

Class Structure and the US Personal Income Distribution,
1918–2011¹

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This version: 21 August, 2014

¹A much earlier version of this paper was presented at the 2013 Analytical Political Economy meeting at the University of Massachusetts Amherst, and I am grateful to participants for comments on that paper. Thanks also to Ben Fine, Duncan Foley and Alfredo Saad-Filho for comments on a more recent draft. The usual disclaimer applies.

Abstract

Using definitions of class motivated by classical political economy, this paper uses the tax-unit based personal income distribution to construct quantitative measures of class, by percentile position and income share, on an annual basis from 1918 to 2011. Three classes are identified: managers who have sufficient nonlabour income that they do not need labour income from an employment contract (although typically they do engage in such employment); managers who do not have enough nonlabour income to meet that threshold; and the working class. Class measures of inequality are constructed to show that in class terms inequality was greater by 2011 than at any time since 1918. The paper concludes with some discussion of how causal explanations of the patterns in the data might be constructed.

JEL Classifications: B51, D31, P16

Keywords: Class analysis, US personal income distribution, inequality

1 Introduction

Ricardo famously began the Preface to his *Principles* by declaring

The produce of the earth – all that is derived from its surface by the united application of labour, machinery, and capital, is divided among three classes of the community; namely, the proprietor of the land, the owner of the stock or capital necessary for its cultivation, and the labourers by whose industry it is cultivated.

But in different stages of society, the proportions of the whole produce of the earth which will be allotted to each of these classes, under the names of rent, profit, and wages, will be essentially different; depending mainly on the actual fertility of the soil, on the accumulation of capital and population, and on the skill, ingenuity, and instruments employed in agriculture.

To determine the laws which regulate this distribution, is the principal problem in Political Economy.... (Ricardo 1951 [1821], p.5)

Ricardo's focus was on class, and he defined class in terms of the type of income received, with rent accruing to landlords, profit to capitalists and wages to workers. In early nineteenth century England, this division was socially obvious and uncontroversial. Some half a century later, partly in reaction to how Marx had further developed an approach based on class, political economy was transformed by the neoclassical revolution of the 1870s, and its basis sought in the activities of optimizing individuals rather than in the relations between classes.

This transformation reflected developments in the economic structure of capitalism. The development of joint-stock companies on the principle of limited liability began to spread nominal ownership more widely, and later, as corporate structures replaced the family firm in the late nineteenth and early twentieth centuries, professional layers of managers emerged, whose income was derived largely from employment rather than from the ownership of capital. The latter eventually became concentrated in financial institutions (insurance companies, pension funds and later sovereign wealth funds), largely comfortable with the derogation of control to salaried managers. Since pension funds in particular gave large numbers of people an indirect stake in corporate profits and interest on debt, the separation of ownership from control was easy to associate

ideologically with the demise of class. One consequence was the distinction drawn between the macroeconomic class distribution that had been Ricardo's concern, and the income received by individuals; the former became the province of the 'functional distribution of income' and the latter the 'personal distribution of income'.

Much recent work has focused on the top of the personal income distribution, describing how inequality has evolved over time, and has received a major impetus from the recent publication of Piketty (2014). In some ways, this book is a progress report on work by a number of scholars. For example, Atkinson, Piketty and Saez (2011) have surveyed the long run evolution of top incomes; Alvaredo, Atkinson, Piketty and Saez (2013) have focused on the top 1 per cent; and a number of collaborators have constructed and are extending a world database of top incomes.¹ Much of this work was inspired by the Piketty and Saez (2003) work on tax-unit-based income inequality in the United States, which has justly had a wide impact, and with regular updates of the data (currently, Saez 2013) their work has become a standard reference.

Two features of the Piketty and Saez dataset on incomes, constructed out of the Internal Revenue Service (IRS) individual Statistics of Income (SOI) data, are that the basic unit of analysis is a tax unit, and that the incomes are pre-tax. While the pre-tax feature provides evidence over time of underlying trends, the tax-unit basis has some awkwardness. For many purposes it would be preferable to have measures of household income, drawn for example from the Census Bureau's Current Population Survey (CPS), and to be able to compare pre-tax and post-tax household incomes in order to assess the effectiveness of redistributive policies. But neither dataset is entirely satisfactory, as the Congressional Budget Office (CBO) comments:

The SOI lacks information on couples and individuals who do not file a federal tax return, does not report all income from government cash transfer programs, has no information on the receipt of in-kind transfers and benefits, and uses tax returns rather than households as the reporting unit. The CPS lacks detailed information on high-income households, does not report capital gains, underreports other income from capital, and lacks information on deductions and adjustments necessary to compute taxes. (Congressional Budget Office (2011), p.33)

¹<http://topincomes.g-mond.parisschoolofeconomics.eu/#Home:>>.

CBO has accordingly matched detailed SOI records with CPS records such that each pair has both the CPS demographic characteristics and the SOI income, and on that basis has explored the evolution of the US personal income distribution (Congressional Budget Office (2011)). But this study is limited to the period 1979–2007, and does not therefore address crucial issues of how the distribution has changed over the longer run with respect to income inequality. For the latter, there is no choice but to use IRS data.

Since incomes are the sum of labour incomes (deriving from an employment contract) and nonlabour incomes (deriving from the personal ownership of wealth in a variety of forms), some studies focus directly on the evolution of inequalities in the underlying distribution of wealth (for example, Piketty and Saez (2014), Piketty and Zucman (2014), Saez and Zucman (2014)). Like the studies of income distribution, these studies look at particular cuts into the (tax-unit) distribution to see how these have evolved over time (for example, the top 10%, the top 1%, the top 0.01%). But there is nothing in particular to motivate the selection of these percentile numbers, save that they are numerically ‘the top’. Wolff and Zacharias (2013) have examined household wealth inequality, using a different dataset, matching data from the Census Bureau’s Annual Demographic Supplement with data from the Federal Reserve’s Survey of Consumer Finances, but only for the two years 1989 and 2001. The relevance of this study in the present context is that it attempts to cut into the distribution with sociological rather than numerical categories. Thus

A household is considered to be a capitalist household if it has non-home wealth of at least \$4 million or business equity worth at least \$2 million (in 2000 dollars). Our thresholds reflect wealth levels that would be, under normal circumstances, sufficient to yield a property income that can provide a household with a standard of living that is over and beyond a life of leisure. (Wolff and Zacharias (2013), p.1384)

But Wolff and Zacharias concede that these thresholds are “arbitrary” (ibid. p.1385).

The challenge is therefore to provide sociologically meaningful thresholds that are both less arbitrary and can be used over the long run with IRS data. That is what this paper attempts, on the basis of the income dataset published by Saez (2013).

Piketty and Saez (2003) summarized their findings as follows:

Our estimated top shares series display a U-shape over the century and suggest that a pure

Kuznets mechanism cannot fully account for the facts.... top capital incomes were severely hit by major shocks in the first part of the century [World War I, post-WWI depression, Great Depression and World War II] ... [and] were never able fully to recover from these shocks, probably because of the dynamic effects of progressive taxation on capital accumulation and wealth inequality. (Piketty and Saez 2003, p.3)

They further asserted that “the increase in top income shares in the last three decades is the direct consequence of the surge in top wages”. (Piketty and Saez 2003, p.3), concluding that “the working rich have now replaced the coupon-clipping rentiers” (ibid.). Wolff and Zacharias (2009) pointed out that this conclusion was overstated, and Piketty has revised it in favour of the two ‘cohabiting’ rather than the one ‘replacing’ the other (Piketty 2014 n.39, p.607). Thus for Piketty and Saez, both Kuznets and Marx were wrong; Kuznets because his belief, that growth and competition would in later stages of development reverse the inequalities of early development, is belied by the data; Marx because his thesis, that concentration of income and wealth in ever-fewer hands would characterize capitalist development, is also belied by the data. Rather than a deterministic process, “rising or shrinking inequality ... depends on the institutions and policies that societies choose to adopt” (Piketty and Saez 2014, p. 843).

But the institutions and policies that a society chooses begs the question of how such social decisions are made. In a framework of methodological individualism, those choices are fundamentally made by individuals, and somehow aggregated. But that is not the only possible approach. There is nothing sacrosanct about starting from individuals, even though that has been the *lingua franca* of economics at least since the 1870s. Prior to that, and notoriously in the work of Ricardo and Marx, class took centre-stage and individuals were conceived (in the first instance) only in so far as they were representative of the class to which they belonged. Subsequently, the notion of class has never quite died. The idea that individuals might only derive existential meaning from some sort of ‘class-belonging’ in a wider social context, while increasingly alien to economics, lived on in the other social sciences, where there was less concern with trying to construct the behaviour of aggregates out of the optimizing decisions of individuals. Also, although arguably, it retained some presence in post-Keynesian economics through the Cambridge saving equation. And it remained central to the Marxian tradition, in which individuals have always been treated (at least in the first instance) as the

‘bearers’ of class relations. It is worth considering whether this is a more promising framework for interpreting the data that Piketty and Saez (hereafter PS) have collected. This paper proposes that underlying the PS data is a class-divided reality, and it is those class divisions that are reflected in the data. If that is true, the institutions and policies that a society ‘chooses’ may have more to do with power and class conflict than individual choice.

There is a huge sociological literature on class, to which for example Wright (1976, 2009) has been a major contributor, but this paper confines itself to quantitative estimates on the basis of the definitions to be outlined below. The advantage of these definitions is their analytical coherence and tractability over the long run; the disadvantage is that they cannot address intra-class issues. But in a long run historical treatment, there is much to be said for analytical simplicity in place of detailed historical complexity.

The paper proceeds as follows. The next section considers the classical approach to class and its difficulties, while the following section proposes different definitions of class which remain within the spirit of the classical approach, but are more operational. In so doing, the paper constructs a historical historical record of each of the classes in terms of their percentile position in the personal income distribution and their share in total personal income. The following section focuses on what this reveals about income inequality in class terms, and the next section sketches some proposed explanations for the historical patterns displayed. A short conclusion then suggests where this class approach could lead.

2 Definitions of class: the classical approach

2.1 The working class

Marx took Ricardo’s definition of the working class as those in receipt of wages and developed it further through an examination of the wage bargain. For Marx, what was transacted in that bargain was the capacity to work (or labour-power) for a defined period of time. The purchaser had then the right (like any commodity purchaser) to consume the commodity purchased during that time; consuming labour-power meant putting the worker into a production process in which more was produced than the cost of inputs. With the value of non-labour inputs transferred to the final product, this implied that the value produced by the consumption of labour-power over the period of time covered by the transaction was greater than the

value of that labour-power at the beginning of that period of time, and this difference accrued to the owner of the commodity as surplus-value.

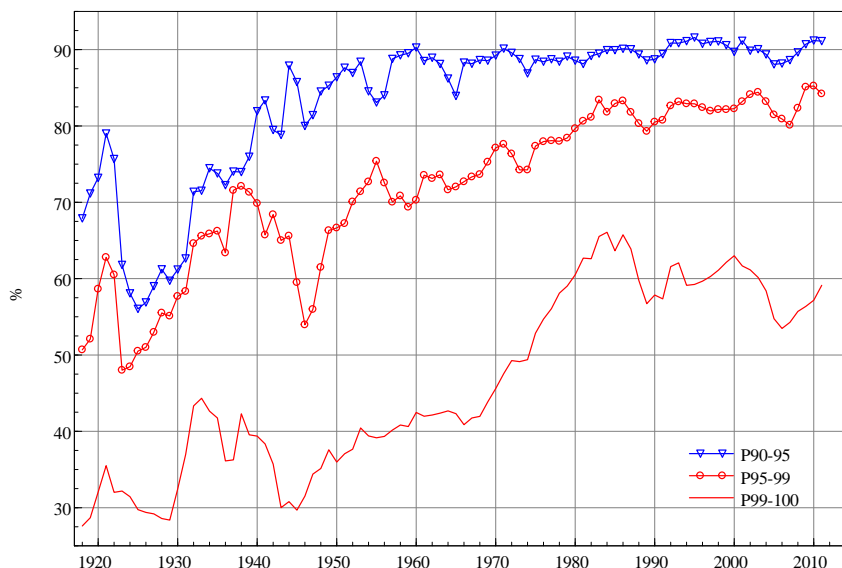
Why would workers sell their labour-power in this manner? Marx's answer was in two parts. First, they were able to do so. This was the result of the long run historical developments that had destroyed those feudal restrictions that in the countryside had bound peasants to the land and in the towns had bound urban workers to the guild. Second, workers were forced to do so, because they had no non-labour means of production with which to work on their own account. The same historical developments that had destroyed feudal restrictions also dispossessed workers from means of production, so that they had no access to means of subsistence other than through the sale of the only asset from which dispossession was impossible – their capacity to work. Dispossession from the means of production (typically land) was partly an economic process (in which larger production units enjoying scale economies could bankrupt smaller units), and partly extra-economic (particularly through the enclosures of common land). Revolutions in mechanical power generation then enabled the concentration of production in the new urban factories, in which much greater control and supervision (and, subsequently, transformations) of the work-process were possible (as compared with the rural 'manu-factories' of the putting-out system). As rural migration into the towns accelerated (ex-agricultural workers being pushed by dispossession from the land, and pulled by the availability of urban work), the modern capitalist economy came into being.

This two-part definition constituting the working class has always had some ambiguities regarding the determination of the value of labour-power. With a floor set by biological subsistence requirements, the social norms determining what living standards were appropriate at any particular time are undetermined, except by a generalized notion of class struggle. Changing household and family structures impinge on whether the wage is to be regarded as supporting the individual, the family or the household, creating particular difficulties of definition when the family (or household) has more than one wage-earner. Welfare states intervene to support the young, the old, the sick and the unemployed, providing some nonmarket access to subsistence (albeit with considerable variability across different states). Nevertheless, the general principle is clear: classes in capitalist society are determined by their situation with regard to the wage bargain. The working class comprises those who have no choice but to sell their labour-power, and this is summarized as

their structural subordination to the ‘capital relation’, structural because it is essentially involuntary.²

Applying such a definition empirically is difficult. As the family firm was replaced by the corporation, so the labour contract came to characterize the employment situation of almost everybody. Those at the apex of the largest corporations (Chief Executive Officers, for example) and those at the bottom (office cleaners, for example) are all employees with labour contracts, and all receive ‘employee compensation’. Hence there is no distinction in the data between involuntary and voluntary participation in the labour market. PS (Saez (2013)) have estimated the percentage of income (excluding realized capital gains, social security payments and unemployment insurance) that is accounted for by labour income from the 90th percentile to the top of the personal income distribution, and this is reproduced in Figure 1.³ For the bottom half of the top

Figure 1: *Labour Income to Total Income within the Top Decile, US Personal Income Distribution, 1918–2011*



decile, since 1940 more than 80% of average income has been labour income, and since 1960 around 90%. For P95–99, since the early 1950s more than 70%, and since 1980 more than 80% of average income has been labour income. And for the top 1%, since 1980 their labour income has fluctuated around 60% of

²Of course there is a large ideological industry (education, the media and so forth) devoted to socialization, to persuade that ‘involuntary’ is actually ‘voluntary’.

³In the PS dataset, labour incomes are wages, salaries and (private sector) pensions. Labour incomes do not include the benefits that in the National Income and Product Accounts are added to wage and salary accruals to derive employee compensation. Neither do labour incomes include farm income or self-employment income (profits from sole proprietorship businesses). The latter two, along with profits from S-corporations and profits from partnerships, are classed as entrepreneurial income, and along with rental income, interest income and distributed dividends comprise total nonlabour income.

their average income (around double what it was in the 1920s). Thus while the proportion of income that is labour income falls as smaller and smaller top percentages are considered, nevertheless that proportion remains substantial right at the top, and has increased more sharply right at the top than further down the top decile. An obvious preliminary conclusion is that because the receipt of labour income is so significant at the top of the income distribution, the receipt of labour income cannot be used to define the working class.

2.2 The capitalist class

The classical definition of the capitalist class is that group of people who own and control the means of production, and who therefore purchase labour-power which is then put to work with those means of production. But the evolution of the firm entails serious difficulties in making the classical definition operational. For ownership of the means of production is vested in shareholders, who are quite widely dispersed, and only those with major blocks of shares (such as pension funds and insurance companies) are able to exercise control, and only if they choose to do so. They rarely do so directly, and both day-to-day and strategic control is vested in senior management, who are constrained only by (often nebulous) criteria of satisfactory performance (generally of shareholder value). Hence the historical separation of ownership from control has created two related and significant difficulties with the classical notion of the capitalist class; how active managers should be treated, and how passive shareholders should be treated.

Marx's most extensive treatment of these issues occurs in the notebooks that Engels put together after Marx's death as *Capital* III (Marx 1981 [1894]). In what Engels called chapter 23, the context is the division of surplus-value into profit of enterprise and interest, and part of Marx's intention was to explain the appearances that such a division generated. Suppose the industrial firm borrows to finance its advances of money-capital to purchase its inputs (labour-power and means of production). Then surplus-value must be divided into profit of enterprise, accruing to what Marx called the "functioning capitalist", and interest, the payment to the owner of the capital lent, called the "money capitalist". So he wrote, "Interest-bearing capital is capital *as property* as against capital *as function*" (ibid., p. 503, italics in original), and he developed the point with an argument that, because the functioning capitalist has to direct the production and circulation processes, he has to *work*, and hence his 'profit of enterprise' appears as a return to that

work, that is, as “the wages of superintendance” (ibid. p. 504). In this manner, “The social form of capital devolves upon interest, but expressed in a neutral and indifferent form; the economic function of capital devolves on profit of enterprise, but with the specific capitalist character of this function removed” (ibid. p. 506).

Since, like a loan, shareholders’ equity is a liability on the firm’s balance-sheet, this argument can be readily generalized, and Marx did so as follows.

Joint-stock companies in general (developed with the credit system) have the tendency to separate this function of managerial work more and more from the possession of capital, whether one’s own or borrowed ... But since on the one hand the functioning capitalist confronts the mere owner of capital, the money capitalist, and with the development of credit this money capital itself assumes a social character, being concentrated in banks and loaned out by these, no longer by its direct proprietors; and since on the other hand the mere manager, who does not possess capital under any title, neither by loan nor in any other way, takes care of all real functions that fall to the functioning capitalist as such, there remains only the functionary, and the capitalist vanishes from the production process as someone superfluous” (ibid. p. 512).

These are the appearances, simultaneously real (because that is really how it does appear) and illusory (because an underlying reality both generates and is concealed by the appearances). Thus while the appearance is that the firm’s profits accrue as a result of managerial work, a return to the labour of ‘superintendance’, the reality is different. With respect to the manager of a firm,

That his function as a capitalist consists in producing surplus-value, i.e. unpaid labour, and in the most economical conditions at that, is completely forgotten in the face of the antithesis that interest accrues to the capitalist even if he does not perform any function as capitalist, but is simply the owner of capital; while profit of enterprise, on the other hand, accrues to the functioning capitalist even if he is not the owner of the capital with which he functions. In the face of the antithetical form of the two parts into which profit and thus surplus-value divides, it is forgotten that both are simply parts of surplus-value and that such a division can in no way change its nature, its origin and its conditions of existence (ibid. p. 504).

Managers are therefore treated as the ‘functioning capitalist’ even if they own no capital, while the owners of capital receive dividends and interest even if they perform no function *qua* capitalist.

The appearance that the profit of the industrial firm is a return or reward to enterprise seems to imply that the greater the effort of the ‘functioning capitalist’, the greater the return and the higher the ‘wages of superintendance’. But this of course neglects the issue that the magnitude of profit of enterprise increases with the magnitude of the capital invested, and the greater the latter the more essential and extensive are the large hierarchies of management that have developed in firms as management has become professionalized. As soon as a division of labour emerges that specializes workers to different functions in the production process, then the productive labour of *coordination* of the production process is required. As Marx put it, “the interconnection and the unity of the process is necessarily represented in a governing will, and in functions that concern not the detailed work but rather the workplace and its activity as a whole, as with the conductor of an orchestra” (ibid., p. 507). But coordination in any mode of production that is based on a separation and therefore opposition between workers as direct producers on the one hand and owners of means of production on the other, that is, coordination in any class society, requires the unproductive labour of *supervision*, which is authoritarian and hierarchical. In class societies, these two functions of management were for Marx “directly and inseparably fused” (ibid. p. 510). So while he recognized the distinction between ownership and control, the conclusions he drew from it were limited to an account of appearances, and these do not help in resolving the question of how far down the managerial pyramid the capitalist class should be conceptualized. What is certain is that managers are employees receiving labour income, and as Figure 1 shows, this is true right at the top of the income distribution. That is, just as Figure 1 problematizes the classical definition of the working class, so too it problematizes the classical definition of the capitalist class. If those with top incomes enter the labour market, the simple identification of classes via the functional distribution of income, while at the heart of classical political economy, is not possible.

3 Definitions of class: a revised approach

3.1 The working class

Those who are compelled to sell their labour-power are in this regard powerless; they might be free to sell to whomsoever will buy, but they are not free not to sell at all. Moreover, once sold, their labour-power is at the disposal of its (temporary) owner, who can use it in whatever way will most contribute to competitive advantage. Hence the seller of labour-power is to a degree powerless in a second regard, being organized and supervised in a production process. The history of production processes is a history of successive technological transformations which further the division of labour and subordinate individuals to the imperative of machines-driven processes. These transformations are major arenas of struggle, as workers seek to retain craft skills that give them some autonomous control over their work-lives, and as the organizers of production seek to deskill their employees in order to remove such islands of autonomy. Issues surrounding power and control over the work-process are therefore important, both in describing the effects of technical progress in imposing authority and hierarchy in production processes, and in defining the class situation of its participants (Braverman 1974, Marglin 1976, Edwards 1979, Gordon 1996).

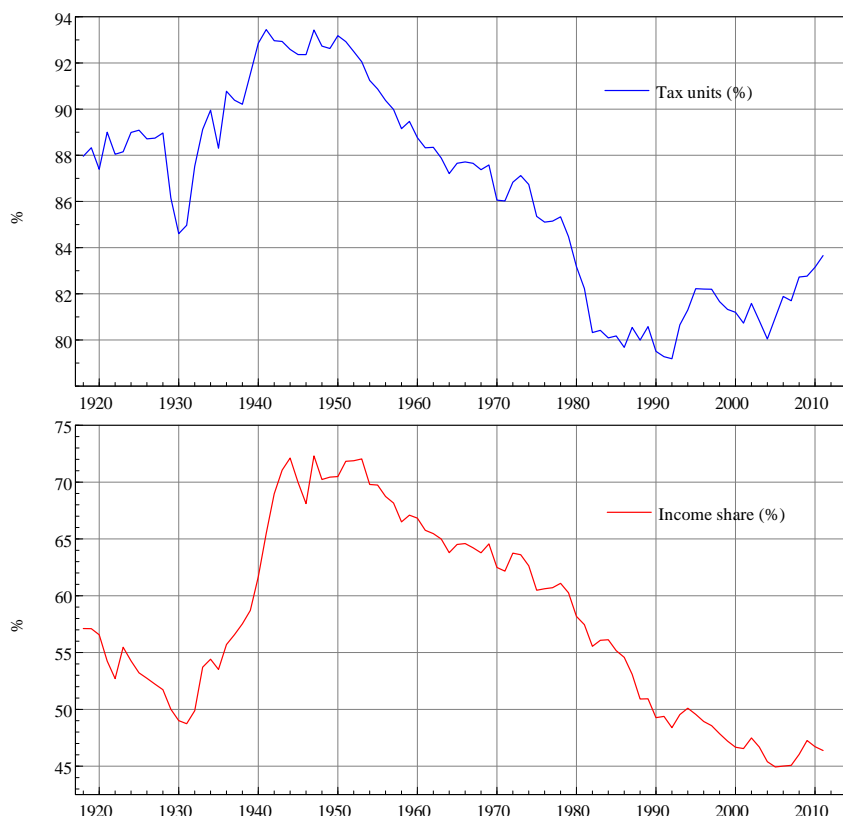
The working class could therefore be defined in an alternative manner, as comprising those without any degree of power within the production process. More precisely, define powerlessness as both having no supervisory responsibilities over anyone else, and being supervised by someone else. The lack of any control emphasizes the power relationships involved; in capitalism, the working class is defined by its subordination, and this alternative definition of the working class presumes the elimination of those at the top of the income distribution (those who do not have to sell their labour-power, but nevertheless do so sell, will not do so in order to enter a situation of powerlessness).

Empirically, this alternative definition can be operationalized in the manner described in the Appendix. Because the method slices into the personal income distribution at an income point which divides managers who supervise from those who are supervised, it follows that everyone with an income less than this managerial threshold income is a member of the working class, whether or not they are in work, or are of working age, and so on. This is a consequence of the data being in tax units: towards the bottom of the income distribution there are a large number of tax units that have no labour income because of unemployment,

sickness and, most of all, retirement (and most government transfers are not in the data at all). Hence the calculation of average working class income and labour income can mislead. For example, in 2011 average working class (tax unit) income (in \$2012) was \$28,849 (and labour income \$27,760), but this is defined across all working class tax units, and not across all workers. By contrast, the Employment, Hours and Earnings survey of the Bureau of Labour Statistics (BLS) shows that the average wage of a production and nonsupervisory worker in 2011 was (in \$2012) \$35,209.

In terms of the personal income distribution, Figure 2 shows how the working class has evolved since 1918, in terms of percentage of the total and in terms of income share. Both graphs display an inverted

Figure 2: *Working class: number (% tax units) and income share (%), USA, 1918–2011*



U-shape, with a right-hand fall that is more than the left-hand rise. But, noting the different vertical scales, the fluctuations in income share were considerably greater than the fluctuations in the tax unit total. In the 1920s, working class tax units were roughly constant at 88-89% of the total, but their income share fell from around 55% to 50%. Through the 1930s, working class tax units rose to between 92% and 93% of the total,

and remained at around that level through the 1940s. Their rise in income share was more dramatic, by around 20 percentage points, about half of the rise occurring through the Great Depression, and about half in the early 1940s, so that for the rest of the 1940s their income share was 70% to 72%. Thereafter, these rises were more than reversed. While the number of working class tax units peaked at around 93% of the total (in 1947), with a corresponding income share of 72.3%, 45 years later in 1992 the corresponding figures were 79.2% (tax units) and 48.4% (income share). Since then, the percentage number of tax units has risen but the income share has fallen further, so that in recent years the bottom 83% of all tax units have around 46% of all personal income.

These trends in working class tax unit and income shares are not autonomous, but inversely reflect managerial trends. Before outlining these latter, managers must be more precisely defined.

3.2 Managers

Those who are not members of the working class are managers, so that, in recent years, by subtraction, the top 17% of tax units have around 54% of all personal income. In one sense this answers the question of how far down the personal income distribution the managerial hierarchy stretches. But it is only a limited answer, because, while managers supervise, most of them are also supervised, and splitting the distribution into working class and non-working class does not address the question of who has to sell their labour-power and who does not. That is, in no way can managers be considered a homogeneous group, because they are fundamentally divided into those who might sell their labour-power but do *not* have to do so, and those who do sell their labour-power because they *have* to do so.

Suppose the capitalist-managerial class were defined as that group that has sufficient assets to generate a nonlabour income on which a typical member could survive without having to enter the labour market. This is independent of whether they choose to enter it (although the PS data show that on average they do so enter it); because of their level of nonlabour income, they are genuinely free to choose whether or not to take employment. Call this capitalist-managerial class ‘quasi-capitalist managers’ or ‘Qc managers’ for short.

Managers who are in a structurally different position, being forced to sell their labour-power, are

noncapitalist-managers. Still managers, with supervisory responsibilities in production, they are not free to choose whether or not to take employment, because they do not have sufficient assets to generate a nonlabour income enabling them not to enter the labour market. Hence call them ‘labour-power dependent managers’ or ‘Lpd managers’ for short.

Because the data are in terms of tax units, these definitions imply that nonworking dependents (whether young or old) of a working member of a class are also members of that class. Independent retirees are allocated to a class by their tax unit income no differently from anyone else. Working spouses are allocated to a class determined by the income of their tax unit. Further, a Qc manager (tax unit) who is made unemployed remains a member of the Qc managerial class, unless and until sufficient assets have been liquidated in which case their class location is determined by their total income; similarly, the class location of an Lpd manager (tax unit) who is made unemployed is determined by total income. Class categories and boundaries are thus objectively determined. It should be obvious that this says nothing about the crucial questions of mobility between classes, class identity and class subjectivity, and the social construction of class-belonging.

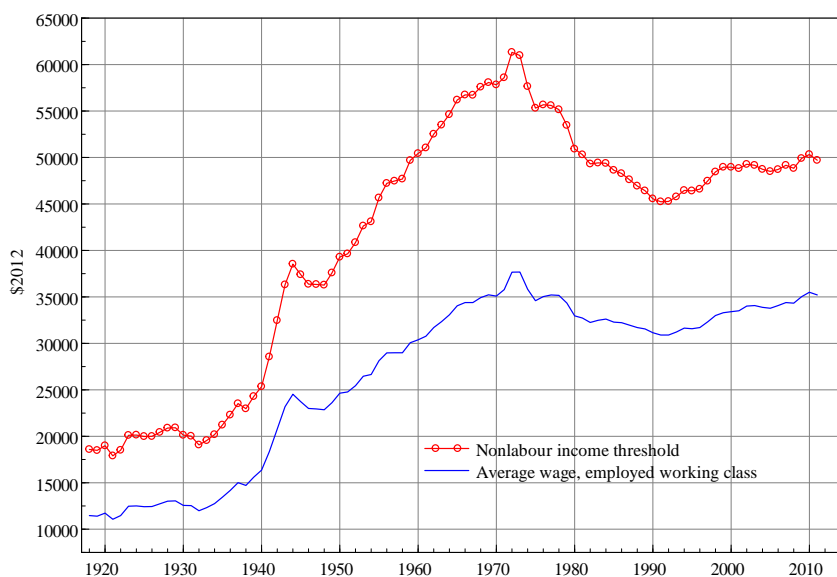
3.2.1 Qc Managers

What constitutes ‘sufficient’ nonlabour income? An obvious starting point is the average individual working class wage (production and nonsupervisory employee wage from BLS).⁴ This is displayed as the lower line in Figure 3. A Qc manager is such because he or she has a nonlabour income at least equal to the prevailing average working class wage. Since the basic data are in tax units, combine data from the Census Bureau, the National Income and Product Accounts (NIPA) and PS to calculate, on average, how many individuals there are in each tax unit, their age structure, and how many of them earn a wage. Assume the prevailing working class wage is sufficient to support one person, and then scale for average tax unit composition using the modified OECD procedure for equivalization (counting the first adult as 1, each additional person aged at least 14 as 0.5, and each person less than 14 years old as 0.2).⁵ This determines the threshold nonlabour

⁴As already noted, the wage is not the same as employee compensation, because it does not include supplements such as employer contributions to social security, pensions and other insurance. While in 1929 these supplements were small, employee compensation for the whole economy being 1.95% higher than wage and salary accruals, the difference increases over time, and by 2011 for the whole economy employee compensation was 24.7% higher than wage and salary accruals. These figures are the average for all employees, and one might expect that the relevant working class percentages would be rather lower than the Qc managerial percentages. Even so, they remain significant, and more so in later years than in earlier.

⁵The cut-off changes from 14 to 16 in 1945. An alternative would be to multiply the average working class wage by the square root of the number of individuals in an average tax unit, but this only makes a negligible difference to the calculations.

Figure 3: *Qc managers: nonlabour income threshold (\$2012), USA, 1918–2011*



income that a tax unit must have to qualify as a member of the Qc managerial class, displayed as the upper line in Figure 3.⁶

Constructing a single Pareto distribution out of the PS data, and interpolating the decomposition of average income into its labour and nonlabour components enables calculation of the position of Qc managers in the personal income distribution and their income share. These are displayed in Figure 4.

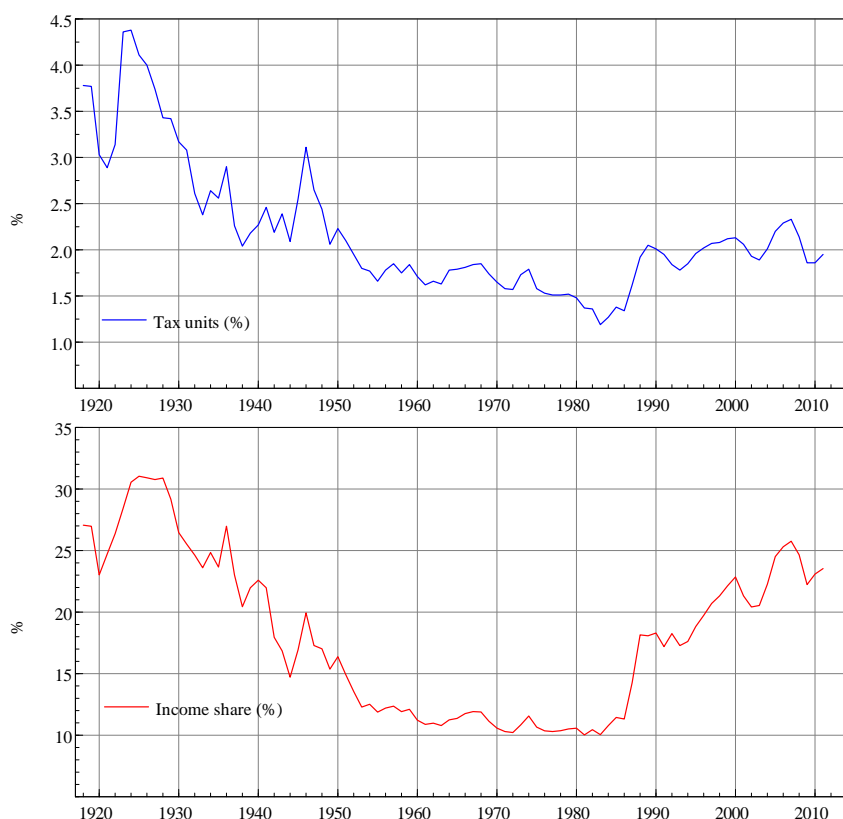
The U-shaped pattern of the income share in the bottom panel is evident, as is the feature that the climb from the early 1980s has not reached its late 1920s levels (26% in 2007, compared with 31% in 1926). But it would be a mistake to conclude that class inequality thereby similarly falls short, because the number of Qc managers has proportionately halved, from around 4% to around 2%.

There are three especially noteworthy features in the data. First, while one might expect the Qc managerial threshold (in Figure 3) to rise in real terms over time, it is particularly striking how it fell by a quarter (in \$2012) from \$61,314 in 1972 to \$45,239 in 1991. This did lead to a roughly proportional rise in the number of capitalist tax units; they rose from 1.57% in 1972 to 1.95% in 1991, but this was not automatic, for it also required a major legislative change in tax law (the 1986 Tax Reform Act).⁷ Secondly, from the end of the

⁶ Although this is an income threshold, it is income that derives from wealth, so that, for example, in 2010-11 a real nonlabour income of around \$50,000 required a wealth of around a million dollars (if the pre-tax rate of return on all assets were 5%).

⁷ On which, see below.

Figure 4: *Qc managers: number (% tax units) and income share (%), USA, 1918–2011*



1980s decade, the threshold income of the top one percent of tax units was approximately the median Qc (tax unit) managerial income, so that ‘the 1%’ constituted (to a reasonable approximation) the top half of the Qc managerial class. To that extent, it turns out that the recent popular focus on ‘the 1%’ has (perhaps fortuitously) more sociological basis than an arbitrary numerical choice of number. And thirdly, whereas in 1918 just over one-third of Qc managerial tax unit income was accounted for by labour income, by 2011 this proportion had more or less doubled, labour income being nearly two-thirds of average Qc managerial tax unit income. Hence the rise in Qc managerial average tax unit income has been driven by the rise in labour income, and this requires explanation.

Bakija, Cole and Heim (2012) have examined the occupational structure of this top percentile over the period 1979 to 2005, classifying tax units by occupation of the primary taxpayer. Arts, media and sports occupations, so prominent in popular culture, comprise just under 2% of the total, for, unsurprisingly, most top tax units are related to business (43-47% are nonfinancial executives, managers and supervisors, or

work in financial professions; a further 8-10% work in nonfinance business operations, skilled sales, or are entrepreneurs not elsewhere classified; further, some of the 8% who are lawyers will be corporate lawyers. It seems reasonable to assume on this evidence that the majority of Qc managerial tax units comprise business executives of one sort or another. Moreover, the increasing proportion of executive occupations in closely held businesses⁸ over time, at the 1% level rising from one seventh of nonfinancial executives, managers and supervisors in 1979 to two-thirds in 2005 (Bakija, Cole and Heim (2012), Table 2), has both counteracted to some extent the effects of the separation of ownership from control and blurred the distinction between labour and nonlabour income.

3.2.2 Lpd Managers

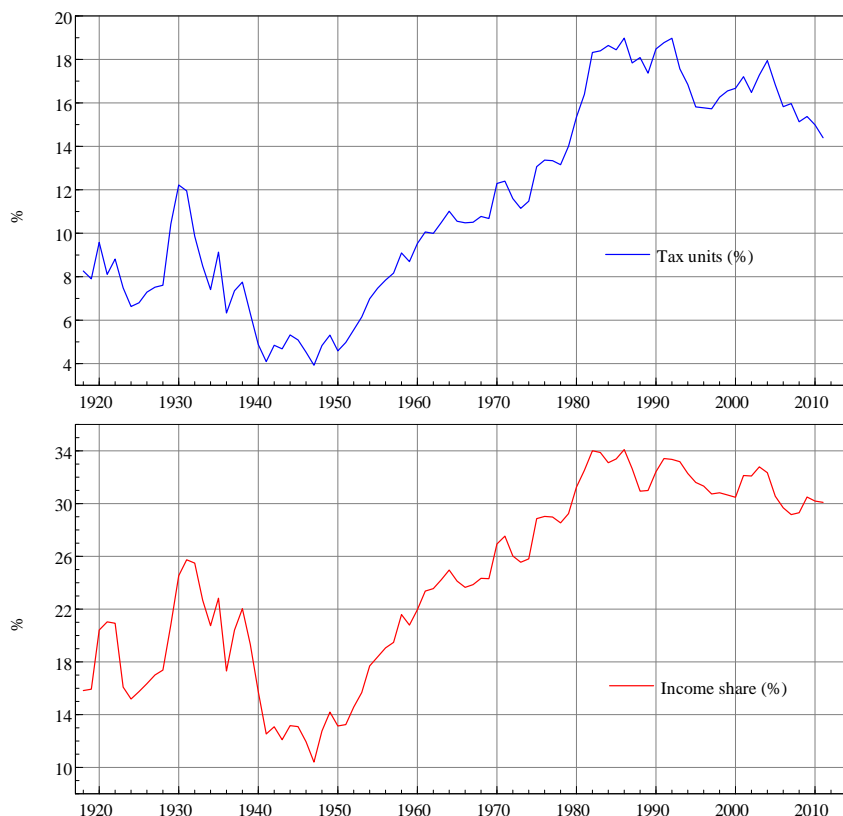
The pattern followed by the intermediate stratum of Lpd managers, shown in Figure 5, was similar to Qc managers up until World War II. But then Lpd managers rose sharply in both numbers and income share, from about 5% of tax units and 13% income share in the late 1940s to 18% of tax units and 34% of income share in 1982. These gains were largely at the expense of the working class. Since the early 1980s, Lpd managerial numbers and income share have both declined somewhat; while some have slipped into the working class, for those who have not their income share has not followed the pattern of the Qc managers above them. While they are structurally similar to the working class in having to sell their labour-power, their supervisory status has enabled them to avoid the falling income share of those they supervise. But their labour market dependence has not enabled them to increase their share. In sum, the 30 years or so after the mid-1940s constituted an era of ‘managerialism’, but in the 30 years after 1980 the Lpd managerial shares in both total tax units and in total personal income display gently declining trends.

4 Inequality

Figure 4 shows that the Qc managerial income share peaked in the second half of the 1920s, and at its post-World War II peak of 2007 was some 5 percentage points lower than its pre-War peak. But Figure 4 also shows the changing numerical composition of the Qc managerial class. Similarly, Figure 5 shows that,

⁸A closely held business has more than 50% of its stock owned by no more than 5 individuals (and is not a personal service corporation).

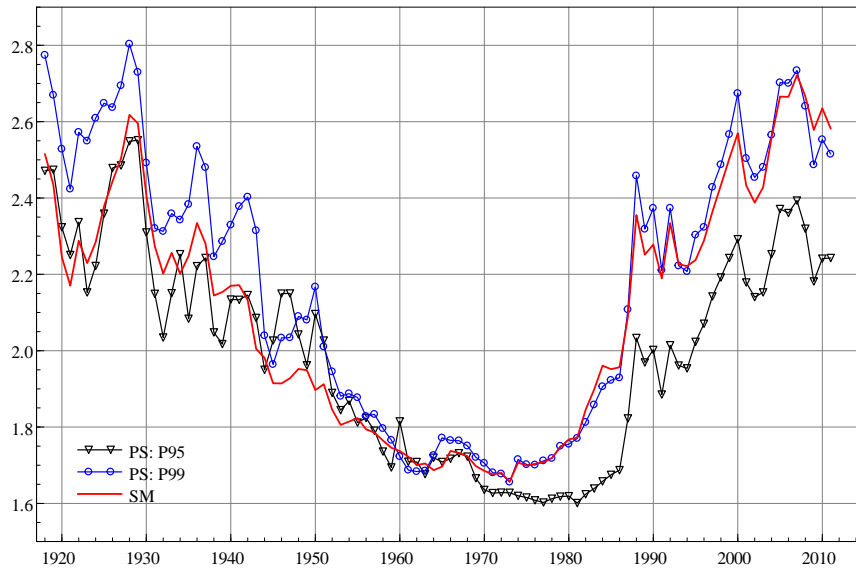
Figure 5: *Lpd managers: number (% tax units) and income share (%), USA, 1918–2011*



over the whole period, the Lpd managerial income share peaked in the 1980s (in 1982 and 1986) at almost three times its 1950 level before gently declining, and it also shows that their (percentage) number increased some four and a half times from 1950 to the early 1980s. But it is difficult to make temporal comparisons of inequality when both incomes and numbers are changing.

One way to approach this issue is to look directly at the inverted Pareto coefficient b . Because of the way in which PS constructed their data, their b (average income divided by threshold income at the various percentile points) varies across the distribution; whereas the b underlying the construction of classes here is uniform. Figure 6 illustrates, comparing the evolution of the b of this paper (denoted SM) over time with the PS P95 b (which it roughly tracks until the 1960s) and the PS P99 b (which it roughly tracks after the 1960s). If b is taken as an index of inequality, its pre-War peak of 2.62 in 1928 was surpassed by 2005, and had risen to 2.72 by 2007. While it then fell back by a small amount, it is still (as of 2008–11) hovering around its 1928 peak of around 2.6. On this basis, class inequality today is on a par with its levels in the

Figure 6: *The inverted Pareto coefficient b, USA, 1918–2011*

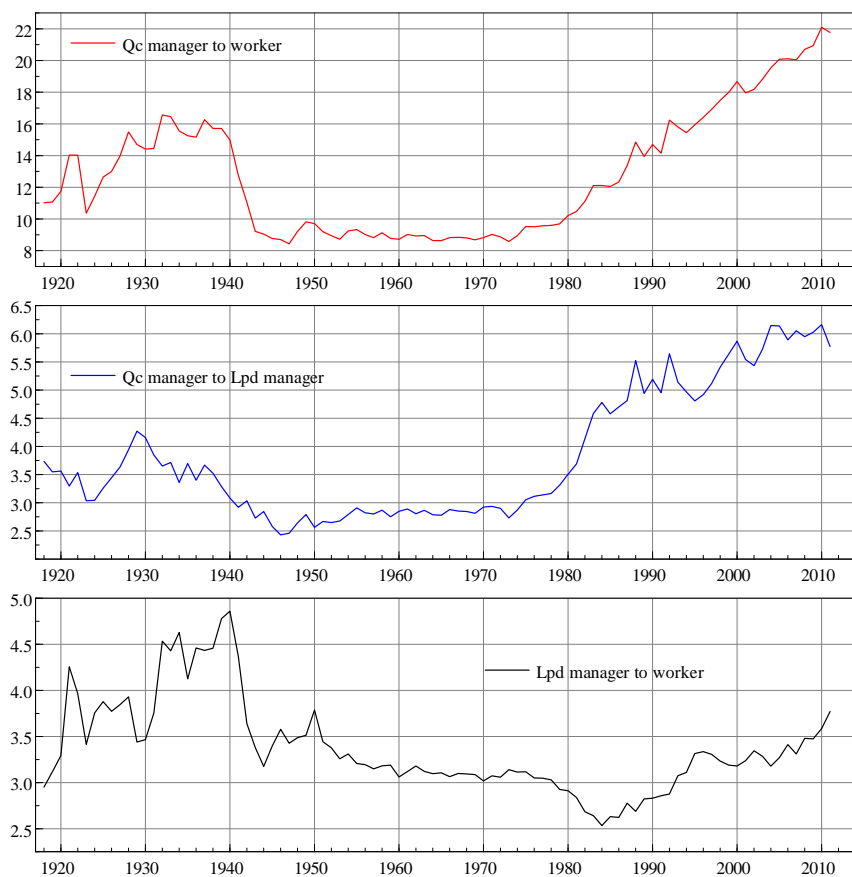


late 1920s.

Another way of considering this in class terms is to consider the three ratios of average Qc managerial income to average working class income, average Lpd managerial income to average working class income, and average Qc managerial income to average Lpd managerial income. These are depicted in Figure 7, remembering that all averages are defined across tax units, not individuals. While all three panels display the familiar U-shape, these shapes are nevertheless significantly different in each panel (note the very different vertical scales in each panel). The middle panel shows how average Qc managerial income pulled away from average Lpd managerial income in the 1920s, from 3 times larger in 1923 to 4.3 times larger in 1929. But depression and war saw a substantial compression of managerial differentials; average Qc managerial income fell to just 2.4 times average Lpd managerial income by 1946. Thereafter through to 1974, the ratio was fairly stable, and for two decades from the early 1950s to the early 1970s varied between 2.7 and 2.9. With the end of the ‘golden age’, managerial differentials increased, to 3.5 by 1980, fluctuating around 5 a decade later, and around 6 from 2004 onwards. Average managerial differentials exceeded those of the 1920s by the early 1980s, and were considerably greater by the first decade of the twenty-first century.

The bottom panel of Figure 7 shows a similar relationship between average Lpd managerial income and average working class income. After an initial large increase in 1920-21 (a consequence of the severe recession

Figure 7: Ratios of average income by class, USA, 1918–2011



of that time), in 1923 average Lpd managerial income was 3.4 times average working class income, and rose to 3.9 times by 1928. The pattern through the 1930s was determined by Lpd managers on average faring less badly than the working class (they did not regain their 1928 level of real income until 1936, whereas for the working class it was briefly 1937 and then 1939); but average relativities then dropped sharply as employment recovered with rearmament, from 4.9 in 1940 to 3.2 in 1944. After a short-lived rise in the second half of the 1940s, average Lpd managerial income as a multiple of average working class income fell back through the first half of the 1950s, and from 1955 to 1975 fluctuated in a narrow band between 3.1 and 3.2. It then fell to 2.5 by the early 1980s, before rising to 3.3 by the mid-90s. It was then fairly constant until 2008, and then rose to between 3.6 and 3.7. To a large extent, the relationship between average Lpd managerial income and average working class income was determined by how the general level of economic activity affected working class incomes, but it is striking how little the differential varied in the 70 years

after the early 1940s.

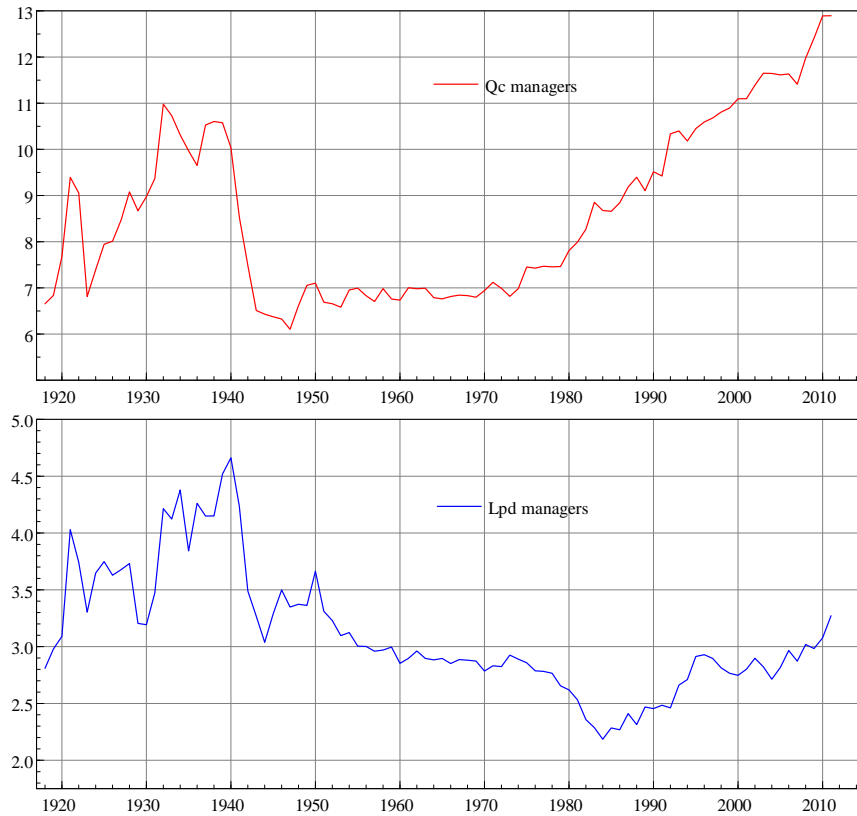
By contrast, the relationship between average Qc managerial income and average working class income, in the top panel of Figure 7, combines the effects displayed in the bottom two panels. Like the bottom panel, there was a sharp rise in 1920-21; like the middle panel, there was a sharp rise through the 1920s; like the bottom panel, there was a steep drop in the first half of the 1940s; like both panels, the ‘golden age’ saw a long period of stability; and then there was a sustained rise from 1979 to 2011. But the scale in the top panel is different. The 1920s witnessed a rise in average Qc managerial income as a multiple of average working class income from 10.4 in 1923 to 14.7 in 1929; and in the 1930s it fluctuated between 15.5 and 16.5. But from a ratio of 15 in 1940, it fell to 9 by 1944, and then for 30 years fluctuated between 8.4 and 9.8 (and mostly less than 9). After 1979, the multiple rose steadily (with only small fluctuations), from 9.7 in 1979 to 14.9 in 1988, to 18.7 by 2000 and 21.8 in 2011. The pre-war peak multiple of 16.6 in 1932 was surpassed in 1997, and by 2011 was around 30% higher.

It might be thought that this historical record is illustrative of what is happening right at the very top of the income distribution. But it is not just the very top that matters. This is explored in Figure 8, which shows the relationship of median managerial income (both Qc and Lpd) to average working class income. The bottom panel shows Lpd managerial median income to working class average income. There is very little difference from the bottom panel of Figure 7, either in pattern or in scale, because Lpd managerial average income is not very much larger than Lpd managerial median income. This is not true for Qc managers, as can be seen in a comparison of the top panel of Figure 7 with the top panel of Figure 8; while the pattern is almost identical, the scale is considerably compressed. Nevertheless, the pre-war peak of Qc managerial median income as a multiple of working class average income was 11 in 1932; this was surpassed in 2000, and was 12.9 by 2011. In class terms, inequality of income by 2011 was considerably greater than that experienced in the late 1920s and the 1930s.

5 Power

Explaining this within a framework based on individualism has proved difficult. The most common approach to labour market inequality focuses on marginal productivity and competition, seeing educational expansion

Figure 8: *Managerial median income to working class average income, USA, 1918–2011*



increasing the supply of skills at a lower rate than technical progress has increased the demand for skills. This difference has been exacerbated first, because technical progress has evolved in ways that complement the skills of the already highly-skilled and substitute for the less highly-skilled, and second, because globalization has undercut the wages of the less-skilled in the U.S. with the lower wages of low-skilled workers in the rest of the world. Further, globalization and accompanying technological change has created a market for the very best that has enabled them to pull away from those who are less than ‘superstars’.

The difficulties of this type of explanation for what has happened at the top of the income distribution are legion (such as the very notion of skill, difficulties in identifying marginal products, implicit competitive assumptions, and the production function framework itself). Not least is the scale of what has to be explained. For example, looking at the labour income of individuals rather than tax units, and total compensation rather than wages and salaries, Mishel and Davis (2014) report that the CEO-to-worker compensation ratio has increased from 22.3 in 1973 to 231.8 in 2011 (having peaked at 383.4 in 2000 and then fallen back somewhat,

because of its correlation with stock market returns); while a typical worker's compensation increased by 10.2% in total between 1973 and 2011, CEO compensation increased by some 937%. Yet this spectacular increase has translated into a worse overall performance of the economy than in the preceding 'golden era'.

For reasons such as this, attention has rather focussed on the responsiveness of income to changes in marginal tax rates. In 1918 in the U.S., the top marginal income tax rate was 77% (having risen from 7% in 1913–15). Following the Great War and its aftermath, the top rate was successively lowered, down to 25% by 1925. In 1932 it was raised to 63%, and raised successively in 1936, 1940, 1942 and 1944 when it was 94%. Once World War II was won, the top rate fell back to the low 80s, but then rose again by 10 percentage points during the Korean War and its aftermath. From 1953 to 1963, the top rate was 91%, and was then cut to 70% by 1965, where it remained until 1981. By the end of that decade, it had more than halved to 28%. It increased to 40% during the Clinton years, and was reduced to 35% in 2003, at which rate it remained through to 2011. So the supposition is that top marginal rate tax cuts from the early 1980s created incentives to earn more, and high income earners responded appropriately. But there were similar cuts to top marginal income tax rates in the U.K. after 1981, without the same degree of wage surge, so that at the least there are difficult identification issues in separating causal factors.

A related argument concerns the particular effects of the Tax Reform Act of 1986. Before 1986 top corporate income tax rates were considerably less than top personal income tax rates, which created an incentive for the very rich to organize their entrepreneurial income through a C-corporation; keeping their personal income within a corporation enabled them to defer high personal income tax rates and pay corporation income tax instead. The 1986 Act reduced the top personal rate below the top corporate rate. This had two effects. First, the incentive just mentioned was reversed, so that there was a considerable incentive to convert from a corporate to a pass-through entity (such as a partnership), in order that what was corporate income became individual income, to be taxed on an individual basis. Second, for those firms that retained a corporate legal status, there was an incentive to reduce their taxable income by transferring it to the individual tax base through higher royalty, interest and rent payments, as well as through higher wage payments to entrepreneurs. The effects on Qc managers are clearly visible in the bottom panel of Figure 4, but equally, Figures 7 and 8 show a continued and sustained rise from 1979 through to 2011. Changing

marginal tax rates and the effects of the 1986 Tax Reform Act might be part of an account of the wage surge in top incomes, but they are clearly not the whole story.

A different focus is not on changing marginal tax rates but on changing practices of corporate governance, and especially on how executive compensation packages are determined. Partly this has to do with the increasing role of stock options, which, when exercised, are (mostly) treated as a part of employee compensation on tax returns. The use of stock options is supposed to align managers' interests with shareholders' interests. But presumably the interests of the latter are concerned with their stock rising faster than their competitors' stock (or indeed any alternative stock they could hold); yet a general rise in stock prices gives very large benefits to holders who exercise their options, so that the alignment of interests is hardly clear – top executives have been massively rewarded for doing no better than other top executives. Corporate governance is an issue because executive compensation committees are selected by top executives from among their peers, and these committees then make compensation recommendations for those top executives. But Frydman and Saks (2010) argue that it is difficult to attribute the growth in top incomes to problems with corporate governance, because if anything, corporate governance has been strengthened over time and not weakened as the attribution would appear to require.

Bakija, Cole and Heim (2012) found significant heterogeneity in income growth rates across professions, and divergence of income within professions, in the top one percent, which they took to indicate that a successful explanation “cannot just, or even primarily, be things that are changing in similar ways over time for everyone within the top one percent” (Bakija, Cole and Heim (2012), p.24), and they concluded that explanations for the rise in top income shares should be sought in financial market asset prices, the effects of the 1986 Tax Reform Act and perhaps corporate governance and entrepreneurship.

For PS, executive pay is “probably determined to a significant extent by herd behavior” (Piketty and Saez (2003), p.35), and, in addition to fiscal policy, they point to social norms as the area in which to pursue an explanation. Appeal to herd behaviour and social norms does not imply that all in the herd behave in exactly the same way; rather herd behaviour and social norms imply the social construction of a permissive environment, in which those with most power prosper the most. But once issues of the social are raised in this manner, it is a small step from treating individuals as influenced by unexplained social norms to treating

Table 1: *Summary Class Statistics, USA, 1918-2011*

	1918	1929	1944	1973	1979	2007	2011
Tax units (%)							
Qc managers	3.8	3.4	2.1	1.7	1.5	2.3	2.0
Lpd managers	8.3	10.4	5.3	11.1	14.0	16.0	14.4
Working class	88.0	86.2	92.6	87.1	84.5	81.7	83.7
Income share (%)							
Qc managers	27.1	29.2	14.7	10.8	10.5	25.8	23.5
Lpd managers	15.8	20.8	13.2	25.6	29.2	29.2	30.1
Working class	57.1	50.0	72.1	63.6	60.3	45.1	46.4
Average income ratios							
Qc man. to Working class	11.0	14.7	9.0	8.6	9.7	20.0	21.8
Qc man. to Lpd man.	3.7	4.3	2.8	2.7	3.3	6.1	5.8
Lpd man. to Working class	3.0	3.4	3.2	3.1	2.9	3.3	3.8

them as the bearers of social relations, who embody in their behaviour a culture of class power expressed by the norms they have created.

For changing norms reflect changing regimes of capitalist relations as particular patterns of relations undermine their conditions of existence over time. This has always been a fundamental tenet of Marx's historical materialism, in which modes of production are undermined by the forces of production they develop, rendering particular relations of production unstable and transforming them through revolution. But the same principle can also be applied within capitalism: basic capitalist relations might remain, but as they transform patterns of technology, trade and finance, so institutional structures and state economic interventions have to be reset in ways more appropriate to these changing patterns. What prompts such a resetting is a 'crisis', a set of events that indicate that matters cannot go on as before.⁹ The changes that crises then require for their resolution, even if stopping short of a transformation of the mode of production itself, are generally highly contested.

Specifically, the era culminating in the 1929 stock market crash was characterized by a particular set of relationships that were transformed by the New Deal, wartime planning and the restructuring of the institutions of the international economy into a very different set of relationships that characterized the 'golden age' from the late 1940s to the early 1970s. Similarly these relationships were again transformed around the end of the 1970s into ones more reminiscent of the pre-1929 era. These changes are summarized in Table 1. All of the years (except 2011) are approximately peak years of the cycle. The period 1918–1929 covers the 'roaring

⁹The terminology was originally medical, denoting that stage of illness from which the patient would either recover or die.

twenties', while the years 1929–44 were a period first of crisis and then of a stumbling transition away from the prerogatives of the free market towards an era of regulation. The period 1944–73 marks the 'golden age', a weak form of social democracy that embraced regulation of national and international finance, state commitment to full employment, some welfare state provision and more egalitarian norms. This era ended in 1973, although there were clear signs of problems from the mid-60s onwards. The years 1973–79 were a period of stalemate in class struggle, which was ended by the interest rate rise of October 1979, ushering in the neoliberal period of deregulation and promotion of the free market as the answer to all social and economic problems. The year 2007 marked the start of the financial crisis and the 'great recession', and 2011 is the last point of the dataset. It is against these historical specificities that explanations must be sought for the major changes outlined in this paper. In such explanations, contestation between classes is central, particularly during periods of transition from one era to the next. But such explanations also require a shift in focus from classes-in-themselves to classes-for-themselves, as the latter struggle to impose their own view as the universal common-sense of the day. That shift in focus is beyond the scope of this paper.

6 Conclusion

In order to construct a picture of long run US economic development in class terms, this paper has proposed a method of cutting into the distribution of income such that the intervals constructed reflect the different classes of the economy. These intervals are not the constant percentile categories that have been the subject of so much recent attention. Apart from the construction of the basic class categories themselves, the main finding is that inequality of income in class terms is currently greater than at any time since 1918.

There are two obvious directions in which to take this analysis further. While the specification of the periodization of US capitalism in the previous section requires more detail, the data in class terms are highly suggestive of a periodization of capitalism into different regimes over the long run. But this poses many questions. In particular, why did all managers (both Qc and Lpd) do so badly through the 1930s and most of the 1940s? What was it that so entrenched the stabilities revealed by the 'golden age', and how and why were they so easily disrupted by the experience of the 1970s? What is the explanation for the labour income surge in Qc managerial incomes? Did the financial crisis beginning in 2007 mark the beginning of another

period of transition, or are the post-2007 years characterized by a neoliberal ‘business as usual’? The data constructed in this paper provide a basis for a more detailed examination of these issues.

Second, in class terms corporate governance is something of an irrelevance, and the income of Qc managers is not distinguishable from distributed profits. If capitalist development can be summarized by the aggregate rate of profit for the economy as a whole, and if the numerator is broadly defined as net national product less employee compensation, it is worth investigating what difference is made to the profitability time trend by excluding Qc managerial income from employee compensation (and hence treating all Qc managerial income as a component of total profit, conceived in broad surplus terms). While in individualist terms such a procedure would be a category error, a class analysis positively invites it.

A Appendix

All of the data underlying this paper are from my own calculations using the data sources below. A detailed description of how the data have been constructed is available on request. The class data themselves are available for download from my homepage.¹⁰

A.1 Data sources

Bureau of Economic Analysis: National Income and Product Accounts (NIPA), at <<http://www.bea.gov/>>

Bureau of Labour Statistics:

1. Current Employment Statistics (Employment, Hours, and Earnings - National) survey (both current and discontinued databases), at <<http://www.bls.gov/>>
2. Bureau of Labor Statistics (2009)

Census Bureau: population estimates at <<http://www.census.gov/popest/data/historical/index.html>>

Federal Reserve Bank of St. Louis: Federal Reserve Economic Data (FRED), at

<<http://research.stlouisfed.org/fred2/>>

¹⁰<<http://webspace.qmul.ac.uk/smohun/>>
[tba once a final version is ready].

Historical Statistics of the United States: Bicentennial edition, Bureau of the Census (1975), and Millennial edition, Carter et al. (eds) (2006).

Internal Revenue Service:

1. All Individual Income Tax Returns: Sources of Income and Tax Items (in Current and Constant Dollars). Tax years 1913-2005. Published as SOI Bulletin article - Ninety Years of Individual Income and Tax Statistics, 1916-2005, Tables 1 and 1A [Excel file 05in01an.xls]
2. Selected Income and Tax Items for Selected Years (in Current and Constant Dollars). Tax years 1990-2011. Published as Individual Complete Report (Publication 1304), Table A [Excel file 11intba.xls]

both at <<http://www.irs.gov/uac/SOI-Tax-Stats-Individual-Time-Series-Statistical-Tables>>

Saez (2013)

US Department of Labor, Employee Benefits Security Administration, at

<<http://www.dol.gov/ebsa/pdf/historicaltables.pdf>>

A.2 Data construction

A single Pareto distribution is constructed out of the Saez (2013) data, and the percentages of Saez's Table A7 are interpolated in units of 0.01%. Wherever they are in the income distribution, tax units in any year are assumed to have the same population composition. Classes are constructed by importing information derived elsewhere. In constructing the Q_c managerial nonlabour income threshold, the average working class individual wage is assumed sufficient for one person, and the modified OECD equivalization procedure multiplies this up to the number of people represented by the tax unit. Total labour income is split between the working class on the one hand and all supervisors (both Q_c and Lpd managers) on the other hand according to the ratio of Bureau of Labour Statistics (Current Employment Statistics) production worker wages to the NIPA-derived wage and salary accruals total. The only nonlabour income accruing to the working class is assumed to derive from self-employment; the number of self-employed working class is assumed to be given by the proportion of working class employees to total employees (in full-time equivalents) and their income is imputed as the average working class wage. The ratios of data constructed from outside

the IRS are applied to relevant IRS totals (for example, the ratio of working class self-employment income to NIPA total proprietors' income is applied to IRS business or profession net income less loss).

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