Lonergan and Piketty on Income Inequality

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Introduction: Why Might Economic Inequality Matter?

In 2017, Oxfam International reported that "collectively the richest eight individuals have a net wealth of $426 billion, which is the same as the net wealth of the bottom half of humanity" [i.e., as 2.4 billion adults].[1] In a Senate floor speech (also in 2017) Charles Schumer declared: "In fact, if you add up the net wealth of his [Trump's] Cabinet, it has more wealth than one-third of the American people total -- close to 100 million people."[2] At the beginning of 2018, an Oxfam press report read "Richest 1 percent bagged 82 percent of wealth created last year – poorest half of humanity got nothing."[3] Will the year 2019—or 2119 for that matter—be any different? And why should statements of this sort matter to us anyway? I would like to begin by mapping out a range of general possible reasons.

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[1]Deborah Hardoon, 'An Economy for the 99%: It's time to build a human economy that benefits everyone, not just the privileged few', Oxfam Briefing Paper, January 2017, p. 10, https://www.oxfam.org/sites/www.oxfam.org/files/file_attachments/bp-economy-for-99-percent-160117-en.pdf

[2] Congressional Record, 115th Congress, 1st Session, Issue: Vol. 163, No. 36, March 1, 2017, https://www.congress.gov/congressional-record/2017/3/1/senate-section/article/s1510-2?r=2

[3] Oxfam International, Press Release, 'Richest 1 percent bagged 82 percent of wealth created last year - poorest half of humanity got nothing', January 22, 2018, https://www.oxfam.org/en/pressroom/pressreleases/2018-01-22/richest-1-percent-bagged-82-percent-wealth-created-last-year

First, it is arguable that inequality ought *not* to matter. If the distaste for inequality is fueled simply by *resentment*, if it is merely the protest of the weak against inevitable differences in human ability, effort, and luck—differences necessary for the vitality of any civilization—then perhaps, on intellectually honest Nietzschean grounds, inequality ought not to matter. On the other hand, virile arguments of this sort might plausibly be suspected of masking self-interest, obscuring injustice, and glossing over societal damage inflicted by inequality.

Second, there are those who would agree that equality is a genuine value, but emphasize this always rests in tension with liberty. While inequality may be undesirable, practical efforts to promote equality inevitably transgress against the liberty of the more successful. In deference to liberty, inequality is to be mitigated only with extreme caution, and in some cases tolerated.

Third, perhaps the desideratum of equality should not be the central focus. Daniel Finn recently pointed out that "the fathers of the church were adamant in their insistence that the wealthy share what they had with the poor, but they did not appeal to the concept of equality. As long as the needs of all were met, there was no presumption that it would be wrong for the wealthy to have more than everyone else."[4] In light of the fact that there exists far more agreement about the undesirability of poverty than about inequality, Finn suggests that "it might be wiser to address economic injustice by focusing on poverty rather than inequality. After all, *everyone* believes that poverty is a problem."[5]

Fourth, in recent years there has been an outpouring of accounts arguing that economic inequality is detrimental for a wide variety of psychological, social, political, cultural, moral, and religious reasons. These attempt to disclose the painful consequence of inequality and poverty in

[4] Daniel K. Finn, "Inequality: What Can Be Done?" *Commonweal Magazine*, June 23, 2016, https://www.commonwealmagazine.org/inequality-what-can-be-done

[5] ibid.

the lives of ordinary people, and the corrosive effects on society.[6] They are worthy of our collective deliberation and wisely redemptive action. Thomas Piketty's *Capital in the Twenty-First Century* is an effort of this sort, but it is unusual in the unprecedented depth of its statistical analysis.

This afternoon however, it is my intention to argue that economic inequality also matters in another way. I intend to bring Thomas Piketty's findings and concerns into the unusual, complex, and neglected context of Bernard Lonergan's macroeconomic theory. My thesis is that income and wealth inequality not only distort the social structure and the viability of meaningful democracy as Piketty emphasizes, but also undermine necessary conditions for long-term macroeconomic stability and flourishing. Though the focus will be economic, the consequences extend beyond economics. The history of the twentieth century provides painful reminders that financial instability and economic depression can evoke radical right-wing or left-wing political reactions that superimpose an ineffectiveness and destruction all their own.

Piketty's *Capital in the Twenty-First Century*

Thomas Piketty's bestselling 685-page tome *Capital in the Twenty-First Century* provides statistical documentation of global income and wealth inequality and its long-term historic variation. Piketty claims his study is "the first attempt to place the question of the capital-labor split and the recent increase of capital's share of national income in a broader historical context by focusing on the evolution of the capital/income ratio from the eighteenth

[6] See, for example, Barbara Ehrenreich, *Nickel and Dimed: On (Not)Getting By in America* (New York: Henry Holt, 2001) or Richard Wilkinson and Kate Pickett, *The Spirit Level: Why Greater Equality Makes Societies Stronger* (New York: Bloomsbury Press, 2011).

century until now."[7] I found the book to be painstakingly thorough, clear, historically informed, and unusually generous in its provision of examples, including presentations of inequality and its lived consequences from 19th century literature. Although no adequate summary is possible here, I will provide a bare-bones account of Piketty's main terms, key findings, theoretic explanation of inequality in the equation $r > g$, and underlying motivations. Critical comments, including those pertaining to policy recommendations, will be made in light of Lonergan's approach, and so will be presented later.

Piketty defines capital "as the sum total of nonhuman assets that can be owned and exchanged on some market. Capital includes all forms of real property (including residential real estate) as well as financial and professional capital (plants, infrastructure, machinery, patents, and so on) used by firms and government agencies."[8] The aggregate annual rate of return on capital is denoted by the variable r. Over the long term, r has averaged to be approximately 5%, although r does vary across nations and over shorter time periods, according to a wide variety of factors (economic activity, productivity, exogenous shocks, etc.). Since the rate of return on capital is net of labor costs, r will also depend on the relative bargaining power of labor vis-à-vis capital.[9]

Since Piketty is interested in exploring questions of the social significance of capital, he must find a way to measure capital accumulation that is suitable for comparisons across nations and time periods. For this he relies extensively on a metric known as the capital/income ratio, or β. β indicates the value of the capital stock of a nation expressed as a multiple of its national

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[7] Thomas Piketty, *Capital in the Twenty-First Century*, trans. Arthur Goldhammer (Cambridge, MA: Harvard University Press, 2014), 220. (Hereafter *Capital*).

[8] Piketty, *Capital*, 46.

[9] Piketty, *Capital*, 212.

income. Piketty argues that over the long run β will tend to be proportionate to the savings rate, *s*, and inversely proportionate to the growth rate of the total economy (measured as national income), *g*; i.e., β will tend toward an equilibrium such that $\beta = s/g$.[10]

Since higher β tends to be associated with higher levels of income and wealth inequality, Piketty is wary of both determinants of high β, a high savings rate, and low growth. "A country that saves a lot and grows slowly will over the long run accumulate an enormous stock of capital (relative to its income), which can in turn have a significant effect on the social structure and distribution of wealth…. In a quasi-stagnant society, wealth accumulated in the past will inevitably acquire disproportionate importance."[11]

Piketty's central interest is income inequality, and he makes use of the capital/income ratio in his analysis. The share of income flowing to capital, expressed as α , is simply a matter of the capital/income ratio multiplied by the rate of return on capital: $\alpha = r \times \beta$.[12] The share of national income flowing to labor is the remainder, and could be expressed as $1 - \alpha$. Piketty's concern is "that no self-correcting mechanism exists to prevent a steady increase of the capital/income ratio, β, together with a steady rise in capital's share of national income, α ."[13]

Capital in the Twenty-First Century presents an extremely detailed, multi-national, long-term historical, statistical analysis of variations in β, *r*, *g*, shares of national income to capital (α), shares of national income to labor, distributions of income, distributions of accumulated wealth, inheritance flows, and so forth. Significant among the historical findings is that high levels of income and wealth inequality in the 19th century actually declined significantly in middle of the

[10] Piketty, *Capital*, 166-70.

[11] Piketty, *Capital*, 166.

[12] Piketty, *Capital*, 52-55.

[13] Piketty, *Capital*, 222.

20th century, a period that witnessed the emergence of the middle class. Piketty is concerned, however, that this decline may be an anomaly, and that it may already be reversing. He attributes the shift toward more egalitarian income and wealth distributions to a series of shocks in the period from 1914 to 1945. Two world wars and the Great Depression were not friendly to the owners of capital, who faced reductions in both the capital/income ratio, β, and the return on capital, *r*. This was due to massive property destruction (especially in Europe), expropriation, hyperinflation, deflation, extensive bankruptcies, low corporate profitability, and so forth. Capital accumulation was also impeded as a consequence of progressive taxation required for the bolstering of social welfare programs. Since about 1970 however, inequality has been on the rise. In the US "by 2010, the top decile's share of total wealth exceeded 70 percent, and the top centile's share was close to 35%."[14] Piketty's worry is that if nothing is done we risk returning to levels of inequality not witnessed since the 19th century.

While Piketty's work is mainly statistical in nature, his chief theoretic contribution was to propose an explanation for observed historical variations in inequality in terms of the equation $r > g$. Income inequality results from the fact that the rate of return to capital is greater than the growth rate of national income.[15] The expression $r > g$ indicates a gap, quantifiable as $r - g$. "The difference $r – g$ measures the rate at which capital income diverges from average income if none of it is consumed and everything is reinvested in the capital stock. The greater the difference $r – g$, the more powerful the divergent force."[16] Furthermore, *income* inequality resulting from $r > g$ compounds over time to generate *wealth* inequality. Insofar as capital's

[14] Piketty, *Capital*, 349.

[15] Piketty, *Capital*, 350-8.

[16] Piketty, *Capital*, 364.

share of income in one period is not spent on consumption but is reinvested in yet more capital (which tends yet again to generate an *r* higher than *g* in the subsequent period) wealth will tend to accumulate.

The inequality $r > g$ is not a logical necessity or invariant economic law, but rather a matter of generally observed historical fact.[17] In antiquity and prior to the industrial revolution the rate of growth was very low by contemporary standards, averaging only about .5% to 1%. Returns on agricultural land however typically yielded approximately 5%. Hence it has been the case that "throughout most of human history…the rate of return on capital was always at least 10 to 20 times greater than the rate of growth of output (and income)."[18] The period from 1913 to 2012 however (even with the increase of *r* and the decrease in *g* at the end of that period) was an "unprecedented era during which the net rate of return on capital was less than the growth rate," i.e., $r < g$.[19] This was due both to the shocks described above and to an exceptionally high level of growth subsequent to WWII.[20] "To sum up: the inequality $r > g$ has clearly been true throughout most of human history, right up to the eve of World War I, and it will probably be true again in the twenty-first century. Its truth depends, however, on the shocks to which capital is subject, as well as on what public policies and institutions are put in place to regulate the relationship between capital and labor."[21] Piketty concludes the book with policy recommendations that include imposition of confiscatory rates of taxation on the highest incomes as well as a global tax on previously accumulated *capital*.

[17] Piketty, *Capital*, 353, 361.

[18] Piketty, *Capital*, 353.

[19] Piketty, *Capital*, 357.

[20] Piketty, *Capital*, 355-6.

[21] Piketty, *Capital*, 358.

Why Inequality Matters for Piketty

In reading Piketty's book the concerns that motivated him to write it gradually become apparent. I would like briefly to highlight some of these, in part because I believe there is good reason to suppose Bernard Lonergan would have been sympathetic to them as well.

First, Piketty clearly affirms the importance of social and economic justice, and he is bothered by the existence of inequalities that seem to have no rational justification. "The professed equality of rights of all citizens contrasts sharply with the very real inequality of living conditions, and in order to overcome this contradiction it is vital to make sure that social inequalities derive from rational and universal principles rather than arbitrary contingencies."[22]

Second, he questions how the reemergence of extreme economic elites can be compatible with the preservation of meaningful democracy, highlighting the fact that "the top centile is a relatively broad elite that plays a central role in shaping the economic, political, and symbolic structure of society."[23]

Third, extreme inequality will be tolerated only up to a limit, once it is seen for what it is. Those with vested interests in maintaining inequality near or beyond that limit must engage in surreptitious techniques of repression and persuasion, i.e., in the Machiavellian virtues of force and fraud.[24] Although Piketty himself does not discuss the inner workings of the apparatus of repression and persuasion, such techniques typically undermine the values of justice, liberty, fraternity, transparency, open discourse, communicative rationality, and democratic governance.

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[22] Piketty, *Capital*, 422.

[23] Piketty, *Capital*, 409.

[24] Piketty, *Capital*, 263-4.

Fourth, Piketty is troubled by the way inegalitarian wealth distribution distorts the social structure. One of the most engaging features of *Capital* is its generous use of nineteenth-century novelists such as Balzac and Austen to depict the distortions of "a society in which a truly comfortable life required the possession of a large fortune."[25] Piketty notes that "for both writers, the material and psychological threshold was about 30 times the average income of the day. Below that level, a Balzacian or Austenian hero found it difficult to live a dignified life."[26] Particularly disturbing is Piketty's observation that in societies where the capital/income ratio is very high, success in life is extremely difficult or impossible to gain by study, hard work, or determination, but rather comes about mainly by the luck of one's birth, strategic marriages, or nefarious scheming that somehow pays off in a huge inheritance.[27] Piketty does not want us to return to a world where "study and work cannot possibly lead to a comfortable and elegant life,"[28] and the good life is "totally out of reach for anyone content to practice a profession, no matter how well it paid."[29] He is concerned because the capital/income ratio in the 21st century could soon approach levels that gave rise to the "patrimonial society" of the 19th century. Also not encouraging are projections for inheritance flows as a percentage of national income. Such flows were very high in the late 19th century, dipped dramatically in the mid-20th century, but could (under low-*g*, high-*r* conditions) nearly reach the previous 19th century levels by the year 2100.[30]

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[25] Piketty, *Capital*, 411.

[26] Piketty, *Capital*, 411.

[27] And especially chilling is Vautrin's lecture to Rastignac from Balzac's Père Goriot. See Piketty, *Capital,* 238-42.

[28] Piketty, *Capital*, 379.

[29] Piketty, *Capital*, 411.

[30] Piketty, *Capital*, 398-401.

Finally, and in summary, Thomas Piketty morally opposes the very law he claims to have discovered. "The inequality $r > g$ is the basis of a society of rentiers."[31] It is "the central contradiction of capitalism" and is "potentially threatening to democratic societies and to the values of social justice."[32] Whereas capitalism has been justified, celebrated, and even glorified in light of the Promethean gifts bestowed upon civilization by the entrepreneur, Piketty laments that in the evolution of capitalism "the entrepreneur inevitably tends to become a rentier, more and more dominant over those who own nothing but their labor. Once constituted, capital reproduces itself faster than output increases. The past devours the future."[33]

We turn now to the macroeconomic theory of Bernard Lonergan. Thomas Piketty has presented a massive body of evidence demonstrating disturbing trends in economic inequality. While *Capital* offers a sort of mathematical explanation for the tenacity of this trend in the inequality $r > g$, and sounds the alarm over its social ramifications—Lonergan's circulation analysis contributes a complementary theoretic understanding of how inequality *functions* with respect to the dynamically changing exigencies of the business cycle. For Lonergan, the problem of inequality is more than a social problem calling for a political solution. It is also a properly economic problem that requires intelligent and responsible navigation by a wide variety of agents at a properly economic level.

Bernard Lonergan -- Circulation Analysis

Motivated by the suffering and disorder he witnessed during the Great Depression, by dissatisfaction with ineffective policy responses, and by a suspicion that the root of the problem

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[31] Piketty, *Capital*, 564.

[32] Piketty, *Capital*, 571.

[33] Piketty, *Capital*, 571.

had not been adequately grasped, Lonergan embarked in the 1930's on what would become a life-long effort to understand macroeconomic process at a fundamental theoretic level. Marxists had asserted capitalism was shot through with internal contradictions that would inevitably lead to its demise. Given their assumption that markets were self-correcting, classical economists were deeply puzzled by the failure of the depression economy to reach equilibrium on its own. And while Keynes had proposed both a diagnosis of ineffective demand and a remedy of government fiscal stimulus, Lonergan suspected there was still lacking an adequate understanding both of the systematic causes of ineffective demand and the long-term unsustainability of the standard "palliatives" for it, (i.e., deficit spending and attempts to gain advantage by a favorable balance of trade).

Lonergan's macroeconomic theory offers a functional analysis of what a modern exchange economy fundamentally is. It is dynamic in its consideration of technological innovations and capital expansions. It highlights a previously unacknowledged necessary condition for long-term macroeconomic stability. It clarifies the possibility of an economic "pure cycle," in which economic depressions could be avoided and the gains of successive waves of technical innovation could be optimally and durably incorporated into a standard of living. A complete summary will not be possible here, but for our purpose—of thinking about inequality in the context of Lonergan's theoretic framework—I would like to highlight four aspects of circulation analysis: 1) the distinction between basic and surplus production, 2) fundamental economic variables and their relations, 3) surplus expansions, and 4) the problem of basic expansion.

Two Distinct Kinds of Production

Central to Lonergan's understanding of economic process was his differentiation of two distinct kinds of production, which he termed "basic" and "surplus." Any economy beyond an extremely primitive subsistence stage is constituted not by a single circuit of production, but by two interrelated circuits. One circuit produces a flow of "basic" goods and services which, at final sale, leave the productive process to enter into a community's standard of living. The other circuit produces "surplus" goods and services. These, after being sold, do not enter directly into a standard of living, but rather remain in the productive process by being *utilized* within that process. Surplus goods and services are the means of production. They function in a manner that enables and renders more efficient the production of all other goods and services (whether basic or surplus).

To provide a local Milwaukee example: A Harley Davidson motorcycle is self-evidently desirable for its own sake—or at least to some people it is! It is a *basic* good.[34] Once purchased, the Harley rolls out of the productive process to enhance its owner's transportation experience. If one were to tour a Harley Davidson factory however, one would observe a complex array of *surplus* goods, i.e., pneumatic wrenches, welding stations, robotic assemblers, heavy-duty parts racks, dipping tanks, engine hoists, chrome applicators, industrial lighting, automated silicon gasket dispensers, and so on. Such goods are "surplus" goods. They are desirable not for their own sake, but solely because they enable efficient, high-quality production of an indefinite series of motorcycles.

[34] Notice by this example that by "basic" Lonergan is not appealing to the common-sense distinction between needs and desires (e.g., she may *want* a Harley but *needs* to buy her groceries and pay her rent). According to Lonergan's functionalist distinction all goods and services comprising a community's standard of living—whether necessary for sustenance of life or merely extravagant indulgences—are economically "basic."

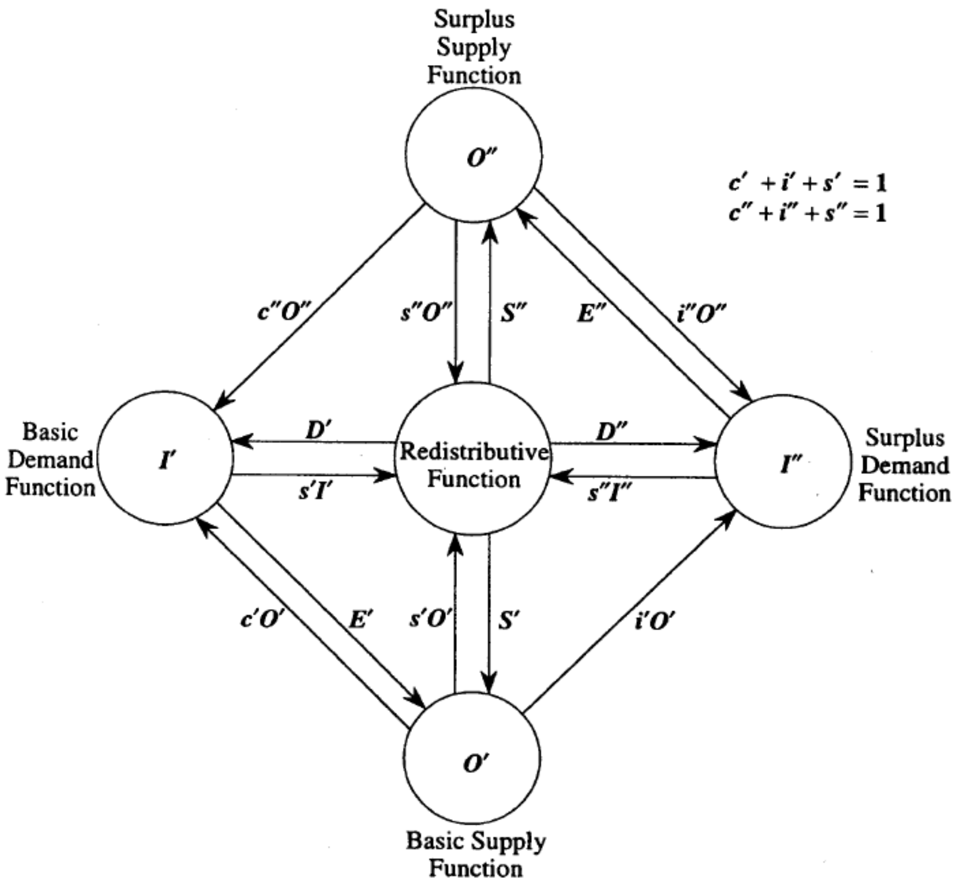
Although Lonergan generally avoids the use of Piketty's central term "capital," his notion of surplus production captures what is most important about capital, from a functionalist perspective. Surplus production and capital formation in an economy occur not because of any intrinsic desirability of capital *per se*, but because it serves to "expedite and accelerate the process of supplying the goods and services that are wanted by consumers."[35] The relation of surplus to basic production is that of accelerator to accelerated. And no production is for its own sake, but ultimately for the sake of a better standard of living, preferably for all.

Diagram of Monetary and Productive Circulation

Lonergan sought to identify the fundamental variables that capture the functioning of the economy as a whole, and to systematize their relations in a comprehensive diagram of monetary and productive flows. His schema theoretically exploits the distinction between surplus and basic production, and intentionally highlights the interdependence of the two circuits. The "Diagram of Rates of Flow" from *Macroeconomic Dynamics* is presented below:[36]

[35] Bernard Lonergan, *Insight: A Study in Human Understanding*, Collected Works of Bernard Lonergan, vol. 3, ed. Frederick E. Crowe and Robert M. Doran (Toronto: Toronto University Press, 1992), 233.

[36] Photocopy from Bernard Lonergan, *Macroeconomic Dynamics: An Essay in Circulation Analysis*, Collected Works of Bernard Lonergan, vol. 15, ed. Frederick G. Lawrence, Patrick H. Byrne, and Charles C. Hefling, Jr. (Toronto: Toronto University Press, 1999), 55. (Hereafter, *Macroeconomic Dynamics*).



In contrast to standard circular flow diagrams, circulation analysis does not indicate economic entities descriptively, under the rubric of "households" or "business firms," but rather explanatorily as monetary *functions*: Basic Demand function, Basic Supply function, Surplus Demand function, and Surplus Supply function. The diagram intends to capture all monetary flows that occur in the productive process over successive intervals of time, and can register positive or negative accelerations of rates, as flows in each circuit expand or contract.

Basic Demand function represents the aggregate of rates of basic income (I'). Basic income is money allocated for expenditure on basic goods and services during a particular interval, e.g., Harley Davidson motorcycles, or pints of Lakefront Brewery Beer (to use another local example). Basic Supply function represents the aggregate of rates of outlay for the production of such basic goods and services (O'). Notice that a portion of this outlay, $c'O'$, returns back to Basic Demand function, typically in the form of wages workers receive for their contributions to basic production. But firms engaged in basic production must also maintain and replace their equipment, and typically seek to improve or increase their productive capacity. That constitutes a distinct outlay, $i'O'$, which moves to Surplus Demand function. Surplus Demand function represents the aggregate of rates of surplus income (I''). Surplus income (I'') is money allocated for expenditure on surplus goods and services during a particular interval.[37] Returning to our Lakefront Brewery example, such expenditures might be for stainless steel fermentation tanks, welders used to make these tanks, machine tools used to make the welders, CAD software used to design machine tools.[38] These will be utilized within the productive process ultimately to augment future basic production (in this case more and/or better beer). When funds held in reserve as I'' are spent, this expenditure, E'', moves to Surplus Supply function. Surplus Supply function represents the aggregate of rates of outlay for the production of surplus goods and services (O''). Notice that firms producing surplus goods and services also have two distinct types of outlay. They too must pay their workers, with some portion (c'') of O'', flowing as $c''O''$ to Basic Demand. And they also seek to maintain, improve, or increase their own productive capacity by investing some portion (i'') of O'', flowing as $i''O''$ to Surplus Demand. As a whole, Lonergan's diagram indicates the relations that obtain between these

[37] This includes both new fixed capital investment and expenditures for maintenance and replacement of existing surplus productive capacity.

[38] Notice that as surplus goods are needed to produce other surplus goods, there can be successive levels of surplus production. The welder is needed to make the fermentation tank, machine tools are needed to make the welder, and software is needed to make the machine tools.

functions. Arrows point in the direction of monetary flow, and we may imagine goods and services flowing back in the oppose direction to these operative payments.

We should also say something about the Redistributive Function, located at the center of the diagram. While for Lonergan, what is *economically* essential is basic and surplus production and consumption, and the monetary flows that condition these operative exchanges, there also exists a remainder class of government taxation, spending, and transfer payments; importing and exporting; as well as financial operations of saving, lending, investing, insurance, central bank monetary policy, and so forth. Vertical and horizontal arrows moving to and from Redistributive Function register these exchanges, and do so precisely in relation to each of the four operative functions.[39] In addition, a large volume of transactions occur internally within the Redistributive Function, without adding or subtracting money from the operative circuits at the periphery of the diagram, i.e., without directly or immediately impacting the so-called "real economy." Sales and purchases of stocks or bonds, settlements of options contracts, transfers of titles of property ownership, can be facilitated by savings or financial investments initiated in a previous interval; and if this is the case these may be functionally regarded as merely redistributive transactions.

Finally, on this theory "the economy" is comprised not of a single undifferentiated circuit, but rather of two distinct circuits, basic and surplus. This differentiation of circuits is extremely important theoretically.[40]   Because *surplus* goods and services facilitate the productive process itself, innovation in the surplus circuit should (after a time lag) *accelerate* the

[39] It is noteworthy that Piketty's analysis intended to capture merely the "inequality of primary income (that is, before taxes and transfers)" (Piketty, *Capital*, 272). But flows of taxes and transfer payments are of course relevant to understanding the fully concrete situation. For Lonergan these occur as exchanges involving the Redistributive Function.

[40] Philip McShane makes the helpful suggestion that this importance could be made clearer if one imagines the diagram rotated 45 degrees counterclockwise, turning the diamond into a square, with surplus supply and demand functions above, and basic demand and supply directly below.

stream of basic goods and services. Hence it is important to appreciate the fact that any long-term improvement in the standard of living is dependent upon successive implementations of innovations in the productive process. Such implementation has necessary financial conditions, which will be discussed presently.

Surplus Expansion and the Financing of Innovation

In *Capital* Piketty does not depart from the standard convention of regarding economic growth as a single undifferentiated rate, i.e., the rate "*g*", which indicates the annual growth of the entire economy as measured by national income. By contrast, Lonergan's circulation analysis seeks to theoretically exploit the important distinction between surplus and basic production and work out the ramifications of the fact that the underlying basis of economic growth in technological innovation is itself not uniform. Even over multi-decade periods the surplus or basic circuit may be expanding significantly relative to the other circuit. This analytical framework yields insights to which we remain blind if we focus merely on an undifferentiated rate of growth that neglects the existence of dual circuits and the wave-like structure of innovation. On the other hand, these distinctions make possible a dynamic model of ongoing economic history as involving two distinct types of expansion. Normatively, a *surplus expansion* is to be followed by a *basic expansion,* which the previous surplus expansion makes possible.

A major surplus expansion is a period in which there occurs the massive and recurrent investments necessary for implementing promising new innovations in the productive process itself. The period from 1780 to 1848, for example, was characterized by the water-powered mechanization of industry; its transportation and communication infrastructure by canals, turnpike roads, and sailing ships. The proliferation of steam-power, roughly from 1848 to 1895, allowed for a new and more powerful mechanization of industry and transport. This period saw the construction of steam ships, railways, and the telegraph. Electrification of industry, transport, and the home proliferated from 1895 to 1940. A chemical revolution allowed for large-scale refinement of gas and oil, for the motorization of the transport system (e.g., for automobiles and airplanes), for the fabrication of plastics and other synthetic materials. And since the 1960's, we have been working and living through an era of computerization, high-speed telecommunications, and global information networks.[41]

Lonergan sought to understand the financial conditions that must be initiated and maintained for surplus innovation to be implemented optimally. A major expansion of the means of production is obviously not something that can happen if all available money is recurrently absorbed by consumption of basic goods and services. A surplus expansion requires partial deferral of current basic consumption, and an increasing rate of aggregate savings to finance the new wave of fixed capital investment. "A surplus expansion calls for saving, and a massive surplus expansion calls for massive savings."[42] Furthermore, if there is to occur an *acceleration* of the surplus circuit, this requires not merely a high rate of savings, but a series of ever higher rates, from interval to interval.

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[41] Chris Freeman and Francisco Louca, *As Time Goes By: From the Industrial Revolution to the Information Revolution* (Oxford: Oxford University Press, 2001), 139-335. In discussions of sequences of technological innovations, economic historians typically do not make enough of the distinction between innovations impacting production, and innovations in basic goods *per se* (e.g. electricity as used in the factory vs. electricity used for domestic lighting)—although they are certainly not unaware of this distinction. Having made central to his analysis the surplus-basic distinction, Lonergan is especially interested in the former kind of innovation, i.e., that which facilitates the process of production.

[42] Lonergan, *Macroeconomic Dynamics*, 135.

How can an acceleration of the savings rate sufficient for surplus expansion be achieved? There must occur a channeling of money from basic income (I') to surplus income (I''). But what is conducive to that? How could there occur this shift in consumption, from basic goods to surplus goods? Lonergan straightforwardly admits that the condition most conducive to such a shift is inherently anti-egalitarian.[43] "The *simplest* way to obtain great savings, and so promote a surplus expansion, is to increase the income of the rich, *who can hardly spend more* on their standard of living."[44] The insight here is that the rich, however extravagant their basic income (spent during an interval as I'), will have a remainder that flows elsewhere. This remainder will tend to move from Redistributive Function to Surplus Demand through a process we now refer to as financial intermediation. "While they [the rich] may be too distant from the current operations of the economic process to judge, at least they can put their money into the bank or bonds or stocks, and perhaps others there will see how it can be best used."[45]

Lonergan's conditional acceptance of an inegalitarian income distribution does not stem from any ideological affirmation of the private interests of the rich, but rather from a functional understanding of necessary conditions for attaining a massive future public good. What is ultimately desired, and truly in the interest of all, is a basic expansion. But surplus expansion makes basic expansion possible. Without improved production there can be no improved consumption. The wealthy happen to be in a relatively better position to save and invest. "The

[43] "The surplus expansion is anti-egalitarian, inasmuch as that expansion postulates that increments in income go to high incomes" (Lonergan, *Macroeconomic Dynamics*, 135).

[44] Lonergan, *Macroeconomic Dynamics*, 119. Emphasis added. I would caution that Lonergan's theoretically correct statement that increasing the incomes of the rich is "the simplest way" to increase the savings rate should be construed more as a mathematical condition for optimization than as a policy recommendation. In practice there surely must be ways of increasing the saving rate that may be less optimal but more just.

[45] Lonergan, *Macroeconomic Dynamics*, 135.

higher any individual's total income, the smaller will be their fraction… of total income going to basic expenditure," and consequently the larger the fraction of total income available for surplus expenditure.[46] Hence distributions of income favoring the wealthy "are a means of providing adjustments in the community's rate of savings" conducive to effective financing of the surplus expansion.[47]

Basic Expansion and the Need for an Egalitarian Shift of Income

The inegalitarian income distribution is economically justified only insofar as it is necessary for the financing of the surplus expansion. In the absence of adequate financing, promising new innovations that could have accelerated the production of the means of production would not be implemented, at least not in a timely manner. Surplus expansion however, is merely one moment in a larger dynamic process, and is itself only for the sake of the *basic* expansion it later makes possible. The purpose of economic activity is not production for its own sake, but a heightening of the standard of living, preferably for all. Lonergan recognized a significant challenge recurring in economic history however, with regard to the fulfillment of this purpose. The benefit of surplus expansion—of newly implemented technological innovation in surplus production yielding improved quality, increased quantity, and more affordable prices in *basic* production—comes to pass only after a temporal delay. In the simplest example of surplus expansion Lonergan considers Robinson Crusoe on his island, clearing a field for cultivation. "When Robinson is clearing a new field, he is incapable of the illusion that that

[46] Lonergan, *Macroeconomic Dynamics*, 135.

[47] Lonergan, *Macroeconomic Dynamics*, 135.

activity enables him to have more to eat here and now."[48] This time lag can be lengthy indeed: "…the industrial revolution of the nineteenth century transformed the means of production; the demand for labor was almost continuously strong; but only in the last quarter of the century did standard of living begin to rise generally."[49]

Following the lead of Joseph Schumpeter in *Theory of Economic Development*, Lonergan recognized that periods of surplus expansion can generate outsized gains for certain talented, ambitious, and fortunate individuals who happen to be advantageously situated with respect to the entrepreneurial process and surging financial inflows. Typically however these periods can be difficult for most ordinary working people. They tend to be times of increased labor, less leisure, deferred consumption, increased saving, higher inflation, and (as mentioned) inegalitarian income distribution. Surplus expansion is nevertheless worthy of undergoing. Effectively implemented innovation in surplus production should, after a time lag, accelerate the flow of production in the basic circuit. Ultimately surplus expansion is for the sake of a future higher standard of living, characterized not least by greater and more widespread leisure and cultural opportunities.

Lonergan's macroeconomic theory attempts to synthesize Schumpeter's insights about the dynamics of production with Keynes's insights about the indispensability of consumption. Schumpeter clarified economic expansion as stemming from technological innovation, entrepreneurial activity to exploit its practical applications, and savings and investment to

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[48] Bernard Lonergan, *For a New Political Economy*, Collected Works of Bernard Lonergan, vol. 21, ed. Philip J. McShane (Toronto: Toronto University Press, 1998), 151.

[49] Lonergan, *For a New Political Economy*, 24. The extraordinary delay in this instance was perhaps extended unnaturally by the attempt on the part of the British to maintain a favorable balance of trade vis-à-vis their colonies. A similar deferral of internal basic expansion may be occurring today in the case of China, and perhaps other major exporters.

effectively finance those applications.[50] His account of the business cycle described how such expansion occurs in a cyclical or wave-like pattern.[51] Keynes's diagnosis of the Great Depression, on the other hand, emphasized the indispensability of effective demand.[52] If production is not met with consumers who are willing *and able* to purchase what has been produced, then prices decline, workers are laid off, consumption falters even more, producers descend into bankruptcy, and the economy spirals into a slump.

Lonergan sought to integrate these insights into a systematic understanding of necessary conditions for optimal macroeconomic functioning and long-term sustainability. Optimization mainly requires the promotion of innovation and its timely financing in surplus expansion. Sustainability, on the other hand, requires timely transition from surplus expansion to basic expansion. At some point late in the surplus expansion, the range of practical applications arising from the new innovation has been more or less fully implemented. Further financing of the surplus expansion pushes up against a law of diminishing returns. Yet insofar as the surplus expansion has for many years or even decades required an accelerating rate of savings to be channeled from the basic circuit to the surplus circuit, the productive capacity of the surplus circuit now threatens to outstrip the consumptive capacity of the basic circuit. Lonergan argued that this is the point at which economies are especially prone to falter. The augmentation of surplus production via the surplus expansion was ultimately to allow for heightened basic consumption. But what conditions must obtain for that to be consummated?

[50] Joseph A. Schumpeter, *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle* (New Brunswick: Transaction Publishers, 1983).

[51] Joseph A. Schumpeter, *Business Cycles: a Theoretical, Historical, and Statistic Analysis of the Capitalist Process* (New York: McGraw Hill, 1964).

[52] John Maynard Keynes, *The General Theory of Employment, Interest, and Money* (New York: Prometheus Books, 1997).

Lonergan attempted to clarify the normative conditions for an ideal, but nevertheless practicable economic cycle, "a pure cycle or wave that has no necessary implications of negative acceleration. A pure cycle of the productive process is a matter, simply, of the surplus stage accelerating more rapidly than the basic, then of the basic stage accelerating more rapidly than the surplus."[53]

What would an economic pure cycle require? What conditions would be necessary to successfully transition from surplus to basic expansion? The recent surplus expansion has implemented productive innovations and thereby optimized the productive capacity of the economy, including that of the basic circuit. Having run its course, financing of surplus production should taper off to a level that sustains maintenance and replacements at the now higher level of production that has just been achieved. Given that there is to be a reduction in new fixed capital investment however, and consequently a *contraction of the surplus circuit*, the only way a negative acceleration can be avoided in the economy *as a whole* is if there occurs a compensatory *positive acceleration in the basic circuit*, an expansion of production directly for the sake of the standard of living. This expansion of the basic circuit would make full *use* of the newly increased productive capacity installed by the recently completed surplus expansion. It would require a shifting of employment from surplus to basic industrial sectors. As basic income (I') would increase, expenditures for basic goods and services could sustain the economy, while now at last also allowing for the enjoyment of a higher standard of living.

But how is this increased basic production and consumption possible, so that a contraction can be avoided? The main requirement is that there occur an adjustment in the aggregate rate of savings. This adjustment is not a simple matter. The surplus expansion, over a

[53] Lonergan, *Macroeconomic Dynamics*, 38.

long period of time, has channeled an ever increasing rate of savings into the surplus circuit. Furthermore, investors and financiers have generally received high rates of return for enabling this flow. If the basic expansion is to occur, there must now be effected and sustained an opposite flow, from the surplus circuit into the basic circuit. The only way there can occur an acceleration of the basic circuit however, is if there occurs an acceleration of the rate of basic income, I', that allows an expanded basic production to clear the basic final market. Lonergan argued that this condition could be effected by a *decline* in the savings rate. Monetary flows, which during the surplus expansion had been diverted to the surplus circuit *via* savings, could now (at the initiation of a basic expansion) be directed to the basic circuit by a progressive reduction of the previous high rate of savings.

A major obstacle to this reduction of the savings rate however, is the persistence of relatively "invulnerable" sources of what Lonergan termed "pure surplus income." Pure surplus income is the fraction of total surplus income directed to new fixed investment, rather than merely to maintenance and replacement of existing productive capacity. While maintenance and replacement expenditures are necessary to sustain current levels of production (even during a basic expansion), pure surplus income, by definition, is neither for maintenance and replacements, nor expended on basic consumption. Lonergan describes some sources of pure surplus income:

> Today, with increasing specialization of function, pure surplus income is distributed in a variety of ways: it enters into very high salaries of general managers and top-flight executives, into the combined fees of directors when together these reach a high figure, into the undistributed profits of industry, into the secret reserves of banks, into the accumulated royalties, rents, interest receipts, fees, or dividends of *anyone who receives a higher income than he intends to spend at the basic final market*.[54]

[54] Lonergan, *Macroeconomic Dynamics*, 153. Emphasis added.

We note here that whereas Thomas Piketty identified high incomes and wealth purely from a statistical perspective, i.e., in terms of percentile rankings, Lonergan has adopted a functional perspective. He is interested in how incomes of various types function relative to the exigencies of surplus or basic expansions and against his normative theoretical standard or an economic pure cycle. By definition, pure surplus income is not spent in the basic final market. As channeling of money away from basic income, I', the persistence of these flows is detrimental to the basic expansion. Pure surplus income is channeled to Surplus Demand function, either directly, or through financial intermediation. It fights to keep the boom going.

While those in Piketty's top deciles of income and wealth will tend to be the most obvious sources of pure surplus income, it is important to realize that pure surplus income can be generated from profits earned by owners of businesses engaged in *basic* production[55] as well as by the mid-decile incomes of "middle class" workers who happen to earn more than they spend.[56] The exigencies of an economic pure cycle would require (as a theoretical limit) pure surplus income to taper off to zero during transition to a basic expansion. The problem is that

[55] Lonergan suggests that pure surplus income generated by owners operating in Basic Supply function, departs the basic circuit *via* the crossover $i'O'$: "there are large salaries and large profits to be had, at least at times, by contributors to the standard of living, and so there can be some fraction, say i' of O', that heads to the surplus demand function" (Lonergan, *Macroeconomic Dynamics,* 49). Lonergan acknowledges it is also possible that money departs the basic circuit through the Redistributive Function. But in this case he suggests that flow will also eventually be channeled to Surplus Demand function. "It is possible to divert pure surplus [income] from the circuits to the redistributional function without causing a negative ($D'' - s''I''$) because in the redistributional function there is an organization of promoter, underwriters, brokers, and investors who there mobilize sums of money and move them along ($D'' - s''I''$) from the redistributional function to the surplus demand function where they are spent as new fixed investment." Lonergan, *Macroeconomic Dynamics,* 147.

[56] Lonergan's diagram (shown above) seems to suggest that *wages* outlaid for basic production flow to Basic Demand *via* $c'O'$ and that wages outlaid for surplus production flow to I' *via* $c''O''$. While this may perhaps be true of the majority of wages, we must make the qualification that wages only flow to Basic Demand (I') if they are allocated for basic expenditure during the interval being employed in the analysis. Wages in excess of what will be expended upon basis goods and services during the interval tend to flow to the Redistributive Function as savings, and from there will tend to flow into the surplus circuit as investment via financial intermediation. Hence to some extent even "middle-class" wages may be a source of pure surplus income.

persistence of pure surplus income at this time tends to drain the basic circuit by channeling income from the basic circuit to Surplus Demand function.[57] This counter-flow (of I'' beyond what is needed for maintenance and replacements) subverts the basic expansion.

Lonergan argued that the remedy to this draining of the basic circuit, and the solution to the problem of "insufficient consumer demand," is to promote an "egalitarian shift" of incomes.

> Just as the surplus expansion is anti-egalitarian in tendency, postulating an increasing rate of saving, and attaining this effectively by increasing…the income of those who already spend as much as they care to on basic products, so the basic expansion is egalitarian in tendency; it postulates a continuously decreasing rate of saving, a continuously decreasing proportion of surplus income in total income; and it achieves this result effectively by increasing, in the main, the income of those who have the maximum latent demand for consumer goods and services.[58]

Stated more simply: "To decrease the rate of saving, *increase the income of the poor*."[59] The same theoretic functional justification for the anti-egalitarian shift of incomes during the surplus expansion now requires an egalitarian shift during the basic expansion. While during the surplus expansion an egalitarian income distribution would have been incompatible with the requirement of an increasing savings rate and the channeling of an accelerating monetary flow from Basic to Surplus Demand, now—during the basic expansion—the persistence of an anti-egalitarian income distribution is incompatible with a decreasing savings rate and the need to channel an accelerating monetary flow from Surplus to Basic Demand.

If this egalitarian shift of incomes fails to occur, the increased productive capacity made possible by the prior surplus expansion will not be met by an adequate level of effective basic demand. A number of "palliatives" generally will be attempted to compensate. These include

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[57] See Lonergan, *Macroeconomic Dynamics,* 144-56.

[58] Lonergan, *Macroeconomic Dynamics,* 139.

[59] Lonergan, *Macroeconomic Dynamics*, 135. Emphasis added.

deficit spending, tax cuts, seeking favorable balance of trade, deepening of consumer debt, and so on. Yet these only delay and exacerbate the inevitable, an economic slump which ultimately benefits neither the wealthy, nor the middle class, nor the poor.

In the remainder of this paper I seek to bring Lonergan's approach to macroeconomics into dialog with Piketty's *Capital in the Twenty-First Century*. In doing so I seek: 1) to gain a critical perspective on Piketty's book, 2) to identify points of complementarity between Lonergan and Piketty that might deepen our understanding of the problem of inequality, and 3) to consider how Piketty's findings (especially regarding $r > g$) might modify Lonergan's account of the challenges of long-term economic development.

The Nature of Capital and the Importance—for Everyone—of Capital Formation

Lonergan's understanding of capital is unique, and differs markedly from that of Piketty. In fact Lonergan tends to avoid using the term "capital" altogether, and discusses instead the dynamics of "surplus production." His intention was to move to a more functionally differentiated and explanatorily useful set of terms and relations. To recall, surplus production is production of the means of production. It is the production of surplus goods and services, which are distinct from basic goods and services. While a basic good (such as a hamburger) is a component in some individual's standard of living, a surplus good (such as a 3-ton industrial meat grinder) is not. Surplus goods and services are produced in the surplus circuit, but used both in the surplus circuit and in the basic circuit. When used, surplus goods and services accelerate the flow of surplus production, and later of basic production as well. Any level of civilization beyond the simplest hunter-gatherer stage requires surplus production.[60] It is what

[60] I recommend two articles by Michael Shute, each offering a beautiful and leisurely analysis of a humble instance of surplus innovation: the first of the basket, the second of a simple fishing weir. See Michael Shute, "Two

facilitates transformation of the potentialities of nature (e.g., soil, plant fibers, metal) into a standard of living (e.g., nutritious food, Levi jeans, and Harley motorcycles).[61] Without surplus production, we would not be here.

Piketty adopts a conventional definition of capital "as the sum total of nonhuman assets that can be owned and exchanged on some market. Capital includes all forms of real property (including residential real estate) as well as financial and professional capital (plants, infrastructure, machinery, patents, and so on) used by firms and government agencies."[62] Piketty excludes "human capital" which he defines as consisting of "an individual's labor power, skills, training, and abilities."[63]

Piketty's inclusion of residential housing under the rubric of capital seems problematic, at least from the perspective of Lonergan's surplus/basic distinction. On that distinction residential housing would be considered a basic good. Piketty proposes however that "capital produces 'housing services,' whose value is measured by the equivalent rental value of dwellings, defined as the increment of well-being due to sleeping and living under a roof rather than outside."[64] To speak of owner-occupied residential housing as a service productive of well-being seems forced, and blurs any distinction between basic goods constitutive of a standard of living and surplus goods necessary to produce those basic goods.[65] Furthermore, Piketty's focus on capital as

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Fundamental Notions of Economic Science," *Lonergan Review*, 2010, Vol. 2, no. 1; 95-106 and Michael Shute, "Real Economic Variables," *Divyadaan: Journal of Philosophy & Education*, 2010, Vol. 21, no. 2; 184-94.

[61] Lonergan, *Macroeconomic Dynamics*, 19-20.

[62] Piketty, *Capital*, 46.

[63] Piketty, *Capital*, 46.

[64] Piketty, *Capital*, 213.

[65] As the value of residential housing is included in the value of capital and constitutes a significant portion of Pikettys capital/income ratio, β, the relevance of Piketty's data on β, for those who might be interested in advancing Lonergan's macroeconomics, is limited.

“forms of real *property*” places emphasis on surplus *goods*, but to the neglect of equally important surplus *services*. Piketty’s exclusion of human capital is also problematic insofar as much of what he includes under the rubric of human capital might possibly be considered a surplus service. Corporations, for example, routinely make considerable outlays to improve their own internal organizational structure, managerial capacities, and worker productivity. Finally, Piketty’s inclusion of “financial capital” and “patents” as capital would be qualified on Lonergan’s view. Such financial or legal instruments are not directly operative in either the surplus or basic circuits of the economy, but are mere titles of ownership, situated non-operatively in Redistributive Function.

Piketty’s undifferentiated understanding of capital carries over into the challenge of understanding the dynamic context of capital formation and its significance. Lonergan’s account of surplus expansion clarifies the importance of capital for bringing about a higher standard of living. Surplus expansion is a difficult period of intensive capital formation. It is *hoped* that investment in the surplus circuit will effectively implement *promising* new innovations and that this effort will *eventually* facilitate a subsequent acceleration in the rate of production of those goods and services that enter directly into a community’s standard of living. Over the long term this process is potentially beneficial even to those who are not owners of capital. Ideally executed, economic history becomes not a series of boom and busts, but an alternating sequence of surplus and basic expansions, through which humanity’s standard of living mounts to successively higher plateaus.

While Piketty does acknowledge that “capital in all its forms has always played a dual role, as both a store of value and a factor of production,” he tends to focus almost exclusively on the former role.[66] This is understandable given his concern with inequality, yet any adequate theoretic understanding of capital must also grasp the latter role, i.e. how capital functions with respect to production. Piketty neglects the functional significance of capital formation as increasing the quantity, enhancing the quality, and reducing the price of consumer goods, in ways that are potentially beneficial for all. His focus with regard to capital is mainly on how much there is of it (β), what it returns (*r*), and to whom (statistical distribution of wealth and income).

Agreement and Differences regarding Tolerance of Inequality

To begin with a point of general agreement, it should be noted that Lonergan and Piketty both consider inequality a disvalue, although the grounds from which they articulate this are different. In a discussion of the justification of taxation and the social state Piketty appeals to Article I of the Declaration of the Rights of Man and the Citizen (1789), which proclaims that "men are born free and remain free and equal in rights" and insists that "social distinctions can be based only on common utility."[67] Lonergan's deepest ground for affirming equality is theological, and rooted in a notion of the human person as *Imago Dei*. His account of group bias

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[66] Piketty, *Capital*, 48. Statements such as the following belie a somewhat tepid interest in the function of capital with respect to its role in production: "The overall importance of capital today… is not very different from what it was in the eighteenth century. Only its form has changed: capital was once mainly land but is now industrial, financial, and real estate" (Piketty, *Capital*, 377). Unlike Schumpeter, there is no interest here in how these forms might function differently. And in his discussion of $r > g$, Piketty remarks: "Thus throughout most of human history, the inescapable fact is that the rate of return on capital was always at least 10 to 20 times greater than the rate of growth of output (and income). Indeed, this fact is to a large extent the very foundation of society itself: it is what allowed a class of owners to devote themselves to something other than their own subsistence" (Piketty, *Capital*, 353). The passage insinuates that what the owners are devoted to, rather than merely their own subsistence, is merely their own enrichment. While motivationally this may (or may not) be the case, capital formation also happens to be a necessary condition for the historical elevation of the standard of living—not to mention for civilization itself.

[67] Piketty, *Capital*, 479.

in *Insight* is more proximate to the topic at hand however. There he suggests social differences (including income differences) could be rationally justifiable on a functional basis.

> Basically, social groups are defined implicitly by the pattern of relations of a social order, and they are constituted by the realization of those dynamic relations. In its technological aspect the social order generates the distinctions between scientists and engineers, technicians and workers, skilled and unskilled labor. In its economic aspect, it differentiates the formation of capital from the production of consumer goods and services, *distinguishes income groups by offering proportionate rewards to contributions*, and organizes contributors in hierarchies of employees, foremen, supervisors, superintendents, managers, and directors.[68]

Yet congruent with Piketty's affirmation that "social distinctions can be based *only* on common utility," Lonergan clarifies that we must be vigilant and systematically critical of the tendency for society to become stratified on the flimsier basis of mere past success.

> Groups differ in their possession of native talent, opportunities, initiative, and resources; those in favored circumstances find success the key to still further success; those unable to make operative the new ideas that are to their advantage fall behind in the process of social development. Society becomes stratified; its flower is far in advance of average attainment; its roots appear to be the survival of the rude achievement of a forgotten age. Classes become distinguished, not merely by social functioning, but also by social success; and the new differentiation finds expression not only in conceptual labels but also in deep feelings of frustration, resentment, bitterness, and hatred.[69]

This raises a further relevant question: If economic inequality were actually based on some genuine and significant "common utility," would it then be rationally tolerable? While the principle that "social distinctions can be based only on common utility" seems logically open to this, Piketty himself is not. His general affirmation of equality carries over to the economic sphere in a straightforward manner, i.e., in what seems to be an invariant assumption that inequality is universally undesirable, always to be avoided or remedied if it can be.

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[68] Lonergan, *Insight*, CWL 3, 247. Emphasis added.

[69] Lonergan, *Insight*, CWL 3, 249.

Because Lonergan recognized the importance of the productive role of capital (as opposed to merely its "store of value" role), and because he had a systematic theory of how surplus income functions with respect to the dynamically changing exigencies of the business cycle, his position on inequality is more complex. An inegalitarian income distribution happens to be more optimal to the financing of a surplus expansion than is an egalitarian distribution. Inequality (at least as correlated with pure surplus income) will tend to increase through the surplus expansion. As the expansion exhausts itself however, the persistence of an inegalitarian income distribution becomes increasingly detrimental. If the egalitarian shift of income necessary for timely transition to basic expansion is not effected, the economy will struggle, destabilize, and possibly fall into depression.

It is therefore important to point out that Lonergan's tolerance for inequality is conditional. It is from a purely functional standpoint that Lonergan argued it is "simplest" to have high incomes in the hands of those whose marginal propensity to consume is the least. This inegalitarian distribution is justifiable *only* during surplus expansion, and only for the sake of financing the surplus expansion. Furthermore, Lonergan characterized the inflows of surplus income during this period as a "social dividend." The recipients of such flows ought not to spend it on basic consumption, and they ought not to save it in a nonproductive manner. Pure surplus income is only for the sake of surplus circuit investment.[70] If the wealthy squander the social dividend on personal consumption at this time, the surplus expansion will not be optimally

[70] "It remains that the excess of bills receivable over bills payable [profits] during the surplus expansion is not in its entirety a contribution to personal income. The part that would be profit in the stationary state still is profit. But the excess over that part is a social dividend. It is not money to be spent. It is not money to be saved. It is money to be invested either directly or, through the redistribution area, indirectly. For it is the equivalent of the money that, if not invested, contracts surplus production, [and] that, if invested, keeps surplus production at its attained volume; [moreover,] if a further appropriate sum is added interval by interval, surplus production will not merely level off but keep accelerating" (Lonergan, *Macroeconomic Dynamics*, 81-2).

financed, and to that extent society will be deprived of the subsequent basic expansion that ought to have been facilitated.

Finally, surplus expansions eventually come to an end. As the surplus expansion is not permanent, neither is the anti-egalitarian income distribution that was functionally justified in order to optimally finance the surplus expansion. With the waning of the surplus expansion, a more egalitarian distribution of incomes becomes functionally imperative, and is the main financial condition for successful transition to basic expansion. Again, a failed basic expansion manifests in economic depression, which is not good for anyone. This *properly economic functionalist imperative for equality*, at least at this point in the business cycle, is not the same as Piketty's uniform socially and politically motivated advocacy of equality. But it is complementary to Piketty's argument, and (assuming Lonergan's approach is valid) gives us reason to believe that the stakes are even higher than Piketty suspects.[71]

Meaning and Implications of *r* > *g* in Terms of Circulation Analysis

Thomas Piketty has provided formidable long-term statistical documentation of a resilient tendency, across multiple nations, toward income inequality. Through successive accumulation year after year, and generational transfers via inheritance, income inequality compounds into even greater divergences of wealth inequality. Piketty has offered an explanation of how

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[71] Piketty gives little indication in *Capital* that high levels of inequality may threatens economic sustainability. He writes: "there are no grounds for asserting that the upper decile can never claim more than 50 percent of national income or that a country's economy would collapse if this symbolic threshold were crossed…. In particular, it is possible that under the Ancien Régime, right up to the eve of the French Revolution, the top decile did take more than 50 percent and even as much as 60 percent…" (Piketty, *Capital*, 263-4). The only limit Piketty discusses is one of political tolerance, the threshold for revolution. Lonergan's theory, on the other hand, suggests there are *properly economic* limits to inequality, beyond which the economy falters. Piketty and Lonergan cannot both be correct here, although (if Lonergan has it right) there is no reason why discontent with economic limits (i.e., the experience of low wage growth, unemployment, bankruptcies, depression, etc.) would not *also* manifest itself in political discontent (giving rise to the revolutionary phenomena to which Piketty has adverted).

inequality occurs in terms of the expression $r > g$.[72] While the consistent occurrence of $r > g$ is susceptible to exogenous shocks and political interventions that counteract it, in their absence the return to capital has generally tended to exceed the rate of growth of the economy as a whole (as measured by national income). As a result, incomes flowing to those who own capital have tended to grow considerably faster than the incomes of those who do not. And insofar as those higher returns to capital are reinvested in yet more capital, wealth distributions diverge as well.

I have argued that one significant limitation of Piketty's *Capital* is its lack of a functional account both of income and of capital, and consequently of an understanding of the properly economic ramifications of income inequality. However persuasive regarding the social and political consequences of inequality, *Capital* fails to examine $r > g$ in a theoretic context that might disclose its properly economic consequences. I suggest Lonergan's circulation analysis might supply such a context. So we now inquire: How might Piketty's $r > g$ be interpreted in terms of Lonergan's circulation analysis?[73]

Recall that Lonergan distinguished two different types of income: basic income, I', and surplus income, I''. This is a functional distinction, and relies on a differentiation of operative monetary functions. It is not the same as Piketty's distinction between return to labor and return to capital. Basic income (I') is money held in reserve during an interval for expenditure on basic goods and services. Those in low to middle-income deciles are likely to spend most of their income, perhaps all of it, or even more (going into debt), as I'. They save little or nothing—for the simple reason that there is little or nothing to save. Now it is possible that some particular

[72] Piketty himself realizes that $r > g$ is actually more of a description than any sort of causal explanation: "To my way of thinking, the inequality $r > g$ should be analyzed as a historical reality dependent on a variety of mechanisms and not as an absolute logical necessity" (Piketty, *Capital*, 361).

[73] My intention is not to provide an exhaustive analysis, but merely some direction for further exploration.

individuals with *upper*-decile incomes will *choose* to spend most or all of their income on basic expenditures as well, perhaps consuming conspicuously. But in the *aggregate* this will tend not to be the case; those with higher incomes will save a greater portion of that income. And at the highest percentiles we run up against the phenomenon of "the rich, who *can hardly spend more* on their standard of living."[74]

If those with high incomes do not spend it all as I', where does the remainder go? Lonergan suggests it will tend to find its way to Surplus Demand function to become I''. This could happen, either directly, (e.g., if individuals invest in their own businesses) or indirectly, through the Redistributive Function. Savings flowing initially to Redistributive Function are invested, typically by intermediaries, in a manner that hopes to generate a return. Such investment could flow back into the basic circuit (e.g., as consumer loans, mortgages, or commercial loans to firms engaged in basic production), but some considerable portion flows to Surplus Demand and becomes I''—and not merely to finance maintenance and replacement of existing productive capacity but (as "pure surplus income") to finance production of ever further means of production.[75] The *use* of new surplus goods and services, in either circuit, accelerates all production, both surplus and basic. As long as this remains economically productive and monetarily viable, a return is produced. This return on new surplus production is a significant component of Piketty's "*r*". It flows back to the financial intermediaries and to the original savers and investors via the Redistributive Function, in the form of interest payments, dividends,

[74] Lonergan, *Macroeconomic Dynamics,* 119. Emphasis added.

[75] International investment can be envisioned as a departing of savings via the domestic Redistributive Function and their reemergence through the Redistributive Function of the foreign economy, where they are subsequently deployed. Some investments, e.g. the purchase of a previously constructed building, or equities or bonds from another party (not at an initial public offering or secondary offering), etc. induce no new fixed capital expenditure, but merely a transfer of ownership. Lonergan clarified such transactions as "merely redistributive."

capital gains, rents, royalties, etc. Again, Piketty's *r* is functionally undifferentiated with respect to circulation analysis. But insofar as *r* contributes to the incomes of those already at the upper end of the income and wealth distribution, we may suppose that *r* will have a strong tendency to flow back yet again to Surplus Demand, becoming I'' in the next interval, in the way just described. While the cycle lasts, wealth is accumulated.

If Piketty is correct—if $r > g$ is statistically verifiable and reasonably expected to remain so—this entails that there will be a persistent tendency (a monetary pressure as it were), for income to flow to Surplus Demand, to become I'' to the detriment of I'. Flows to Basic Demand—which typically occur in the form of wages (and probably at a rate correlated Piketty's relatively lower rate of *g*)—will be attenuated. While this may be appropriate *in the situation of surplus expansion*, Lonergan sought to clarify that a compounding tendency to recirculate the higher proceeds of *r* to Surplus Income *is not indefinitely sustainable*. Over the long term an alternating equilibrium must be maintained between the surplus and basic circuits. If this does not occur, the surplus circuit drains the basic circuit and the basic expansion fails to occur.

Major investment in the surplus circuit was initially reasonable on the grounds that there were promising technological innovations in need of financing. Initial returns on those early and mid-cycle investments typically are quite high. But as the cycle plays out, investors (having learned to expect high returns) are in danger of not adequately apprehending when the implementation of the underlying innovation has run its course. Barring a wave of new innovation, continued flows to Surplus Demand (seeking the high return of the past) will eventually be met with disappointment.[76] This exhaustion of innovation problem, on the surplus front, combines with an even more intractable problem on the demand front. The whole purpose

[76] Piketty too noted a tendency for *r* to decline under conditions of saturated capital intensity (high β).

of surplus expansion was to facilitate production of a greater quantity and quality of *basic* goods and services, which raise the standard of living for everyone. A persistent $r > g$ however (with the lower g more closely correlated with basic incomes than the higher r) suggests *there may not be sufficient basic income (I′) necessary for the new productive capacity of the economy to clear the basic final market.* If this is the case, the situation is one of ineffective basic demand. Economists may speak of "secular stagnation" and speculate on its cause. They may diagnose a "global savings glut"[77] or "global overcapacity"[78]— both of which are consistent with Lonergan's diagnosis (although entirely innocent of Lonergan's explanatorily incisive functional analysis).

Even in the absence of any well-founded explanation, various maneuvers may be attempted to compensate for the "economic weakness." These might include deficit spending, tax cuts, fiscal stimulus, lowing of interest rates (perhaps even inducement of negative real rates through quantitative easing), attempts to maintain a favorable balance of trade, tariffs on foreign goods, trade wars, elimination of "burdensome" regulations, extension of consumer debt, increased transfer payments and welfare, and so on—all of which we have seen in recent years. More perversely, there may occur the scapegoating of immigrants, or of foreigners who supply our imports. And there is always the risk that frustrations that cannot be relieved through economically wise routines conducive to economic prosperity might be defused through military domination and war. Lonergan regarded all such remedial efforts as mere "palliatives," at best only temporarily papering over an underlying (but not understood) failure to transition to basic expansion.

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[77] See Martin Wolf, *Fixing Global Finance* (Baltimore: John Hopkins University Press, 2008).

[78] See Daniel Alpert, *The Age of Oversupply: Overcoming the Greatest Challenge to the Global Economy* (New York: Penguin, 2013).

Implications of *r* > *g* for the Challenge of Successfully Navigating an Economic Pure Cycle

On the assumption that Piketty's statistical evidence is valid, and that his finding *r* > *g* can be empirically verified along the lines presented in *Capital*, we ask: what might be the implications for Lonergan's normative conception of long-term economic process as one of successfully navigating an alternating series of surplus and basic expansions? What might Lonergan have learned from Piketty?

First, Piketty's *r* > *g* suggests that *the initial financing of surplus expansion might be less problematic* than Lonergan realized. At least in post-industrial, developed capitalist economies, with established institutions of financial intermediation, fractional reserve banking and channels for international financing, the phenomenon of *r* > *g* might typically be expected to yield a savings rate sufficiently high to handle financing for all but the most major waves of new technological innovation.[79] And even in those cases, expansion might still be financed, albeit suboptimally. At least this is a pertinent question for further economic research. Confirmation of this matter of fact would not undermine Lonergan's macroeconomic theory, or invalidate his emphasis on understanding the monetary conditions necessary for surplus expansion. Lonergan himself regarded basic expansion as far more difficult to initiate than surplus expansion. Piketty provides new statistical information, relevant to understanding historical fact and the concrete contemporary situation. As Lonergan desired circulation analysis to be sensitively attuned to changing concrete situations, I am confident he would have been interested in Piketty's data, and its implications.

[79] A distinction should be clarified here between the *financing* of surplus expansion, and the underlying technological *innovation* itself, as that which is implemented by the surplus expansion. While I am suggesting the former may be less problematic in the contemporary context than Lonergan supposed, the latter has perhaps become increasingly challenging. Economic progress will require ongoing innovation, and Piketty's *r* > *g*, of itself, does nothing to ensure that.

Second, Lonergan was keenly aware that transition to basic expansion is highly problematic. (Indeed, he is the *only* economist to give a systematic account of basic and surplus expansions, and the challenges of navigating these.) The addition of Piketty's finding of $r > g$—to the extent it contributes something new to circulation analysis—suggests, unfortunately, that transition to basic expansion may be *chronically* problematic. Especially in his account of the persistence of sources of pure surplus income, it is clear that Lonergan himself appreciated the chronic nature of the problem. While Piketty's undifferentiated $r > g$ to some extent conceptually overlaps with Lonergan's notion of pure surplus income, $r > g$ also seems to indicate the underlying presence of robust and entrenched routines. Piketty's sociological approach also puts a human face on the difficulty. Resistance to the basic expansion is concretely embodied in the self-interests of "the one percent," of ever more influential corporations and corporate supermanagers, of an emerging elite of global oligarchs. Of course insofar as moral self-transcendence remains possible, self-interest need not have the final say. But what is needed is adequate theoretic understanding of economic process, accompanied by the wise and compassionate praxis of economic participants at all levels—in short, "a new political economy."

Third, I have just suggested Piketty's $r > g$ might possibly entail that *surplus expansion will be less difficult, and basic expansion more difficult*, than Lonergan initially realized in the absence of relevant data. If this is indeed the case, Lonergan's notion of the need for an inegalitarian shift of incomes during surplus expansion should be carefully reconsidered. While optimal financing of surplus expansion does require prior savings (and an increasing rate of savings), and while the financing of surplus expansion in the past may indeed have been problematic, if $r > g$ happens to be a verified scheme of recurrence in the way Piketty suggests, the problem of financing surplus expansion could perhaps more or less regularly solve itself. Lonergan's statement that "the *simplest* way to obtain great savings, and so promote a surplus expansion, is to increase the income of the rich, who can hardly spend more on their standard of living," while no doubt true, must take account of the extent to which adequate savings might *already* be available simply through the dynamics of $r > g$.

Finally, insofar as it is the case that a deliberate inegalitarian shift of income is no longer needed and can no longer be justified on economic grounds, this would seem to entail a thoroughgoing repudiation of "supply-side economics" and all its empty promises.

Piketty's Policy Recommendations: Three Initial Objections

As a remedy to unacceptably high and increasing income and wealth inequality, Piketty advocates two main policies: a raising of the income tax, and a progressive global tax on capital. "Leveling confiscatory rates on top incomes is not only possible but also the only way to stem the observed increase in very high salaries. According to our estimates, the optimal top tax rate in developed countries is probably above 80 percent."[80] Such rates would be imposed upon the statistically highest .5 to 1% of incomes. Piketty suggests this would not negatively impact economic growth. "The evidence suggests that a rate on the order of 80 percent on incomes over $500,000 or $1 million a year not only would not reduce the growth of the US economy but would in fact distribute the fruits of growth more widely while imposing reasonable limits on economically useless (or even harmful) behavior."[81] He suggests that high marginal tax rates would act as a disincentive to high salaries, and that this would allow pay to be raised at lower

[80] Piketty, *Capital*, 512.

[81] Piketty, *Capital*, 513.

levels.[82]

The proposal of a global tax on capital is a bit more controversial. Piketty insists however that "if democracy is to regain control over the globalized financial capitalism of this century, it must… invent new tools…. The ideal tool would be a progressive global tax on capital, coupled with a very high level of international transparency."[83] "The largest fortunes are to be taxed more heavily, and all types of assets are to be included: real estate, financial assets, and business assets—no exceptions."[84] My sense is that readers of Piketty's *Capital* are likely to regard this final section, on policy recommendations, as the weakest part of the book. A number of objections seem fairly obvious.

First, there would be practical hurdles to implementation, which would require not merely national but trans-national cooperation on matters directly threatening to the interests of powerful individuals and corporations, to entities currently very adept at evading all manner of regulation and taxation. Piketty himself is certainly aware of the disproportionate influence of the rich, and asks—probably more rhetorically than naively: "Has the US political process been captured by the 1 percent?"[85]

Second, a global tax on *capital* (i.e. on property already purchased, presumably with income already subjected to income taxation) is bound to raise plausible objections on grounds of justice. Such taxes are not unprecedented. For example, property taxes assessed on residential and commercial real estate is already customary. But such taxes can be justified on the basis of the provision of ongoing municipal services that are at least somewhat proportionate

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[82] Piketty, *Capital*, 513.

[83] Piketty, *Capital*, 515.

[84] Piketty, *Capital*, 517.

[85] Piketty, *Capital*, 513.

to the tax paid. A progressive tax on the capital of the wealthy cannot easily be justified on the same basis. Piketty insists implementation of such a tax will only be the result of democratic debate. Yet this will feel like theft to those taxed, and one has to wonder whether democracy here has become what Alexis de Tocqueville feared it might become—merely the tyranny of the majority.

A third objection is on the basis of liberty, and has grounds as well in the principle of subsidiarity, emphasized by Catholic social teaching. Piketty's solution would require the creation of new globally-effective institutions wielding considerable coercive power. Lonergan, who was an admirer of urban planner Jane Jacobs, shared Jacobs' aversion to coercive top-down institutional solutions. In this regard Lonergan, rather than Piketty seems the real champion of democracy. His hope was that given adequate understanding of the conditionality of optimal and sustainable economic functioning, morally self-transcending persons at all levels might be called upon to cooperate with the normative exigencies of economic process. Lonergan envisioned the science of macroeconomics as educating free and responsible persons into a possible actualization of optimal and sustainable economic practice. He did not take *homo economicus* as axiomatic, and did not presuppose the impossibility or improbability of moral self-transcendence. His approach to macroeconomics seeks to facilitate an "augmenting [of] the enlightenment of enlightened self-interest" necessary both for the maintenance of human liberty, and for capitalism to avoid "eliminating itself" under a conception of self-interest that is excessively narrow.[86]

Piketty's Redistributive Policy in Light of Circulation Analysis

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[86] Lonergan, *Macroeconomic Dynamics*, 6.

Circulation analysis provides a distinctive theoretic framework from which specific economic policy recommendations can be evaluated and criticized. While it is not possible here to provide the full and detailed assessment Piketty's recommendations deserve, we can perhaps indicate a general heuristic. The following questions would be pertinent: Where in the business cycle are we? From what operative monetary function(s) would the tax flows recurrently be attained? Toward what operative monetary functions would the tax flows recurrently be moving? What functional consequences would this change be expected to have, given the exigencies of the pure cycle? Are these consequence phase-appropriate?

Let us begin by considering the policy merely with a view to *the source* of the tax revenue. Piketty intends revenues, both from the income tax and the tax on capital, to be derived most aggressively from those at the highest income and wealth percentiles. Such revenues would likely be derived from Redistributive Function (e.g., from the savings or investment accounts of the wealthy) and (in light of what has been explained above) might be expected to impede what would otherwise be a flow from Redistributive Function to Surplus Demand function. Some flow to Basic Demand function, might also be impeded (e.g., someone holds off on buying that third vacation home in order to pay the tax bill), but as we approach taxpayers at the highest levels of wealth, impedance of I' will tend less and less to be the case.

What are the functional implications of this, again merely with a view to the source of the tax revenue? It will depend on the exigencies of the pure cycle. If there is a normative exigence for surplus expansion, such a policy would be detrimental—because what is needed then is surplus income, I''. On the other hand, if there is a normative exigence for basic expansion, an impedance of I'' could be beneficial, assuming tax revenues somehow make their way to Basic Demand function to bolster I'.

Turning now from the source to the *destination* of the tax flows, we raise the question: toward what operative monetary function(s) would the new tax revenues be moving? There are several possibilities. If the revenue is used to invest in state-owned capital (e.g. roads, bridges, airports) this would still be a type of flow to Surplus Demand function. State-owned capital does differ in important ways from private capital however, and there may be a sound rationale for such investment, if it is both needed and prudently allocated. This is not a direct flow to Basic Demand function however—which might be more appropriate, especially during the difficult transition to basic expansion.

Another possibility is tax revenue being used to pay down government debt. Piketty himself laments the fact that "we currently spend far more in interest on the debt than we invest in higher education" and proposes "the debt must be reduced as quickly as possible."[87] When debt is repaid, holders of government bonds receive cash. Government bonds are owned, to a considerable extent, by wealthy individuals and foreign governments. Distribution of cash to foreign bondholders does not affect directly the domestic economy (although it will reduce *future* interest payments). Distribution of cash to wealthy individuals domestically does little to impede flow to Surplus Demand function or increase flow to Basic Demand.[88]

In Chapter 13 of *Capital*, Piketty offers a vigorous defense of the social state. Revenues from the taxes he proposes would be deployed to fund the social state, in the form of education, healthcare, retirement programs, social programs, etc. In the case of an economy struggling to transition to basic expansion, this might seem to be precisely what is called for. Lonergan

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[87] Piketty, *Capital*, 567.

[88] It should be noted that Piketty's preference for taxation over government borrowing is in fact compatible with Lonergan's analysis of deficit spending as an unsustainable palliative for economic weakness. Piketty's reasons for this preference however, are not theoretically grounded in the same manner.

however, is wary of such redistributional optimism. A major flow of this sort to Basic Demand function, *in the absence of new basic production*, would merely be inflationary. Basic expansion requires not merely a monetary flow of I', but also a proportionate acceleration in basic production itself. If this production does not occur we have a situation of more money chasing the same amount of goods and an upward shift in consumer prices to equilibrate that fact. While increase of I' by means of transfer payments would be inflationary, what might be more effective is facilitation of I' in the form of wages for new *basic production* proportionate to the flow of I'. This must again be qualified as appropriate only during periods of basic expansion. It is also the case that a heavily burdened social state can be an impediment to surplus expansion, at times when that happens to be what is most needed.

Concluding Remarks

Significant among the empirical findings of *Capital* is the observation of a decline in inequality that occurred in the mid-20th century. Piketty notes that its cause was largely accidental, a somewhat perverse outcome of war, depression, government welfare schemes, and extraordinary catch-up growth after WWII. In the following passage we find a plea for a more intentional and deliberate control of human history. "It was the wars of the twentieth century that, to a large extent, wiped away the past and transformed the structure of inequality. . . . Can we imagine a twenty-first century in which capitalism will be transcended in a more peaceful and more lasting way, or must we simply await the next crisis or the next war (this time truly global)?"[89]

[89] Piketty, *Capital*, 471.

Lonergan shared this desire for a more deliberate guidance over history and our economic destiny. Capitalist exchange economies, he believed, are not fated to inevitable catastrophic breakdown; but nor are they entirely self-correcting over the long-term. Preservation of economic stability requires intelligent and responsible navigation of economic rhythms that are not themselves stable over long durations. The path to optimal and sustainable economic development is traveled only by understanding what an economy functionally is, and by cooperating with its intrinsic exigencies.

> The difficulty emerges in. . . the basic expansion. In equity it should be directed to raising the standard of living of the whole society. It does not. And the reason why it does not is not the reason on which simple-minded moralists insist. They blame greed. But the prime cause is ignorance. The dynamics of surplus and basic production, surplus and basic expansions, surplus and basic incomes are not understood, not formulated, not taught.[90]

This paper has been an attempt to understand surplus and basic production, expansions, and incomes, in relation to an important book that addresses one of the most pressing issues of our times. Income inequality is not a simple issue, and it is not an issue that can be entrusted to simple-minded moralists. Now Thomas Piketty is certainly not a simple-minded moralist. But his immense and statistically incisive work begs to be situated in a deeper theoretic context. Inequality has not just social and political consequences, but properly economic ramifications as well. If an egalitarian shift of income fails to occur, and the basic expansion is thereby undermined, the increased productive potential that was the promise of the surplus expansion will be wasted. A lack of effective basic demand tumbles the economy into a depression, and this (as Piketty's data makes abundantly clear) benefits neither the poor nor the wealthy.

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[90] Lonergan, *Macroeconomic Dynamics*, 82.

Adequately understood, the problem of economic inequality will be recognized as a problem for everyone.