SAY'S LAW AND MODERN MACROECONOMICS

A Senior Honors Thesis

by

LAUREL CAMERON VAN ALLEN

Submitted to the Office of Honors Programs
& Academic Scholarships
Texas A&M University
in partial fulfillment for the designation of

UNIVERSITY UNDERGRADUATE
RESEARCH FELLOW

April 2001

Group: Economics & Political Science

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ABSTRACT

Say's Law and Modern Macroeconomics. (April 2001)

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Many economists have debated the interpretation of what is known as "Say's Law of markets"; it has been the subject of controversy for two centuries. Jean Baptiste Say describes Say's Law by noting that the "success of one branch of commerce supplies more ample means of purchase, and consequently opens a market for the products of all the other branches; on the other hand, the stagnation of one channel of manufacture, or of commerce, is felt in all the rest."[1] Twentieth-century economist John Maynard Keynes, in an attempt to destroy the credibility of Say's Law, parodied Say's Law by expressing it as "supply creates its own demand," and this inaccurate phrase has since become well-entrenched in economics. Hence, the disagreement over Say's Law extends to its very definition.

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[1] Say, Jean Baptiste. [1803]. *A Treatise on Political Economy.* (New York: Augustus M. Kelley Publishers, 1971), 135.

Despite the historical controversy over Say's Law, it has generally been neglected in recent years, and modern macroeconomics has virtually disregarded it as either erroneous or irrelevant. My approach focuses on five propositions, proving that (I) Say's Law is crucial to economics, particularly macroeconomics; (II) Walras' Law[2] is its formalization; (III) its implications are far more important than have been previously recognized; (IV) modern theorists have neglected Say's Law; (V) the results of this neglect have led to theories that stray from sound economic theory.

The crux of my research involves an in-depth analysis of the major commentators on Say's Law, dating from Adam Smith to modern economists. However, this research is not merely interested in history of economic thought; by gaining an understanding of the evolution of Say's Law, I can then assess its role, if any, in macroeconomic analysis. In addition to exploring written texts, I consider the opinions of prominent modern economists, thereby solidifying the basis for my final conclusions about Say's Law and its pertinence to modern macroeconomics.

I conclude that Say's Law is absolutely embedded in sound economic theory, and modern economists may *implicitly* accept Say's Law without readily realizing (or crediting) it. In sum, opponents of Say's Law have failed to disprove it, and it remains a key proposition beneath all great macroeconomic analysis of crises.

[2] Broadly defined, Walras' Law says that if N-1 markets experience excess demand>0, then the Nth market must offset the excess demand so that the aggregate sum of excess demand equals zero.

For my dad,

without whom I would not be an aspiring economist.

Acknowledgements

First and foremost, I would like to thank Dr. Morgan O. Reynolds, my thesis advisor, for his patience and dedication to the project despite the many hurdles we encountered. His feedback was invaluable throughout the research process, and I could not have produced this paper without his guidance. I would also like to thank those who provided tremendous insight into my paper through their conversations with me; namely, Dr. Leonardo Auernheimer, Nobel Laureate Gary Becker, Dr. Dennis W. Jansen, Dr. Lloyd Garrison, Mr. Javier Reyes, Dr. Thomas R. Saving, and Dr. Leland Yeager. I am truly grateful for their kind assistance, and many of my conclusions have been shaped, in part, from getting feedback from each those individuals. I would also like to thank all of my professors who have encouraged and *inspired* me throughout my academic career, particularly Dr. Richard K. Anderson (who is both an outstanding teacher and helpful academic advisor), Dr. Liqun Liu, Dr. Svetozar Pejovich, Dr. Andrew J. Rettenmaier, and finally, Dr. Curtis Taylor (who is truly a remarkable economist and person). In addition, I am grateful to the helpful and friendly administrative assistants in the Economics Department, particularly Teri Bush and Christi Rameriz. Finally, I am grateful to David L. Veksler for our daily discussions (and debates) about economics, philosophy, and politics. When I met him, he called himself a staunch "Keynesian" and challenged me to prove that Keynes had failed to disprove Say's Law. I hope that I have sufficiently answered him in the following pages.

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I. Introduction[1]

When I began investigating the topic of Say's Law, I met someone who was taking a "Principles of Macroeconomics" course. I mentioned to him that I was beginning to conduct research on the meaning of Say's Law in modern macroeconomics, and he asked me, "Wasn't Say's Law disproved long ago by Keynes?" I then realized my research addresses a topic that has an impact on virtually every student that takes any macroeconomics course.

Many economists have debated the interpretation of what is known as "Say's Law of markets" [2]; it has been the subject of controversy for two centuries.[3] Jean Baptiste Say describes Say's Law by noting that the "success of one branch of commerce supplies more ample means of purchase, and consequently opens a market for the products of all the other branches; on the other hand, the stagnation of one channel of manufacture, or of commerce, is felt in all the rest."[4] Economist William J. Baumol defines the law with considerable clarity when he interprets Say's Law as follows: "A community's purchasing *power* (effective demand) is limited by and is equal to its output, because production provides *the means* by which outputs can be purchased."[5] Twentieth-century economist

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[1] This thesis follows the style and format of *The Chicago Manual of Style*.

[2] Even the origin of Say's Law remains disputed, though it is named after nineteenth-century economist Jean Baptiste Say. Some believe that James Mill conceived of the law, while traces of it have been found in previous writers, including famed eighteenth-century economist Adam Smith. Regardless, numerous classical economists expressed the kernel of the idea in some form, including the aforementioned.

[3] Sowell, Thomas, *Say's Law: An Historical Analysis*. (Princeton: Princeton University Press, 1972), 3.

[4] Say, Jean Baptiste, [1803], *A Treatise on Political Economy*, (New York: Augustus M. Kelley Publishers, 1971), 135.

[5] Baumol, William J., "Say's (at least) Eight Laws, or What Say and James Mill May Really Have

John Maynard Keynes, in an attempt to destroy the credibility of Say's Law, parodied Say's Law by expressing it as "supply creates its own demand," and this inaccurate phrase has become well-entrenched in economics since that time. Hence, the disagreement over Say's Law extends to its very definition.

A leader in the marginalist revolution in economics in the 1870s, French economist Leon Walras improved the profession's understanding of Say's Law by mathematically formalizing the proposition in the nineteenth century. Walras emphasized the interdependence of markets and developed what is called Walras' Law, the postulate that the sum of excess demands always equals zero in a closed, interdependent exchange system. Hence, if many markets (products) are in a condition of "glut" or oversupply (disequilibrium), as is true in a business depression, then it implies a shortage in other markets, particularly a shortage of money in real economies.[6] Hence, gluts and shortages must be offsetting. J.B. Say is Walras's true intellectual predecessor, and so it is important to note that any serious treatment of Say's Law must also consider Walras's Law.

According to classical economists, it is impossible to have a glut across all goods or markets simultaneously if money is an economic good and that it is an especially important one at that. The greatest ramification of Say's and Walras's assertion is that the market system is self-correcting or self-healing because major "gluts" in some markets must be offset by shortages in other markets. In other words, once displaced or shocked,

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Meant." *Economica*, 44, (May 1977), 147.

[6] Definition derived from class notes in Dr. Morgan O. Reynolds's "History of Economic Thought"

there is an auto-control or stabilizing mechanism that steers a market economy back toward full-employment equilibrium. Thus, recessions can be remedied in time through the flexible market pricing process without any government intervention. Of course, the question of whether fiscal and monetary interventions are stabilizing or destabilizing is at the heart of modern business cycle theory.

The implications of Say's and Walras's Law—whether they be true or false—are so enormous that few other issues have stirred such a controversy in the field of economics. The famed economist John Maynard Keynes remarked that he doubted "if many modern economists really accept Say's Law," [7] and many observers have credited him with completely refuting Say's Law. Yet his alleged dismissal of Say's Law takes only four pages of wrong-headed inquiry, and the merit of Keynes's assumptions and analysis have lost considerable esteem in the last few decades as the prestige of Keynesian economics has deteriorated.

Despite the intense historical debate surrounding Say's Law, modern macroeconomics virtually ignores it. A typical introductory textbook to macroeconomics mentions Say's Law in one sentence, without any analysis. Bradley R. Schiller's introductory textbook, *The Economy Today*, states Keynes's version of Say's Law as its definition, and then precedes to "discredit" Say's Law by citing the Great Depression.[8]

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course. Texas A&M University. College Station, Texas, October 28, 1999.

[7] Keynes, John Maynard, *General Theory of Employment, Interest and Money*, (New York : Harcourt, Brace, & World, 1935), 219.

[8] Schiller, Bradley R., *The Economy Today*, 6th ed. (New York: McGraw Hill, Inc.: 1994), 84. Schiller provides no analysis of the causes of the Great Depression, and "refutes" Say's Law by claiming that the Great Depression exemplifies an instance when "the classical self-adjustment mechanism simply did not work." Yet other economists argue that the continual interventions of the Hoover and Roosevelt

Prominent Harvard economist Robert Barro does not mention Say's Law at all in his advanced textbook, *Macroeconomics*.[9] Yet genuine understanding of macroeconomics cannot be achieved without a clear understanding of Say's Law and its subtle, yet powerful, implications. Modern neglect of the axiom has led to a considerable amount of confusion in modern economics, particularly in the regard to theories that deny basic economics principles, including that of Say's Law. While it is likely that Say's Law has never been fully rejected—or fully accepted—by mainstream economists, it has not received enough attention in the development of modern macroeconomic theory.

Some dissection of Say's Law has occurred in the past few decades, most notably Thomas Sowell's book on the subject.[10] However, his analysis falls short, as do the analyses of the few of his contemporaries who have addressed Say's Law. Previous research has mostly focused on the *historical* controversy over Say's Law and its historical relation to ideas and events. Published scholarly literature includes the debate between Say and Karl Marx,[11] the relation between Say and John Stuart Mill,[12] an analysis of what Say's Law truly says,[13] an attempt to disprove Say's Law through data

governments prevented markets from initiating and sustaining an expansion. See Murray Rothbard, *America's Great Depression*, (New York: Richardson and Snyder, 1983); Alan Reynolds, "What Do We Know about the Great Crash?," *National Review*, (November 9, 1979), 1416-21; Richard Vedder and Lowell Gallaway, *Out of Work: Unemployment and Government in Twentieth Century America*, (New York: New York University Press, 1997).

[9] Barro, Robert J., *Macroeconomics*, 5th ed. (Cambridge, MA: MIT Press, 1997).

[10] Sowell, Thomas, *Say's Law: An Historical Analysis*.

[11] Shoul, Bernice, "Karl Marx and Say's Law," *Quarterly Journal of Economics*, 71(4), (Nov. 1957), 611-29.

[12] Balassa, Bela A., "John Stuart Mill and the Law of Markets," *Quarterly Journal of Economics*, LXXIII (2), (May 1959), 263-74.

[13] Baumol, William J., "Say's (at Least) Eight Laws, or What Say and James Mill May Really Have Meant," *Economica*, 44, (May 1977), 145-61.

demonstrating general overproduction in the economy,[14] and the relationship between Say's Law and the Physiocrats.[15] In addition, a few books have addressed Say's Law, all with the objective of defining the history and meaning of Say's Law. Perhaps the greatest contribution to the matter is W.H. Hutt's *A Rehabilitation of Say's Law*[16], which addresses Say's Law with clarity and insight.

In general, Walras's contributions to economics are more widely accepted than are Say's. Perhaps due to Walras's mathematical approach, modern economists commonly recognize Walras as an important contributor to macroeconomic theory, and several of his developments have been integrated into mainstream macroeconomics. Therefore, I will focus on the tie between Say and Walras, and the merit of their respective laws.

My hypothesis focuses on five related propositions. I assert that (I) Say's Law[17] is crucial to economics, particularly macroeconomics; (II) Walras' Law is its formalization; (III) its implications are far more important than have been previously recognized; (IV) modern theorists have negl

neglect have led to theories that stray from sound economic theory.

I argue that Say's Law is not only a self-evident principle supported both by

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[14] Neisser, Hans, "General Overproduction: A Study of Say's Law of Markets," *Journal of Political Economy*, 42(4), (Aug. 1934), 433-65.

[15] Spengler, Joseph J., "The Physiocrats and Say's Law of Markets I," *Journal of Political Economy*, 53(3), (Sept. 1945), 193-211; "The Physiocrats and Say's Law of Markets II," *Journal of Political Economy*, 53(4), (Dec. 1945), 317-347.

[16] Hutt, W.H., *A Rehabilitation of Say's Law*, (Athens: Ohio University Press: 1974).

[17] Here I mean Say's Law *and* its extended axiom, Walras's Law; hence, when I propose to prove the

will is based upon exploration of well-accepted principles in economics and historical evidence supporting my contention. It is important that I establish the veracity—or inaccuracy—of Say's Law without merely presuming its verity so that my assumptions can be well-defended.

I show that the connection between Say and Walras whereby Walras's Law is an extension and mathematical formalization of Say's Law. I assert that Walras's Law is a logical derivation of Say's Law, and my research confirms this assumption.

Once establishing Say's Law as valid or invalid, it is important to recognize the implications of its actuality or falseness. If Say's Law is true, then the substance of numerous modern theories, including Keynesian, suffers extensively. If Say's Law is false, then the classical economists misunderstood markets to a large extent. Hence, it is important that I not only establish or reject Say's Law, but that a positive or negative assertion of the law results in numerous implications about our understanding of markets. As my research will demonstrate, Say's Law was and remains valid.

I observe that, beyond reasonable doubt, Say's Law is conspicuously disregarded in modern theory, as evidenced by its lack of emphasis in college textbooks, scholarly journals, and economic research in general.

I contend that Say's Law deserves greater emphasis than it has been given in recent years, and economic analysis consistently strays from solid theory when it is ignored. For instance, modern macroeconomists tend to separate aggregate demand and aggregate supply, thereby ignoring their necessary interdependence, even equality. Careless

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importance of Say's Law, I imply an equal verification of the Walrasian theory.

disregard for Say's Law and widespread ignorance of its importance in economics has had serious repercussions in modern theory. Current economic theory is overcome with *bad* theory based upon dubious empirical evidence, and poor theoretical foundations lead to even poorer empirical conclusions.

My research relies upon two main sources: a literature review of published scholarly works, and interviews of prominent economists who can share their expertise on the matter. Literature review will depend upon research conducted through the library and academic journal catalogs (such as www.jstor.org). I also conducted interviews with experts like Dennis W. Jansen, Department Head of Texas A&M University's Economics Department; Roger W. Garrison, Professor of Economics at Auburn University; and Leland B. Yeager, Professor Emeritus of Economics at Auburn University. Since my research is theoretical in nature, I will not need to conduct research involving data collection or laboratories.

My research involves the nature and significance of Say's Law, as well as the results of its neglect. My hypothesis states that Say's Law is crucial to understanding macroeconomics and needs greater emphasis in current mainstream economics. I prove the importance of Say's Law of markets by establishing its place in economics as the cornerstone of macroeconomics. Further, it should be treated as a necessary basis for all economic theory.

II. Introduction to Literature Review

While the controversy over Say's Law has largely been ignored in recent years, there continues an ongoing debate in macroeconomics over whether production and the supply of goods drive economic activity or whether consumers and demand drive economic activity. Several schools of thought have arisen on both sides of the fence, and with varying interpretations of the implications of each. For instance, Keynes—perhaps the most prominent aggregate "demand-sider"—advocates an active role of government in stimulating demand and increasing output and consumption through public initiatives. By contrast, the Austrian School emphasizes the role of the consumer—or the demand-side—as the ultimate director of economic activity but not the initiator of production. Thus on the supply or production side entrepreneurs "propose" or offer the fruits of productive efforts while on the demand side, consumers "dispose" or decide on the success or failure of those efforts.

Thus, the overriding debate extends beyond merely a question over the phenomenon of general gluts or depression existing in any (and all) markets. The debate is over the very nature of markets and over the self-correcting mechanisms that may or may not permeate every aspect of market behavior.

III. Richard Cantillon

Richard Cantillon (1680?-1734) authored *Essai sur la nature du commerce en general* (*Essays on the Nature of* Commerce in General) published posthumously in 1755), which is considered to be one of the first genuinely systematic texts in economics. Though overshadowed by Adam Smith and other British economists, Cantillon remains a very important contributor to economics, and is particularly noted by Murray Rothbard for his clarity on the price mechanism. William Stanley Jevons referred to Cantillon's contribution as a "systematic and connected treatise" and "the *first treatise on economics*,"[18] and Murray Rothbard regards him as "the founding father of modern economics."[19]

Cantillon provides a raw version of Say's Law in his *Essai*, though his influence on Say can be seen in several peripheral areas that lead up to Say's logical conclusions. Both men viewed economics "as a fully integrated structure of abstract and general principles."[20] Several economists who observe that Say followed the logical methodology of Cantillon rather than succumbing to the flaws of Smith have stressed the importance of Cantillon's methodology. Say produced a *Treatise* that emphasized an axiomatic-deductive method similar to Cantillon's that at least indirectly influenced later economists (such as the Austrian School). Murray Rothbard credits Turgot (rather than Cantillon)

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[18] Jevons, William Stanley, "Richard Cantillon and the Nationality of Political Economy." *Contemporary Review*, (January 1881), 342, quoted in *15 Great Austrian Economists*, ed. William Holcombe., (Auburn: Ludwig von Mises Institute, 1999), 13.
[19] Rothbard, Murray, *Economic Thought Before Adam Smith*, (London: Edward Elgar Pub, 1997), 343-62.

with the first genuine explanation of Say's Law, suggesting that the connection between Cantillon and Say need not be over-emphasized. In addition, Cantillon emphasized the crucial role of consumers in the marketplace, and "the emphasis on the consumer in Cantillon and the Physiocrats is one of the elements of their thought that led to Say's law of markets."[21] He also influenced Say deeply on the topic of entrepreneurs, so much so, that Leonard Liggio notes that "from Cantillon, Say developed his theory of entrepreneurship by which entrepreneurs compete as brokers buying services of productive agencies. These insights contributed to his contribution on the Law of Markets."[22] Cantillon, addressing the supply-side of the market, explains the role of the entrepreneur in accepting risk and the potential for providing a good or service at an amount unmet by the market demand:

> All these Entrepreneurs become consumers and Customers of each other; the Draper, of the Wine Merchant; the latter of the draper. They adjust their numbers in the State to their Customers or to their market. If there are too many Hatters in a City or in a street for the number of persons who buy hats there, those having the fewest customers will have to become bankrupt; if there are too few, it will be a profitable enterprise, which will encourage some new Hatters to open shop there, and it is thus that Entrepreneurs of all kinds, at their own risk, adjust their numbers in a State.[23]

Cantillon recognizes the interconnectedness of markets, and how individual markets effect each other. Hence, Cantillon built the groundwork for the development of Say's

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[20] Salerno, Joseph T., "The Influence of Cantillon's *Essai* on the Methodology of J.B. Say," *Journal of Libertarian Studies,* 7(2), (1985),.312.
[21] Liggio, Leonard P., "Richard Cantillon and the French Economists: Distinctive French Contributions to J.B. Say," *Journal of Libertarian Studies*, 7(2), (1985),.299.
[22] Ibid., 302.
[23] Cantillon, Richard, [1755], *Essai sur la nature du commerce en general*, 52. Quoted in Robert Ekelund, Jr., and Robert F. Hebert, *A History of Economic Theory and Method*, 4th ed. (New York: McGraw-Hill, 1997), 73.

Law because he emphasized both the roles of entrepreneur and consumer; while he grasped the nature of entrepreneurship whereby the entrepreneur faces risk in his decision-making process, he did not neglect the fact that successful economic activity is contingent on the consumer. Cantillon also "introduced some of the elements of the problems in markets" with his analysis of "the process of saving and net capital formation, the effects of savings on effective demand for all products and the impact of capital accumulation."[24]

Pigou's real effect is related to Say's Law in consideration of price levels, and it has been argued by some, notably Oscar Lange, that Say's Law neglects to account for changes in price levels since the classical economists allegedly had no firm grasp on the effect of changes in price levels. A weak monetary theory suggests that Say's Law would then be incapable of properly applying to complex monetized economies; some have even argued that Say's Law requires the absence of any monetary theory. Cantillon disputes this view that the classicals had nothing but a naïve view of money. His most important contribution to Say's Law lies in the clarity of his monetary theory. "Through whatever hands the money which is introduced may pass, he writes, "it will naturally increase the consumption; but this consumption will be more or less great according to circumstances. It will be directed more or less to certain kinds of products or merchandise according to the idea of those who acquire the money. Market prices will rise more for certain things than for others however abundant the money may be."[25] Cantillon clearly acknowledged

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[24] Ibid., 301.

[25] Cantillon, Richard, *Essai Sur La Nature Du Commerce En General*, Higgs translation. (London:

that the demand for goods may be affected by changes in the price level, supposing relative prices remain constant. Hume also realized that it would require time for changes in the price level to reach across all markets. Therefore, it is clear that many of the classicals were well-versed in a stronger understanding of money than Lange gives them credit.

Cantillon is an important subsequent predecessor to contributors to economic theory, and he specifically emphasizes concepts—entrepreneurs, consumers, a *microeconomic* view of money and the economy, and even a structural foundation for Say's Law—that set the stage for Say.

Macmillan, 1931), 179.

IV. Pierre-Paul Mercier de la Riviere

A strong defender of property rights and free trade, French Physiocrat Pierre-Paul Mercier de la Riviere (1720-1793) anticipates Say's Law in several passages of his *The Nature and Essential Order of Political Societies* (1767).

While arguing that the greatest happiness of a society consists in "the greatest possible abundance of useful goods and in the greatest possible liberty to make use of these goods,"[26] he affirms his support of property rights as the best means of securing the greatest happiness. The greatest happiness for individuals is equal to that of the community, i.e., "what secures the best possible state of affairs for the community procures also the same advantage for each individual member of society."[27]

Riviere undoubtedly states a version of Say's Law of during a discussion of trade and money:

> Everybody is a buyer only to the extent to which he is a seller, and since buying is paying, the buyer can do so only to the extent that he sells, because it is only by selling that he is able to obtain the money to pay for what he buys. From the fact that every buyer must be a seller and can buy only insofar as he sells, a further conclusion follows: namely, that every seller must be also a buyer and can sell only insofar as he buys, and that each seller must through his purchases provide others with the money to buy the commodities which he intends to sell them.[28]

Riviere's first phrase, "everybody is a buyer only to the extent to which he is a seller," is a very basic version of Say's Law reduced to its simplest form. While Riviere is perhaps

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[26] Riviere, Pierre-Paul Mercier de la, *The Natural and Essential Order of Political Societies*, quoted in Phillip C. Newman, et al, *Source Readings in Economic Thought*, (New York: W.W. Norton and Company, 1954),103.
[27] Ibid.
[28] Ibid., 105.

too simplistic, he grasps the basic notion of Say's Law, particularly in a rudimentary scenario.

The key idea to Say's Law—and suggested by Riviere—is the emphasis on a system-wide phenomenon rather than market by market, yet he correctly follows an analysis based upon individual phenomenon *first* and then adding up the effect in the aggregate. Riviere's treatment is not flawless, however; for instance, he nearly suggests the Keynesian misunderstanding that spending—not production—is the source of wealth when he argues that sellers "provide others with the money to buy…commodities". Riviere is unclear as to whom "others" may be, and so does not provide a sufficient explanation. If he means that sellers must first produce (or own sellable products), and in the selling process, he exchanges with other sellers, who then use the cash to purchase other commodities, than he is correct. What exactly he means is unclear. Further, he doesn't make a logical argument as to the causal relationship (i.e., whether it is production or consumption which initiates this symbiotic relationship). However, he is clearly tying together the activities of buying and selling as necessarily interdependent. Though it requires a more sophisticated argument to clarify what Riviere intends to prove, one thing is clear: Riviere hints at Say's Law and foreshadows the controversy that will surround it.

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V. Ann Robert Jacques Turgot

Ann Robert Jacques Turgot (1727-1781) is associated with the Physiocrats though he was ultimately independent and subscribed to no single school of thought. Murrary Rothbard and others have remarked on Turgot's influence on Smith and Say, and Rothbard even goes so far as to argue that Say borrowed extensively from Turgot but neglected to cite Turgot due to the volatile political times, where quoting outsiders' views could lead to grave consequences. Joseph Spengler remarks that "Turgot had implicitly denied that...unemployment would persist so long as interoccupational movement was possible, thus anticipating Say's law."[29]

Rothbard describes Turgot's clarity and understanding in a passage on Turgot's contributions to Say's Law:

> In his scintillating comments on the paper by Saint-Peravy, Turgot expanded his analysis of savings and capital to set forth an excellent anticipation of Says Law. Turgot rebutted pre-Keynesian fears of the physiocrats that money not spent on consumption would "leak" out of the circular flow and thereby wreck the economy. As a result, the physiocrats tended to oppose savings per se. Turgot, however, pointed out that advances of capital are vital in all enterprises, and where might the advances come from, if not out of savings? He also noted that it made no difference if such savings were supplied by landed proprietors or by entrepreneurs. For entrepreneurial savings to be large enough to accumulate capital and expand production, profits have to be higher than the amount required to merely maintain the current capital stock.
>
> Turgot goes on to point out that the physiocrats assume without proof that savings simply leak out of circulation. Instead, he says, money will return to circulation immediately; savings will be used either (a) to buy land, (b) to be invested as advances to workers and other factors, or (c) to be loaned out at

[29] Spenglar, Joseph J., "The Physiocrats and Say's Law of Markets II," *The Journal of Political Economy*, 53(4), (Dec. 1945), 319.

> interest. All of these uses of savings return money to the circular flow. Advances of capital, for example, return to circulation in paying for equipment, buildings, raw materials, or wages. The purchase of land transfers money to the seller of land, who in turn will either buy something with the money, pay his debts, or re-lend the amount. In any case, the money returns promptly to circulation.[30]

Turgot overcomes the concern by Physiocrats, and later, Keynes, that saving results in a outflow of money which leaves the market process and potentially causes serious stagnation in consumption. Turgot's careful argument creates what is considered to be a genuine version of Say's Law. Turgot demonstrates that several of the classical economists had a sophisticated understanding of the market process.

[30] Rothbard, Murray. "A.R.J. Turgot: Brief, Lucid, and Brilliant" from *Fifteen Great Austrian Economists*, ed. Randall G. Holcombe. (Ludwig von Mises Institute: Auburn, 1999), 37-8.

VI. Adam Smith

Say regarded Adam Smith (1723-1790) as an important contributor to economic thought, but he also realized that his contemporary often stumbled on matters of great economic importance. Smith's attempt to systematically create a comprehensive analysis of markets in his *Wealth of Nations* produced many failings in analysis. Smith, for example, focused on *productive* and *unproductive* labor (which is an invidious distinction between the production of goods and services), and he had multiple wage theories, never fully comprehending which one was accurate. The key flaws in Smithian thought revolve around his neglect of consumers and subjective value in favor of emphasizing a cost or supply side theory of market prices.

Despite Smith's shortcomings in analysis and his weakness as a rigorous technician, his pre-Say contributions to Say's Law—primarily his discussion on the role of saving—remain significant to the analysis of the evolution of Say's Law. Further, as Murray Rothbard concludes, Say and Smith are crucial figures in their economic approaches; it is from the tradition of Smith that Milton Friedman, Irving Fisher and others have arisen, while the Austrian School is markedly the offspring of Say.[31] While the originator of the Austrian School is commonly thought to be Carl Menger, Rothbard illustrates how Say contributed to the distinct continental tradition which branched away from British thought.

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[31] Mark Thornton regards Irish economist Richard Cantillon (1680-1734) as the forgotten father of economics and emphasized Cantillon as the most prominent precursor to Austrian economics in an essay entitled "Richard Cantillon: The Origin of Economic Theory" found in *15 Great Austrian Economists*, ed. Randall G. Holcombe, (Ludwig von Mises Institute: Auburn, AL, 1999), 13.

Smith's *Wealth of Nations* had been published almost 30 years before Say published the first edition of his own *Treatise*. Many mistakenly regard Say as merely a noted follower of Smith and as a primary promoter of Smithian thought, with few solid contributions of his own. Say remarked that "I revere Adam Smith,--he is my master," though this was more political convenience (Say could not invoke the name of Turgot for political reasons) than a genuine admission of following the footsteps of Smith.[32] Indeed, Say is not merely a French version of Smith; while they are certainly intellectual allies on economic policy, the two have distinct approaches and separate contributions to economic science. "Although Say has been best known as the man who systematized Adam Smith's concepts and introduced them to French readers, he was more than a mere popularizer…he became the founder of a school of his own, the liberal-optimistic school."[33]

Smith never directly addresses general gluts, but he makes contributions with implications favoring Say's view. His understanding of the market process suggests that he would have perceived the "invisible hand" as a self-correcting method of overcoming gluts within single markets, if not economy-wide. His insightful passage on saving, quoted below, is a firm refutation of Keynesian distrust of saving as a "leakage" from the spending stream, and hence a depressant on aggregate demand.

[32] Say, Jean Baptiste, [1821]. *Letters to Mr. Malthus on Several Subjects of Political Economy and on the Cause of the Stagnation of Commerce,* Translated by J.Richter. (London: Sherwood, Neely, and Jones). Reprinted (New York: Augustus M. Kelly, 1967),.17.

[33] Newman, Philip C., Arthur D. Gayer, and Milton H. Spencer, *Source Readings in Economic Thought,* (New York: W.W. Norton, 1954), 157.

The foundation for Say's Law depends upon sound economic theory. Smith, noted for his strong treatment of the division of labor and specialization, points out the relation between production and consumption whereby producers sell whatever they have produced after direct consumption (i.e., a wheat farmer brings to market the wheat which he himself has not consumed).[34]

Smith argues extensively for economic growth based upon capital and saving, an example of his emphasis on the production- or supply-side. His passage about parsimony, or saving, clarifies saving as "the immediate cause of the increase of capital." Saving is defined as a fluid commodity which, instead of satisfying immediate consumption needs, is invested and committed to some kind of production, generally in the form of capital. Saving is usually transferred to investors, who in turn commit resources as inputs, which increases the flow of production and total revenues, provided output is priced to sell. One of the highlights of Smith's insight into human economic behavior manifests itself in the following passage.

> Parsimony, by increasing the fund which is destined for the maintenance of productive hands, tends to increase the number of those hands whose labour adds to the value of the subject upon which it is bestowed. It tends therefore to increase the exchangeable value of the annual produce of the land and labour of the country. It puts into motion an additional quantity of industry, which gives an additional value to annual produce.[35]

It is not entirely clear whether Smith is referring to a positive effect of saving on an overall aggregate employment effect or to simply the productivity of labor. Smith fails to

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[34] This is suggestive of Walrasian excess demand curves. Walras attacked Alfred Marshall for his separation of demand and supply curves.

clarify the effects of saving on labor, and speaks in terms of aggregates, thereby sometimes losing the important microeconomic principles underlying the effects. He goes on, however, to almost directly refute the Keynesian assault on saving as a "leakage" for aggregate spending:

> What is annually saved is as regularly consumed as what is annually spent, and nearly in the same time too; but it is consumed by a different set of people. That portion of his revenue which a rich man annually spends, is in most cases consumed by idle guests and menial servants, who leave nothing behind them in return for their consumption. That portion which he annually saves, as for the sake of the profit it is immediately employed as a capital, is consumed in the same manner, and nearly in the same time too, but by a different set of people, by labourers, manufacturers and artificers, who reproduce with a profit the value of their annual consumption.[36]

In order to have investors, suggests Smith, you first need savers (defined as those who abstain from current consumption). Saving is seen as the allocation of resources, rather than a decline in full employment and income. Hence, saving doesn't cause mal-investment (defined as excessive investment due to improper signals to investors, namely resulting from faulty interest rates) because consumers are getting what they want, and no

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[35] Smith, Adam, [1776], *An Inquiry into the Nature and Causes of the Wealth of Nations*, quoted in Phillip C. Newman, et al, *Source Readings in Economic Thought*, .321.

[36] Ibid.,.321-2. This is a direct refutation of Keynes' distrust of saving where he writes: "... [U]p to the point where full employment prevails, the growth of capital depends not at all on a low propensity to consume but is, on the contrary, held back by it; and only in conditions of full employment is a low propensity to consume conducive to the growth of capital. Moreover, experience suggests that in existing conditions savings by institutions and through sinking funds is more than adequate, and that measure for the redistribution of incomes in a way likely to raise the propensity to consume may prove positively favourable to the growth of capital." (Keynes, J.M. *The General Theory of Employment, Interest and Money*, (New York: Harcourt, Brace & Co., 1958), 372-3.). Keynes erroneously suggests in this passage that no trade-off occurs between consumption and investment. It is possible that Keynes' distrust of saving derives from the Calvinist tradition which perhaps excessively advocates thrift and saving at all times, in contrast with the Continental embrace of consuming and "living life fully." The Neoclassicals and Austrians see a trade-off between current and future consumption (or short-run and long-run consumption) even with a rate of return of zero. In contrast, the Keynesian paradox tries to do away with the apparent trade-off.

"mismatch" occurs. Smith focuses on the role of producers as creators of wealth—or as Say would say, creators of *value*. Say uses a nearly identical argument in his chapter entitled "On Production" in his *Treatise*. Further, Smith perceives investment as current resource use (consumption) to form capital by 'a different set of people' than the savers. Importantly, saving is a *good* activity according to Smith, as it raises economic productivity, increases employment, and economic growth. In contrast, Keynes notably muddled the tie between saving necessarily being put into investment (at times arguing that savings must always equal investment, whereas at others, arguing that there tends to be an excess of saving and investment), thereby confusing saving with hoarding of purchasing power (money).[37] Ultimately, this and similar errors led him to focus on artificial creation of demand and consumption, as well as a false representation of Say's Law as an assertion that business recessions were impossible.

[37] Say counters Keynes' concern when he writes in a footnote that "even when money is obtained with a view to hoard or bury it, the ultimate object is always to employ it in a purchase of some kind. The heir of the lucky finder uses it in that way, if the miser do not." Money yields services while in inventory, for savings are simply assets not available for immediate use in the short-run. (Say, Jean-Baptiste, [1821]. *Treatise*, Translated by C.R. Prinsep (Philadelphia: Claxton, Remsen & Haffelfinger, 1881), Reprinted. (New York: Augustus M. Kelley, 1971). 133.)

VII. Jean-Baptiste Say

Jean-Baptiste Say (1767-1832) published the first edition of his major work the *Treatise on Political Economy* in 1803; however, it is his fourth edition, published in 1821, which has been translated fully into English and which is most often quoted.[38] Considerable changes were made between his first and fourth editions, extending to such great lengths that some chapters were completely rewritten while entirely new chapters were added. Between the publication of his first and second edition (published in 1814), James Mill (1773-1836) published his important contribution to the general glut controversy, entitled *Commerce Defended* (1808). Some argue that Say's Law was scarcely present in Say's first edition, and that it wasn't until *after* Mill's treatment of the general glut controversy that Say clarified his own arguments. Rothbard, in contrast, emphasizes the possibility that neither Say nor Mill regarded themselves as making any great contribution or discovery, but rather, merely asserting a very obvious axiom in economics. That is, neither took credit as the "founder" of the "doctrine" because it appeared to each of them as an absolute fundamental, a nearly obvious *given* in economic science. It is likely that both read each other's writings on the subject, and influenced each other in some respects, but their approaches were distinct.

Say introduces the topic of gluts—or recessions—by remarking that it is often heard by sellers of various goods and services that "their difficulty [in selling their product] lies not in production, but in the disposal of commodities; that produce would always be abundant, if there were but a ready demand."[39] He goes on, observing that "ask them what peculiar causes and circumstances facilitate the demand for their products, and you will soon perceive that most of them have extremely vague notions of these matters."[40]

Say tells the reader that his goal is to refute false beliefs held by the general public related to the causes (and cures) of "gluts," or in modern language, recessions and depressions. That is, gluts are defined as periods of low employment, output, and income. He points out that during times of economic hardship, notably during recessions, serious doubts arise about the ability for markets to self-correct. Further, he observes that it is nearly inevitable that the business community will cry for some cure of the (short-term) recession. In a period of crises, people complain that they do not have enough money to spend. Say realizes this complaint is superficial and that the real problem is that not enough goods have been successfully produced and sold, resulting in the supply side causing a general crisis. This point is critical for it demonstrates that crises occur due to underproduction (low income) rather than underconsumption.[41] Say suggests that the temptation to insist upon a governmental cure without identifying the *cause* of the problem leads to (government) solutions "of the most mischievous tendency." He argues that we are led to a conclusion about the nature and causes of gluts

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[38] The author will be quoting from the fourth edition unless otherwise noted.
[39] Say. J.B. Say, [1821], *Treatise*, Translated by C.R Prinsep. [Philadelphia: Claxton, Remsen & Haffelfinger, 1881), Reprinted, (New York: Augustus M, Kelley, 1971), 132.
[40] Ibid., 132.
[41] On March 29, 2001 the chief economist for Chase argued on CNBC that the important thing is income—if that holds up, then consumption spending will be fine. This understanding of markets is present in Say's writngs.

"that may at first sight appear paradoxical; viz. that it is production which opens a demand for products."[42] This is perhaps the closest that Say gets to stating Keynes' parody that "supply creates its own demand." Say isn't stating that a supply of plums *creates* a demand for plums, but rather, that it is only through supply of plums (priced for sale) that the ability to purchase non-plums can potentially occur.[43] More accurately, to demand, you must supply. That is, consumers must have purchasing power (income) acquired through prior production.

Say does not appear to argue that supply is the necessary and sufficient condition for demand—it is only the necessary condition because buyers need means for exchange and this means money comes from prior sales. He points out that "the mere circumstance of the creation of one product [priced for sale] immediately opens a vent for other products."[44] Say's use of term "vent" here most likely means the *potential* for demand, as opposed to *actual* demand. If so, then Keynes' suggestion that Say's Law implies an automatic "creation" of demand is a misleading caricature of Say's meaning. Say contends that supply occurs because individuals want to demand—to purchase goods and services in the short-run or long-run. Say is not neglecting the demand side, as suggested by Keynes, but rather, is emphasizing the crucial role of the supply side in creating recessions. He is essentially pointing out the cause of such crises, which simply happens to be that of the supply side

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[42] Ibid.
[43] This example of the plums can be found in *W.H. Hutt: An Economist for the Long Run*, ed. Morgan O. Reynolds, (Chicago: Gateway Editions, 1986), 12-13.
[44] Ibid., 134-135

Say then clarifies the role of money, which he defines as primarily "the agent of the transfer of values. Its whole utility has consisted in conveying to your hands the values of the commodities, which your customer has sold, for the purpose of buying again from you; and the very next purchase you make, it will again convey to a third person the values of the products you may have sold to others."[45] Say carefully includes money in this passage because people often attribute economic gluts to a scarcity of money; sales, he says, "cannot be said to be dull because money is scarce, but because other products are so."[46]

Say's belief that scarcity of money cannot be the cause of recessions his highly arguable. Monetary malfunctions are an obvious correlate of business cycles, so it is clear that Say is considering money without the potential for monetary glitches. Say writes, "there is always money enough to conduct the circulation and mutual interchange of other values, when those values really exist. Should the increase of traffic require more money to facilitate it, the want is easily supplied, and is a strong indication of prosperity."[47] Say severely misunderstands money here. He relies on Hume's notion that money is simply a veil, and in doing so, neglects Walras' Law and Pigou's real balance effect (defined as an imbalance in quantity supplied and quantity demanded for money). Say falters here on the "optimal quantity of money theory" and misses the point that any amount of money, which must be a scarce good to remain money, is efficient as long as prices are flexible. With flexible prices, low money supply causes harm only if an unpredictable collapse in

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[45] Ibid., 133.
[46] Ibid., 134.

the money supply has occurred. Unpredictable fluctuations in quantity of money have major economic costs, especially in redistributing wealth between lenders and borrowers. That individuals value stability and low variability in the exchange value of money is a widely acknowledged virtue or asset. While such incidents have adverse effects, the act of decreasing money supply per se is not necessarily harmful.

Say emphasizes interdependence across markets, suggesting that the prosperity of one benefits others. Exchange is not a zero-sum game, but a mutually beneficial act for those parties involved. "The success of one branch of commerce supplies more ample means of purchase, and consequently opens a market for the products of all the other branches; on the other hand, the stagnation of one channel of manufacture, or of commerce, is felt in all the rest."[48] Here Say highlights the importance of production (and hence, supply) as Smith and Riviere did before him. If the agricultural sector harvests well one year, this higher income allows producers of agricultural goods to buy more non-agricultural goods. Likewise, a poor yield means that farmers can purchase, for example, fewer manufactured goods. Importantly, this example implies that a glut of manufactured goods can occur due to a shortfall in agricultural goods; the problem, as Say sees it, is that the agricultural market—for whatever reason—has produced too little, leading to an imbalance in *values* of goods in each respective market; this becomes obvious because of the higher market price for agricultural goods and the lower market

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[47] Ibid.
[48] Ibid., 135.

price for manufactured goods (assuming price flexibility). Fewer purchases of manufactured goods follow from a reduction in agricultural income.

Say addresses the criticism that there empirically sometimes exist a large glut of commodities "all around", a fact which appears to counter his argument. He replies that "the glut of a particular commodity arises from its having outrun the total demand for it in one of two ways: either because it has been produced in excessive abundance, or because the produce of *other commodities* has fallen short."[49] It is entirely possible for entrepreneurs to miscalculate the appropriate amount to produce, as individuals have imperfect predictive powers and willingly accept risks involved with producing a product. If sellers produce too much of a good, the market price adjusts by falling. If the price falls low enough, marginal sellers discontinue production of the good. Hence, an error in production is remedied by market adjustment in price; the problem is short-run and corrected by market processes. If an economy-wide recession occurs due to the declining production of other goods, then, writes Say somewhat inadequately, "people have bought less, because they have made less profit; and they have made less profit for one of two reasons; either they have found difficulties in the employment of their productive means, or these means have themselves been deficient."[50] However, Say correctly points at some kind of hindrance to proper coordination. Though Say may not properly identify the correct hindrance, he is on the right track.

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[49] Ibid., 135.
[50] Ibid., 135.

Say anticipates the phenomenon of Walras' Law, but it is important to note that while Say did not really understand Walras' Law, John Stuart Mill (1806-1873) did. Broadly defined, Walras' Law is an adding up or accounting proposition which says that a closed system must obey certain aggregate constraints. Therefore, Walras' Law deals with the summation of all individual budget constraints. In particular, if N-1 markets experience aggregate negative excess demand ("glut"), then the Nth market must have aggregate positive excess demand ("shortage") of equal money value because the aggregate sum of excess demands across all individual markets always equal zero. Implicitly, then, aggregate supply equals aggregate demand under Walras' Law, though depression is possible despite built-in corrective pressures.

The focus of Say's chapter then highlights the implications of what he has carefully argued for the first half of the chapter. He deduces that all purchases are the result of someone having produced something of value; even a welfare recipient, who himself never works a day in his life, consumes in place of the person who actually produced the value which allow the goods to be purchased. Yet Say, after concluding that general gluts can occur, ends the chapter with a vague explanation directed at the misguided errors of governmental administration. Hence, Say ends on a weak note rather than fully and rigorously defending his position. He is far too vague and opens real opportunity for criticism.

VIII. James Mill

James Mill (1773-1836) is a noted philosopher, historian and economist, and the father of John Stuart Mill. He is regarded by some as the co-founder of the law of markets, for he addressed the general glut controversy during the same period as Say, and argues perhaps even more intensely for "Say's" Law. His two greatest contributions to economics are his *Commerce Defended* (1808) and *Elements of Political Economy* (1821). Say had virtually no section on "Say's Law" in the first edition of his Treatise, and only included his formal arguments for Say's Law in a later edition, after the publication of Mill's *Commerce Defended.* It is for this reason that some regard *Commerce Defended* as the original source for Say's Law, and accordingly, it should really be "Mill's Law."

While Mill's perspective is often lucid and well-reasoned, he also tends to exaggerate the case for the inability of gluts to occur, and in doing so, adopts a view against the existence of gluts.

James Mill described the role of production as "the one and universal cause which creates a market for the commodities produced." He explains that "if a nation's power of purchasing is exactly measured by its annual produce, as it undoubtedly is; the more you increase the annual produce, the more by that very act you extend the national market, the power of purchasing and the actual purchases of the nation."[51] A key to individual purchasing power is the necessary condition that products must be priced for sale; if this

[51] Mill, James, [1808], *Commerce Defended*, (New York: Augustus M. Kelley, 1965), 81.

is so, then production equals income (or purchasing power). Mill highlights the temporal order of events such that production leads to an increase in what he calls purchasing power, a necessary condition for demand to exist (though not sufficient—one must also be willing to demand). However, we can hardly exaggerate the explicit role of prices in the market process, and Mill tends to neglect prices as an explicit factor in the discussion.

Mill argues that "whatever be the additional quantity of goods therefore which is at any time created in any country, an additional power of purchasing, exactly equivalent, is at the same instant created; so that a nation can never be naturally overstocked with capital or with commodities."[52] Mill boldly asserts this without recognizing the possibility for gluts (excessive prices). Intertemporal hitches to the economy may prevent short-run equilibrium, but investment, though long-term, involves the creation of capital that aids in both short-run and long-run production. Production priced for sale creates new income for subsequent (new) demand. Further, Mill declares that a nation can never "naturally" be overstocked, implying that such phenomena are caused by something other than aggregate overproduction and under-consumption. Reiterating the point, Mill says that "the whole of the goods will be exchanged, the one half against the other, and the market will always be equal to the supply. Thus, it appears that the demand of a nation is always equal to the produce of a nation... The extend of its supply are always exactly commensurate."[53] However, these strong claims are open to criticism by even allies of

[52] Ibid.
[53] Ibid., 83.

Mill, for his exuberance over his point disallows a more realistic view of possible scenarios. His analysis is too strong here, and thus falters.

In accord with Say's assertions as to the nature and causes of gluts, should they occur, Mill remarks that "the quantity of any one commodity may easily be carried beyond its due proportion; but by that very circulation is implied that some other commodity is not provided in sufficient proportion."[54] Mill reveals the generally microeconomic analysis of the classical economists, who address even aggregate market conditions in terms of microeconomics. Perhaps more important, though, is his realization that interdependence between markets results in reactions to over- or undersupply. If a good experiences oversupply, then some other good experiences a similar reaction through *under*supply. The more complex the market as a whole, the less obvious this relationship may become. Yet the relationship maintains existence, according to some (including Mill).

> Later, Mill addresses the potential for "demand deficiency" when he notes that:
> The Economistes and their disciples express great apprehension lest capital should increase too fast, lest the production of commodities should be too rapid. There is only, say they, a market for a given quantity of commodities, and if you increase the supply beyond that quantity you will be unable to dispose of the surplus.[55]

Mill addresses the fear of those who argue that suppliers may produce too many goods, thereby leaving large amounts of unsold output. Once again, the role of prices appears to be the primary cause of misunderstanding about such an occurrence. Fundamental market laws of supply and demand predict that a surplus on the supply side will, through

[54] Ibid., 84-85.
[55] Ibid., 134-5.

the market process and some unknown period of time, result in prices declining until markets clear.

In James Mill's *Elements of Political Economy*, Mill frequently parallels Say's arguments on market behavior. Mill refers to "that supply upon which the consumption depends."[56] Further, he makes the distinction between individual markets and the aggregate, a significant point to understand when analyzing the existence (or lack) of Say's Law. "In speaking here of demand and supply, it is evident that we speak of aggregates," Mill says. "When we say of any particular nation, at any particular time, that its supply is equal to its demand, we do not mean in any one commodity, or any two commodities. We mean, that the amount of its demand, in all commodities taken together, is equal to the amount of its supply in all commodities taken together." To view the market in terms of aggregate supply versus aggregate demand may not be the most useful approach (as some critics, such as Leland Yeager, have noted), but the underlying concept is a state of general equilibrium in the aggregate.

While Mill argues for an equality between aggregate demand and aggregate supply, he ignores the integral role of prices and the price level. Mill remarks that "it may very well happen, notwithstanding this equality in the general sum of demands and supplies, that some one commodity or commodities may have been produced in a quantity either above or below the demand for those particular commodities."[57] He concludes that "whatever, therefore, be the amount of the annual produce, it never can exceed the

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[56] Mill, James, [1844], *Elements of Political Economy*, 3rd ed. (New York: August M. Kelley, 1963), 2.
[57] Ibid., 230.

amount of the annual demand."[58] Mill seems unaware of any problems of pricing and aggregation.

Arguing that every producer comes to the market with the ultimate intention of consuming sooner or later, Mill echoes the words of Say on the very intent of a producer to enter the market. Importantly, Mill acknowledges that one might enter the market with a demand for a certain commodity which no one has found profitable or desirable to produce. Herein lies one of the several possible reasons for underproduction in a given market. Writes Mill, "Though it be undeniable, that the demand, which every man brings, is equal to the supply, which he brings, he may not find in the market the sort of purchaser, which he wants. No man may have come desiring that sort of commodity, of which he has to dispose. It is not the less necessarily true, that he came with a demand equal to his supply; for he wanted something in return for the goods which he brought."[59] He continues, arguing at the microeconomic level, that every individual has a market demand equal to his own market supply. Since demand is both the willingness and ability (purchasing power) to buy a good or service at a market price, it makes obvious sense that this ability, and thus demand, derives from an individual providing or supplying a good or service. From this logic, Mill concludes that "every man [has] a demand and a supply, both equal; if any commodity be in greater quantity than the demand, some other commodity must be in less."[60]

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[58] Ibid., 232.
[59] Ibid., 233.
[60] Ibid., 235.

Mill then addresses a situation when one commodity exists in superabundance while another exists in shortage.

> The commodity, which happens in superabundance, declines in price; the commodity, which is defective in quantity, rises [in price]. This is the fluctuation of the market, which every body sufficiently understands. The lowness of the price, in the article which is superabundant, soon removes, by the diminution of profits, a portion of capital from that line of production: The highness of price, in the article which is scarce, invites a quantity of capital to that branch of production, till profits are equalized, that is, till the demand and supply are adapted to one another.[61]

Mill's treatment is misleading when he writes about "the article which is scarce," for all economic goods are inherently scarce; he is referring to a good experiencing shortage, despite his imprecise use of terminology. While he neglected the role of prices previously, he now emphasizes their effect in correcting markets experiencing gluts or shortages. He seems to accept the condition of a partial glut corrected by price reductions; Mill does not deny the possible existence of superabundance in a given market. Yet he fails to address the difference between a market or partial glut, which he concedes can exist, and a general *aggregate* glut, which he argues is impossible. His argument suffers because he does not recognize that a general glut may occur if all markets but the money market are in superabundance. He fails to clarify that the presence of money allows for a general glut in other goods and services.

Mill lightly touches upon an issue which Keynes would later address: excessive saving (resulting from collapsed investment ex ante) that leads to depressed aggregate spending (demand). "The strongest case, which could be put, in favour of the supposition that produce may increase faster than consumption," writes Mill, "would undoubtedly be that, in which, every man consuming nothing but necessaries, all the rest of the annual produce should be saved. This is, indeed, an impossible case, because it is inconsistent with the laws of human nature."[62] Unfortunately, Mill abandoned a deep inquiry into this question and simply relied upon a weak justification that some unnamed "laws of nature" prevented this from occurring. He may be referring to the empirical evidence demonstrating that mankind simply does not operate in that manner with subsistence spending only, but his reasoning did not clarify the issue one way or the other. He in effect ignores Say's simple lesson: why should one bother to add supply if there is no intent to augment consumption, or even future consumption (investment). He continues, saying that "it appears, therefore, by accumulated proof, that production can never be too rapid for demand. Production is the cause, and the sole cause, of demand. It never furnishes supply, without furnishing demand, both at the same time, and both to an equal extent... The doctrine of the glut, therefore, seems to be disproved by reasoning perfectly conclusive."[63] Mill understands the reciprocal nature of production and demand. He seems to again provide a sketchy indication of Walrasian theory. Mill's conclusions,

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[61] Ibid., 235-236.
[62] Ibid., 236.
[63] Ibid., 237-240.

while "perfectly conclusive" to him, remain disputed and at the heart of a deep controversy in economics.

It is possible that the law of markets could be justifiably called "Turgot's Law" or "Mill's Law" given their involvement in developing the concept. Mill plays a key role in advancing Say's Law, while his arguments differ from Say's substantially enough to observe his distinctive approach to the general glut controversy.

IX. Thomas Robert Malthus

Known predominantly for his population theory, the Reverend Thomas Robert Malthus (1766-1834) was the leading classical critic of Say's law of markets. He devoted much of his academic effort toward refuting Ricardo's and Say's explanations of political economy and is often regarded as Keynes' predecessor, in part because Lord Keynes himself asserted as much. Malthus and Say conducted extensive exchanges over the explanation for general gluts. Malthus' *Principles of Political Economy* (1820) is his most notable economic text, in which he formally makes his arguments against Say's Law. Malthus presents his perception of the debate in the following manner:

> It has been thought by some very able writers, that, although there may easily be a glut of particular commodities, there cannot possibly be a glut of commodities in general; because according to their own view of the subject, commodities being always exchanged for commodities, one half will always furnish a market for the other half, and production being thus the sole source of demand, an excess in the supply of one article merely proves a deficiency in the supply of some other, and a general excess is impossible. M. Say...has indeed gone so far as to state that the consumption of a commodity by taking it out of the market diminishes demand, and the production of a commodity proportionately increases it... This doctrine, however, as generally applied, appears to me to be utterly unfounded, and completely to contradict the great principles which regulate supply and demand."[64]

If one ignores the market for money, or suspends the reality of money's existence, then Malthus is correct in his first assertion. However, Malthus' criticism of Say in his final sentence above is erroneous because consumption is the extermination of market value, and hence the end of the economic process. This direct attack on Say, therefore, seems

[64] Malthus, Thomas Robert, [1820]. *Principles of Political Economy*, quoted in Phillip C. Newman, et al, *Source Readings in Economic Thought*, 177.

to reveal a misunderstanding by Malthus on the role of consumption, since Say argues that consumption is the *end* and not the *stimulus* of commerce.[65] Because consumption is the ultimate end of exchange, once a product is fully consumed, i.e., has fulfilled its ultimate purpose, it "has opened no new market," says Say, "but just the reverse."[66] Additionally, Malthus describes the market in terms of "halves," a rather faulty view of markets. Supply and demand are not mutually exclusive halves of a pie; instead, they interact as duality in the market process. Ultimately, a producer is also a consumer, and vice versa. Malthus defends his position by arguing that it is not necessarily true that commodities are exchanged for (other) commodities. Malthus' argument reveals that he misunderstands the market process. Under a barter economy, exchange only occurs when goods are exchanged for other goods. When commodity money is introduced, this principle still holds, even though the market becomes more complex and the act of exchange with money separates the direct exchange of economies. However, exchanging goods and services for money results in an exchange between a good or service and money, which represents the possibility for the money-holder to defer the exchange between money and some other good or service.

More important, however, is Malthus' argument favoring the potential for general gluts to occur. Citing a case of increased production with (what he suggests is) constant or declining current demand, he writes that "a great increase of produce with comparatively stationary numbers or with wants diminished by parsimony, must

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[65] It is important to recognize that consumer demand and consumption are not equal; they are distinct principles.

necessarily occasion a great fall of value estimated in labour, so that the same produce, though it might have *cost* the same quantity of labour as before, would no longer *command* the same quantity; and both the power of accumulation and the motive to accumulate would be strongly checked."[67] This passage almost hints at a primitive "real" business cycle theory. His analysis, while accurately implying that drops in production price imply input price declines, falters in terms of the entire picture. While Malthus addresses the appropriate problem, his diagnosis is incomplete and headed down the wrong path.

In response to Ricardo, Malthus asks "when there may be an universal glut of commodities, how can it be maintained, as a general position, that capital is never redundant; and that because commodities may retain the same relative values, a glut can only be partial, not general?"[68] Malthus assumes that capital becomes "redundant" during downturns since net consumption declines. The problem is not that capital becomes redundant due to over-saving, but that some producers are not producing enough commodities priced to sell.

Malthus then addresses Ricardo's argument about a glut of capital, such as that found during a depression. Malthus quotes Ricardo's argument that "there is only one case, and that will be temporary, in which the accumulation of capital with a low price of food may be attended with a fall of profits; and that is, when the fund for the maintenance of labour increases much more rapidly than population; –wages will then be high and

[66] Say, Jean-Baptiste, [1821], *Treatise on Political Economy*, Translated from 4th ed. 139.
[67] Malthus, *Principles of Political Economy*, 178.

profits low." Ricardo alludes to the faulty classical notion that because corn and grain supply was restrained by a tariff, food prices were high, thus resulting in (what they believed to be) an increase in subsistence wages. Ricardo continues, "if every man were to forego the use of luxuries and be intent only on accumulation, a quantity of necessaries might be produced for which there could not be any immediate consumption." He identifies a coordination problem resulting from an intertemporal mismatch between production and consumption. Says Ricardo, "of commodities so limited in number, there might undoubtedly be an universal glut; and consequently there might neither be demand for an additional quantity of such commodities, nor profits on the employment of more capital. If men ceased to consume, they would cease to produce."[69] Ricardo's concluding remark indirectly suggests Say's Law through understanding the integral role of consumer in initiating the production process.

Rhetorically, Malthus asks "but if, whenever this occurs, there may be an universal glut of commodities, how can it be maintained, as a general position, that capital is never redundant; and that because commodities may retain the same relative values, a glut can only be partial, not general?"[70] Malthus correctly identifies a weakness but neither he nor Ricardo can point to the conditions providing for a glut, especially the assumed inflexibility of prices downward.

Expanding the argument further, Malthus concludes that "no nation can *possibly* grow rich by an accumulation of capital, arising from a permanent diminution of

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[68] Ibid., 179.
[69] Ibid. (Malthus is quoting Ricardo here).

consumption." This, of course, is preposterous, since capital enables higher future consumption. Here again, Malthus confuses the matter by ignoring its source. If consumption permanently declines—an absurd situation given that future consumption is deferred for a finite period—then the national savings rate increases as people increase capital investments. As capital stock rises, production increases (at least for sure in the short-run investment increases, and consumption increases in the long-run due to the capital increase). Malthus continues his reasoning, stating that "because such accumulation being beyond what is wanted in order to supply the effectual demand for produce, a part of it would very soon lose both its use and its value, and cease to possess the character of wealth."[71] Interestingly, Malthus proposes an over-investment theory rather than malinvestment as a "boom." He hints at a notion of malinvestment suggests the beginnings of a business cycle theory, particularly related to the Austrian School's view.

Ultimately, Malthus' arguments form the foundation for what will become Keynesian thought in some respects, while at times touching upon ideas related to the Austrians. Malthus defines gluts in the first edition of *Principles of Political Economy* as simply the condition where "profits [decline] almost to nothing." Typically, there is a strong correlation between crises and small, zero, or even negative profits. However, this phenomenon is an effect—a symptom—rather than a genuine cause or definition of gluts. Keynes expands upon Malthus' arguments against Say, or what he calls the classical

[70] Malthus, Thomas Robert. *Principles of Political Economy*. 179.
[71] Ibid., 181.

fallacy, relying in large part on Malthusian thought according to Stephen Kates.[72] Keynes' reliance on Malthus in some sense seems to have harmed the integrity of Keynes' attack on Say for Malthus often exaggerated Say's position (who never denied that gluts can occur), and in doing so, may have influenced Keynes' understanding of Say himself. Many scholars have acknowledged that Keynes was not well-read, and may have, for instance, addressed what Malthus *claimed* Say argued, rather than researching Say's own arguments.

In response to Malthus' intense criticisms and distortions of Say's meaning, Say replied with letters published as pamphlets. In a series of five published letters, Say confronts the arguments set forth by Malthus, the first of which was devoted to proving that "produce is only bought with produce." It is not until the second letter that Say directly addresses Malthus' opposing view on the nature of gluts. Since Say's case relies on a logical argument establishing the role of production, however, his first letter plays an important role in the overall debate. "The only real consumers are those who produce on their part," writes Say in the first letter, "because they alone can buy the produce of others, and that barren consumers can buy nothing except by the means of value created by producers."[73] Say regards barren customers as those who produce nothing but consume, such as children or welfare recipients. That is, exchange is a two-way process.

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[72] Kates writes that "It was reading Malthus' letters to Ricardo during the depths of the Great Depression in late 1932 that crystallized [sic] in Keynes' mind the important of effective demand. It was out of this first acquaintance with the law of markets that the *General Theory* would grow." (Kates, Stephen. *Say's Law and the Keynesian Revolution.*, (Edward Elgar: Cheltenham, UK, 1998),130.)
[73] Ibid., 5.

Say believes that the entire value of production is capable of being purchased (or borrowed against the anticipated production value) as long as no intertemporal problems arise. Stating a basic assumption, which Say's Law depends upon, Say asserts that individuals cannot be buyers without first having something to offer in exchange. "It is therefore really and absolutely with their produce that they make their purchases: therefore it is impossible for them to purchase any articles whatever, to a greater amount than those they have produced, either by themselves or through the means of their capital or their land."[74] It is critical to understand that Say, like most of the classical economists, probably thought in terms of a one-period simple economy because they set aside complications; they made no formal distinction between one-period and multiple-period analysis. The classical economists did not formally address markets in this manner, but the lack of an overt distinction likely opened the door for the dynamic short-run analysis of Keynes. At its core, Say's argument establishes a causal relationship in the marketplace; it provides a sound explanation as to why an individual enters the marketplace in the first place. To *exchange* implies the provision and trade of commodities or services by two parties (assume, for simplicity, a barter economy with a double-coincidence of wants). Therefore, one cannot enter the market without first possessing or producing a good or service; in a two-man world, no market exists unless both individuals produce (or at least possess) some economic good for exchange. Even in a purely exchange economy without production, exchange can be productive and

[74] Say, Jean-Baptiste, [1821. *Letters to Mr. Malthus on Several Subjects of Political Economy and on the Cause of the Stagnation of Commerce*, Translated by J.Richter. (London: Sherwood, Neely, and Jones),

benefit both parties since possessing *economic* goods that others desire opens up the opportunity for mutually beneficial exchange.

Addressing the logical argument behind Say's Law, Say writes that "as no one can purchase the produce of another except with his own produce, as the amount for which we can buy is equal to that which we can produce, the more we can produce the more we can purchase... That if certain commodities do not sell, it is because others are not produced, and that it is the raising produce alone which opens a market for the sale of produce."[75] While Say is not incorrect, he neglects a possible source for commodities not selling—overpricing. However, he is focusing on *underproduction* here due to some problem or hindrance, which might include pricing discrepancies.

While Malthus emphasizes the role of the consumer, Say argues that "the only real consumers are those who produce on their part because they alone can buy the produce of others, and that barren consumer can buy nothing except by the means of values created by producers."[76] Hence, consumption purchases inherently rely upon production, without which they simply cannot occur in a production and exchange system. Even "barren" (as Say calls them) consumers like welfare recipients or children consume because someone else has produced exchangeable goods or services.[77] This is an important issue because Keynes supports stimulating consumer demand through government means, suggesting an underconsumptionist theory. In contrast, Say argues

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Reprinted. (New York: Augustus M. Kelly, 1967), 4.

[75] Ibid., 4.

[76] Ibid., 5.

[77] See Gary Becker for more on the role of children as a "consumer durable" whereby parents must do the production to provide for the consumption of children.

that we stimulate the economy when "we purchase commodities with productive services, and the greater portion of productive serve we employ, the more we can buy."[78]

Say points out what, ultimately, is the cause of aggregate wealth: "it is the capability of production," he says, "which makes the difference between a country and a desert. And the more a country produces, the more it is advanced, the more populous it is, and is the better provided."[79] Say's ingenious remark reveals what makes the difference between a poor and rich nation—not government or natural resources or even capital, but the capability for production itself. Clarifying his position regarding the superabundance of commodities in general, or in the aggregate, Say writes:

> I have asserted that if there is an overstock, a superabundance of many kinds of goods, it is because other goods are not produced in sufficient quantity to be exchanged with the first. That if the producers of them could produce more, or others, the first would find the vent which now fails; in a word, that there is only too much produce of certain kinds because there is not enough of others.[80]

Say's analysis is inadequate because he is not clear enough, nor does he rigorously overcome the objections to his unsubstantiated last remark above. While Say is not referring to money, a more sophisticated treatment would suggest that Walras' emphasis on money applies to Say's argument. Say properly believes that an abundance of economic (i.e., *scarce*) goods cannot be a problem. He describes what a merchant who traveled to America might have encountered upon landing in (early) 1600s. Clearly, with few or no settlers, a merchant would find his products in "overabundance" because demand would be too low. Yet the problem was caused due to a lack of flourishing

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[78] Ibid., 13.

[79] Ibid., 6.

producers (and accordingly, consumers) willing and able to exchange with the merchant. Modern New York does not suffer from an "overabundance" of goods, because it has flourishing consumers of every variety. While at first glance it appears that the problem in unsettled New York was that there were too many goods, i.e., the merchant has overproduced for a market which appears to have little to no demand, the *cause* for this scenario is simple: there are not enough *different producers* to create vigorous market demand.

Though Say may not completely understand his own argument, he then restates the implications of Say's Law—a glut is caused by underproduction in one or several markets, and not by under-consumption. It is this point which Malthus and Sismondi aggressively attack. Say acknowledges Sismondi's own contribution on the debate, citing his well-written criticism of Say and Ricardo. Sismondi, as quoted by Say, writes that

> 'The error into which [Say and Ricardo] have fallen is entirely owing to this false principle—that the production is the same thing as the revenue. Mr. Ricardo, according to M. Say, repeats and affirms it. 'M.Say has proved in the most satisfactory manner,' says he, 'that there is no capital, however large, that cannot be employed, because the demand for produce is only bounded by production.' No person produces but with the intention of consuming or selling the article he produces, and no one sells but with the intention of buying some other production, which may be of immediate use, or contribute to future production... Upon this principle,' continues M. de. Sismondi, 'it becomes absolutely impossible to comprehend or explain the best demonstrated fact in all the history of commerce, viz. the choaking up of markets.'[81]

Sismondi realizes the weakness in Ricardian thought where the role of prices, money and intertemporal coordination are neglected so that confusion arises over the difference

[80] Ibid., 6.
[81] Ibid., 7.

between production and revenue. Sismondi points out the flawed reasoning by Ricardo that leads toward a complete dismissal of factual historical economic periods of recessions. Say replies that "revenue only exists in proportion to the exchangeable value of the produce, and that it can only have that value in consequence of the demand for it, in the present state of society."[82] This in part lays the groundwork for the future view by the Austrians that entrepreneurial willingness to pay (and take on risk) is determined by anticipated market price.

Say, evoking allusions to Adam Smith's invisible hand, states that men produce to satisfy their own wants and desires. Content with his proof on the nature of production, Say then addresses the "one point" which he and Malthus disagree on in the 3rd Section of the seventh chapter of Malthus' *Principles of Political Economy*, namely, the fact that Malthus "persist[s] in maintaining that men can, putting all productions together, produce a quantity more than equal to their wants, and consequently—that there will be no employ for a part of these productions—that there may be a superabundance and glut of all kinds at the same time."[83] Seeing the debate as over that point alone, Say endeavors to

> prove in the first place, that whatever be the quantity produced, and the consequent depreciation of its price, a quantity produced of one kind is always sufficient to enable the producer to acquire the quantity produced of another kind; and after having proved that the possibility of acquiring exists, I must enquire how those productions which superabound give rise to wants to consume them.[84]

[82] Ibid., 11.
[83] Ibid., 19.
[84] Ibid.

Say's argument is somewhat oversimplified and at times unclear. He should replace his focus on quantity produced with revenue and expenditure, because what is important is the income earned from producing goods that someone else demands.

Part of his answer lies in a question he poses. "What more shall I say than that we only sell to those who produce? Why are not articles of luxury sold to a farmer who likes to lead a rustic life?" To this he replies, "because he had rather be idle than produce wherewith to purchase them." Elements within Say's Law indirectly derive from this simple truth, this lucid understanding of human action; it may be that leisure is preferred by luxuries. One cannot afford luxuries because one has not produced enough to warrant an exchange, or one may simply not desire luxuries at all. Concluding with passion, Say declares that "whatever be the cause that circumscribes production, whether the want of capital, of population, of diligence, or liberty, the effect in my mind is the same: the articles which are offered on the one hand are not sold because too few are produced on the other."[85] While Say rightly observes one aspect of the cause of gluts, he ignores the very real aspect of overpricing that, temporarily, produce surpluses.

Perhaps most important of all, Say *acknowledges the possibility of a short-run glut.* Contrary to the misleading ideological attacks by his critics, Say clearly concedes that gluts may occur. However, he perceives the quickness with which some may overreact to a glut, which is undoubtedly short-run in nature. He writes that

> Although the evil [of gluts] is great, it may still seem greater than it is. The commodities which superabound in the markets of the universe, may strike the eye by their mass, and alarm commerce by the depreciation of their price, and still be

[85] Ibid., 24.

> only a very small part of the commodities made and consumed of each kind, There is no warehouse that would not be very soon emptied, if every kind of production of the commodity contained in it was simultaneously to ease in all parts of the world....It has been further remarked, that if the quantity sent in the slightest degree exceeds the want, it is sufficient to alter the price considerably.[86]

Finally emphasizing price flexibility after neglecting it for too long, Say turns his attention to the important role of prices. In doing so, he cites the key to markets adjusting under the condition of gluts—the ability to depreciate prices. It is this paragraph which dramatically summarizes the entire argument by those who favor Say's Law, for much of their analysis necessarily focuses upon non-fixed prices and the ability for prices to adjust.

[86] Ibid., 24.

X. David Ricardo

David Ricardo (1772-1823) plays the role of ally to Say in the dispute over Say's Law, though Murrary Rothbard contends that John Stuart Mill "ghost wrote" much of Ricardo's work. Several scholars contend that Ricardo's role in the debate over Say's Law is small because, while Ricardo implicitly accepted propositions leading to Say's Law, he was never a major advocate for it. However, as Stephen Kates argues, Ricardo is an important figure if for nothing more than the fact that his "correspondence with Malthus…first alerted Keynes to the issue of effective demand and Say's Law."[87]

That Ricardo advocated Say's Law can be best demonstrated by his brief explanation that "Too much of a particular commodity may be produced, of which there may be such a glut in the market, as not to repay the capital expended on it; but this cannot be the case with respect to all commodities."[88] All commodities can be in disequilibrium with the exception of money, though, according to Walras' Law. Ricardo does not suggest whether he considers money or not in this case. In a letter to Malthus, he also states Say's Law in his simplified version: "Men err in their productions, there is no deficiency of demand."[89]

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[87] Kates, Stephen, *Say's Law and the Keynesian Revolution*, 41.
[88] Ricardo, David, [1817], *The Principles of Political Economy and Taxation*, (New York: Everyman),292.
[89] Ricardo, David, *The works and correspondence of David Ricardo*, 11 vols, Vol VII: *Letters, 1819 June 1821*, ed. P. Sraffa with M.H. Dobb, (Cambridge: Cambridge University Press). 277.

In his often-quoted passage, Ricardo plainly supports the general notion of Say's Law. Further, he provides solid groundwork as a classical economist who played a key role as a supporter of Say's Law and its implications.

> M. Say has...most satisfactorily shown that there is no amount of capital which may not be employed in a country, because demand is only limited by production. No man produces but with a view to consume or sell, and he never sells but with an intention to purchase some other commodity, which may be immediately useful to him, or which may contribute to future production. By producing, then, he necessarily becomes either the consumer of his own goods, or the purchaser and consumer of the goods of some other person. It is not to be supposed that he should, *for any length of time*, be ill-informed of the commodities which he can most advantageously produce, to attain the object which he has in view, namely, the possession of other goods; and, therefore, it is not probably that he will *continually* produce a commodity for which there is no demand.
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> There cannot, then, be accumulated in a country any amount of capital which cannot be employed productively until wages rise so high in consequence of the rise of necessaries, and so little consequently remains for the profits of stock, that the motive for accumulation ceases. While the profits of stock are high, men will have a motive to accumulate. Whilst a man has any wished-for gratification unsupplied, he will have a demand for more commodities; and it will be an *effectual demand* while he has any new value to offer in exchange for them...
>
> Productions are always bought by productions, or by services; money is only the medium by which the exchange is effected. Too much of a particular commodity may be produced, of which there may be such a glut in the market as not to repay the capital expended on it; but this cannot be the case with respect to all commodities.[90]

Ricardo is not clear as to whether he includes money in "all commodities," an important distinction to be made. The direct assertion by several classical economists that general gluts simply cannot occur gives substantial cause to take Say's Law seriously, without discarding it foolishly as did Keynes. However, the issue was also troublesome for the

[90] Ibid., 193-94.

classicals given the enormous confusion surrounding the debate, as well as historical instances of general gluts.

Ricardo, like Say, engaged in a series of debates with Malthus. Stephen Kates argues that one of Malthus' phrases found in a letter to Ricardo likely led Keynes defining Say's Law as "supply creates its own demand." Importantly, the following reference is the only single text by a classical economist that remotely uses the terminology of Keynes. Kates writes in a footnote that

> The [Decemeber 29th] letter is notable for a particular phrase which Malthus uses, 'I think the source of [Say's] error is, that he does not properly distinguish between the necessaries of life and other commodities,--the former *create their own demand* the latter not (Ricardo 1950-73: VI 168, italics added). It is possible that Keynes took the phrase 'supply creates its own demand' from this passage.[91]

If Keynes truly took his understanding of what Say meant *from Malthus, perhaps Say's greatest contemporary critic*, then his entire analysis of Say's Law weakens considerably. It is possible that Keynes may have argued the merits of Say's Law without ever pursuing a rigorous study of Say's own words, an error that could lead to the questioning of Keynes' intellectual merit.

Apart from that important discovery in the Ricardo-Malthus letters, the issue of Say's Law arises on several occasions. Ricardo and Malthus both regard Say's arguments as insufficient, but Ricardo still maintains that the general principle holds. Ricardo and Malthus disagree about the effects of a sudden increase in production by a large quantity. Malthus argues that an increase leads to a surplus of goods that are

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[91] Kates, *Say's Law and the Keynesian Revolution*, 48. (See footnote 5).

wasted because of the "insufficiency of demand." Ricardo responded with, what he regarded as the central issue:

> The real question is this; If money should retain the same value next year, would any man (if he had it) want the will to spend half as much again as he now does, -- and if he did want the will, would he feel no inclination to add the increase of his revenue to his capital, and employ it as such. In short I consider the wants and tastes of mankind as unlimited. We all wish to add to our enjoyments or to our power. Consumption adds to our enjoyments, -- accumulation to our power, and they equally promote demand.[92]

Ricardo addresses the fear of Malthus (and Keynes) that "effective demand" may fail, leading to widespread recession and unemployment. Say's Law's critics assume that demand will not keep up with increases in production, perhaps due to saving and underconsumption. Ricardo rejects this notion, asserting that scarcity implies an unlimited fulfillment of wants.

Ricardo was not one of the foremost advocates of Say's Law, but he embraced the general principles which form Say's Law. He did not comprehend its importance as well as James and John Stuart Mill, but he can be viewed as an opponent of the Malthusian analysis which Keynes hastily embraced.

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[92] Ricardo. David, *The works and correspondence of David Ricardo,* 11 vols. Vol VI: *Letters, 1810-1815,* ed. P. Sraffa with M.H. Dobb, (Cambridge: Cambridge University Press), 134-5.

XI. John Stuart Mill

John Stuart Mill (1806-1873) followed the lead of his father, James Mill, by providing solid arguments regarding Say's Law. While Murray Rothbard is quite hard on J.S. Mill's reliance upon the British economic tradition (as opposed to the Continental tradition), and argues that Mill revived poor Ricardian theory that resulted in a poor state of economic theory prior to John Maynard Keynes. (Keynes may have been so widely embraced because he seized the opportunity to replace bad economic theories with his own new ideas). Regardless, J.S. Mill will prove in the following excerpts that he understands the law of markets more lucidly than does Say, and he even understands the fundamental idea of Walras' Law.

J.S. Mill demonstrates his implicit opposition to Keynes when he argues that "what a country wants to make it richer, is never consumption, but production. Where there is the latter, we may be sure that there is no want of the former."[93] One could hardly design a more anti-Keynes remark, given that Keynes advocated expanding aggregate demand to meet and stimulate aggregate production (and hence, the general economy). He continues with words Keynes sought to refute, saying that "there may be, and always are, an abundance of persons who have the inclination to become consumers

[93] Mill, J.S., *Essays on Some Unsettled Questions of Political Economy*, Reprint, (London: London School of Economics and Political Science, 1948), 49.

of some commodity, but are unable to satisfy their wish, because they have not the means of producing either that, or anything to give in exchange for it."[94]

Importantly, Mill realizes that production priced to sell provides the seller with wealth so long as there is a buyer. Hence, with or without a glut, "a single producer['s]....affluence depends, not solely upon the quantity of his commodity which he has produced and laid in store, but upon his success in finding purchasers for that commodity."[95] He then turns to the "unsettled question" of whether or not general gluts occur.

> There can never, it is said, be a want of buyers for all commodities...sellers and the buyers, for all commodities taken together, must, by the metaphysical necessity of the case, be an exact equipoise to each other....This argument is evidently founded on the supposition of a state of barter; and, on that supposition, it is perfectly incontestable. When two persons perform an act of barter, each of them is at once a seller and a buyer. He cannot sell without buying.[96]

Mill's sharp line of reasoning clearly shows the distinction between trade with and without money. Mill argues what both advocates and critics (including Lord Keynes himself) of Say's Law generally agree upon: that under a barter economy, Say's Law holds. Even the some most ferocious of opponents of Say's Law (including Keynes himself) concede that in the "textbook, perfect-world scenario," Say's Law holds for tautological reasons in an aggregate barter economy. Budget constraints and the two-way nature of exchange lead to the necessary holding of Say's Law in a barter economy.

[94] Ibid., 49.
[95] Ibid., 51.
[96] Ibid., 69-70.

While Mill's analysis in a barter economy is solid, he falters when he confronts a money economy:

> If however, we suppose that money is used, these propositions cease to be exactly true. It must be admitted that no person desires money for its own sake, (unless some very rare cases of misers be an exception,) and that he who sells his commodity, receiving money in exchange, does so with the intention of [eventually] buying with that same money some other commodity….But there is this difference—that in the case of barter, the selling and the buying are simultaneously confounded in one operation; you sell what you have, and buy what you want, by one indivisible act, and you cannot do the one without doing the other."[97]

Introducing the role of money, Mill's reasoning suggests the framework of Walras' Law. He realizes the elaborate nature of the market process, particularly when money is introduced, while suggesting a realization that both barter and money economies face budget constraints. However, it is significant to acknowledge that Mill is sometimes inconsistent in his treatment of money, because he has two definitions for money; *commodity* money and what economist Bela Balassa calls *credit* money. As a result, two "alternative interpretations" evolve from Mill according to Balassa: "*commodity money and the impossibility of a general overproduction on the basis of Walras' Law,* on the one hand, and *credit money and the possibility of a (temporary) undersupply of money* (overproduction of commodities) on the other."[98] Balassa's claims are somewhat exaggerated, but he points to one of the key controversies associated with Say's Law, namely, whether it refers to the impossibility of general gluts or not. Admitting that

[97] Ibid.

[98] Balassa, Bela A., "John Stuart Mill and the Law of Markets," *Quarterly Journal of Economics*, 73(2), (May 1959), 268. Italics are Balassa's.

"credit money" allows for intertemporal problems absent in a barter economy or even commodity-based money economy, Mill writes that

> It may well occur, that there may be, at some given time, a very general inclination to sell with as little delay as possible, accompanied with a general inclination to defer all purchases as long as possible. This is always actually the case in those periods which are described as periods of general excess. And no one, after sufficient explanation, will contest the possibility of general excess, in this sense of the word.[99]

Hence, Mill concedes that disturbances in the money market may temporarily bring about disequilibria in the form of aggregate oversupply of non-money goods. Yet the cause of such an event is evidently money-induced discoordination rather than aggregate underconsumption.

Directly combating Malthus' faulty notion of permanent reduced consumption, Mill meticulously explains the reason for "general excess" as described by Malthus:

> Although he who sells, really sells only to buy, he need not buy at the same moment when he sells; and he does not therefore necessarily add to the *immediate* demand for one commodity when he adds to the supply of another. The buying and selling being now separated, it may very well occur, that there may be, at some given time, a very general inclination to sell with as little delay as possible, accompanied with an equally general inclination to defer all purchases as long as possible.[100]

Mill acknowledges that demand to hold money (in real purchasing power) may increase. He, like Say, sees this as a potential intertemporal coordination problem, but not an inherently negative activity. The scene that Mill describes applies to incidents of a shortage of money because prices are too high. When involving money, Mill

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[99] Mill, *Essays on Unsettled Questions*, 70.
[100] Ibid., 70.

foreshadows Walras, who addresses the impossibility of aggregate excess demand across all markets, in general. Mill writes:

> In order to render the argument for the impossibility of an excess of all commodities applicable to the case in which a circulating medium is employed, money itself must be considered a commodity. It must, undoubtedly, be admitted that there cannot be an excess of all other commodities, and an excess of money at the same time.[101]

Mill is correct because otherwise an "adding up" problem would occur. This is practically a statement of Walras' Law itself. He reasons that what some regard as a "general superabundance" is simply a positive excess demand for the commodity money and a negative excess demand for other commodities. That is, a general glut of non-money goods implies a shortage of money. This, of course, can be seen empirically in the scramble for "liquidity" during times of recessions.

Mill turns his discussion over to the transient nature of gluts. Here he supports Say's acknowledgement that gluts might occur *temporarily*. "It is true," says Mill, "that this state can only be temporary, and must even be succeeded by a reaction of corresponding violence, since those who have sold without buying will certainly buy at last, and there will then be more buyers than sellers." Mill suggests Pigou's real balance effect here, an important discovery since the classical economists have been criticized for their lack of a monetary theory.

Importantly, Mill makes it clear that gluts are phenomena only in the short-run, thereby furthering his argument. Mill may accept the existence of a general glut in non-money goods, but he distinguishes his concession as applying to the short-run alone.

"Although the general over-supply is of necessity only temporary," he continues, "this is no more than may be said of every partial over-supply. An overstocked state of the market is always temporary, and is generally followed by a more than common briskness of demand."[102]

Mill extends his argument with the inclusion of money as a commodity by addressing the crucial role of prices. He states that should a "general" glut occur, then the prices of all goods will fall, or the goods themselves will not be sold. "When this happens to one single commodity," he says in reference to a non-money commodity, "there is said to be a superabundance of that commodity; and if that be a proper expression, there would seem to be in the nature of the case no particular impropriety in saying that there is a superabundance of all or most commodities, when all or most of them are in this same predicament."[103]

Mill points out that an excess of *all* non-money commodities simply indicates a "temporary fall in their value relative to money… [T]here cannot be excessive production of commodities in general."[104] He concludes by remarking that what appears to be excess in general supply may simply be "want of commercial confidence" or some other alteration in the behavior of individuals due to altered expectations. Mill, like Keynes, relies on a vague phenomenon of individuals experiencing unexplained "mood swings" in their market behavior. Keynes focused on the "animal spirits" of businessmen who may

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[101] Ibid., 71.
[102] Ibid., 71.
[103] Ibid., 72.
[104] Ibid., 72-3.

alter their behavior due to sudden emotional responses. In reality, what Keynes describes is really a credit "boom" or "bust."

Published in 1848, *Principles of Political Economy* extends J.S. Mills' arguments favoring Say's Law. Mill follows his father's line of reasoning, with an emphasis on purchasing power. The following passage is particularly important because Keynes would later quote the first part, though not the last part, of the passage. I have italicized the part of the passage which Keynes later quoted. Observe that Mill's argument is not complete until the conclusion of the passage, an important omission of Keynes:

> *What constitutes the means of payment for commodities is simply commodities. Each person's means of paying for the production of other people consist of those which he himself possesses. Could we suddenly double the productive powers of the country, we should double the supply of commodities in every market; but we should, by the same stroke, double the purchasing power. Everybody would bring a double demand as well as supply: everybody would be able to buy twice as much, because every one would have twice as much to offer in exchange.* It is probable, indeed, that there would now be a superfluity of certain things. Although the community would willingly double its aggregate consumption, it may already have as much as it desires of some commodities, and it may prefer to do more than double its consumption of others, or to exercise its increased purchasing power on some new thing. If so, the supply will adapt itself accordingly, and the values of things will continue to conform to their cost of production. At any rate, it is a sheer absurdity that all things should fall in value, and that all producers should, in consequence, be insufficiently renumerated.[105]

Mill argues that costs of production derive from prices (which are affected by consumer's willingness to pay and scarcity). The passage above may be one of his best, for he lucidly rebuts the critics' problem with Say's Law. Mill answers opponents of Says' Law who simply observe that general gluts can and do exist.

[105] Mill, John Stuart, *Principles of Political Economy*, 558.

To sum, J.S. Mill provides some of the most eloquent arguments in favor of Says' Law, exceeding even his father's contribution to the defense of Say's Law. He provides sound reasoning as well as clarity on money, which is central to any substantial analysis of Say's Law. Gary Becker writes that after reading J.S. Mill's *Unsettled Questions* and *Principles*, "one is led to wonder why so much of the subsequent literature (this paper included) had to be written at all."[106]

[106] Becker, Gary S. and William J. Baumol, "The Classical Monetary Theory: The Outcome of the Discussion," *Economica*, 76, (Nov 1952), 376. Becker was referring to the clarification of the meaning of Say's Law itself, which has been largely misunderstood and frequently disputed.

XII. Karl Marx

Karl Marx (1818-1883) has had an enormous influence on political and economic philosophy since his death, and while his theories are largely regarded as irrelevant in modern economic theory, his scathing criticism of Say deserves analysis. Other than Keynes, Marx is the most famous critic of Say's Law, and his criticism is far more scathing than even that of Keynes. Marx devoted a chapter entitled "Crises" to Say in his posthumously-published collection of essays, *Theories on Surplus Value*. Marx regarded Say with contempt, at times reducing himself to name-calling; he calls Say "that miserable fellow", the "humbug himself", and "inane," and regards a quote by Say as "childish babble."

However, one should separate Marx' *ad hominem* attacks from the content of his theory. Whatever his remarks might suggest about his personality, one should not discredit Marx merely based upon his unusual writing style. Focusing on the substance of Marx, Bernice Shoul addresses what seem to be inherent self-contradictory theories based on a rejection or reliance of Say's Law. He argues that three primary Marxian dubious models deal directly with Say's Law: "(1) the circular flow model which postulates Say's Law; (2) the model of monetary exchange which denies Say's Law; and (3) the dynamic model which provisionally assumes Say's Law only as a means for demonstrating a tendency to break-down and the inevitability of crises and cycles in spire of the operation of Say's Law."[107] Thomas Sowell concisely highlights six major areas of Say's Law which Marx argues against, the most significant of which being: first, that aggregate supply and aggregate demand are not equal, *ex ante,* because no one can predict prices; second, that even if aggregate supply and aggregate demand are equal, *ex ante*, it is an irrelevant equivalence; and third, that the arguments that gluts are caused by undersupply in a different market are false since a glut is caused by "over-production" in one market rather than "under-production" in another.[108]

The "General Glut Controversy" had subsided during Marx' lifetime, and the most significant arguments for Say's Law—asserted by Say himself and James and John Stuart Mill—were already written and familiar to anyone in the general glut controversy. "The basic dichotomy was between those economists who attributed crises or depressions to internally disproportionate output and those who attributed them to excess aggregate output...Marx saw disproportionality as the initiating force of crises."[109] Marx did not follow the "underconsumptionist" theory set forth by Malthus and others, criticizing that position against Say by remarking that "it is pure tautology to say that crises are caused by the scarcity of solvent consumers, or of a paying consumption."[110]

Less distinct from Keynes than Keynesians might readily admit, Marx argues that it is in saving (and the consequent expansion of capital) that the opportunity for a crisis, or general glut, arises. He admits that saving increases production and expands

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[107] Shoul, Bernice, "Karl Marx and Say's Law," *Quarterly Journal of Economics*, 71(4), (Nov. 1957), 612.
[108] Sowell, Thomas, *Say's Law: An Historical Analysis,* (Princeton: Princeton University Press. 1972), 181-182.
[109]. Ibid., 169.

population, but a tendency toward excessive saving due to the "boundless urge of the capitalists to enrich themselves"[111] causes economic crisis. While Keynes focuses on the failure of investment and aggregate spending (rather than adopting Marx' focus on saving per se), both pay great attention to saving-investment disequilibrium.

Marx argues that the assertion by Say and (James) Mill that a general glut cannot occur relies upon the assumption that commodities are exchanged with commodities. Importantly, the argument set forth by Say and James Mill is distinct; Mill argues that general gluts cannot occur (while Say never fully adopts this view). With the role of capital (implicitly, saving) and money, however, Marx projects the occurrence of stagnation. Capital is invested over long periods, and, as Marx asserts,

> In the course of these periods great upheavals and changes in markets take place, since great changes in the productivity of labour and therefore in the *real value* of commodities take place—it is therefore very evident that from the starting point—the advance of capital—until its return at the end of one of these periods, great catastrophes must occur and elements of crises must accumulate and develop—and these cannot in any way be got rid of by the pitiful claptrap that products exchange against products.[112]

Marx argues that gluts are inevitable consequences in a market with money and saving, and circumvents the importance of distinguishing between flexible and fixed pricing conditions. No classical economist argued that Say's Law would hold under fixed prices, for Say's Law depends inherently upon the ability of markets to adjust (in particular, market prices). Marx then proceeds to criticize the apparent discrepancy in Say-Mill

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[110] Marx, Karl, *Capital*, Vol. II, (Chicago: Charles H. Kerr & Co., 1909), 86.
[111] Marx, Karl, *Theories on Surplus Value*, Translated by G.A. Bonner and Emile Burns. (New York: Augustus M. Kelley, 1971), 368.
[112] Ibid, 371.

thought which he claims denies the existence of general gluts of commodities while acknowledging the possibility and tendency toward the over-abundance of capital. "Not a single responsible economist of the post-Ricardo period," he writes, "denies the [possibility of] overabundance of capital. On the contrary, they all explain crises by it…Therefore they all admit overproduction in one form, but deny it in another."[113] He argues that the role of money leads to the potential for crises, for a "crisis is nothing but the forcible assertion of the unity of phases of the production process which have become independent of each other."[114] Clearly Marx implies that the role of money allows for this separation to occur, thereby nullifying Say's Law in a money economy (this argument that the existence of a money market nullifies Say's Law is present in Keynesian thought as well).

Admittedly, the role of money, particularly non-commodity money, requires clarification by Walras' Law or the real balance effect. Writes Marx,

> No crisis can exist unless sale and purchase become separated form each other and come into conflict, or the contradictions inherent in money as means of payment come to the surface; unless therefore crisis at the same time emerges in the simple form—as the contradiction inherent in money as means of payment.[115]

Marx addresses the concession by Say-Mill supporters that a partial glut can occur (while still maintaining the theoretical improbability of general gluts). It is during this discussion which Marx makes a surprising assertion: "That only *particular* but not *all* kinds of commodities can constitute a glut in the market, and that consequently overproduction

[113] Ibid., 374.
[114] Ibid., 383.
[115] Ibid., 386.

can always only be partial, is a paltry evasion...In fact, all commodities [may be in oversupply] except *money*."[116] Surprisingly, Marx concludes that all markets may be glutted at once except money, an observation which most Say-Mill supporters would embrace, particularly Walras. In addition, Marx argues that "for a crisis (and therefore also overproduction) to be general, it is sufficient for it to grip the principal articles of trade."[117]

Given Marx' visceral objection to Say—both the man and his doctrine—one finds such concessions unexpected from such an opponent of Say's Law. Say and Walras (et al) consider a general glut in terms of all markets, and while Marx redefines, in a sense, the conditions for a general market, he concedes on the arguments, such as accepting Walras' Law, that ironically most justify Say's Law.

Walras' Law is perhaps the greatest boost to Say's Law because it is readily accepted by mainstream economists. Say, Mill, and Walras accept that a partial glut can and may occur; recall that Walras' Law suggests that as much as n-1 markets (in an economy with n markets) may experience a glut, the nth market offsets the glut, because excess demand must sum to zero within an exchange economy. While Marx does not appear to find his virtual acceptance of Walras' Law as a concession, it is difficult to defend the logic behind Walras' Law while trashing the very notion of Say's Law.

Marx continues his condemnation of the Say-Mill approach, having compiled a chapter on crises with a combination of muddled, poor, or downright false assertions and

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[116] Ibid., 392.
[117] Ibid., 393.

a few (unintended) statements which lend his opponents some support. While Marx' arguments fail to discredit Say's Law, some of the foundations for his arguments are not that distinct from those of the most successful critic of Say's Law, John Maynard Keynes.

XIII. A.C. Pigou

Arthur Cecil Pigou (1877-1959) found himself the target of Keynes' criticism in the *General Theory*. Pigou was to Keynes the quintessential contemporary economist to embrace all of the alleged ills of the classical economists. Regarded as the product of Alfred Marshall, Pigou and Keynes were highly critical of each other, though Pigou eventually adopted many Keynesian viewpoints. Pigou occupied a prestigious chair and was a prolific economist, so Pigou was an important economist in his own right, and deserves distinction for his, say, real balance effect, beyond being the frequent target of Keynes.

Pigou wrote a series of texts on economics with a particular interest in money, unemployment, and welfare economics. In one small text entitled *Lapses from Full Employment* (1945), Pigou wrote that the classical economists

> Never had any doubt that, provided only thorough-going competition exists among wage-earners, there must be a tendency towards full employment, and, apart from changes and frictions, there must actually be full employment. This implies that in stable conditions, apart from friction, imperfect mobility and so on, the establishment of a sufficiently low rate of money wages would carry with it full employment in *all* circumstances.[118]

This point is crucial, because the classical economists approached Say's Law with the embedded assumption that price flexibility and competitive conditions pervaded the market. In stark contrast, Keynes' models were created upon the implicit assumption that prices and wages were *inflexible,* and that market conditions would not lead to prevailing

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[118] Pigou, A.C., *Lapses from Full Employment,* (London: Macmillan & Co., 1945),20.

full employment output. In essence, Keynes throws away the doctrine by eliminating its necessary assumptions and then "proving" it as fallacious. Pigou recognizes that the classical economists did not address the conditions that prevent Say's Law—and the market mechanism—from occurring. Specifically, their focus was not on the hindrances to proper coordination but rather on the outcome when no such hindrances occurred.

Pigou then argues that the classical economists' understanding needs to be "qualified." Specifically, he addresses the fact that (a) stable conditions must exist in this analysis, and (2) terminology must be properly defined (for instance, savings and investment). He then turns to Keynes opposing view of market behavior in instances of unemployment. He describes Keynes' view as follows:

> When, through a failure of profitable openings for investment, the rate of interest has been forced down to the minimum, it is probable that people will want to supply some savings (investment) for reasons of prestige, security, and so on, even though none are demanded. ...Thus there must come about a continuous withdrawal of more and more money from circulation and a resultant continuous fall in the size of aggregate money income. If money wage rates do not fall this leads directly to reduced unemployment; if they do fall, since the cuts in wages set up equivalent further cuts in money income, it still leads to this, the only difference being that money income comes down faster. This downward process does not, however, go on forever, because, as employment falls, people, being poorer, do not desire to make such large savings. Thus ultimately there is no longer an excess in the amount of what they want to save or invest above the amount that industrialists require. At this point the downward process stops and there is established a new low-level equilibrium, with employment much less than full.[119]

The last statement suggests a misunderstanding of the proper role of equilibrium, since mass unemployment implies disequilibrium by nature. Pigou, though no fully satisfied with the classical account, finds Keynes' view inadequate. He argues that Keynes' analysis is faulty in concluding that a lower-level of employment results in equilibrium. He offers an alternative view.

> Suppose that, when the original equilibrium is disturbed by opportunities for profitable investment being contracted in the way we have described and, in consequence, money income goes crashing downwards, money wage rates crash downwards parallel with it. It is true that, since the rate of interest does not fall, the cuts in money wage rates entail equivalent proportionate cuts in money income and the money demand for labour. But the several actions and reactions are presumably separated by time-lags. Hence, it would seem, though, owing to the inevitable lag in the first wage reduction, employment must be cut down, it will not be cut down progressively. The pursuer will *be* behind the pursued because he has got a worse start, but will not afterwards fall further behind him. Hence Lord Keynes's low-level equilibrium will not be attained... since, after employment and the scale of real income have ceased falling, money income continues to fall, prices must also continue to fall.[120]

Pigou is not entirely correct here, for his reasoning is confusing and he emphasizes too much on the aggregate without analyzing the effects on markets, real income, employment, and price levels. Pigou realizes that with flexible falling prices, the market process can guarantee a resumption of equilibrium at a level at least closer to the initial full-employment equilibrium. He concedes that the perception of what occurs is controversial, and even suggests that due to its controversy, the issue itself is not significant. However, he makes an important point which Keynesians and careless economists make: under stable conditions without hindrances to the adjustment mechanism, the classical analysis is correct. Furthermore, if government intervenes to fix wage rates (or create price rigidity), then the ability for the market process has been impeded. Intervention violates the prior market conditions and, accordingly, leads to

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[119] Ibid., 23.
[120] Ibid., 23-24.

different outcomes from those predicted by classical economists. Pigou, acknowledging this point, observes that should government intervene, "thorough-going competition among wage-earners would have been interdicted; and it is no part of the classical view that, if that were done, there would be a tendency for full employment to establish itself."[121]

Pigou's "real-balance effect" would prove to upset a fundamental argument of Keynes. Arguing that markets cannot self-correct in a state of unemployment (or recession), Keynes asserts that downward price and wage flexibility do not exist because "of the agglomeration of monopoly power on both the input and output sides of the market."[122] Additionally, Keynes argues that falling prices beget falling wages by equiproportional amount, and consequently, income and employment do not increase. Hence, real wages would not decline. Pigou counters this analysis with the recognition that when prices decline, the real balance (M/P=real value of money, where M=money, P=price level) or purchasing power of the money stock increases. That is, as the price level declines, the real exchange value of each unit of money rises. In effect, a general "wealth effect" (or portfolio imbalance creating too much money) stimulates consumption spending. The important recognition of this fact by Pigou nullifies Keynes' liquidity trap and faulty analysis of falling prices. To Ekelend and Hebert, "the Pigou effect saves neoclassical theory" from Keynes' condemnation.[123] This may be a gross exaggeration,

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[121] Ibid., 25.
[122] Ekelund, Robert, and Robert Hebert, *A History of Economic Theory and Method,* 4th ed. (New York: McGraw-Hill Co., 1997), 480.
[123] Ibid., 481.

but it nonetheless reveals a belief by some that the Pigou effect is central theory to modern macroeconomics.

With regard to a more specific view on Say's Law, Pigou argues that "the problem in recession is that there is not enough aggregate demand, and the practical remedies are related to whether the level of demand can be increased."[124] Demand is considered to be deficient due to supply side discoordination. While Pigou asserts that the government can increase demand artificially, he does not abandon Say's Law in the haphazard manner of Keynes. However, he compromises the truth in erroneously attributing the cause of recessions to demand deficiency. Like Marx, who conceded the points that strengthen the defense for Say's Law, Pigou accepts the Malthus-Keynes "underconsumptionist" cause of recessions. In doing so, he undercuts much of the logic of his argument, for wrongly identifying an event's cause likely leads to an incorrect solution.

While Pigou misunderstands the origin of recessions, he still adopts the theoretical framework of the law of markets. For instance, in describing the effects of unemployment occurring in one or several markets, he writes that the producers of these markets will reduce purchases from various other markets during this time of economic trouble. As a result, demand for some (or all) goods in various markets declines. While Pigou does not overtly state that this decline in demand results from a decline in production, the logical steps which he takes clearly imply that one leads to the other (i.e,

[124] Kates, Stephen M., *Say's Law and the Keynesian Revolution: How Macroeconomic Theory Lost its Way*, (Cheltenham: Edward Elgar Publishing, 1998),.94.

a drop in production leads to a drop in demand). He also argues that the causes for recessions in various periods arise from difficulties independent of money. That is, the causes occur with or without the existence of money in the world. However, he argues, in reality adjustments (like recessions or gluts) "are intensified by reflex price influences."[125] This is due to the varying turnover rates of money balances affected by varying economic conditions; when time are "good," people borrow more and turn over balances frequently, while in "bad" times, saving increases and pessimism over the future of the economy increases.

Pigou may not thoroughly embrace Say's Law but his real-balances effect has implications which severely hurt Keynes' argument against the ability for markets to adjust to crises. Furthermore, the Pigou effect supports the conclusions introduced by Walras' Law that point out the role of money as a major factor in analyzing the causes and definitions of crises. If nothing more, Pigou clarifies the main disequilibrium implications of Walras' Law.

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[125] Pigou. A.C., *Essays in Applied Economics*. (London: P.S. King & Son, Ltd, 1923), 37.

XIV. Leon Walras

One of the objectives of this paper is to affirm or deny that Walras' Law[126] is the formalization of Say's, and that the implications of Walras' Law (in addition to Say's Law) are crucial to a solid understanding of macroeconomic theory. Whether Walras fully accepted Say's own writing or not is somewhat irrelevant, for the relation between the two theories may be found present despite any intentional devotion to Say's Law by Walras. We acknowledge that Walras himself never attributes his development of Walras' Law to Say, though he must have been familiar with his fellow Frenchman's work.

The French economist Leon Walras (1834-1910) remains an important figure in economics as a leader of the marginalist utility revolution. He is also perhaps the most influential economist in "mathematizing" the field of economics. Walras was never formally trained in economics, though his father was an economist and taught Walras in a manner akin to the relationship between John Stuart and James Mill, albeit a less rigorous training. Despite Walras' lack of formal economic training, Joseph Schumpeter regarded him as "the greatest of all economists." His study and understanding of mathematics is present throughout his writing on economics. He is most noted for his general equilibrium theory and Walras' Law. Walras' Law says that if N-1 markets experience positive excess demand>0 (glut), then the Nth market has negative excess demand

[126] Broadly defined, Walras' Law says that if N-1 markets experience excess demand>0, then the Nth market must offset the excess demand so that the aggregate sum of excess demand equals zero.

(shortage) of equal money value because the aggregate sum of excess demand always equals zero. In other words, the total value of all goods demanded (including money) must equal the total value of goods supplied (including money). Thomas Sowell remarks that it also "implies that an excess quantity of [all] goods supplied is the same as an excess demand for money."[127] Sowell's interpretation is somewhat unclear, but it appears that he means that Walras' Law implies that a general positive excess supply of all non-money goods is equal to a general negative excess supply of money. That is, Sowell rearranges the formula of Walras' Law from

$$(1)\ \sum_{i=1}^{n}(p_iD_i - p_iS_i) \equiv 0$$

$$(2)\ \sum_{i=1}^{n}p_iD_i = \sum_{i=1}^{n}p_iS_i \quad \text{whereby}$$

$$(3)\ \sum_{i=1}^{n}p_iD_i \equiv \sum_{i=1}^{n-1}p_iD_i + D_n \quad \text{and}$$

$$(4)\ \sum_{i=1}^{n}p_iS_i \equiv \sum_{i=1}^{n-1}p_iS_i + S_n$$ where D_n and S_n represent the nth (money) markets.

Therefore, Sowell is simply observing the conditions which hold given mathematical rearrangements of Equation (1).

Walras has been frequently compared and contrasted with Alfred Marshall, and it has been said that "perhaps one of the most instructive contrasts between Walras and Marshall concerns the so-called law of markets."[128] While Marshall emphasizes the role

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[127] Sowell, Thomas. *Say's Law: An Historical Analysis,* (Princeton: Princeton University Press, 1972), 34.

[128] Ekelund, Robert B., and Robert F. Hebert, A *History of Economic Theory and Method.*388.

of quantity differences in markets, particularly as the "adjusting variable" to maintain equilibrium, Walras highlights prices as the key adjusting mechanism to overcoming disequilibrium.

Walras builds up to his law in *Elements of Pure Economics*, published originally in 1874 in French, and the first major work laying the groundwork for mathematical economics. Walras first addresses a two-market, barter exchange economy. It is clear that Walras entirely accepts Say's Law under a barter economy. Developing his argument further, he then introduces money (artificially, as opposed to Say's and Carl Menger's treatment), and as before, implicitly accepts Say's Law when commodity money is introduced. Implicitly, if money is a commodity, then Walras' Law indicates that given instantaneous equilibrium price adjustments, an increase or decrease in money demand does not lead to a general glut. However, Walras' Law extends his acceptance from the simple barter economy to a world where fiat money, saving, and complexity exists.

Related peripherally in terms of an understanding of a general equilibrium theory, Walras mathematically concludes that the equilibrium of m-1 markets mathematically implies an equilibrium in the mth market. Walras states his framework based upon general equilibrium analysis after some careful mathematical derivations.

> Thus m-1 prices of m-1 of the m commodities are determined mathematically in terms of the mth commodity which serves as the *numeraire*, when the following three conditions are satisfied: first that each and every party to the exchange obtain the maximum satisfaction of his wants, the ratios of his *raretes* then being equal to the prices; second that each and every party give up quantities that stand in a definite ratio to the quantities received and vice versa, there being only one price in terms of the *numeraire* for each commodity, namely the price at which

> total effective demand equals total effective offer; and third that there be no occasion for arbitrage transactions, the equilibrium price of one of any two commodities in terms of any third commodity.[129]

It is clear that Walras believes that "the upward and downward movements of prices solve the system of equations of offer and demand."[130] His emphasis on the important function of prices in maintaining equilibrium reveals a weakness in Say's own analysis, which often lacked a focus upon prices as the crucial key to markets adjusting in times of crises.

Concluding his analysis, Walras summarizes Walras' Law as follows (Walras' italics):

> We are now in a position to formulate the law of the establishment of equilibrium prices in the case of the exchange of several commodities for one another through the medium of a *numeraire: Given several commodities, which are exchanged for one another through the medium of a* numeraire, *for the market to be in a state of equilibrium or for the price of each and every commodity in terms of the* numeraire *to be stationary, it is necessary and sufficient that at these prices the effective demand for each commodity equal its effective offer. When this equality is absent, the attainment of equilibrium prices requires a rise in prices of those commodities the effective demand for which is greater than the effective offer, and a fall in the prices of those commodities the effective offer of which is greater than the effective demand.*[131]

Beyond his contributions through Walras' Law, Walras adopts some ideas relevant to the discussion. For instance, he separates investment and saving, thereby suggesting a potential problem arising from inequalities between the two. "Keynes did not accept Say's Law, emphasizing the fact that investment and saving are independently

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[129] Walras, Leon. [1926], *Elements of Pure Economics,* Translated by William Jaffe, (New York: Augustus M. Kelley Publishers, 1969), 169.
[130] Ibid., 170.
[131] Ibid, 172.

decided by different groups of individuals, while Walras, although he also emphasized this same fact, paradoxically assumed a smooth adjustment of aggregate investment to aggregate saving," writes Michio Morishima, an opponent of Say's Law.[132] While Keynes himself wrote that aggregate investment and aggregate saving must necessarily be equal, he apparently did not regard this equality as assured.

Walras never formally attributes his "law" to Say, nor does he suggest that Walras' law is a sophisticated understanding or explicit formalization of the law of markets. In fact, Walras mentions Say in his *Elements of Pure Economics* only to compare Smith and Say's respective theories of value. However, the relation between Say's Law and Walras' Law, whether explicitly intentional or not, remains firm. W.H. Hutt writes "Walras' famous work can be reasonably interpreted as a detailed, mathematical statement of the law of markets, although Walras himself *seems* not to have perceived it."[133]

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[132] Miroshima, Michio, *Walras' Economics: A Pure Theory of Capital and Money,* (Cambridge: Cambridge University Press, 1977), 60.
[133] Hutt, W.H., *A Rehabilitation of Say's Law,* (Athens: Ohio University Press, 1974), 46.

XV. John Maynard Keynes

Undoubtedly Say's greatest critic of the 21^{st} Century, John Maynard Keyes (1883-1946) is perhaps his most successful opponent, for Keynes literally carved out the field of macroeconomics. Much of his analysis was accepted for decades despite negative reviews at the time of its publication, and many—though not all—mainstream economists, who for various reasons embraced his "New Economics" without serious inquiry into its merits and faults. Even opponents of Keynes, such as Milton Friedman and the Chicago School, engaged in a battle with Keynes in his own terms, leading to their (perhaps unintended) acceptance of the Keynesian framework and methodology while simultaneously maintaining that his analysis fell short. Thus the debate became about the details of Keynesian thought, rather than its validity as a general framework for economic analysis.

What largely distinguished Keynes from his predecessors and contemporaries was his new approach to economics, with an emphasis on short-run conditions and theories based upon new assumptions that would later be formalized into a set of IS-LM models. There appear to be substantial evidence that most economists shortly prior to Keynes were very confused on money and the macroeconomy. As economist Leland Yeager plainly stated to me, "economic theory was in a sorry state of affairs just prior to Keynes." This provided an opportunity for an ambitious economist to reject the "archaic" classical notions and provide a new set of tools and analysis. Consequently, some have suggested that perhaps the classicals' passive defense of Say's Law fueled Keynes' revolt away from Say's Law and other classical discoveries. Hutt argues that "the relevant content of [classical] economics which Keynes attacked was not its monetary theory but its tacit acceptance of Say's law."[134]

It has been argued that Keynes' greatest accomplishment was his attack on Say's Law. Indeed, over half a century ago Paul M. Sweezey predicted that today's economists would regard Keynes as victorious over the "classical fallacy." "Historians fifty years from now may record that Keynes' greatest achievement was the liberation of Anglo-American economics from a tyrannical dogma [namely, Say's Law], and the may even conclude that this was essentially a work of negation unmatched by comparable positive achievements."[135] Fifty years after Sweezey wrote this, the question over whether economists outright (or implicitly) reject (or accept) Say's Law remains important.

Keynes vigorously attacked Say's Law, claiming that its fundamental premise in classical economics was a primary cause for erroneous classical economic theory. Keynes, like Malthus before him, believed that defenders of Say's Law believed without exception that general gluts could *never* occur. Henry Hazlitt counters this belief, writing that "No important economist, to my knowledge, ever made the absurd assumption (of which Keynes by implication accuses the whole classical school) that thanks to Say's Law depressions and unemployment were impossible, and that everything produced would automatically find a ready market at a profitable price."[136]

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[134] Ibid., 143. Hutt used unnecessary italics, which I have removed here.
[135] Sweezey, Paul M. in *The New Economics*, ed. Seymour E. Harris, (New York: Alfred Knopf, 1947), 105.
[136] Hazlitt, Henry, *The Failure of the 'New Economics'*, (Princeton: D. Van Nostrand Company, 1959), reprint, (Irvington-on-Hudson: The Foundation for Economic Education, Inc., 1994), 35.

In large part, the argument between Say and Keynes centers on what Keynes regards as the basic belief by classical economists that the free market tends toward full employment. By regarding full employment—except during times of recessions—as the normal state of economic affairs, many of the classical economists relied on Say's Law as being valid. In reality, says Keynes, the actual existence of chronic unemployment in markets refutes Say's Law as a general principle. In reality, unemployment simply means that a labor glut exists (which usually coincides with other gluts in goods and services). Keynes does not hide his scorn of Say's Law because he devoted four pages of his *General Theory* to debunking Say's Law. In his most famous passage on the principle, he remarks that

> I doubt if many modern economists really accept Say's Law that supply creates its own demand. But they have not been aware that they were tacitly assuming it. Thus the psychological law underlying the multiplier has escaped notice. It has not been observed that the amount of consumption goods which it pays entrepreneurs to produce is a function of the amount of investment goods which it pays them to produce. The explanation is to be found, I suppose, in the tacit assumption that every individual spends the whole of his income either on consumption or on buying, directly and indirectly, newly produced capital goods. But, here again, whilst the older economists expressly believed this, I doubt if many contemporary economists really do believe it. They have discarded these older ideas without becoming aware of the consequences.[137]

This passage is little more than an artful parody of Say, for it wrongly characterizes Say's Law, and then proceeds to argue in terms of poorly defined aggregates. He relies upon a function based on autonomous investment as a function of consumption. He has been criticized for separating saving and investment so much that he loses sight of their interconnectedness. Fearing inequalities between the two, he ignores the role of time in the individual's decision-making process, whereby one may choose to move consumption into the future for a multitude of reasons. As suggested by the fact that individuals must have a rational motive to save (and invest), the relationship between investment and interest rates is considered to be inversely related.

Importantly, Keynes quotes John Stuart Mill's *Principles of Political Economy*, and this reference has become the cause of much criticism over Keynes' attack on Say's Law.[138] Numerous scholars have acknowledged that Keynes cuts J.S. Mill's passage short, and in doing so, eliminates the most important part of Mill's argument. Some have contended that Keynes simply borrowed Mill's quote from a second-hand source, and did not realize that he had missed the meaning of the passage by unknowingly eliminating the crux of the argument. Furthermore, the passage was taken out of context, and does not fully encompass the classical understanding of Say's Law. As Keynes' quotes, John Stuart Mill argues that

> What constitutes the means of payment for commodities is simply commodities. Each person's means of paying for the production of other people consist of those which he himself possesses. All sellers are inevitably, and by the meaning of the word, buyers. Could we suddenly double the productive powers of the country, we should double the supply of commodities in every market; but we should, by the same stroke, double the purchasing power. Everybody would bring a double demand as well as supply; everybody would be able to buy twice as much, because every one would have twice as much to offer in exchange.

[137] Keynes, John Maynard. *The Collected Writings of John Maynard Keynes,* Vol. XIV.

[138] I mention Keynes' omission in a prior section on John Stuart Mill, but have added the quotation again due to its significance in the understanding of Keynes' attack on Say's Law.

The following remarks by J.S. Mill provide the context for his statements and fulfill the meaning of what Keynes quoted. These observations immediately following the quotation above in Mill's original text:

> It is probable, indeed, that there would now be a superfluity of certain things. Although the community would willingly double its aggregate consumption, it may already have as much as it desires of some commodities, and it may prefer to do more than double its consumption of others, or to exercise its increased purchasing power on some new thing. If so, the supply will adapt itself accordingly, and the values of things will continue to conform to their cost of production.[139]

Keynes attacks Say directly in his magnum opus, *The General Theory of Employment, Interest, and Money*, by stating that his theory is an express rebuttal of Say's "classical doctrine." After establishing two functions, $Z=\varphi(N)$ and $D=f(N)$ (where Z is defined as the aggregate supply function of final goods and services, and D is defined as the aggregate demand function, with N representing the size of employment in terms of workers), he argues what Say's Law means in terms of his functions. Keynes provides no mechanism tying these two arbitrary non-monetized aggregate functions together.

> The classical doctrine, on the other hand, which used to be expressed categorically in the statement that 'Supply creates its own Demand' and continues to underlie all orthodox economic theory, involves a special assumption as to the relationship between these two functions. For 'Supply creates its own Demand' must mean that $\varphi(N)$ and $Z(N)$ are equal for *all* values N, i.e. for all levels of output and employment; and that when there is an increase in $(Z= \varphi(N))$ corresponding to an increase in N, $(D=f(N))$ necessarily increases by the same amount as Z. The classical theory assumes, in other words, that the aggregate demand price (or proceeds) always accommodates itself to the aggregate supply price; so that, whatever the value of N may be, the proceeds D assume a value equal to the aggregate supply price Z which corresponds to N. That is to say, effective demand [which Keynes defines as the point where aggregate supply and aggregate demand functions are equal or intersect], instead of having a unique

[139] Mill. John Stuart, *Principles of Political Economy*, Book III. Ch xiv, Sect. 2, 558.

> equilibrium value, is an infinite range of values all equally admissible; and the amount of employment is indeterminate except in so far as the marginal disutility of labour sets an upper limit.[140]

This is the crux of Keynes' argument against Say's Law, or at best, it is his most sophisticated dismissal of it. Importantly, Keynes' use of quotations is erroneous since he can find no classical economist who said precisely "supply creates its own demand." The quote is simply a fabrication of Keynes', whether intentionally misleading or not. He also ignores an explicit analysis of money, a serious error, especially since Keynes writes later that while Say's Law holds in a barter economy, the presence of money erases its relevance. Keynes implicitly assumes that money demand equals money supply (or simply neglects money period), though his greatest error is in ignoring forces for repricing of N and Z. He also ignores the basis of Say's Law—that the motive for production is to sell and subsequently demand.

While Keynes is the most famous of all critics of Say's Law, his references to it are surprisingly sparse. He devotes only four pages in his *General Theory* to Say's Law, and finds himself content to consider it totally refuted after that brief passage. Keynes' refutation of Say's Law fails on several levels, and what's even more important is that Keynes readily admitted that a refutation of Say's Law was the fundamental core to Keynesian theory. Hence, if Say's Law stands, the Keynesian Revolution tumbles.

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[140] Ibid, Vol. VII, 25-26.

XVI. Oskar Lange

Oskar Lange (1904-1965) serves as perhaps the most significant contributor to clarifying the *meaning* of Say's Law in the Twentieth Century. He links Say's Law to Walras' Law, and while he cannot be considered a proponent of Say's Law, his contribution actually helps the argument for Say's Law. In particular, his mathematical treatment of Say's Law provides a formalized emphasis on its role in a closed system. Hence, though Lange is ultimately critical of the law of market's simplified assumptions, he helps us understand what Say's Law means. Lange's article "Say's Law: Restatement and Criticism" fueled a lengthy debate over the original intent and understanding of Say's Law by the classical economists.

Given Lange's extensive treatment of Say's Law and in the interest of focusing on the key aspects of his article, a concise general outline for his reasoning is as follows: Say's law states, according to Lange, that total supply of commodities identically equals total demand for commodities. In a closed system, Walras' Law is a generalization of Say's Law, though Walras' Law does not rely on individual commodities (or markets) maintaining equilibrium, but rather, only an aggregate accounting constraint. Aggregate money value of supply and aggregate money value of demand are equal under the necessary and sufficient requirement of the condition of monetary equilibrium. In the absence of money, or when money is a "veil," total demand for commodities equals total supply of commodities. Money and commodities are considered substitutes under Say's Law. General overproduction may not occur only in the sense that unplanned entrepreneurial profits must be offset by too optimistic planned profits in another sector or part of the system. Say's Law does not require or suggest that total supply of and total demand for (final) *products* must hold, i.e., that each stage of production must be in equilibrium. Relative prices are independent of the money supply under Say's Law. Because Say's law excludes monetary theory, it follows that any monetary theory must inherently reject Say's Law. This is the ultimate conclusion of Lange, that while Say's Law may stand in a simple economy, a modern economy using monetary theory of any kind presupposes a rejection of Say's Law. Significantly, Lange—not Say—sets up Say's Law to lead to conclusion.

Lange makes no reference to whom or what served as the source for his understanding of the definition of Say's Law, but it seems unmistakable that Keynes' assertion that Say's Law means "supply creates its own demand" influenced Lange's understanding of the law. Indeed, Lange develops the proposition by Keynes that Say's Law regards unemployment impossible since aggregate supply meets aggregate demand. He unflinchingly asserts that:

> Say's law is the proposition that there can be no excess of total supply of commodities (general oversupply) because the total supply of all commodities is *identically* equal to the total demand for all commodities. Under certain assumptions as to the nature of the demand for money this proposition appears as a simply corollary of the general theory of prices. Associated with it is proposition that there cannot be such a shortage of total entrepreneurial receipts relative to total entrepreneurial cost as to cause losses throughout the whole economy (general overproduction).[141]

[141] Lange, Oskar, [1942], "Say's Law: A Restatement and Criticism," *Studies in Mathematical Economics and Econometrics*, Reprinted, (New York: Books for Libraries Press, 1968), (originally Chicago: University of Chicago Press, 1968), 49.

As Stephen Kates interprets this passage, he argues that it "is a restatement of Keynes' definition of Say's Law—'aggregate demand price of output as a whole is equivalent to its aggregate supply price for all volumes of output'—and leads to similar conclusions. Both Keynes and Lange agree that recession and unemployment are ruled out by Say's Law because total demand is always equal to total supply."[142] The most important implication from this aspect of Say's Law is that the price system is immaterial, i.e., it has no effect on the relative prices and adjustment mechanism. In this price structure, money is virtually a veil. Lange is clearly unfamiliar with John Stuart Mill's brilliant arguments on this matter, particularly where J.S. Mill clarifies that a shortage of money can exist. Yet it is from Lange's understanding of Say's Law—void of J.S. Mill's approach to the law—that the debate arises over Say's *Identity* versus Say's *Equality*, and their respective relations to Walras' Law. Gary Becker and William Baumol would later address Lange's understanding of Say's Law, concisely summarizing that "by summing over all individuals, we see that at any set of prices the total money demand for *commodities* will be equal to the total money value of the quantity supplied of all *commodities*. It is this which Lange... [has] identified with Say's Law."[143]

From the definition stated above, Lange considers a closed system, and through mathematical deduction, derives the formula for Say's Identity, which Lange calls "*Walras' law* because Walras was the first to recognize its fundamental importance in the formulation of the mathematical theory of prices. It should be noted that Walras' law

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[142] Kates, *Say's Law and the Keynesian Revolution*, 169.
[143] Becker, Gary S. and William J. Baumol, "The Classical Monetary Theory: The Outcome of the

does not require that the demand and supply of each commodity, or any of them, be in equilibrium."[144] In mathematical form, Lange represents Say's Identity (or Walras' Law as) total demand and total supply being identically equal in basically a tautological sense. He then derives a similar equation which states that the demand for money equals the demand for supply. As a result, Lange combines both equalities to conclude that "total demand for commodities is equal to total supply of commodities only in a state of *monetary equilibrium*."[145] Lange seems to readily admit that under the condition of monetary equilibrium and under Walras' Law, aggregate money value of supply for goods equals aggregate money value of demand for goods. Becker and Baumol explain Lange's understanding of Walras' Law when they write that "If we call paper money a good and sum over all individuals, then by definition the total value of *goods* (including money flow) demanded…is identically equal to the total value of goods (including money flow) supplied. This result, which Lange calls Walras' Law, has nothing whatsoever to do with equilibrium in the various markets, and holds for *all* price configurations."[146]

However, Lange's criticism of Say's Law centers on his contention that the law of markets argues beyond the naturally acceptable equalities of aggregates under monetary equilibrium. "Say's law makes a much stronger claim than either Walras' law of the equality of total demand for commodities and total supply of commodities under conditions of monetary equilibrium. It states that the total demand for commodities

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Discussion," *Economica.* 19(76), (Nov. 1952): 355.
[144] Lange, "Say's Law: A Restatement and Criticism," p. 50.
[145] Ibid., 52.
[146] Becker and Baumol, "The Classical Monetary Theory," 356.

(exclusive of money) is *identically* equal to their total supply… From [this] we see immediately that, in order that Say's law should hold, it is necessary and sufficient that" aggregate demand for money necessarily identically equals aggregate supply of money.[147] Say never actually said what Lange asserts that he says, thereby taking away considerable strength from Lange's arguments. It seems clear, according to Lange, that this necessity for equality of money demand and supply implies that Say's Law holds in a barter economy. Hence, by this line of reasoning, critics like J.M. Keynes could feasibly acknowledge that Say's Law holds in a primitive barter economy, while attacking it as utterly useless in a more complex monetized economy.

Extending the argument that Say intended that total money demand always equals total money supply, Lange states that "Say's law implies a peculiar nature of the demand for money, namely, that the individuals in our system, taken together, are *always* satisfied with the existing amount of money and never wish to hold either more or less. There is never a desire to change the total cash balances otherwise than to adapt them to changes in the amount of money available." Lange correctly addresses an error in Say's own thinking, yet he limits the scope of the understanding of Say's Law by the classical economists in general. He continues, suggesting that "this peculiar nature of the demand for money implied in Say's law was clearly understood by its original proponents. They assumed it explicitly by stating that money is only a medium of exchange and abstracting from its function as 'store of value.'"[148] However, the understanding of price levels varied

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[147] Ibid., 52.
[148] Ibid., 53.

amongst the classical economists; while Say himself shrugged aside concerns about price levels, not all of his contemporaries were that quick to reject the very possibility for price levels playing a role in the ability for Say's law to apply. While the classical economists certainly considered conditions with flexible prices and constant general prices, they recognized that factors such as government policies, long-term wage contracts, labor unions, and so forth, would invariably complicate the market's adjusting mechanism.

After addressing what Lange considers to be the primary essence of Say's Law, he then turns to what he calls a proposition extending from Say's Law. In particular, he relates the classical view of entrepreneurial profit to their alleged argument that general overproduction or gluts can never occur. Of course, as prior sections reveal, most if not every classical advocate of Say's Law conceded the possibility for general gluts under certain conditions. Lange asserts that

> From its very first enunciation Say's law has been associated with the proposition that there can be no 'universal glut' or 'general production' in the sense of all entrepreneurs suffering losses... Total entrepreneurial receipts are thought of as being identically equal to total cost plus some measure of profit (to be discussed later), and a deficiency of receipts with respect to one commodity must, therefore, be accompanied by a surplus of receipts with respect to some other commodity (or commodities). 'Overproduction' can be only 'partial,' each partial overproduction being accompanied by a partial underproduction somewhere else in the economic system.[149]

While Ricardo does argue that a general glut cannot occur,[150] it may be significant that Ricardo was less active in defending Say's Law than many of his contemporaries and his

[149] Ibid.

[150] As Lange quotes, Ricardo writes "Too much of a particular commodity may be produced, of which there may be such a glut in the market as not to repay the capital expended on it; but this cannot be the case with respect to all commodities." This passage is from the edition of Ricardo's *Principles of Political Economy and Taxation*, 227, cited previously.

contributions to the defense of Say's Law are both sparse and distinctly Ricardian in nature. That is, Ricardo defends Say's Law with distinctive arguments not advanced by other classical advocates. In a sense, Lange is addressing isolated arguments for Say's Law and treating them as though they were the generally accepted opinions of all (or most) of the classical defenders. While many of the classical economists argued from the understanding that the constraints of a closed system necessarily prevented a general glut from occurring, their primary concern was in addressing the *cause* of crises.

Addressing the realm of entrepreneurial profits, Lange asserts that "an impossibility of realizing planned profit in one part of the system must be compensated by a possibility of realizing more than planned profit in some other part of the system. It is in this sense that 'overproduction can only be partial.'" Lange concludes that "this holds, however, only for a purely capitalistic system."[151] Consequently, Lange apparently accepts the implication by Say's Law that general overproduction cannot occur in a "purely capitalistic system," which he ambiguously defines as "a system in which there are not direct services."[152] I have assumed that Lange refers to a pure barter economy when using the term "capitalistic system," though his exact meaning remains vague.

Lange then addresses what Say's Law does *not* mean: "Say's Law, however, does *not* imply that the total demand and the total supply of products are identically equal. Neither does it imply an identity of the total demand and the total supply of primary

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[151] Ibid. 57.
[152] Ibid. 56.

factors and direct services."[153] Through continued reasoning, he eventually concludes that Say's Law doesn't require "stability conditions" holding in the entire system, but "the existence of a stable equilibrium for two broad classes of commodities, namely, the class of products and the class of primary factors and direct services," or the condition under which "*net* stream of money offered to entrepreneurs is equal to the *net* stream of money demanded by them, and entrepreneurs can realize their planned total profit and their demand for new investment."[154]

Returning again to the role of prices in Say's system, Lange concludes that due to the "peculiar nature" of money demand assumed by Say's Law, "Say's Law precludes substitution between money and commodities because it implies that purchases of commodities cannot be financed from cash balances and that cash balances cannot be increased out of the receipts from sales of commodities." Consequently, "the demand and supply functions of commodities are, when Say's Law holds, homogeneous of zero degree, i.e., a proportional change of *all* prices does not affect the quantities demanded or offered. These quantities depend merely on the *relative prices*, i.e., on the ratios of prices."[155]

Becker and Baumol address the "allegations" and argue with clarity that the classical economists—particularly Hume and Cantillon—asserted no such theory of prices. Furthermore, they argue that Pigou's real balance effect "is part and parcel of the

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[153] Ibid., 58.
[154] Ibid, 59.
[155] Ibid, 63.

classical stationary state."[156] However, Lange ignores or rejects the evidence by several of the classical economists themselves, and concludes that "the traditional procedure of the theory of money involves a contradiction. Either Say's law is assumed and money prices are indeterminate or money prices are made determinate—but then Say's law and hence the 'neutrality' of money must be abandoned. Say's Law precludes any monetary theory."[157] Ultimately, Lange finds that "Both in static and in dynamic theory Say's law leaves money prices indeterminate."[158] Thus begins the modern interpretation of Say's Law, with the particular emphasis that Say's Law applies exclusively to a barter economy.

Lange considers the implications of Say's Law based upon his understanding of its original intent, and while his conclusions logically derive from his definition of Say's Law, he in fact derives his definition from *Keynes*, rather than Say (or other classicals). It appears that Lange focused too heartily on interpreting what the classical economists meant without pursuing their own words in primary sources first. His conclusions have been broadly accepted, and it might be reasonable to assert that Lange, rather than Keynes, most powerfully denounced the law of markets. While a proper understanding of his formal consideration of Say's Law provides some strong arguments *defending* Say's Law, Lange's view should be considered one of mixed results: he ultimately rejects Say's Law, but many of his arguments promote its soundnes

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[156] Becker and Baumol, "The Classical Monetary Theory," 364.
[157] Lange, 65-66.
[158] Ibid, 68.

Law, Lange's view should be considered one of mixed results: he ultimately rejects Say's Law, but many of his arguments promote its soundness, at least under certain conditions.

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[158] Ibid, 68.

XVII. Joseph A. Schumpeter

Joseph Schumpeter (1883-1950) was a major critic of Keynes and Marx in the Twentieth Century. He contributed to the understanding and analysis of business cycles, and remains an important figure in economic analysis.

Schumpeter provides a distinct analysis of Say's contribution. In his *History of Economic Analysis* (1954), Schumpeter addresses the theory behind Say's Law. First, he argues that free trade arguments derive initially from the clear understanding of free markets domestically. This, he says, Say understands clearly in the sense that Say (as Schumpeter phrases it) asserts that "production increases not only the supply of goods in the markets but normally also the demand for them. *In this sense*, it is production itself ('supply') which creates the 'fund" from which flows the demand for its products."[159] Schumpeter then devotes himself to discussing the implications of understanding Say's Law in terms of aggregates versus partial analysis. He argues that many crucial results arise from Say's Law, including a rejection of the possibility for general gluts. Schumpeter agrees with Sa

While he is critical of Say's often-brash assertions and frequently muddled arguments, Schumpeter recognizes his contribution as important: "As stated, Say's Law is obviously true. Nevertheless, it is neither trivial nor unimportant."[160] In a later

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[159] Schumpeter, Joseph A., [1954], *History of Economic Analysis*, 5th ed. (New York: Oxford University Press, 1963), 616.
[160] Ibid., 617.

discussion on business cycles, Schumpeter reveals most lucidly the actual importance of Say's Law:

> So far as the subject of crises is concerned, the main merit of [Say's] law was a negative one. Say showed successfully that, however large the phenomenon of overproduction may loom in the historical picture of individual crises, no causal explanation can be derived from it: there is no sense in saying that there is a crises *because* 'too much' has been produced all round. Though negative, this contribution was very important. It may be said to stand at the fountainhead of the scientific analysis of cycles to mark the point at which the latter broke away from pre-analytic thought.[161]

Clearly a recognition of causation in the understanding of crises leads to better reactive policies.

Schumpeter is not a strong defender of Say's Law, but he recognizes its analytical soundness. He contributes to the debate as a major critic of Keynes, and as such, he provides insight into the role of Say's Law in the mind of one of the great economists of the Twentieth Century.

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[161] Ibid., 739.

XVIII. W.H. Hutt

Without doubt, one of the best analyses of Say's Law can be found in W.H. Hutt's *A Rehabilitation of Say's Law*, published in 1974 shortly after Thomas Sowell published an inferior historical analysis of the law. It is Hutt who argues more emphatically than any other economist that Say's Law is of utmost importance. He states

> that a grasp of [the Law] is indispensable for an understanding of the true genesis of depression and of prosperity without inflation; that attempts at dynamic treatment of the economic system which ignore it are worthless; that new "withholdings of inputs or outputs," mainly consequent upon the failure to price all such inputs and outputs for "market clearance" into consumption or stock accumulation, are the origin of depressed economies; that the path from that condition to non-inflationary prosperity is always *via* the dissolution of such "withholdings"; that this objective can be achieved only by institutional reforms aimed successfully at creating incentives for (and/or the removal of disincentives for) the pricing of all inputs and outputs for "market clearance"; and that such reforms facilitate the mechanism whereby (in the money economy) all inputs and outputs are (subject to inevitable human error) continually co-ordinated in the light of the current or expected value of the money unit.[162]

Clearly Hutt regards Say's Law as "the most fundamental law in all economic theory."[163] Though familiar with the classical and modern arguments for and against Say's Law, Hutt comes to the conclusion that Say's Law is crucial to the understanding of macroeconomics.

Before attempting to defend Say's Law, Hutt confronts the frequent objections to Say's Law. Perhaps directly addressing Lange's article, Hutt counters the argument that Say's Law "tacitly assumes away changes in the demand for money and, in particular,

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[162] Ibid., 5.
[163] Ibid., 10.

overlooks those variations in that demand which are not correlated with real output. It is the latter charge which is most serious." Hutt cites a variety of factors, including seasonal, temporary, speculative, preferential, or permanent, for individuals to alter their demand for money. "But none of these sources of variations in demand for monetary services, of which every monetary policy must take cognizance, affects the relevance of Say's law."[164] Hutt defends Say's Law against those who contend that it completely ignores the role of monetary theory. Furthermore, critics who cite disturbances (such as deflation or downward "sticky" prices) as arguments against Say's Law have it backwards, according to Hutt. "The cumulative depressive effects of price rigidity in deflation (or in curbed inflation)," he writes, "*are explained by it.* Supplies (hence demand) are *withheld* cumulatively."[165]

While Kates argues that "Hutt has a firm grasp of the classical meaning of Say's law and of its implications,"[166] Mark Blaug argues that Hutt adopts a radical view of the law of markets. Writes Blaug, "If the reader is now persuaded that he understands the meaning of Say's Law, at least in modern terms, he should take a look at W.H. Hutt…[who] argues that Say's Law is true then and now and, paradox of paradoxes, that it offers a complete and satisfactory explanation of the inherent tendency to depression in the modern industrial society!"[167]

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[164] Hutt, W.H., *A Rehabilitation of Say's Law,* (Athens: Ohio State Press, 1974), 30.
[165] Ibid, 31.
[166] Kates, *Say's Law and the Keynesian Revolution*, 208.
[167] Blaug, Mark, *Economic theory in retrospect,* (Cambridge: Cambridge University Press, 1985), 178.

Addressing Keynes' misunderstanding of Say's Law, Hutt quotes Keynes' *General Theory* and explains Keynes' erroneous reasoning. "Keynes thought that Say's law asserted that the 'aggregate demand price of output is equal to its aggregate supply price for all volumes of output,'" writes Hutt. "But this is not Say's law: it is 'Walras' Identity,' which is a sophisticated statement of the obvious. Because the price of every sale equals the price of the purchase, aggregate sales must always equal aggregate purchases. Each transaction can be looked at from two angles!"[168] Once again, Keynes' understanding of Say's Law comes under serious fire.

Addressing the criticism that Say's Law is unable to explain (or hold) during times of depression, Hutt retaliates boldly, arguing that "*Depression is, indeed, the consequence of cumulatively-induced refusals to sell at prices consistent with the cor-oridination of the economy.* This is the truth which Say's law ruthlessly exposes."[169] While Hutt addresses the various classical and modern oppositions to Say's Law, he acknowledges that unraveling Keynes' unemployment equilibrium theory is crucial to finding satisfaction with Say's Law. The controversy over partial versus general gluts is related to an analysis of recessions and depressions. Confronting the general overproduction argument against Say's Law, Hutt acknowledges that

> The fallacious notion of *general* over-consumption is related of course to the equally fallacious notion of *general* over-production. There is, in fact, no inconsistency (as some Keynesians have alleged) in Say's admission of the possibility of *particular* over-production or glut, while he denied the possibility of *general* over-production or glut. There *can* be "too much" of any commodity,

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[168] Ibid. 33-34.
[169] Hutt, *A Rehabilitation of Say's Law*, 37.

> but only in the sense that there is too little of another. Say could not have been more explicit on this point.[170]

Though Hutt may overemphasize Say's own understanding of the Law of markets, he recognizes the double-sided aspect of markets, namely, that too much of one thing implies too little of another. While Hutt does not expand his argument to the troublesome situations, such as when prices are inflexible or price levels are unpredictably dynamic, he clearly grasps the basic underlying argument behind Say's Law. However, he would advance his cause better by providing direct quotes by Say (and other classics) that stated what Hutt claims that Say said. Hutt has been criticized by even those who agree with him for his absence of primary sources providing the foundation for his arguments.[171]

The subject matter then turns to the Keynesian suggestion that markets chronically tend toward crises. Writes Hutt,

> Chronic idleness of productive capacity in general is not due to its being 'in excess.' Say's law explains how a widespread laying-off of men, together with idleness or idling in the complementary assets with which they work, is temporarily inevitable as long as chronic disco-ordinations [*sic*] in the pricing system are tolerated; and if the disco-ordinations)price-cost ratios incompatible with full market clearance) are not rectified, the idleness will persist until the unutilized assets or the unemployed people find sub-optimal employments...Say's law does *not*, then, "assume full employment" or imply that full employment is achievable whatever pricing (valuing) policies are adopted. What it *does* imply is that market pressures *could*, if permitted, have this effect.[172]

Contrary to the Keynesian models that presuppose inherent glitches in the market, the classical economists including Say analyzed phenomena based upon reasonable market

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[170] Ibid, 38.
[171] See Stephen Kates' *Say's Law and the Keynesian Revolution*.

conditions, allowing for variations in the analysis to arise from additional restrictions to the market adjustment mechanism. Importantly, Hutt's passage demonstrates that he, and presumably other defenders of Say's Law, realizes the potential for a lag-time preventing immediate relief from a crisis. This extended period of idleness results from lags in adjusting, rather than from intrinsic market failure. Implicitly, this conclusion suggests that policy should work to lift the burdens on the market process rather than intervening in the market.

Some have contended that Say's Law holds in the long-run as a static equilibrium that results due to the inevitable equality between aggregate demand and aggregate supply in the long-run. However, it is then argued that Say's Law is insufficient at explaining short-run phenomena, and it is short-run markets that Keynes addressed due, in part, to its neglect on the part of the classical economists. Confronting these skeptics, Hutt says that "Some have thought that Say's law is valid only as a long-term theorem; that it would hold under 'perfect price flexibility'; but that it is irrelevant to the price-rigid world of reality…Actually, the law simply makes clear that, in so far as inputs or outputs *are* actually supplied, by being priced for sale, they *are at that moment*—with no time lag—demanding non-competing things."[173]

Turning to an important area of inquiry for this piece, Hutt then addresses the relationship between Say's Law and Walras' Law. Hutt sees a clear and obvious relation between the two propositions: "Walras' famous work can be reasonably interpreted as a

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[172] Ibid, 39.
[173] Ibid, 40.

detailed, mathematical statement of the law of markets, although Walras himself *seems* to not have perceived it."[174]

[174] Ibid., 46.

XIX. Gary S. Becker and William J. Baumol

Gary Becker (1930—) and William J. Baumol (1922—) sought to address the classical monetary theory in their 1952 paper entitled "The Classical Monetary Theory: The Outcome of the Discussion." Becker and Baumol seek not to address Keynes' notably short and incomplete exposé of Say's Law, but instead, to address Oscar Lange's interpretation, which they contend played the primary role in the development of modern economists' understanding and debate over Say's Law. Importantly, Becker and Baumol reject Lange's view of the classical economists, and focus much of their paper on restoring the credibility of the classicals.

Becker and Baumol identify Lange's understanding of Say's Law (where money demand is always equal to money supply) as Say's Identity. "An immediate implication of Say's Identity, or rather an equivalent way of stating it," they write, "is that the quantity of money demanded, considered either as a stock or a flow, is independent of the price structure and is always equal to the quantity of money supplied." They conclude, "Thus, with Say's Identity the quantity of money flow demanded must always equal the quantity supplied."[175] Furthermore, they argue that the equality between quantity demanded and quantity supplied of money flow implies a similar equality between quantity demanded and quantity supplied of money stock. Say's Identity implies that money (or the price level) serves as a "veil" such that the doubling of all prices across the closed system causes no substitution between commodities since relative prices remain unchanged. They then cite a difficulty with the classical system, whereby "the analysis of price determination is thus necessarily incomplete as it cannot specify (equilibrium) absolute prices." Since the classical economists neglected to consider a cash balance or other sophisticated monetary theory, this contradicts "Say's Identity which, as we have seen, requires that the quantity of cash demanded equal the supply *no matter what the price structure.*"[176]

However, Becker and Baumol then modify this system by simply dropping Lange's spurious belief about the classicals, namely, that they assumed that the price structure and money demand are independent. As a result, if all prices double in this system, then individuals can respond in the money market, by increasing (or decreasing) money holdings by substituting commodities for cash holdings (or vice versa). Becker and Baumol remark that this new system "is thus clearly inconsistent with Say's Identity—supply of all commodities does not necessarily equal total demand for all commodities. In particular, these will not be equal if the price structure is such as to cause the quantity of cash demanded to differ from the supply." However, Becker and Baumol are able to reconcile this seemingly irresolvable contradiction by arguing that Say's Law may be interpreted to mean something other than Say's Identity. Specifically, "Say's Law can be interpreted in a way which makes it compatible with an economy in which the absolute price level does matter. This form of Say's Law, which we will call Say's Equality, states in effect that 'supply will create its own demand,' not despite the

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[175] Ibid. 357.
[176] Ibid. 358.

behavior of the price level but because of it."[177] Importantly, Becker and Baumol use Keynes' definition of Say's Law to describe Say's Equality. While Keynes may have distorted the meaning of Say's law, to find clarity in Say's Law within Keynes' own definition of it may provide a strong case in its defense. It may be advantageous to argue in the somewhat erroneous terms of the Law's opponents, since adopting their terminology could potentially further the cause of arguing skillfully that Say's Law does, indeed, hold.

Becker and Baumol consider a system where changes in the price level matter, and assert that "The Cambridge equation implies that for every relative price structure there exists a unique absolute price level at which the money market will be in equilibrium (Say's Equality)." Equivalently, "for every set of relative prices there exits a price level which brings about *overall* equilibrium in the commod
of money offered for commodities is equal to the total value of commodities supplied. Thus it is clear that [Say's Equality] is compatible with determinacy of an absolute price level."[178] Unfortunately Becker and Baumol have, in part due to Lange's inaccurate portrayal of Say's Law, digressed to the point of missing the importance of Say's Law—its analysis of crises.

Ultimately, Becker and Baumol argue that Say's Identity was *not* the understanding of Say's Law by the classical economists, and rather, they affirmed Say's Law in terms of Say's Equality. Furthermore, their understanding of the role of price

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177 Ibid. 359.
178 Ibid.

levels, contend Becker and Baumol, was not so naive as Lange (and others) believed. Their article provides considerable enlightenment of the possible meanings of Say's Law, and what they consider to be the most accurate definition of the Law according to the classical economists' understanding of markets.

XX. Modern Economists

One of the central areas of inquiry for this piece is to gain a general understanding of modern economists' perceptions of Say's Law, if they have any at all. The lack of any serious treatment of Say's Law in essentially *every single modern macroeconomics textbook* seems proof enough that the Law is not a major consideration in modern macroeconomics. However, its absence in textbooks doesn't illustrate what modern economists think or know of Say's Law; it simply reflects the fact that it is not considered important enough to be taught to students of economics. So what do modern economists exactly think of Say's Law? Without question, there is no uniform answer. I sought the views of prominent economists who are openly non-Keynesian economists. The most indelible impression left upon me is that great economic minds today do, indeed, believe that Say's Law holds.

An incident that occurred during my search for the modern understanding of Say's Law left an indelible market upon me. When Nobel Laureate Gary S. Becker told me in person that Say's Law holds both in a primitive (barter) economy and in more sophisticated modern economies, I realized that many modern economists (both macroeconomists and, in the case of Becker, microeconomists) accept Say's Law as a logical proposition that holds to varying extents (according to the individual views of the economists). However, despite this general acceptance of the Law, it is regarded as a subtle proposition, perhaps even underlying some of the common neo-classical macroeconomic models. This can best be seen in the widespread use of Walras' Law in economics.

Since there is little modern literature on Say's Law, I found it necessary to conduct conversations with several important economists and even a grad student. While the knowledge that I gained from these interviews may be unquantifiable, it was crucial to gaining an understanding of the modern perception of Say's Law.

Perhaps the heart of the controversy lies in non-uniformity in the definition, meaning, and scope of Say's Law. While none of the economists I spoke with offered identical meanings of Say's Law, the approach to it was similar. There seemed to be a general consensus that Say was dealing with common-man fallacies over the cause and nature of crises, and Say was countering the typical businessman's general perception, rather than academic circles alone. Further, it seems important to modern economists that Say's words must be put into context, both in terms of the period in which they were written (which was, incidentally, a politically volatile period in France) and the audience for which they were intended. Hence, one can read Say's *Treatise* "charitably" or critically, without regard for the circumstances surrounding its publication.

Regardless of the specific definition an individual economist identifies with Say's Law, it is clear that those I spoke with regard Keynes' definition that "supply creates its own demand" as insufficient to explain the depth and intended meaning of the Law. Furthermore, they find ambiguity in Keynes' own meaning and understanding of the Law, for his explanation is neither complete nor comprehensive.

While it is agreed that Keynes may have discredited Say's Law in terms of its importance to many modern economists, those I spoke with generally agree that Keynes performed no solid dent in the logic of the Law, only in its widespread acceptance. While some argued that it may have been the laziness of many classical economists to properly flush out the snags in Say's thinking, others simply see the classical economists as not having developed a rich enough monetary theory to satisfy the constraints upon and complaints against Say's Law. Importantly, modern economists acknowledge that while the classical economists addressed the market under the framework of its self-correcting mechanism functioning effectively, Keynes' models relied upon a market which tended toward sluggishness or hitches in the market process. Hence, the two approaches revealed two very different views of the market place. Taking Say's Law out of context and then questioning its validity in Keynesian models that assume price rigidity and discoordination problems lead to a rejection of Say's Law, but this rejection is built upon faulty arguments.

Those familiar with Say's own words observed that he intends qualifiers to clarify that he realized that short-run glitches in the market could prevent an immediate correction of the crisis. Hence, several economists regard Say's Law as simply a logical long-run proposition that must tautologically hold. Furthermore, as long as credit substitutes for money exist, periods of recession can and will occur. Say himself never fully explained or realized this, but it is a direct result from Say's Law.

In general, those modern economists familiar with Say's arguments acknowledge that he did not emphasize the role of prices (relative prices and the general price level) enough. This, of course, is one of the key areas which put Say's Law under fire. The lack of a fully-developed understanding of the real balance effect by the classicals limits their dealing with all of the potential problems that can cause a time lag in the market process.

Even those who are not Keynesian economists (indeed, even several of the Austrian economists) admit that some of Keynes' contributions were important. For instance, Keynes sought to deal with real issues, such as depressions, which had been inadequately addressed previously. Even if Keynes was often wrong in his analysis, at least he focused on the problems that can arise due to intertemporal discoordination. He illuminated the need for a focus on the point at which a downturn occurred and worsened (which Hayek called the "secondary contraction," a recession feeding on itself until it spiraled down into a depression due to initially incorrect prices due to monetary influences, especially wrong interest rates). Therefore, while Keynes accurately identified those areas of the economy that needed greatest systematic analysis, his approach and conclusions were unfortunately incorrect, and led many economists down the wrong path for at least a period of time. Of course, Keynesianism had major political consequences, and even today policies are often argued for in Keynesian "creating consumption" terms.

Most modern economists see a direct correlation between Walras' Law and Say's Law, though the question over which one implies the other remains unsettled. Regardless, modern economists undoubtedly see that the acceptance of Walras' Law in modern macroeconomics implicitly implies an acceptance of Say's Law. Perhaps the lack of formalization of Say's Law, or even perhaps the fact that Say's Law need not be formalized, explain its absence as an overt macroeconomic principle.

Ultimately modern economists realize the potential for lags in the market without embracing Keynes' conclusion that Say's Law must be totally rejected. Aware of the concerns brought forth by Keyes, they answer those concerns without rejecting the integrity of Say's Law. Despite the dominance of AD-AS models, economist Lloyd Garrison believes that at least some of the neo-classical models suggest underlying elements of Say's Law.

The conclusions I drew from my correspondence with modern economists is that Say's Law must overcome problems with intertemporal discoordination, prices (both relative and absolute), and money. That Say provided no explicit monetary theory and looked at the core of the issue in terms of money as a "veil" may have opened him up to criticism. However, he was attempting to go at the heart of the matter *ceteris paribus*. In that sense, Say's approach was helpful in isolating the nature of the problem. To sum, the modern neo-classical models implicitly accept Say's Law as an underlying concept. Say's Law is far more widely accepted than the modern textbooks suggest, for it appears that it is has found its place in modern macroeconomics, despite its virtual nonexistence *by name*.

XI. Conclusion

Henry Hazlitt writes that "what is called Say's Law was not originally designed as an integral part of classical economics but as a preliminary—as a refutation of a fallacy that long preceded the development of economics as a recognized special branch of knowledge." Hazlett identifies the somewhat simple roots of Say's Law: "Whenever business was bad, the average merchant had two explanations at hand: the evil was caused by a scarcity of money and by general overproduction."[179] It seems that Say's Law originates from and continues to exist as a subtle, implicit proposition. Given its original consideration as merely a fundamental concept from which to pursue further analysis, it is remarkable that it has been the subject of enormous controversy. Furthermore, economists such as John Maynard Keynes sought to discredit the classical economists almost exclusively based upon Say's Law—a secondary principle far from the forefront of economic thought by the classicals.

It seems incredulous that a peripheral idea of the classical economists has been targeted as their downfall, particularly since various versions of Say's Law remain prevalent even today. The definition of Say's Law is as controversial as its implications, for there is no uniform agreement over what exactly Say's Law *means*. Some of its greatest attackers have had little more than a superficial understanding of its definition. It may fitting, therefore, that most textbooks erroneously cite Say's Law as meaning that

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[179] Hazlett, Henry, *The Failure of the New Economics*, (Princton: D. Van Nostrand Company, 1959), reprint, (New York: The Foundation for Economic Education, 1994), 32-33.

"supply creates its own demand," since most of the economic profession has yet to fully ascertain the proper significance of Say's Law. It should be clear, after reading this paper, that none of the classical economists ever wrote that Say's Law means that "supply creates its own demand," nor did they intend for it to mean that. To the classical economists, Say's Law was simply the formal proposition that refuted common misperceptions about the nature and causes of depressions. Say's Law argues that recessions result from too little *production* successfully being sold, thereby leading to overproduction (gluts). While it may *appear* that the cause is underconsumption, Say (and other defenders' of Say's Law) successfully maintains that *underproduction* is the root cause of the economic downturn.

The relationship between Walras' Law and Say's Law has been shown to be inconclusive. Despite confusion by some economists over this relationship, it is logical to see that Walras' Law implies Say's Law, or perhaps to even suggest that Say's Law *foreshadowed* Walras' Law. The adoption of Walras' Law in mainstream economics may suggest that Say's Law is not as irrelevant to modern macroeconomics as its absence by name suggests. It may be that many neo-classical economists unknowingly accept Say's Law, or it could simply be that the historical confusion over Say's Law has prevented it from becoming a "first principle" in macroeconomics. Regardless of the reason, Say's Law is infused in all first-rate macroeconomic theory. No economist has yet shattered its truth, and while some have claimed to destroy it, the Law of markets remains an accurate proposition.

Perhaps the most important conclusion derived from this paper is that even though Say's Law is absent from macroeconomic textbooks, the idea itself is embedded in Walras' Law, and consequently, some aspects of it can be found in modern economic analysis. Rejecting Say's Law invariably leads to incorrect analysis of crises. Hence, without at least an implicit understanding of Say's Law, macroeconomic theory falters.

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