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**EXPLAINING THE RISE OF US INEQUALITY:
A 'SINISTER' VIEW**

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ABSTRACT

The article develops a so-called 'sinister' explanation for the rise of inequality in the United States since the early 1990s, which maintains that lagging income growth for many households is a corollary of rapid growth at the top. The explanation is based on the exercise of market power, in the form of monopoly in product markets and monopsony in labour markets, and non-market power, due to changes in the political and juridical environment. It draws on an analytical approach proposed by sociologist Charles Tilly which provides an integrating framework for recent work in economics and political economy. Developments in the healthcare sector in the US illustrate the 'sinister', Tillyian explanation.

KEYWORDS

Inequality, labour market monopsony, monopoly, intellectual property, healthcare, United States, Charles Tilly;

About the GPID research network:

The ESRC Global Poverty and Inequality Dynamics (GPID) research network is an international network of academics, civil society organisations, and policymakers. It was launched in 2017 and is funded by the ESRC's Global Challenges Research Fund.

The objective of the ESRC GPID Research Network is to build a new research programme that focuses on the relationship between structural change and inclusive growth.

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THE DEVELOPER'S DILEMMA

The ESRC Global Poverty and Inequality Dynamics (GPID) research network is concerned with what we have called 'the developer's dilemma'.

This dilemma is a trade-off between two objectives that developing countries are pursuing. Specifically:

1. Economic development via structural transformation and productivity growth based on the intra- and inter-sectoral reallocation of economic activity.
2. Inclusive growth which is typically defined as broad-based economic growth benefiting the poorer in society in particular.

Structural transformation, the former has been thought to push up inequality. Whereas the latter, inclusive growth implies a need for steady or even falling inequality to spread the benefits of growth widely. The 'developer's dilemma' is thus a distribution tension at the heart of economic development.

1. Introduction

It is widely recognised that income inequality in the US has risen since the early 1980s (Piketty 2014; Milanovic 2016). The most comprehensive recent analysis of this trend is by Piketty and colleagues (Piketty et al. 2016), who have created a database combining tax, survey and national accounts data which together account for virtually all of national income. According to these data, pre-tax income growth of the top 1 per cent and 10 per cent of the population increased by 205% and 121% respectively, between 1980 and 2014, compared with a 1% increase for the bottom 50 per cent of the population (Piketty et al. 2016: Table 2, p. 41). The corresponding figures for post tax and transfer disposable income growth over the same time period are 194%, 119% and 21%.¹ While there are debates about the magnitude of the increase in income inequality (Meyer and Sullivan 2017), the underlying trend is not in doubt.

A large body of work has developed which examines the causes of the increase in inequality. Important monographs have appeared, such as Joseph Stiglitz's *The Price of Inequality*, along with a second edition of Grusky and Szelényi's (2011) *The Inequality Reader* and a voluminous academic literature. The range of causal explanations on offer is large and debates are ongoing about the relative importance of particular causal variables, as discussed further in Section 2.

One useful way of sifting through the many, different causal stories has been proposed by Angus Deaton (2017) who argues that:

There are two different explanations for the divergence between median and top incomes, and it matters a great deal which one is correct. The first attributes it to impersonal and unstoppable processes such as globalization and technological innovation, which have devalued low-skill labor and favored the well educated. The second explanation is more *sinister* [my emphasis]. It holds that median-income stagnation is actually the direct result of rising incomes and wealth at the top. In this account, the rich are getting richer at the expense of everyone else ... Recent research suggests that there is some truth to the second story, at least in the US.

The objectives of this article are to develop this latter, 'sinister', account of rising inequality and to link it to the works of the late sociologist Charles Tilly in his book *Durable Inequality*. Tilly's analysis provides a theoretical framework which illuminates many of the issues that have appeared in 'sinister' explanations for the increase in US inequality. While Tilly's framework has been used to explain inequality in the United States (Massey 2007), along with poverty and inequality elsewhere (Heller and Evans 2010, Mosse 2010), it has not been explicitly linked to recent work in economics and political economy which covers similar ground. The core contribution

of this article is to forge such linkages, using Tilly as an analytical lens to illuminate issues of increasing monopoly and monopsony power in the US healthcare sector, and the underlying political and institutional changes which have facilitated it.

The format of the paper is as follows. Section 2 presents the broad contours of debates about the causes of rising inequality in the US, distinguishing between 'benign' and 'sinister' explanations. Charles Tilly's analytical framework for explaining inequality is then discussed in Section 3. Section 4 proceeds to link a modified version of Tilly's analysis to the 'sinister' explanation drawing on recent developments in the healthcare sector in the US. Section 5 concludes.

2. 'Benign' and 'Sinister' Explanations

What accounts for the rise in inequality in the US since the 1980s? Drawing on Deaton's remarks quoted in the introduction, I distinguish between 'benign' and 'sinister' explanations. 'Benign' explanations typically refer to impersonal forces associated with the functioning of the economy, such as trade and technological change. 'Sinister' explanations, by contrast, focus on the exercise of market power, evidenced by forms of monopoly or monopsony, and political power, manifested in legislation, enforcement, regulation and judicial interpretation.

There are three preliminary caveats to note. First, the distinction between impersonal economic forces and political power does not imply that economic processes are independent of political decisions, or non-decisions, or one sort or another. It simply differentiates between the main objects of inquiry which characterise the 'benign' and 'sinister' explanations. Second, some variables could appear in either explanation. For example, immigration is obviously affected by political decisions but also reflects broader forces related to the global economy and demographics. Third, in terms of terminology, 'benign' is meant to contrast with 'sinister' in the sense of Deaton's distinction, and not meant to imply to that the effects of impersonal processes are harmless. Despite this imprecision, the benign/'sinister' distinction still has heuristic value in directing attention to substantively different objects of inquiry which characterise different causal explanations of inequality.

'Benign' Explanations

Benign explanation of increasing inequality in the US have focused on the role and relative importance of globalisation and technological change (for example, Feenstra and Hanson 2001).² Of the many aspects of globalisation, trade has figured most prominently. Debates about the effects of technological changes have emphasised the role of Skill-Biased Technological Change (SBTC), or technologies which disproportionately benefit those with greater levels of skill or education. Both of these types of analyses have focused on labour

income, rather than capital income, and accordingly on variables affecting the supply of, and demand for, labour. A few examples will illustrate the form which such explanations have taken.

With respect to technological change, demand-side analyses have examined the skill premium and/or employment-ratios of different categories of employees, such as production and non-production workers. SBTC may be inferred if the relative demand for skilled labour increases even as the skill premium rises (Slaughter 1999). A different variant of this approach is based on a three-fold categorisation of workers into those who perform high-end non-routine cognitive work (lawyers, professors), mid-level repetitive tasks (bookkeeping, accounting) and low-end manual interactive activities (cleaners, truck drivers). Analysis of employment and wage trends of these categories of workers has lent support to the so-called polarisation thesis, that middle-level workers have been most adversely affected by technological change (Autor and Dorn 2010). On the labour supply side, analyses of technological change have focussed on the fall in the rate of growth of college-educated workers which provides one explanation for the rising wage premium of college graduates in the context of the so-called race between education and technology (Goldin and Katz 2008).

Studies of trade as well have relied on this supply and demand framework. In terms of labour demand, attention has been directed to the wage or employment effects of import penetration, offshoring and intersectoral shifts in production due to trade (Slaughter 1999). For example, a recent influential study which examined the so-called 'China Shock' found diminished employment in import-competing industries and geographic areas with few offsetting gains elsewhere (Autor et al. 2016). On the labour supply side, the emphasis has been on the effects of imports on wages, as in factor content analyses (Krugman 2000), given that imports reflect the embodied labour of different categories of workers.

These studies of trade and technological change are not the only 'benign' explanations of rising inequality in the US. Others include: assortative mating, or the increasing tendency of individuals with high earnings potential to marry one another (Greenwood et al. 2014); structural transformation and the attendant growth of the service sector which is characterised by greater wage dispersion than manufacturing (Milanovic 2016, p. 104), the increasing importance of capital income in total income (Piketty 2014), changing societal norms with respect to executive compensation (Stiglitz 2016, pp. 66-67) and so on. In all of these examples, rising inequality is depicted as the result of impersonal forces operating at a societal or economy-wide level.

'Sinister' Explanations

'Sinister' explanations are based on a different causal story. They begin with the shift in the ideological, political and institutional context in the US following the Reagan years of the 1980s.³ Ideologically, there was a shift in the political spectrum in favour of freeing markets, the so-called 'neo-liberal' turn, and a roll back of the state.

Politically and institutionally, large corporations, and wealthy individuals, have had greater sway to shape the rules of the game, policy and enforcement and in ways which benefit them, but also increase inequality. The mechanisms through which such influence is wielded include, *inter alia*, campaign financing of legislators, judges and attorney generals⁴, lobbying, litigation, public relations campaigns and other initiatives to sway public opinion undertaken by think tanks and the media (Reich 2015, pp. 12, 78).

This 'sinister' story has been chronicled and aptly captured in the titles of a number of recent monographs including, Robert Reich's *Saving Capitalism: For the Many, not the Few*, Dean Baker's *Rigged: How Globalisation and the Rule of the Modern Economy were Structured to Make the Rich Richer* and Brink Lindsay and Steven Teles' *The Captured Economy*, among others. Lindsay and Teles (2017, p. 4) provide a good summary statement of the argument: '... the powerful have rigged the economic game in their favor. Elites have conspired to hoard opportunity, manipulate the rules and their control of the political system to generate wealth for themselves, even as living standards of everyone else stagnate or decline.' As Stiglitz (2013, p. 28) has phrased it, 'American inequality didn't just happen. It was created.'

There are a number of variants of the 'sinister' explanation which focus on different aspects of the legislative and policy framework, regulatory and enforcement environment, the courts and so on. For example, of the authors just cited, Reich (2015) has focused on property rights, monopoly, contract, bankruptcy and enforcement, Baker (2016) highlights macroeconomic policy, financial deregulation, patent and copyright monopolies, executive compensation and protection for highly paid professionals while Lindsay and Teles (2017) place emphasis on finance, intellectual property protection, occupational licencing and land use policy. I will focus on three issues which map closely onto the topics discussed in Section 4 on the US healthcare sector, namely: rising concentration, monopoly in product markets due to patent protection and monopsony in labour markets.

A growing body of recent evidence has documented rising levels of concentration in most industries in the US since the 1980s. For example, a recent comprehensive study by Autor et al (2017, pp. 7-8, 10, 34) analysed data from the US Economic Census for the period 1982-2012 for 676 industries in six sectors which together account for 80 per cent of private sector employment. The authors find unambiguous evidence of increasing concentration for both sales and employment across a range of measures in all six sectors.⁵ Other studies, using different data sources or time periods, are generally consistent with these findings.⁶

Rising concentration need not reflect 'sinister' forces. It could result from benign processes such as economies of scale or network externalities.⁷ The 'sinister' explanation, however, points to a fundamental change in the antitrust climate from the 1980s onwards. In this period, the views of the so-called Chicago School gained greater

political sway and was actively promoted by educational campaigns directed at judges and regulators, sponsored by conservative thinktanks such as the Olin Foundation (Stiglitz 2013, p. 44). Chicago School economists maintained that markets were generally efficient and further, the costs of regulating uncompetitive markets often exceeded the benefits. The effects have been far reaching for both regulators and the courts (Furman 2018, p. 8, Wu, 2018). For example, Kwoka (2017, pp. 10-11) has shown a sharp drop in merger enforcement actions by the Federal Trade Commission in mergers with five or more remaining market competitors over the period 1996-2008. Further, Gutiérrez and Philippon (2018, pp. 23-26) document how non-merger enforcement, specifically abuse of dominance and cartel investigations, has dropped sharply since the 1970s and 1980s. It would be odd if concentration did not increase in this changed regulatory environment.

In terms of patents, and the monopoly protection it provides, legislation has continually extended the scope of protection since the late 1970s and judicial interpretation has reinforced this trend. Some of the most important developments include, *inter alia*: the 1980 Bayh-Dole Act which allowed government contractors to control patents based on their work; the 1980 *Diamond v. Chakrabarty* and 1981 *Diamond v. Diehr* Supreme Court judgements that extended patentability to life forms and software respectively; Trade Related Intellectual Property Rights (TRIPS) provisions agreed by member states of the World Trade Organisation in 1995 requiring adoption of US style patent protection, and so on (Baker 2016, p, 84).

A particularly important development occurred in 1982 when exclusive jurisdiction for appeal of patent cases was assigned to the Court of Appeals for the Federal Circuit (CAFC). Since then, the CAFC has systematically lowered the threshold of patentability and expanded the coverage of patent protection. Some allege that this court has been particularly vulnerable to capture by the patent lobby due to the close working relationships and ideological affinities between judges and patent lawyers (Lindsay and Teles 2017, p. 149). The result has been a vast expansion of patent issuance by the US Patent and Trademark Office from around sixty thousand in 1983 to over three hundred thousand in 2013 (Lindsay and Teles 2017, p. 67).

The third issue concerns monopsony in labour markets and the lack of countervailing power. By monopsony, I am referring to situations where employers have wage-setting power which reduces wages below their competitive labour market equilibrium level.⁸ Monopsony, in this sense, could result from benign processes, such as the reluctance of employees to change employers, or 'sinister' ones, such as collusive wage suppression. Both of these possibilities are discussed later in this section and in Section 4. Recently, a flurry of attention has been afforded labour market monopsony in academia, policy circles and the media.⁹

There is now significant empirical evidence which is consistent with, and potentially suggestive of, monopsony in labour markets including: the breakdown, since the 1980s, of the tight relationship between wage and

productivity growth (Stiglitz 2012, p. 65); the declining labour share in national non-farm income which has been especially pronounced since 2000 (CEA 2016, p 1); declines in the Wage Phillips Curve, or the level of unemployment associated with positive wage growth for the median worker, since the late 1970s (Krueger 2018, p. 2); increasing employer concentration, as detailed above, together with evidence of an association between higher concentration and lower wages (Benmelech et al. 2018); long-term declines in labour market dynamism or fluidity, as measured by transitions between jobs (CEA 2016, p. 10-12); firm level estimates of labour supply elasticities¹⁰ which are often quite low (Webber 2015) and so on.

This evidence, however, does not necessarily support the 'sinister' account of rising inequality through active wage suppression. There are a number of 'benign' forces which could explain some of the empirical results. For example, at the national level, labour market slack or slow productivity growth could account for aspects of the wage puzzle (Furman 2018, Krugman 2018). At the micro level, high search or relocation costs, changing preferences, or non-wage-based differentiation between firms, might explain the labour supply elasticities which diverge from infinity (Staiger et al. 2010).

Still, there is direct evidence which supports the 'sinister' explanation, namely: increasing employer concentration for the 'sinister' reasons previously discussed, which is an enabling condition for collusion; direct evidence of collusive practices in the hospital sector (see section 4) and elsewhere (CEA 2016); staffing and hiring practices which reinforce 'sinister' monopsonist tendencies including non-compete agreements and no-poaching clauses, which are employed by around sixty per cent of franchise companies in the US (Krueger 2018, p.5), among others. Equally important is the decline of countervailing power due to the demise of union membership from around twenty per cent of total employment in the early 1980s to around ten per cent in 2015 (Baker 2016, p. 30). While union membership has fallen since the 1950s, the more rapid recent decline was precipitated by the change in norms governing industrial disputes, symbolised by President Reagan's firing of the air traffic controllers in 1981. It was facilitated by institutional change such the weakening of the National Labour Relations Board, mandated to protect workers' rights (Baker 2016, p. 30), legislative action, such as the spread of right-to-work laws across individual states (Reich 2015, p. 130), and court decisions such as the June, 2018 *Janus* ruling, where the US Supreme Court struck down mandatory fees levied on non-union members to cover the costs of collective bargaining (Liptak, 2018). Recent econometric evidence drawing on a new long-term dataset, provides added support to the finding that union membership is inversely related to income inequality (Farber et al. 2018). Together, these factors comprise the 'sinister' case for active wage suppression.

Many of these same 'sinister' themes concerning the exercise of market and non-market power, culminating in monopoly and monopsony, appear in Charles Tilly's account of inequality to which we now turn.

3. Tilly

In his monograph *Durable Inequality*, sociologist Charles Tilly proposed a theoretical framework to account for the persistence of inequality. In Tilly's 'organizational view of inequality-producing mechanisms' (Tilly 1999, p. 9) ... 'inequality emerges from asymmetrical social interactions, in which advantages accumulate on one side or the other, fortified by construction of social categories that justify and sustain unequal advantage.' (Tilly 2001, p. 362). The two main elements in the theory which are particularly important for the present purposes concern the basic social configurations within which inequality is generated along with the mechanisms, or 'social interactions', which produce and sustain it.

Tilly (1999, p.47-53) presents a five-fold typology of basic social configurations based on chain, hierarchy, triad, organization and categorical pair. The latter two assume greatest importance in his analysis. Organizations are the primary site of the construction of inequality. They comprise not only firms, governments and the like but also kinship and religious groups, local associations and so on. A major focus is on the perpetuation of inequality in organizational forms related to work. The critical social categories which reinforce and perpetuate inequality are bounded categorical pairs such as male/female, citizen/foreigner and black/white, among others.

There are two primary social mechanisms which generate inequality, exploitation and opportunity hoarding, and two others, emulation and adaptation, which serve a secondary role in perpetuating it. According to Tilly (1999, p. 7), opportunity hoarding and exploitation 'build a bridge between Max Weber on social closure to Karl Marx on exploitation, and back'. By exploitation, Tilly is referring to situations where 'well-connected people control valuable resources from which they extract returns by deploying the effort of others, whom they exclude from the full value added by that effort' (Tilly 1999, p. 91). There are ambiguities, to be sure, about the definition of 'full value added' as noted by some observers (Mann 1999). Nevertheless, the term is defined broadly enough to apply across a range of socio-economic systems, including slavery, 'traditional' societies in Southern Africa and capitalism.

Opportunity hoarding occurs 'when members of a categorically bounded network acquire access to a resource that is valuable, renewable, subject to monopoly and ... network members hoard their access to the resource, creating beliefs and practices that sustain their control.' (Tilly 1999, p. 91). Tilly usually applies this mechanism to non-elite groups who hoard the limited benefits they derive from valuable resources by restricting access from others. A paradigmatic example is the ethnically-based pattern of employment of new immigrants to the US whereby immigrants of Western European, Eastern European and Jewish descent marked out, and actively preserved, distinct occupational niches in real estate or finance, manufacturing and retail trade, respectively (Tilly 1999, p. 152). Tilly (1999, p. 155) also applies the concept more broadly to cover elites and firms: 'A firm

or an alliance of firms that established monopoly or oligopoly over production and sale of a given commodity [conducts] opportunity hoarding with respect to all other potential producers and sellers.'

The two other mechanisms play a secondary role in Tilly's framework (Tilly 1999, pp. 95-98). Emulation is the copying of organisational models or social relations from one setting to another. An example is the hotel industry where new hotels replicate the gender and racial division of task found in existing ones. Adaptation involves the adoption of day to day practices which ease social interactions and forge accommodations with prevailing behavioural norms. For example, forms of workplace discrimination or harassment may be met with levity or acceptance rather than direct confrontation by those affected.

The relationship between these social configurations and mechanisms has been neatly summarised by Erik Olin Wright in his review of *Durable Inequality* (Wright 2000). He argues that Tilly's presents a type of functional analysis where mechanisms and categories are enlisted to address a number of core problems facing elites. Specifically, exploitation and opportunity hoarding are invoked as solutions to the core problems of securing and enhancing rewards from one's resources. Categorical distinctions serve the functions of sustaining and deepening exploitation and opportunity hoarding. Finally, the problem of stabilising and reinforcing categorical inequalities falls on the mechanisms of emulation and adaptation.

Tilly's framework has generated a significant critical literature¹¹ to which Tilly (2000) has responded (Voss 2010). Critiques of *Durable Inequality* have addressed the insufficient attention afforded cultural dimensions of inequality, such as ideological and belief systems (Morris 2000, Lamont et al. 2010), the treatment of agency (Laslett 2000), the overemphasis on economic organisations, and so on. Nevertheless, a suitably modified version provides a useful framework to incorporate a number of core elements in the 'sinister' account of inequality presented in Section 2, namely monopsony in labour markets and monopoly in product markets.

4. Explaining Rising Income Inequality in the US Healthcare Sector: A 'Sinister', Tillyian Account

The healthcare sector in the US provides a good case study to illustrate a number of key issues which emerged in the 'sinister' account of inequality in Section 2. Emphasis will be on labour market monopsony and wage suppression among nurses in the hospital sector and monopoly and excessively high prescription drug prices due to patent protection in the pharmaceutical sector. In Tilly's language, the focus is on exploitation and opportunity hoarding.

While these forms of monopsony and monopoly may have adverse effects on health outcomes and quality of care, the discussion will be limited to the consequences for income inequality. In this regard, monopsony in the labour markets serve to increase income inequality through wage suppression and inflated corporate profits (Blair and DePasquale 2010). Monopoly in the case of prescription drugs may also translate into income inequality, if higher drug prices are passed on by employers in the form of lower wages to cover high insurance premiums. High drug prices also reduce consumer surplus and increase consumption inequality.

In order to map Tilly's framework onto the analysis of the US healthcare sector, three modifications are required. First, Tilly's two secondary mechanisms which serve to stabilise and reinforce categorical inequalities, emulation and adaptation, will not be discussed. Second, the role of bounded categories, such as black/white, male/female and so on, in sustaining exploitation and opportunity hoarding in the healthcare sector will not be pursued. Third, the concept of exploitation will not be used in a Marxian sense, which simply denotes the fact of surplus value appropriation, but in a broader sense consistent with the idea of wage suppression.

Exploitation: Labour Market Monopsony and Wage Suppression in the Hospital Sector

The situation of registered nurses in the hospital sector in the US has long been considered a possible case of labour market monopsony.¹² The two stylised facts which raise 'red flags' about possible monopsony are persistent nursing shortages in the sector along with large variation in wages between hospitals¹³. While these findings are consistent with monopsony, they could be attributable to a host of other factors. Still, there are at least three sources of information which are directly suggestive of monopsony and wage suppression, namely evidence on concentration, labour supply elasticities and collusion.

High concentration is an enabling condition for labour market monopsony in that wage setting power increases as the number of employers within a relevant geographical area diminishes, *ceteris parabis*. The hospital sector in the US has a very high level of concentration and it has become increasingly concentrated over time. Gaynor et al (2015, p. 239) present data on one measure of concentration, the Herfindahl-Hirschman Index (HHI), which sums the square of market shares based on hospital admissions. Between 1987 and 2006, the mean HHI value rose by around forty per cent. Further, between 1990 and 2006, the number of geographical areas deemed to be highly concentrated based on the Federal Trade Commission and Department of Justice Guidelines increased from 65% to 77%. The primary driver of the increase in concentration has been the spate of mergers and acquisitions which swept through the sector in the 1990s and have continued thereafter. For example, between 2017 and 2012, there were 432 hospital merger and acquisition deals involving 835 hospitals across the US (Cutler and Morton 2013, p. 1965). High and rising levels of concentration has facilitated collusive behaviour as discussed at the end of this section.

Econometric tests for static monopsony estimate labour supply elasticities, or the per centage change in employment associated with a per centage change in wages. In theory, the labour supply curve facing firms should be infinitely elastic in perfectly competitive markets and highly inelastic in conditions of monopsony (see note 8). A highly inelastic labour supply characterises a situation where large wage increases or declines translate into very small changes in employment. Empirical estimates of the supply elasticities of registered nurses in the hospital sector are mixed, though recent studies have found highly inelastic labour supply curves¹⁴. The strongest recent evidence is provided by Staiger et al. (2010) who relied on a natural experiment, to assess the effects of an exogenous wage change on hospital employment, Specifically, they were able to exploit a legislated change in wages at US Veteran Affairs hospitals to estimate labour supply elasticities rather than rely on statistical techniques to address issues of endogeneity.¹⁵ They found very low short-term elasticities of 0.1, implying that a 10 per cent increase in wages translated only into a one per cent increase in employment (Staiger et al. 2010, pp. 213, 231-232).

To return to the language of 'exploitation', a neo-classical understanding of the term, which characterises the literature in applied microeconomics, is based on deviations between wages actually paid and their theoretical value under competitive market conditions. Accordingly, one measure of exploitation, defined in these terms, is the difference between marginal revenue product and wages, given the assumption that workers are paid their marginal product in competitive markets. This may be estimated by multiplying the inverse elasticity of supply at the firm/hospital level, expressed in per centage terms, by the discount rate (Boal and Ranson 1997, pp. 87-90). The intuition here, is the extent to which workers are 'exploited', or paid below their marginal product, is proportional to the degree of inelasticity of their labour supply curves. If this measure of exploitation is applied to the Staiger et al. (2010, p. 232) study using a discount rate of 5 per cent, then short-term wages are around fifty per cent below what they would be under competitive conditions.

As discussed in Section 2, monopsony could be due to a number of relatively 'benign' factors such high search or relocation costs, changing preferences, or non-wage-based differentiation between hospitals. There is evidence, however, of more 'sinister' forces in the form of collusion. An earlier literature pointed to the prevalence of wage standardisation agreements maintained by many metropolitan hospital associations in the US, which are akin to collusive arrangements (Yett 1975 cited in Sullivan 1989, p. S137). More recently, there have been a spate of class action suits filed across the US alleging collusion by hospitals to suppress wages of registered nurses. In one such case which recently settled in New York State, the plaintiffs alleged that five large hospital in Albany shared confidential wage information on registered nurses and conspired to fix wages (Rosenberg 2013). This suit, along with others in Detroit, have resulted in multi-million-dollar settlements paid to registered nurses (Krueger 2018). Other cases are pending.

Tilly's account of exploitation as a driver of inequality sits quite comfortably with the 'sinister' story of rising concentration, collusion and wage repression. While the definition of exploitation differs, in both cases it denotes a scenario where workers are not being paid their full value-added.

Opportunity Hoarding: Patent Protection and Monopoly in the Pharmaceutical Industry

The patent system creates a temporary monopoly by design. It is justified on grounds that the costs to consumers of increased prices are offset by the benefits associated with innovation, technological change and new products spurred by patent protection. There are reasons to believe, however, that the balance has swung excessively in favour of patent holders, as discussed in Section 2. The pharmaceutical sector provides a good example.

In the US, prescription drug spending per capita exceeds that in other industrialised countries by a wide margin and has risen very rapidly since the mid-1990s (Sarnak et al. 2017). The cost has risen from around 0.4 to 2.3 per cent of GDP, an increase of \$350 billion in 2016 dollars (Baker 2016, p. 83.) While there are a number of factors which may have contributed to this trend, such as increased insurance coverage and the introduction of new blockbuster drugs, the most important factor is the pricing of brand name prescription drugs benefitting from market exclusivity (Kesselheim et al. 2016). Among high income countries, studies consistently find that prices are higher in the US for most prescription drugs (Kesselheim et al. 2016, Sarnak et al. 2017). A recent study, from the US Department of Health and Human Services, examined the prices of twenty-seven physician-administered drugs in the US and sixteen high income comparator countries. In 2018, it found that US prices were around 1.8 times the average, at least 20 per cent higher than the average for 20 products, and the highest of all prices for a further 19 of 27 drugs. (USDHHS 2018, pp. 9-10). This report gained some political traction with President Trump vowing to slash Medicare payments to pharmaceutical companies (Pear 2018).

Why are prescription drug prices so much higher in the US than other high-income countries? A big part of the reason is the political power exercised by large firms to influence legislation and legal outcomes (Reich 2015, pp. 22-26, Baker 2016, pp. 79-84). Favourable legislation is no doubt facilitated by the extensive campaign financing and lobbying efforts of pharmaceuticals. For example, in 2013, lobbying costs of the industry amounted to \$225 million and political contributions, \$36 million, which were among the highest of any industry in the US (Reich 2015, p. 25). Further, the likelihood of favourable legal outcomes is enhanced by the vast resources at the disposal of the industry to litigate contested claims.

There are a number of examples of favourable legislation to the pharmaceutical industry such as laws barring Americans from purchasing cheaper versions of prescription drugs abroad (Reich 2015, p. 24). The most stark example concerns legislation barring the government from negotiating drug prices paid by Medicare. In 2003, the Medicare Prescription Drug, Improvement and Modernization Act extended drug coverage but contained a

provision which precluded such negotiations (Stiglitz 2013, pp. 48-49). Some estimate that annual cost to the tax payer is in the order of \$50 billion (Baker 2006 cited in Stiglitz 2013, p. 49). Similarly, in order to pass the Affordable Care Act (ACA), the Obama administration agreed not to pursue an option which would have allowed for negotiation of drug costs (Ellis 2016). The significance of this omission cannot be understated. According to Kesselheim et al. (2016, p. 860): 'Drug prices are higher in the United States than in the rest of the industrialized world because, unlike that in nearly every other advanced nation, the US health care system allows manufacturers to set their own prices for a given product.'

Favourable court rulings are also a factor explaining high drug prices. The most egregious example concerns so called 'pay-for-delay' agreements allowing pharmaceuticals to pay generic drug makers for delaying production of cheaper versions. It is hard to imagine a more flagrant violation of the spirit of anti-trust legislation. These agreements increased rapidly following favourable appellate court rulings in 2005 (*Schering and Tamoxifen*) and 2008 (*Cipro*) which deemed the practice to be legal (FTC 2009, pp. 4-5). It was estimated in 2010 that such agreements cost the US consumer around \$3.5 billion per year (FTC 2010). The frequency of pay-for -delay began to fall in 2013, after the Supreme Court ruled that such agreements could violate antitrust legislation, and be challenged by the Federal Trade Commission, in the *FTC vs. Actavis, Inc.* case (FTC 2016). They were not found to be illegal, however.

Market exclusivity ensured by patent protection, coupled with favourable legislation and court rulings, translate into extremely high drug prices in the US and high rents captured by pharmaceutical companies. They are a paradigmatic example of 'opportunity hoarding' in Tilly's terms.

5. Conclusion

Inequality is a pressing policy-relevant issue in many countries in the world. This point applies equally to the US, despite the fact that this view is not shared by the current administration. How inequality is addressed, however, depends fundamentally on how it is caused.

This article has presented a 'sinister' account of the rise in inequality. It points to the exercise of market power, in the form of monopoly in product markets and monopsony in labour markets, and non-market power, due to changes in the political and juridical environment. It does not argue that these are the only causes of rising inequality. But it does maintain that, until relatively recently, that have not received their due attention in the academic literature.

Many of the themes which appear in the 'sinister' account of rising inequality in the 'standard', or non-heterodox, economic literature have somewhat surprising resonance with an older sociological approach to inequality drawing on Marxian-inspired notions of exploitation and Weberian notions of social closure. These themes converge in Tilly's account of durable inequality with its focus on exploitation and opportunity hoarding as the two primary mechanisms of inequality generation. While the economic literature and Tilly's account of inequality differ in some ways, they do cover quite similar ground. The healthcare sector in the US was used as an example of this convergence. The 'sinister', Tillyian analysis of wage suppression of registered nurses in the hospital sector and excessive prescription drug costs in the pharmaceutical sector represents a meeting ground of different traditions to the study of inequality with analytical power in explaining recent development in the US.

One core concluding point emerges from this analysis. If inequality in the US was 'created', it can be reversed, at least in principle. Clearly, many of the levers which have contributed to rising inequality result from changes in policy, regulation, enforcement and the juridical context. To be sure, such changes would require a fundamental change in the political landscape from its present state. The point, however, is that such drivers of inequality have little to do with allegedly 'impersonal and unstoppable' processes such as globalisation and technological change or to the logic of capitalism (Piketty 2014). Further, even processes of globalisation and technological change may be more amenable to public policy than is commonly perceived (Atkinson 2015). The opportunity structure, and socio-economic outcomes, in the US and beyond will depend on just how the issue is addressed in years to come.

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Endnotes

1 This latter figure increases somewhat if post-tax income extends beyond disposable income to include the imputed value of all transfers and public expenditures but doesn't affect the core finding of rapidly increasing income inequality (Piketty et al., p. 44, Figure 3).

2 See Gordon and Dew-Becker (2008) for a good survey of the literature.

3 Similar analyses are found in Stiglitz (2012), Reich (2015), Baker (2016), Furman (2016) and Lindsey and Teles (2017).

4 In the United States, around 87 per cent of state court judges face election along with a high percentage of attorney generals (Reich 2015, p. 78).

5 The concentration measures used were the fraction of total sales or employment of the largest four or twenty firms, along with the Herfindahl-Hirschman Index, which square the market shares.

6 For example, The Economist (2016) and Gutiérrez and Philippon (2017a) also find increasing concentration in most industries, though Gutiérrez and Philippon (2017b) find that concentration in manufacturing is stable after controlling for imports. Shapiro (2017) provides a critical review of the data on concentration.

7 The empirical evidence is mixed. Autor et al. (2017) argue that rising competition may explain increasing competition while Guitierrez and Philippon (2017a) come to the opposite conclusion based on the negative association between concentration and investment.

8 Technically, monopsony occurs when the labour supply curve facing employers is upwards sloping which deviates from assumptions of infinite elasticity, or horizontal labour supply curves facing firms, in competitive labour market conditions (see Section 4).

9 For example, CEA (2016), Krueger (2018), Krugman (2018) and The Economist (2018).

10 See note 8.

11 See in particular, the Symposium in the April 2000 edition of the journal *Comparative Studies in Society and History* (volume 42, no. 2).

12 Sullivan (1989) surveys the literature.

13 The theory of monopsony predicts that employment will be below its competitive equilibrium level because wage hikes to fill vacancies would have to be paid to all employees which dramatically increases marginal costs. So, a profit-maximising firm will restrict employment and keep wages lower than in a competitive environment (see Ashenfelter et al. (2010) and Varian (1999, ch. 26) for a textbook exposition). The high variation in wages across hospitals suggests wage setting power.

14 Staiger et al. (2010) survey the literature.

15 Other studies have attempted to address endogeneity by using the duration of hospital stays as an instrument to estimate labour supply curves using two-stage least squares econometric techniques. Staiger et al. (2010, pp. 214-150) argue that there are shortcomings associated with these instruments and that their own reliance on an exogenous legislative change provides a much cleaner identification strategy.