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An Inquiry into the Assumptions and Tenets of Neoclassical Economics That Lead Towards Income Inequality

Working Paper No. 55

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Prepared for Professor John Hall

Abstract: This inquiry seeks to establish that key assumptions foundational to Neoclassical Economics contribute towards income inequality. A consideration of the Neoclassical interpretation and assumptions of the laissez-faire approach to market economies opens the inquiry. I examine the economic outcomes that result when the assumptions underpinning the Neoclassical application of laissez-faire are false, as they often are in the real world. The inquiry then turns to the theories and natural "laws" as advanced by Vilfredo Pareto (1848-1923) and John Bates (J. B.) Clark (1847-1938), which were built upon the Neoclassical adaptation of laissez-faire and became canon in the Neoclassical school . Finally, the inquiry explores how the Neoclassical doctrine preserves the status quo of welfare distribution and considers states of inequality to be an inexorable result of the "natural laws" of economics developed by Pareto and Clark.

JEL **Classification Codes:** B13, B30, D31, D63

Key Words: Income Inequality, John Bates Clark, Laissez-Faire, Neoclassical Economics, Vilfredo Pareto, Welfare Economics

This inquiry seeks to establish that key assumptions foundational to Neoclassical Economics contribute towards income inequality. This inquiry commences with an examination of the Neoclassical interpretation of the laissez-faire approach to market economies, and the restrictive market conditions assumed to be true in the Neoclassical ideology. I examine the economic outcomes that result when the Neoclassical laissez-faire assumptions are false, as these are not typically verifiable when juxtaposed to the real world. A consideration of Neoclassical theories and "laws" based upon this interpretation of laissez-faire follows, with emphasis on the contributions from Vilfredo Pareto (1848 – 1923) and John Bates (J. B.) Clark (1847 – 1938) that became tenets in the Neoclassical school. Lastly, the inquiry explores how the Neoclassical doctrine considers states of inequality to be an inexorable result of the "natural laws" of economics developed by Pareto and Clark.

Vilfredo Pareto introduces his concepts of "Optimum" and "Law of Income Distribution" in his books, *Cours d'économie politique* [1896-1897], and *Manuale di economia politica con una introduzione alla scienza sociale* [1906]. These two contributions from Pareto shaped the Neoclassical approach to economic policy that I shall argue contribute towards income inequality. In his book *The Distribution of Wealth: A Theory of Wages, Interest and Profit* [1899], J. B. Clark advances his marginal product of labor theory, rationalizing the existence of inequality as an outgrowth of an empirical law of economics. Clark's contribution further tilts the application of Neoclassical Economics towards income inequality.

The theories developed by Pareto and Clark are considered nothing less than canon in the Neoclassical school and need to be considered as the orthodoxy of the discipline still today. Pareto and Clark's thinking provide natural "laws" that allow neoclassical economists to overlook and even disregard the inequalities in income that have only grown since the Neoclassical school became dominant in the discipline. The "laws" and theories developed by Pareto and Clark borrowed significantly from the Neoclassical interpretation and assumptions of laissez-faire. This inquiry opens by examining the origins of laissez-faire in the Neoclassical school, and how the Marginalists adapted the laissez-faire ideology introduced by the Classical Economists into the Neoclassical tradition.

Part 1 – The Dynamics of Laissez-faire and Its Underlying Assumptions

One of the earliest mentions of laissez-faire as the optimal approach to managing a market economy comes from François Quesnay (1694 – 1774), who founded the economic school of Physiocracy. Quesnay, along with some contemporaries, advocated laissez-faire as a response to the Mercantilists and the ideology of *Colbertisme,* which sought to foster industry through intervention by the French monarchy, which was the state at that time. As Kurz (2016 , 20-21) notes, the slogan of *laissez-faire, laissez passer* introduced by Quesnay redefined when the government had a role to play in economic affairs and when the economic system should be left to the markets. What Quesnay suggests is that a market economy, in which economic activities are coordinated through independent markets, performs better, and generates a faster increase in the wealth of a society over other types of economic systems.

Making good use of Quesnay's ideas, Adam Smith (1723 – 1790) takes up laissez-faire in *An Inquiry into the Nature and Causes of the Wealth of Nations* [1776] advancing the idea that as long as markets are competitive, they will efficiently regulate themselves to prevent both shortages and surpluses. This concept is embraced by the Classic Economists and becomes a standard part of the economic lexicon through the writings of John Stuart Mill (1806 – 1873). Mill devotes an entire chapter entitled "Of the Grounds and Limits of the Laissez-Faire or Non-interference Principle." to the laissez-faire ideology in *Principles of Political Economy* [1848]. In this section, Mill (Heilbroner, 2016 , 151-154) considers special cases for interventions by the government, but ultimately concludes that any withdrawal from laissez-faire, apart from the noted special cases, is a "certain evil", and laissez-faire should be the prevailing practice.

While the Classical Economists embrace minimal state intervention in markets, neither Smith nor Mill believed that there should be no state intervention.

Smith (Heilbroner, 1996 , 94-95) warns that dealers, entrepreneurs or capitalists, will always seek to narrow competition so they can raise their profits beyond the natural rate and capture a larger than natural share of the wealth. To address this potential for market failure, Smith, as noted by Heilbroner (1996 , 104), outlines a fairly large role for state interventions in the market. Identifying the potential for the rise of monopolies and concentrations of businesses in an economy guided solely by the principles of laissez-faire, Mill (Heilbroner, 1996 , 132) also retreats from a pure laissez-faire approach noting sixteen different cases in which state intervention should be considered.

With the rise of the Marginalists and the Neoclassical school, the exceptions for state intervention outlined by Smith and Mill are set aside in favor of an abstract model of the market that operates as modeled only under strict assumptions. As Kurz (2013 , 105) instructs us, the optimal social outcomes delivered by the Neoclassical unfettered market—a market managed with laissez-faire—requires conditions that neglect the real world tendency of markets to consolidate, eliminating competition in favor of a very small number of firms. Under the Neoclassical school, laissez-faire market management is applied ignoring the real-world tendency for concentration, and assumes markets are perfectly competitive in predicting the economic outcomes that result from the laissez-faire approach. However, one must only look at the markets at the end of the 19th century or today to see that the warnings provided by Smith and Mill were all too prescient; a majority of markets are dominated by a single or small set of actors who wield market power to tilt distribution in their favor.

The Neoclassical view of the outcomes delivered by laissez-faire and the dynamics required to achieve them were heavily shaped by the masterwork of Alfred Marshalls (1842 – 1924), *Principles of Economics* [1892]. In *The Worldly Philosophers* [1953], Robert Heilbroner summarizes Marshall's primary consideration in *Principles:* to formulize the workings of the self-correcting and self-adjusting nature of market economies to reach equilibrium. Said another way, Marshall looked to codify laissez-faire through a set of mathematical equations and restrictive conditions that when assumed to be true, predicted economic outcomes resulting from system or policy changes.

Heilbroner (1953 , 209) notes that in Marshall's view, the cornerstone upon which the self-regulating market rests is the belief that individuals act independently and entirely to maximize their. The utility-maximizing individual is a concept Marshall borrows from the work of his contemporary Leon Walras (1834 – 1910) and the work of his predecessors Jeremy Bentham (1748 – 1832) and William Stanley Jevons (1835 – 1882). Walras, Bentham and Jevons all focused on the idea of the pleasure-maximizing individual in their work to explain the causes of economic activity. However, under the care of Marshall, the individual becomes the *Individual*, whose rational calculations on maximizing marginal utility drive the workings of the market system. In other words, the optimal outcomes promised by the Neoclassical view of laissez-faire requires that individuals act in their own self-interest, are rational decision-makers, continually evaluating which choice will give them the most utility, and who continue to act until their effort to get the next unit of utility is greater than the utility they receive.

In the "Mathematical Appendix" of *Principles* ([1892], 1959 , 83*8* – 858), Marshall reduces the complexity of the economic activity of these rational, self-interested individuals to mathematical equations in Euclidean space. When market economies are managed under the Neoclassical school interpretation of laissez-faire, Marshalls' equations predict superior performance and social outcomes. Use of these equations implies a neutral science that eliminates the need to consider questions of morality or values—the political content of an economy—and instead replaces that with abstract, solvable equations for equilibriums and prices. Under this doctrine, Neoclassical economists disregard the questions of social welfare and equality raised by the classical political economists, and instead evangelize the idea that any intervention by the state—any restrictions on the markets—will be harmful to social welfare outcomes for everyone. The formulization developed by Marshall replaces consideration of the structure of society and the equality of economic welfare in the orthodox economic discipline and provides Neoclassical

Economists equations to show that the market economy freed from any state (government) intervention will deliver the *optimal* outcome for social welfare.

Part II – The Doctrine of the Optimum in Neoclassical Thinking

The path to the Neoclassical theory of optimal economic outcomes for society begins with Marshall and his introduction of the concept of consumer and producer surplus. According to Marshall ([1892] , 1959 , 124-125, 141-142), consumer or producer surplus in utility (satisfaction) arises because the price for a thing seldom reaches what an individual is willing to pay for it, and it will certainly never exceed that amount. Marshall (1959 , 830) suggests that the social welfare of a society is equal to the sum of this consumer and producer surplus, and that the market efficiently determines the size of the surplus. Further more, consumer and producer surplus is optimized when the marginal utility to consumers equals the marginal cost to producers: when the market reaches equilibrium. Marshall brings these ideas into his theory of optimal social welfare, proposing that optimal outcome is achieved through the economic activities of utility maximizing independent consumers and profit maximizing firms in a free and unfettered market. This theory becomes canon in Neoclassical teaching on social welfare, and is taught as orthodox without any inspection as to the equality of the outcomes it delivers.

In *Manuale d'economia politica* [1907], Vilfredo Pareto builds on Marshall's concepts and examines how a society obtains the maximum surplus of utility and which allocations of the surplus will result in the greatest well-being to all members of a society. What Pareto (Cirillo, 1979 , 43) suggests is that a society will have reached the maximum welfare position—the Optimum distribution of societal surplus—when it is not possible to increase one individual's utility without decreasing another's utility. Said another way, under Pareto's Optimum a society can increase the utility, or income, of an individual through a change in distribution only if no other member of a society is harmed from that change. Otherwise, according to Pareto, any changes in distribution of utility would be injurious to society as a whole.

In his edited work, *The Economics of Vilfredo Pareto* [1979] (1979 , 24), Renato Cirillo advises that the theory of Pareto's Optimum assumes that under a market economy, a society will have an ideal distribution of income (welfare) as it moves to the maximum welfare position. In this assumption the ideal distribution is due to the efficiency of the market in distributing income across society; each individual is apportioned an amount that is purely representative of their contribution to production, and not due to any market power an individual or firm may have over others. With this condition in place, the Neoclassical school teaches that the Pareto-Optimum of an economy is the most advantageous outcome for the overall welfare of society. However, this assumption that distribution is representative only of contribution is rarely seen in the real world, and so application of the Pareto-Optimum principle to economic decisions and choices effectively protects the status quo of welfare distribution and maintains an income distribution influenced by market power. Renato (1979 , 18) notes that despite this fallible assumption, the idea that the maximum welfare for a society is reached at the Pareto-Optimum, and Pareto's overall consideration of societal welfare becomes the foundation for welfare economics in the Neoclassical tradition.

In addition to the concept of the optimum, Pareto suggests that the welfare of a society is maximized when the economic system is optimized for efficiency in the use and allocation of scarce resources. Pareto (Cirillio, 1979 , 46), making good use of the mathematics introduced by the Marginalists, teaches that for an economic system to be optimally efficient in the use of scarce resources, it must reach the position where marginal utility, marginal productivity, and prices conform to specific mathematical relationships. Once a system reaches that optimally efficient position, then Pareto's Optimum can be applied to judge whether any changes to the system will increase the social welfare of a society. In the Neoclassical tradition, policies and government action that seek to redistribute income are judged for efficiency using the Pareto Optimum and any policies that make even a single individual worse off, no matter how much benefit the rest of the society attains through the change, are rejected. Following the criteria laid out by Pareto, only those changes to welfare distribution which increase every individual's utility will improve the overall welfare of society.

Part III – The Neoclassical Tenets of Wealth Distribution

With his book *Cours d'economie politque* [1896, 1897] Pareto continues his consideration of the welfare and wealth of a society and it is in this book that he introduces his "law" of income distribution with a pioneering use of econometric analysis. Relying upon statistics drawn from several countries, Pareto (Cirillio, 1979 , 81-87) calculates that the distribution of wealth follows a specific equation with a constant income differential between the classes. Furthermore, Pareto's analysis suggests this distribution holds across time and geographies. Pareto instructs us that his equation is an empirical law to which wealth distribution will adhere no matter what interventions are taken; it is impossible to create long-term change in the distribution of wealth amongst the classes. According to Pareto's "law" any policies designed to redistribute wealth will fail, with the distribution will reverting to its prior position. Pareto concludes that the only way to improve the welfare of the lower classes is to increase total social welfare through continual growth of societal productivity and output. In other words, "a rising tide will lift all boats," a phrase exceeding common in the rhetoric and economic policies of the Neoclassical and Neoliberal economists over the last 40 years.

Cirillio (1979 , 18) suggests that Pareto's empirical research to reveal a law of wealth distribution is mostly a way to excuse the inequality of wealth that was growing in Pareto's time. Pareto (Cirillio, 1979 , 80) begins his empirical research as a way to understand the nature and causes of the distribution of wealth. He commences this research with a hypothesis that if the distribution of wealth remains similar across time, geographies, and societal organizations, then the cause is principally to be found in the varying capabilities of man, however he does not include any data on the capabilities of man other than income in his data set. The results Pareto obtains from his econometric analysis on the limited data set do show a similar curve of wealth distribution, no matter the country or time period. Based on his results, Pareto (Cirillo, 1979 , 82) concludes, without including data on man's capability beyond income, that his hypothesis is true: wealth is distributed according to the capabilities of man. The wealth distribution of a society may be unequal, but it follows an empirical law described in mathematical precision by the equation Pareto fits to the curve of wealth distribution. Therefore, to lessen the inequality of wealth in a society, Pareto suggests that total income must increase faster than population. In the language of the Neoclassical tradition, the only remedy to wealth inequality is to grow the economy; no policy or market intervention can effectively address it.

As a contemporary of Pareto and the Marginalists, John Bates Clark further considers how income and wealth are distributed in his work *The Distribution of Wealth* [1899], incorporating the theory of marginal decision making into the distribution of the production (output) of a society. Clark ([1899], 1956 , v) opens *The Distribution of Wealth* by stating the purpose of his work: to show that the wealth of a society is distributed according to a natural law, and that if this law is allowed to work unfettered it will give each individual the amount of wealth that is commensurate with the value their work creates. To develop this purpose, Clark ([1899], 1956 , 12-13) commences by establishing that the wealth of a society is the sum of the income of all the groups involved in making and producing goods; individuals and their wages, firms and their profits, capitalists and their rents. Clark suggests that the level of prosperity (income) each group receives is most efficiently and correctly apportioned through the prices determined by an unfettered market for the goods and services provided and produced. Said another way, what Clark is suggesting is that the market determined prices for labor (wages) and capital (interest) properly distributes the value generated in production, the output of a society, to the individuals within the society. Clark's views become part of the Neoclassical tenets regarding wealth distribution: the market is the optimally efficient mechanism to value labor and capital and pays individuals what they are worth for their contribution.

With these ideas established, Clark ([1899], 1956 , 180 – 187), borrowing from the mathematical reasoning of the Marginalists, states that wealth distribution is governed by a natural law that allocates a society's output (wealth) to labor and capital according to the value added by the final unit of that labor or capital. Clark's natural law for social product distribution is formalized by the Neoclassical school into the equations for the marginal product of labor and the marginal product of capital, which are optimized for efficiency under an unfettered market economy. This doctrine of wealth distribution in neoclassical economics further supports rejection of any policies which seek to addresses income inequality through intervention or redistribution; distribution is determined by an immutable law of nature, therefore if inequality exists then it must be optimal for the welfare and wealth of a society overall.

Conclusion

This inquiry has sought to establish that key assumptions foundational to Neoclassical Economics have indeed contributed towards income inequality. It should be noted that in studies on inequality, income is commonly differentiated from wealth; income is a stream of value and wealth is ownership of stock or capital. Typically, wealth inequality is greater than income inequality, however, since income is the primary source of welfare for most individuals in a society, I have focused on income inequality in this examination of Neoclassical Economics.

The laisse-faire approach to managing market economies seeks to drastically minimize or eliminate entirely any state intervention in the markets, and was adapted from the writings of the Classical economists by the Marginalists as part of the foundation to Neoclassical theory. In the Neoclassical tradition, laissez-faire relies on the assumptions that markets operate with perfect competition and that individual actors in the market are rational in decisions-making, self-interest maximizing, and independent. Under these assumptions, Neoclassical theory states that the unfettered markets will deliver a maximization of welfare for society. However, those assumptions have rarely held true. As Smith and Mill warned, without any state intervention, markets will tend to consolidate, and concentrate market power into a handful of firms as monopolies and oligopolies, which they use to capture an outsized share of the output (welfare), resulting in income inequality. However, orthodox Neoclassical teaching ignores the failure of these assumptions and holds to the theory that laissez-faire management of a market economy will lead to the optimum social product distribution, contributing towards income inequality.

Building upon the foundation of the Neoclassical laissez-faire approach, Pareto introduces a theory of maximum social welfare that establishes the concept of the optimum as canon in the Neoclassical tradition. Pareto's Optimum asserts that the social welfare of a society can only be increased if a change in the welfare position, or the distribution of welfare, makes no single individual worse off, providing justification to preserve a distribution of wealth that is lopsided in some individual's favor. Furthermore, Pareto states this assertation as a natural law, which cannot be circumvented. Pareto's optimum becomes the criteria to judge all economic policy decisions under the Neoclassical school, allowing Neoclassical economists to discard any redistributive policies as harmful to the overall welfare and wealth of the society, no matter how well they may address income inequality.

Along with the theory of the optimum, Pareto also introduces an empirical law of wealth distribution, which states that the only way to increase the welfare of those with less income is to grow total production (welfare) of the state. Following Pareto, Clark develops a natural law to explain and preserve a society's distribution of wealth as it is, equal or not. Clark's natural law characterizes the dynamics of the market in price-setting for labor and capital as the optimal and correct allocation of income that is commensurate with an individual's contribution to output. Together these two tenets of Neoclassical theory led to a common Neoclassical framing of inequality: it is solely the responsibility of the individual to increase his or her capabilities and contribution to output, thereby increasing output overall, in order to capture an equal share of the welfare of society. In other words, the market correctly values individuals paying them what they are worth, and if they are paid less, it is up to the individual to make a change, as any state intervention in the market to redistribute wealth is ineffectual and even harmful to the overall welfare of a society.

To see how the doctrine of Neoclassical Economics leads to inequality, one can look to the outcomes delivered by the Neoclassical school since it was adopted as orthodox in the discipline in the late 19th century. Since then, in the United States and in much of the post-British colonial world, Neoclassical Economics has shaped most government policies, coinciding with a persistent rise in income inequality at the same time, excepting only a period after World War II. Inequality has accelerated in the last 40 years under the predominance of the extreme form of the Neoclassical school, Neoliberalism, in policy decision-making. In their working paper *Trends in Income From 1975 to 2018* (2020), The Rand Corporation estimates that some $47 trillion has been transferred from the lower 90th percentile income group to the top 10th percentile income group since the late 1970s: a stunning transfer of wealth delivered under the orthodoxy of Neoclassical Economics, contributing to the extreme income inequality we have today.

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