Where’s Main Street? Collective action, production structures and the problems securing a new and stable regime of accumulation

Abstract:

The current system of economic governance in the OECD countries clearly does not produce stability. Much like the great depressions of the 1870s and 1930s and the great inflation of the 1970s, the ongoing global financial crisis has revealed the inadequacies and contradictions of existing institutions and social practices matching supply to demand and regulating accumulation at the macro-economic level. This paper asks three increasingly abstract questions about this instability: Why didn’t “main street” organize against an increasingly predatory financial sector? Can a new form of regulation – in the French regulation school sense – emerge from the current crisis? What is the utility, if any, of an evolutionary economics perspective on the current and prior crises of regulation? I answer the first and second questions by pointing to the consequences that flow from having intellectual property rights as a major source of profit for “main street” firms. The predominance of IPRs – of ‘franchise goods’ – throws up barriers to collective action around macroeconomic stabilization by incentivizing a search for tailored state regulation of individual IPRs. By contrast, the profitability of fordist-era firms rested on a combination of public goods (state macro-economic stabilization) and private goods (efficient management of the assembly line). The salience of franchise goods suggests that current political conflicts will not produce a stable form of regulation; a second “Bretton Woods” moment is unlikely. Finally, an evolutionary perspective is useful because it focuses our attention on the balance between and composition of public, private and franchise goods in the creation of actual production structures and the accumulation of profit.

Dear SAIS readers: The paper below represents a first and very undisciplined stab at a new book project now that I am mostly free of Subprime Nation. So please feel free to be as critical as possible. Your interesting critical questions and comments now will make the project that much better later.
Where’s Main Street? Collective action, production structures and the problems securing a new and stable regime of accumulation

[The problem with econometric analysis of investment is that] it withdraws from the operation of the method all those economic problems where political, social, and psychological factors, including such things as government policy, the progress of invention and the state of expectation, may be significant. In particular, it is inapplicable to the problem of the Business Cycle.

John Maynard Keynes, “Professor Tinbergen’s Method,” *Economic Journal* 49:195, September 1939, 558-568 @ 561

Wall Street and global financial institutions more broadly stole billions of dollars from their clients specifically and ultimately taxpayers more generally in the 2000s. The fundamental business model for finance over the past decade or two is indistinguishable from a protection or extortion racket. Financial firms’ speculation with their own and borrowed funds creates excess and economically harmful volatility in global markets. Financial firms then turn around and sell protection against the volatility they create to firms and individuals at risk from that volatility. The finance sector thus was value subtracting well before the current global financial crisis. The crisis itself emerged from deliberate efforts to re-introduce mismatched maturities, and thus amplify rather than reduce risk, in the US housing finance sector. This amplification of risk is above and beyond any *Producer*-type fraud that may have occurred around CDOs built out of subprime mortgages. That is, the amplification of risk was part of a generic business model rather than an idiosyncratic abuse, and extended beyond the housing finance market. Financial firms deliberately courted disaster knowing that regulatory authorities would bail them out. The crash is thus endogenous to the behavior of financial firms, rather than being a ‘black swan’ event or an accident.

The (so far demonstrated) quiescence of ‘taxpayers’ – a diffuse and extremely heterogeneous group – regarding this value subtracting activity is understandable. Most simply do not have the information to assess the finance sector’s behavior beyond a simple sense that it is populated by criminals. For the average person, the precise mechanisms behind financial crimes remains a mystery compounded by the average person’s ignorance of how even simple banking works. But the same cannot be said for large non-financial firms. Their quiescence is a real puzzle. The non-financial sector is the dog that didn’t bark in the run up to the global financial crisis. Why didn’t they organize a counter coalition to balance

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1. People far from America may find this claim hard to take. I suggest they read the accounts of fraud in Matt Taibbi, *Griftopia: Bubble Machines, Vampire Squids, and the Long Con That Is Breaking America* (Spiegel and Grau, 2010) and Barry Ritholtz, *Bailout Nation: How Greed and Easy Money Corrupted Wall Street and Shook the World Economy* (NY: Wiley, 2009), and consider that despite the litigious nature of US society, neither has been sued over their claims.

2. For technical reasons – see Thomas Schelling, “What is the Business of Organized Crime?” *Journal of Public Law* 1971, 10, 1: 71-84 – a protection racket should be distinguished from the contract enforcement aspects of organized crime. Finance is not providing contract enforcement, but rather operating directly in criminal activity via extortion and fraud.


4. In Mel Brooks’ movie *The Producers*, a bankrupt theatre promoter sells 100% ownership rights over the same play to multiple buyers, hoping that the play will prove a failure and thus free him from having to repay any of the original investors.
against or even reverse the rising political power of the financial sector? Why didn’t the non-financial sector act collectively to seek and produce macro-economic stability?

Much like the great depressions of the 1870s and 1930s and the great inflation of the 1970s, the crisis has revealed the inadequacies and contradictions of existing institutions and social practices matching supply to demand and regulating accumulation at the macro-economic level. I argue that the way in which non-financial profit is generated in the new economy creates irreconcilable conflicts among elites, because the new economy is largely built around production of goods characterized by high levels of information content. I will call these goods ‘franchise goods’ (i.e. ‘club goods’ – but I explain later why I prefer ‘franchise’ to club). Producers thus have incommensurable or incompatible interests, because the regulation (in the narrow, administrative/legal sense) of franchise goods creates zero sum conflicts over profitability in the new economy. These conflicts impede the kind of collective action around the kinds of projects that created relatively durable periods of stability in the 19th century and mid-20th century. Macro-economic stability is a public good, and thus requires sustained collective action. This argument is thus in the broad spirit of the various regulation school approaches. It balances my tendency as an unreconstructed materialist by moving beyond ‘objective factors’ relating to production towards the issue of forms of social stability that permit profitability. The approach thus favors that of the Amsterdam school, because of its emphasis on comprehensive concepts of control for the economy. These are irreducibly social, rather than functional. What ideational factors make collective action possible? How do (or don’t) firms overcome knightian uncertainty to end up with understandings of their identity and thus interests in ways that permit them to overcome collective action dilemmas, and secure popular and elite consent to new ways of managing public and common pool goods?

Ideas matter because stable accumulation regimes need institutional solutions to collective action problems. ‘Ideas’ simultaneously supply both policy purpose (roadmaps) and social purpose (legitimacy) for those institutions. Ideas/institutions provide stable ways to resolve micro- and macro-economic knightian uncertainty around, among other things, the supply of common pool and public goods essential for a stable accumulation regime. But there is no guarantee that a given set of ideas will fit well with, or enable expansion of, a given production structure, or fit well with the underlying logic of production and profitability. Similarly, I will draw on the approaches of White and Fligstein, who argue that firms, as organizations, seek to stabilize their environment by creating structured markets. I modify their approach by considering how an evolutionary approach to (global) political economy allows us to bridge the sociological, actor centered account of White/Fligstein with the macro-economic, class centered account of the regulation schools.

This paper proceeds in four steps. First it lays out a typology for understanding different capitalist regimes of accumulation using the standard distinctions among different kinds of goods. This typology is ‘objective’ and thus both static and too deterministic. The typology presents steady-state or circular flow economies in which change is marginal and zero uncertainty produces stereotyped behaviors. I resolve the first flaw by suggesting an evolutionary analysis of how each regime exhausts the abundant common pool and public good resources generating growth. I resolve the second flaw by showing how actors’ efforts to overcome knightian uncertainty both stabilizes expectations but introduces new forms

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5 It is also likely that there is a third, geo-political conflict between the interests of the rich OECD and those of China, India and, possibly, Brazil, but adding this dimension would make the paper unwieldy. In principle, it should be possible to bring them into the analysis. But I have not done so here.

6 See Blyth on Knight.

of risk. These constitute the second and third parts of the paper. The fourth part of the paper shows how efforts to resolve micro- and macro- uncertainties, or to bring them into alignment with the underlying logic of production are likely to be unstable in ways that go beyond the baseline instability of capitalist economies. A coherent concept of accumulation, of the sort that Kees van der Pijl identified for the 1930s-1940s, is unlikely to emerge from an economy in which profitability rests on IPRs. What the paper does not do is provide any evidence to back its claims. Early days for a new research project....

1: Different regimes of accumulation rest on different combinations of goods

In this section I construct three different static models of historical economies based on the relative proportions of excludability and rivalry in the consumption and production of goods. Static, circular flow and equilibrium models of the economy – particularly ones that pretend to stand in for all possible economic systems – are inherently misleading as models of reality. Nonetheless, they have some utility for understanding what it is that animates particular economic systems. The analysis below assumes that there is no single model. Rather, differences in the level of economic concentration, the level of asset specificity and the form that labor exploitation takes constitute different models. Although the typology appears to be based on consumption, it is actually looking at property rights in order to ask about the typical problem(s) encountered in the profitable production of goods. Technically, nothing bars the rollout of new production processes. But socially, production will not occur without profit. The analysis thus privileges neither consumption nor production. Rather, the issue ultimately is about how consumption and production, demand and supply, come into balance at a level consistent with profitability and thus expansion for firms. This is a fundamentally political question because order and equilibrium are neither spontaneous nor natural (contra Hayek and the Austrians).

Consider the classic 2x2 table (Figure 1) used to understand the problems involved in the production of public goods. This table divides goods up based on two factors that jointly allow us to understand the different kinds of potential property rights surrounding each good:

1. is consumption rival (does my consumption necessarily diminish your ability to consume the same good on a one-for-one basis)?

2. is consumption excludable (can you be prevented from having access to the good in question)?

Combining these factors gives us four ideal types of goods characterized by different property rights and thus by different potential barriers to production. All forms of goods face non-trivial barriers to production, including labor discipline and social order. The question is, assuming social order and a degree of labor discipline: what barriers exist beyond these? In orthodox economics, private goods face minimal production problems because property rights are relatively easy to establish and create a basis for both supply and demand. Rivalrous consumption implies that property rights create an incentive for production. In order to consume the good I must not only purchase it, but also bid against other potential buyers. This bidding up process incentivizes other actors to produce the good. Barriers to production largely take the form of transaction costs in the writing of contracts to acquire and dispose of property.

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8 Kees Van der Pijl, Making of an Atlantic Ruling Class, London: Verso, 1984
11 I assume social order and labor discipline because they are prerequisites to any regime of accumulation. But going forward from 2010 this may not be a safe assumption, as rising forms of protest globally show.
<table>
<thead>
<tr>
<th>1: FOUR TYPES OF GOODS</th>
<th>EXCLUDABLE ACCESS</th>
<th>NON-EXCLUDABLE ACCESS</th>
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<tbody>
<tr>
<td><strong>RIVAL CONSUMPTION</strong></td>
<td>PURE PRIVATE GOODS</td>
<td>COMMON POOL GOODS</td>
</tr>
<tr>
<td>Typical problem: transaction costs in writing contracts</td>
<td>Typical problem: Tragedy of the Commons - over consumption of finite resources</td>
<td></td>
</tr>
<tr>
<td><strong>NON-RIVAL CONSUMPTION</strong></td>
<td>FRANCHISE GOODS</td>
<td>PURE PUBLIC GOODS</td>
</tr>
<tr>
<td>Typical problems: tendency towards monopoly from increasing returns –OR- No returns at all</td>
<td>Typical problem: under-provision because of free riding</td>
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</table>

Common pool goods are easy to produce – more accurately harvest – but in the absence of easily enforced property rights (non-excludability) are not reproduced. Rivalrous consumption encourages those who can lay hold on those resources to consume them as quickly as possible. But the inability to enforce property rights means that potential producers cannot recoup their production costs and so do not invest in more production. Most common pool goods are thus subject to quick exhaustion in the so-called tragedy of the commons. Though most examples of the tragedy of the commons involve natural resources, some humanly produced goods are also common pool goods, like roadage. Here exhaustion takes the form of congestion, which produces a quasi-excludability via the ability to endure delays. While this can in turn trigger political pressure to expand production of those common pool goods, the central point is that private production does not automatically occur. Instead, public provision is necessary, which in turn requires revenues and a justification for intervention; that is, institutions.

The same lack of private production also inheres to public goods, both in their full sense as goods from whose consumption no one can be excluded and in the olsonian sense of goods from which no one from a specific sub-group can be excluded. Consumption is non-rivalrous, which implies that exhaustion is not an immediate problem (e.g. defense). Yet public goods also suffer from underproduction because the absence of excludability, the absence of property rights, means that no one will want to bear the cost of production for a good that they cannot reliably sell in the face of free riding. Instead, public goods are only produced via either social or state coercion that compels free riders to bear their share of the cost of producing these goods.¹²

Finally consider what the economics profession usually calls ‘club goods.’ Club goods are non-rivalrous in consumption and potentially excludable. The economics profession uses social clubs as their example for

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¹² Or through regulation that forces producers to internalize the cost of ‘bads’ produced in the course of their production of other goods.
club goods, and thus sees no barriers to their production. Consumption is non-rivalrous, in that your enjoyment of our shared social activity does not limit my enjoyment (and indeed might enhance it). Production of those social activities has costs, like any production process, but the requirement for club membership – and the imposition of an entry or membership fee – assures that those costs are borne by those who enjoy the good, unlike the situation with public or common pool goods. So far, so good. Yet the choice of the label club good and the associated example is somewhat misleading and ideologically charged because it conjures up voluntary association. The choice of ‘clubs’ distracts attention away from the issue of what exactly creates the excludability that distinguishes a club good from a public good. This is why I prefer to call them franchise goods. The central defining feature of a franchise good is that the state creates and enforces both the quantity and quality of excludability. As with all property rights, excludability in club or franchise goods rests ultimately on coercion and a political process legitimating that coercion.

This is why ‘franchise good’ is a better label than club good. Franchise here refers not to the possession of the vote but rather to the older, original meaning from which both the modern business usage and the usage meaning possession of the vote derive. Originally a franchise was a royal grant of land or an exclusive right to engage in a sales or production activity. In all cases this franchise yielded rents rather than profits. Excludability in a franchise is different from excludability for private goods. The property rights inherent in a literal franchise in land of Pennsylvania to the Penn family, or of the lands stretching from Dulles Airport in Loudon County all the way down to Carrsbrook Drive [where I live] to Thomas and Peter Carr – are the same as the property rights inhering to possession of a pencil. Possession here constitutes the famous nine-tenths of law. A franchise in land is in fact a private good in this typology because of the rivalrous nature of use of land.

The property rights inhering to an exclusive right to engage in a production or sales activity of, e.g. intellectual property or patents or reticulation systems are different from the patents (again – historically the same word) granting ownership of land. With IPRs the non-rivalrous nature of consumption raises the issue of why property rights exist in the first place. The obvious and orthodox answer assimilates franchise goods to private goods by arguing that excludability or property rights are what make production possible. Property rights allow producers to recoup their production costs. But what is less obvious with respect to IPRs and network systems is that the specific form through which the state constitutes property rights strongly determines the rate of profit for the firm possessing the franchise. The constitution of property rights for private goods (think of this as the ‘quantity’) makes profitability possible. The specific nature of those property rights for franchise goods (think of this as the ‘quality’ of those property rights) directly determines the level of profitability. On this point much will hang later. But now we need to set up and characterize three different types of economies based on the relative proportions of these four kinds of goods in the entire economy, and especially in its dynamically expanding parts.

2: Three types of economies

Though our starting point is that capitalism is inherently unstable, we must first create a set of static comparisons of three idealized regimes of accumulation in order to understand the sources of profitability. All three regimes display production of all four types of good and possess firms and investment in the production of those goods. It is the proportion that matters, for the proportion determines the kinds of political problems that arise when trying to balance supply and demand.

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The competitive capitalism of the 19th century – still the basic image for much of orthodox economics – combined production of private goods with large scale exploitation of common pool goods and a limited provision of public goods (Figure 2). Those public goods largely centered on enforcement of contract as in the classic “nightwatchman state” image. But it is important to note that the 19th century withdrawal of the state from the positive regulation of economic activity practiced in the 18th century was neither automatic nor insignificant, and a vast expansion of extranl state control and predation matched the rescission of internal state control. The pre-19th century states consciously regulated prices and volumes of key goods, including labor, in order to assure stable food supply for urban areas and thus assure a politically docile urban population. In this respect the medieval French state’s concern for assuring a stable supply of wheat for Paris was exactly the same as the Chinese state’s concern for rice supplies going to Beijing or Nanking. This control extended to large, joint stock firms. The few firms that came into existence did so with explicit permission from and often participation by the state, because they were seen as political creatures and potentially rivalrous with the state.\(^{14}\)

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<th>2: Competitive Capitalism in C19</th>
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<tbody>
<tr>
<td><strong>RIVAL CONSUMPTION</strong></td>
<td>PURE PRIVATE GOODS</td>
<td>COMMON POOL GOODS</td>
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<tr>
<td></td>
<td>Extensive small scale private production; profitability a function of labor exploitation</td>
<td>Extensive mining of CP goods via empire; underpriced inputs into manufacturing and proletarian food supply</td>
</tr>
<tr>
<td><strong>NON-RIVAL CONSUMPTION</strong></td>
<td>FRANCHISE GOODS</td>
<td>PURE PUBLIC GOODS</td>
</tr>
<tr>
<td></td>
<td>Minimal; some patent law (UK, US)</td>
<td>Public order only</td>
</tr>
</tbody>
</table>

The withdrawal of state control required both political pressure and articulation of a vision in which freer markets would permit a politically acceptable level of provisioning. Smith, Ricardo and Malthus provided the vision, while the ever-growing army of manufacturers and commercial firms tied to manufacturers provided political pressure. Reinforcing that political pressure was the ever-larger, ever more dangerous urban proletariat associated with manufacturing. On the other side, the vast array of private goods made possible on the supply side by the industrial revolution and the vast increase in

\(^{14}\) Timothy Alborn, *Conceiving Companies*; Dunstan, *State or Merchant*
demand made possible by the earlier and parallel industrious revolution (De Vries) jointly determined growth.

These pressures forced a shift in the kind of public goods the state provided from the regulation of (urban food) supply to the regulation of private contract and a violent expansion of the market to the rest of the globe. But what was that global expansion of the market? For the most part it was the creation of enough public infrastructure to allow the strip-mining of common pool goods like cod, timber and minerals as well as the engrossment of thinly peopled lands in the temperate peripheries. This public infrastructure simultaneously injected generous and parallel volumes of supply and demand into the market. On the one hand, strip mined raw materials could be sold; on the other hand, the corporations doing that strip mining and the owners of newly stolen land could raise and then spend capital based on the expectation of future income flows. In this sense, Say's law is right: new supply could create its own demand. But it did so through an expansion of capital as credit. Acquisition of these common pool goods provided an essential supplement to capital accumulation, because their sale allowed the social transformation of inert resources into real and fictitious capital.

The image of the 19th century as laissez faire rests on the British state’s indifference to what happened in the labor market. Outside Britain, however, the steady and violent engrossment of land and resources required a massive application of state organized violence. So while the British state abjured direct control in Britain, elsewhere the state was a pervasive force. Even in the United States, the state played a significant role in opening up new fields for enterprise (literally, as with the expulsion of the native population, figuratively through land grant railroads and the homestead system).

Yet at the same time, as Piore and Sabel argued, the 19th century economy was reasonably self-regulating in the sense that most producers could not enforce mark up pricing, most workers had to offer labor at a market price that in nominal terms was relatively flat, and inflation and deflation tended to be self-correcting over long cycles lasting roughly 20 years. The combination of general purpose tools with hire/fire flexibility and wages that were often linked to world market prices tended to make for quick recoveries from financial collapses. Raw materials prices and output were also self adjusting, albeit at a much slower rate. The state didn’t need to assure that supply and demand balanced. In short, competitive capitalism largely resided in the northwest and northeast corners of our diagram with minimal inputs from the southeast, public goods corner. Those inputs largely revolved around the provision of public order – coercion of people rather than markets – and expanded access to common pool goods – coercion of people and places into markets. This combination assured profitability for

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15 Belich, 2009; Alfred Crosby, Ecological Imperialism; and Donald Denoon, 1984
20 W. Arthur Lewis, Evolution of the International Economy
firms. Franchise goods played a minimal role (except in the form of “franchises” for exploitation associated with explicit empire).

This regime of accumulation came to an end for three (four?) reasons. First, like all economic systems (and like all systems in nature) growth required continuous inputs of some initially abundant but ultimately exhaustible raw material. Competitive capitalism exhausted its supplies of common pool goods and cheap (and easily accessible) labor by the end of the 19th century. The closing of the US frontier was followed hard on by the closing of the Argentine, Australian and Canadian frontiers; the deforestation of North American forests near navigable waterways was not yet complete but came around the same time.21 The great and voluntary migration of Europeans to new temperate zone production sites and the equally great and involuntary migration of Asian indentured labor to tropical zone production sites was winding down. On the one hand, as Williamson (1998) has shown, wages in the north Atlantic area had steadily converged from 1850 to 1913, by which time the gap was less than 2:1 between western Europe and the US. On the other hand, the political and economic pressures producing Asian migration were starting to provoke serious unrest in Europe’s Asian empires.

Second, the convergence of north Atlantic wages and the ever growing scale of factory production had led to a growing labor movement in western Europe. To put things in Hirschman’s overly simple terms, workers lacking easy exit turned to voice. This put continuous pressure on the state to regulate the labor market and to ameliorate municipal conditions. Both tasks required more revenue and an expansion of state bureaucratic capacity. Third, geopolitical competition had led to the emergence of new sources of manufactured goods supply without any immediately corresponding increase in demand. States solved part of the problem by absorbing electrical and especially metal goods into ever expanding militaries.22 We know how that solution ended.

Finally (fourth?), the gradual emergence of large firms using continuous flow production changed the earlier dynamics of competitive capitalism by creating an objective need for not only new forms of public good but different kinds of public goods. Continuous flow production systems had very high levels of asset specificity. While these systems were highly productive and thus potentially highly profitable, they could reap the benefits of that increased productivity only by running at high levels of capacity utilization.23 As various flavors of the regulation school argue, bringing supply and demand into balance in this situation required the state to enforce – both in the sense of ‘force on’ and the sense of ‘guarantee’ – a class compromise over wages. The specific concept of accumulation that developed in the various advanced economies naturally varied, but all combined some welfare state element that stabilized employment and wages with some deal linking wage increases to productivity increases. By stabilizing wages and assuring that wages grew in tandem with productivity, these class compromises kept supply and demand in rough balance. Finally states explicitly committed themselves to managing the business cycle, encouraging and then validating new investment. This helped spread continuous flow and increasing specific investment throughout the entire economy.

All this involved not just a change in the nature of public goods provision (as with the prior shift) but also a vast expansion of public goods provision. The welfare state, productivity pacts and Keynesian fine-tuning are all public goods. Keynesian fine tuning, for example, stabilize the macro-economy for all firms, whether or not they offer a productivity wage to their workforce. While all continuous flow, high asset specificity firms had an interest in stable and high aggregate demand, each individual firm had an

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21 For example, 1918 marks the start of the movement to protect California redwoods from clear cutting.
22 James Kurth, “Political Consequences of the Product Cycle.” ; Kerr, Imperial
interest in minimizing its wage costs and any limitations on its access to capital. Similarly, while each firm might seek to sell the most expensive cars, economies of scale required a relatively equal distribution of income that in turn would support the largest possible production runs. As van der Pijl shows, it took considerable time for firms and business elites to understand and accept the need for these three forms of state economic regulation and its relationship to their own profitability. Only then could they overcome their collective action problems around macro-economic stabilization.

Profitability in the Keynesian welfare state era thus had two pillars. Firms still needed efficient management of their own productive processes (the northwestern, private goods corner), as the differences in profitability across the car industry show. A well managed assembly line could yield super profits (as at Toyota) while a mismanaged line could yield bankruptcy (as at British Leyland). But even efficient firms relied on public management of the economy to keep demand stable and stably growing. Losses at both Toyota and Honda during the 2008-09 crash in automobile sales shows and likewise profitability for US auto firms in the 1973-75 recession show the limits to getting private production correct in an unfavorable macro-economic environment. The fordist era thus combined private management of production with enhanced public management of the economy. It combined a primarily northwest/southeast diagonal with a vastly enlarged provision of public goods in the form of macro-economic management, rather than the northwest-northeast combination of the earlier competitive era. To be sure, exhaustible resources like oil still mattered – this will be discussed below – but unlike the common pool goods of the 19th century, these did not carry with them the possibilities for a vast creation or expansion of fictitious capital.

The production structure of the current era reverses this diagonal orientation. While the economy still contains the residues of the older competitive and high asset specificity economies, an increasingly large share of economic activity involves ‘franchise goods.’ This is because the information and intellectual content bundled into various commodities – including those of the prior eras – is what gives those commodities their value. Consider the classic products of the earlier eras. The vast majority of US soy and corn output is now from bio-engineered seeds, and is sown and harvested with GPS enabled machinery. The typical car now has roughly 30 microprocessors on board running between 30 and 100 million lines of code. Those electronics account for 30 percent of the value of a car. Pharmaceuticals, as much an ideal typical information product as software, had seen their share of health care spending decline by half from 1960 to 1980. Yet from 1980 onward the pharmaceutical share of health care spending has again doubled and now comprises about $220 billion in sales in the US. Other franchise goods have also become much more significant in the economy. Deregulation of reticulation networks and the rise of modern / mobile telephony and the internet have created new services that absorb an increasing proportion of consumer income. Yet profitability for reticulation industries is almost totally a function of the structure of regulation.

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24 To be sure, some mass production firms have deliberately sought out the luxury segment expanding out of the collapsing mass market. What is notable about these firms is that they have also consistently sought to expand production volumes by offering cheaper and smaller versions of their core products. Thus the increasingly unequal income distribution in rich countries enabled firms like BMW to come into being as mass producers in the first place. But the ability of BMW, etc. to attain design economies of scope and engine assembly economies of scale and so sustain production of its high end models is a function of their sales of cheaper models. BMW thus has increased its volume by introducing the “1” series cars and the revived Cooper Mini. Even some pure luxury firms like Porsche have found it necessary to partner with mass producers (in this case VW) to make their vehicles even moderately affordable for the rich.
The rising proportion of information goods and intellectual property in the economy was in part engineered by the state. But it has produced a corresponding and self-fulfilling demand for state intervention to create property rights around those goods. What makes those property rights different from the property rights inhering to the goods typical of the northwest corner in both competitive and fordist capitalism? The key difference is precisely the ‘franchise’ nature of that property right. Property rights over information goods and around reticulated services are established via regulation not possession. These regulations set the rate of profitability for firms in those sectors much more so than the internal efforts of those firms to seek production efficiencies. The profitability of thee firms is a direct function of the kind of regulatory environment they face. Thus, for telephony firms, the issue is not whether they are required to give access to their networks to rival firms, but rather at what price they are allowed to give access. Similarly, the specific number of years that drugs may be patented directly affects the profitability of pharmaceutical firms. In short, what is usually seen as the rise of a service economy is actually the emergence of information enabled manufacturing and the so-called dynamic service sector (e.g. modern telephony). This rise shows up in the ever increasing proportion of share market value that is attributable to “intangibles” rather than to physical capital (Figure 4).

In older production regimes, internal productive efficiency was the key determinant of profitability. Toyota’s ability to consistently generate productivity increases 1-2 percentage points higher than its competitors is what propelled it to the front rank of car producers and created its current $20 billion hoard of cash. British firms’ similar ability to stretch their textile machinery well beyond its rated lifetime similarly gave those firms global dominance and profits for most of the 19th century. As noted above, various forms of public goods were preconditions for profitability in those industries. But in the current economy public goods and even more so public regulation directly determine profitability. Consider three different goods with differing degrees of materiality and thus manufacturing costs: popular music, pharmaceuticals, and iPods. And consider the totally immaterial finance sector.

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<thead>
<tr>
<th>3: Organized Capitalism in C20</th>
<th>EXCLUDABLE ACCESS</th>
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<tbody>
<tr>
<td><strong>RIVAL CONSUMPTION</strong></td>
<td>PURE PRIVATE GOODS</td>
<td>COMMON POOL GOODS</td>
</tr>
<tr>
<td>Mass production more profitable when well managed and in the context of a stable macro-economy</td>
<td>Only oil? Radio spectrum (often public)</td>
<td></td>
</tr>
<tr>
<td><strong>NON-RIVAL CONSUMPTION</strong></td>
<td>FRANCHISE GOODS</td>
<td>PURE PUBLIC GOODSs</td>
</tr>
<tr>
<td>Publicly owned reticulation networks (telecoms, aviation, rail, power generation); profits not an issue</td>
<td>Welfare state (demand stability) Wage-productivity pacts (demand growth) Keynesian fine tuning (both)</td>
<td></td>
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25 See the essays in Fred Block, ed, *The State of Innovation*, particularly Shelley Hurt.
26 William Lazonick, *Competitive Advantage on the Shop Floor*. 
**Figure 4:** Share of tangible versus intangible assets in US S&P500 market capitalization. Source: Pagano and Rossi, 2009:671

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<thead>
<tr>
<th></th>
<th>EXCLUDABLE ACCESS</th>
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| **RIVAL CONSUMPTION** | PURE PRIVATE GOODS  
Standardized and commoditized components subcontracted to Asia, etc | COMMON POOL GOODS  
Radio spectrum (Auctioned) |
| **NON-RIVAL CONSUMPTION** | FRANCHISE GOODS  
Private reticulation networks  
IPR industries (Media, software, Pharma, clothing design, etc) | PURE PUBLIC GOODS  
Keynesian demand stimulus (deficits and falling nominal interest rates) in place of wage growth |
Consider music: Production costs are quite low, aside from any necessary illegal drugs for the performers. Studios are so cheap to rent that even political science professors have been known to cut their own albums. Production costs – burning and packaging CDs – are similarly low. Even for boutique performers selling very small volumes, the total production cost for a CD is on the order of a few dollars. Production costs for digitized music are essentially the studio rental fee. Shaving a few pennies off the cost of producing the music each year ala Toyota yields much less additional profit than assuring copyright or extending the length of copyright via lobbying. These “investments” in lobbying are what determine the rate of profit for the industry. Similarly, litigation to attack people who actively redistribute digitized content for free (e.g. Pirate Bay) does more to preserve or determine profitability than the slow accretion of manufacturing productivity.

Consider pharmaceuticals: manufacturing costs in the ethical pharmaceutical industry comprise about 25 percent of the final cost of the drug. By all accounts, the ethical pharmaceutical industry is a highly inefficient manufacturer, attaining at best 2 and 3 sigma quality control (a defect rate of 10-30 percent of output, versus the 6 sigma, 1-3 percent defect rate in the semiconductor fabrication industry). Most pharmaceutical firms run equipment at only 15-20 percent of rated capacity (again, versus the 70-80 percent typical of the car industry; note however anecdotal evidence to the contrary). By contrast, “marketing” accounts for roughly 20-30 percent of total cost. Yet big Pharma has only recently begun to focus attention on production costs. Why?

Because the bulk of their profitability is determined by regulations determining which new drugs come to market, permitting off-label use or an expansion of the market through public advertising, and permitting firms to limit competition by bribing generic producers not to attack profitable drugs as they come off-patent. (Though it is little known, legislation and regulatory practice in the US permits ethical firms to pay generic firms not to attack ethical firms’ products as they came off patent. This is called ‘pay for delay’). Similarly, an investment in litigation against generic producers over patent infringement also yields much more than tweaking manufacturing processes to increase productivity by 1-2 percent a year. Under current US law, a patent infringement lawsuit automatically debars the defendant generic producer from entering the market for 2 years, assuring a longer monopoly on the market and thus higher profitability for the ethical firm. In this environment, while shaving production costs matters, its contribution to profits matters much less than gaming the system to allow various forms of marketing and lobbying that expand the total length of time in which production can be sold at a monopoly price (even with the industry’s traditional low levels of efficiency), and that secure high prices by limiting competition.

Consider iPods: The iPod is a complicated physical product (compared to pharmaceuticals or music). It has considerable physicality. Virtually all of its physical components are outsourced, including final assembly. Apple’s contribution to the iPod is design and software. Apple captured roughly 35 percent of the pre-distribution cost of a first generation iPod (and more when they did direct sales). Because Apple subcontracts production of the various bits comprising an iPod, and because contract electronics

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28 So-called ethical firms (e.g Pfizer) do R&D and develop new chemical entities (NCEs). Generic firms (e.g. Teva) produce drugs similar to already approved NCEs but rarely do any new R&D. Production costs are a higher percentage of total costs for generic firms – almost double that for ethical firms – because they have limited R&D costs.
29 iSupply Tear down study1; see also the similar teardown studies for iPads and iPhones at iSupply tear down study2...
assemblers are everywhere, Apple does not have a specific production advantage over other firms. (It could have a cost advantage because of its size, however). Other firms wishing to emulate Apple can easily access the various bits that make up an MP3 player. And indeed, there are many MP3 players on the market. Apple’s profitability (and its premium price) is a function of patent and copyright protections that prevent firms from directly copying the iPod. The same is true for the iPad, where Apple’s margins are even larger. Here, as with pharmaceuticals and music, profitability is a function of the quality and quantity of legal protection afforded to firms or sectors by the state.

Finally, consider finance. The very existence of finance is a function of a specific form of regulation (i.e. deregulation) and the willingness of the state to intervene to save failing firms. Profit levels in finance stem from regulation of what the industry may and may not do, including, critically, leverage limits and reserve requirements, accounting standards (see especially the FASB 157 ‘mark to make believe’ level 3 assets), regulatory forbearance with respect to special investment vehicles (SIVs), and consumer regulation (more precisely the absence of serious consumer protection). Just like the three material examples, finance also has a franchise. It trades on its control of information about what it is selling to consumers.

The centrality of state regulation in the scale of profitability for franchise goods should be apparent now. But what about public and the other goods? My sense of the last 20-25 years is that the core regulatory dilemmas and institutions now revolve the bottom (southern) two cells, franchise goods and some new forms of public good. First, the state has privatized rather than operates many of the common pool goods that are of interest to franchise good producers. The most important example is the radio spectrum which is increasingly auctioned off rather than used by public broadcast.

But more important than that are two crucial public inputs into the franchise good economy. First, the state (and particularly the US state) produces public goods that matter to the franchise sectors of the economy. This largely takes the form of publicly funded R&D, which creates both human capital for franchise industries and a backlog of innovations that can be exploited. But these inputs largely make franchise industries possible, not profitable. The second public good is even more important, as enables profitability to an even greater degree. Contrary to the myth that Keynesian demand stimulus was typical of and important during the fordist period and abandoned in the Thatcher-Reagan revolution, Keynesian demand stimulus has never been more important nor less typical. Public economic intervention in the fordist period managed the supply and demand relationship primarily through productivity pacts and incomes policy. In other words, ‘keynesianism’ worked through direct intervention in wage formation rather than through some generic stimulus (Keynes’ cash in the coal mine; Bernanke’s helicopter drop). In the current period, by contrast, the creation of new demand has relied on direct manipulation of the money supply via the financial sector. Fictitious capital created by falling interest rates and the financialization and securitization of an ever greater volume of income streams provided the cash needed to absorb ever larger volumes of franchise goods. Ironically (given the degree to which most analyses stress Keynesian versus monetarist ideologies as the justification for policy in the 1990s and 2000s), the past few decades have seen much more straightforward Keynesian demand stimulus as a substitute for wage growth now that the wage-productivity nexus is largely broken.

Yet this shift away from macro-economic fine-tuning of the economy through wage policy towards a more generic demand stimulus has not provided a coherent regime of accumulation. Rather it is an effort to paper over the distributional conflicts created an information based economy between winner firms (or sectors) and everyone else, and among various winners. The fundamental problems are first, that the breakdown of the nexus between wages and productivity in a winner take all economy means
that profits pile up unevenly. At successful firms, workers and owners receive more money than they can spend; at unsuccessful ones workers and owners receive little and find themselves cash constrained. At the same time, firms that can lobby successfully for a helpful set of regulations become predatory on the economy as a whole (see especially finance, but health care is not far behind). Their higher profits come at the expense of profits (and perhaps demand) in other sectors. It is impossible for all firms to be winners from the lobbying game.

To be done: this entire section would benefit from data on the relative proportions of small and large firms in the economy, the shares of capitalization of different kinds of firms in the equity market, and the share of GDP growth from different sectors.

3: Going dynamic

The prior section presented a static picture of three different regimes of accumulation characterized by different mixes of public, private, franchise and common pool goods. What allows us to understand internal dynamics as well as transitions from one regime to another? My intuition is that what matters is the interplay between the exhaustion of critical abundant resources and the ideas/institutions validating the creation of those resources. Contrary to much Marxist thinking (as well as orthodox economics), this implies first, that there is no timeless logic to capitalism that explains each period. Rather, each period has its own inner logic based on the differences in the form that exploitation takes (here though, Marx is right in general). Second, it implies that the economic path of any given regime is not determinate. Actors can (and as we will see do) get their ideas and institutions wrong. Whether this implies path dependence is an interesting question that rests on what precisely we mean by path dependence, but path dependence is woefully undefined in contemporary arguments. Instead, I think more useful insights come from applying evolutionary theory to the issues above.

Ian Lustick argues that much social science writing uses ‘evolution’ in an unsystematic way, typically as a synonym for any process of gradual change. This broad brush picture misses several relatively coherent efforts. First, various academics have applied evolutionary thinking to different levels of the economy. At the micro level, Nelson and Winter’s classic study examined how firms changed their internal organizational and production structures in response to changes in their environment. Campbell, Hollingsworth and Lindberg (CHL) critiqued and expanded on Nelson and Winter (NW) by looking at the meso-level, showing how different governance regimes came into being and changed over time at the level of sectors rather than firms. Unlike NW, CHL explicitly looked at the role of politics and the state. Here I wish to move one more level up, to the macro-level sketched above, and to make an evolutionary argument (but, NB, not a teleological one). George Modelski made an early attempt to organize an evolutionarily oriented research agenda around the development of the world economy. Finally, Geoffrey Hodgson has systematically tried to apply evolutionary thinking to understand economics and particularly institutional economics. He thus serves as our starting point because he connects both micro and macro-levels and does not fall into the trap Lustick identifies.

Hodgson suggests that a coherent evolutionary model necessarily has four parts which collectively add up to a mechanism for explaining both gradual and abrupt change in the constitutive parts of a given

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30 Ian Lustick 2011.
32 CHL, Governance of the American Economy.
system. These are principles of variation and divergence for units, a process of natural selection among those units, and a phylogenetic rather than ontogenetic outlook on any given ecological/biological system and its units. Put in natural language, an evolutionary theory must answer the questions of why and how are individual organisms different, what determines how those differences affect the probability that a given unit will survive long enough to reproduce, and, finally, accept that equilibria are unstable and that evolution has no final stopping point.

So, first, evolution assumes a population of dissimilar units – both individuals and species – occupying the same environment. Mutation creates variation and this variation is what allows natural selection to occur. If all members of a species were identical and could faithfully transmit their genetic make-up to successor generations then selection processes would not operate on individuals inside that species. Selection might operate across species though. Second, the characteristics that define units must be heritable. Selection is rarely and all or nothing phenomenon, in which all units with similar characteristics are wiped out in one go. Instead, selection operates over time by reducing the probability that an unfit individual will survive long enough to reproduce. Characteristics that are not heritable will not affect the probability that successor generations survive long enough to reproduce. Third, obviously, a process of natural selection must operate such that better adapted, fitter organisms have a higher probability of having offspring and thus proportionately more offspring than worse adapted individuals. Over time, these offspring crowd out those from worse adapted individuals, producing either extinction or competing species or of deviant individual organisms within a species. Together, all three factors imply common descent. All known life forms on earth use DNA or RNA to reproduce themselves; all known life is thus descended from the operation of selection on variations in the organisms produced by these first self-replicating proteins.

Hodgson also argues that variation, heritability, and selection imply a phylogenetic rather than ontogenetic outlook on a given system and its units. An ontogenetic outlook assumes that species (and thus their individual units) have unchanging features or qualities. Tuna are Tuna, can be identified as such through a list of qualities, and remain Tuna regardless of genetic drift or changes in the environment. By contrast, a phylogenetic outlook assumes that, despite common descent from the original self-replicating proteins we know now as RNA, DNA, and prions, units carrying those proteins are constantly changing. Darwin’s tree of life implied a phylogenetic approach in which sexual recombination, genetic mutation, and environmental disturbances continuously created variety within and across species. Organisms constantly changed as selection worked its inexorable magic on them. This change means that a permanent and stable equilibrium is impossible. In this view, a ‘species’ is simply a short hand expression for a group of organisms that vary from individual to individual but cluster around a node of shared characteristics; the modal point for that node can and does change over

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35 Hodgson, 1993:59
36 This model ignores epigenetics – modification to the expression of genes that occurs as a result of contact with the environment. Darwin’s model lacked genetics, let alone epigenetics, so this is in the nature of a simplifying assumption. A more complex model could incorporate epigenetic effects with no violence to the original model, as epigenetic expression creates variation across individuals constituting a particular species. It is unclear at this point in time whether epigenetic effects are heritable. If they were it would shift the debate about evolution away from a strict focus on individual reproduction towards species and clusters of species.
37 However this is what appears to have happened in the great Permian extinction and the apparent extinction of those dinosaurs that did not turn into birds.
38 “I think it naturally follows, that as new species in the course of time are formed through natural selection, others will become rarer and rarer, and finally extinct. The forms which stand in closest competition with those undergoing modification and improvement will naturally suffer most.” Charles Darwin, The Origin of Species.
39 Hodgson 1993:94.
At the most basic level, this struggle for resources can be understood as a struggle for energy to drive self-replication. All life requires energy inputs, and all energy transformation involves a loss of some energy. Life is thus the up-hill, temporary creation of order in the form of organized structures (viruses, bacteria, cells, organs, individual animals or plants) at the expense of greater entropy (disorder) in the surrounding environment. (And here the obvious and intended connection is to new forms of non-human energy in Schumpeter’s large economic cycles.) Forms of life that can directly transform solar energy into biological energy can partially avoid the issue of entropy because they have direct access to what is in essence an unlimited supply of energy. Everything else, however, is parasitic on those primary transformers of solar energy. Evolution is the process by which individual organisms and the species those organisms constitute compete to capture energy from the environment in order to raise the probability that their DNA will be able to reproduce itself. A relatively greater ability to capture energy, as compared to other individuals inside the species and across species, defines ‘fitness’ with the environment. This ability increases the probability that a unit will reproduce, passing its DNA on to successor generations. The demiurge in this drama, to the extent that there is any, is DNA. Evolution through adaption is not necessarily driven by conscious behaviors.

If an evolutionary argument has to have a mechanism producing natural selection, a principle of variation and divergence, and an argument about phylogeny, can we apply these at the level of the firm or sector or national economy? Any given firm is potentially inserted in a competitive local or global market that effectively selects for specific behaviors that fit the market at that time. Firms facing this external environment need not be optimal. Instead, they merely have to be less dysfunctional than their global competitors in order to survive, transmitting their organizational DNA (their production technologies, capital and organizational structure) on into the future. As Darwin argued, and Alchian echoed, selection produces divergence, not convergence, and within divergence, phylogenetic change. Firms display a multitude of strategies – expressed as organizational structures – that can be well or ill suited to their environments. Most analysts understand this to mean that competition will extinguish unsuitable organizational structures. But while competitive pressures force firms to adapt their strategies (organizational structures) to the environment, they do not necessarily enforce conformity or predominantly tend to extinguish non-conforming firms. Ecologies with multiple niches permit multiple successful strategies. This is the essence of the Nelson and Winter argument. Moreover, if firms constitute a differentiated population, then we should expect to see constant and significant change in the make-up of firms and in their internal forms of organization, much as Hayek expects.

Campbell, Hollingsworth and Lindberg’s argument, by contrast, builds on those in White and Fligstein. Economic actors always try to stabilize their environment in order to minimize Knight’s uncertainty, and


to transform uncertainty into risk. As with all collective action, actors need some form of credible commitment to make their deals stick, and they need some idea about what kind of deal it is they want. Unlike a pure rational choice approach, CHL acknowledge – indeed stress – that the state can not only reinforce the deals that firms strike, but also help generate sectors and their governance structures. Sector level governance structures reduce uncertainty by stabilizing prices and output, and by standardizing the terms on which firms acquire inputs and produce outputs. Yet the entries in the CHL collection largely look at individual sectors in isolation from each other without asking what stabilized the entire economy in the organized capitalism period. They analyze the meso level without looking at the macro-level, and though they do discuss the origins of specific sectoral forms of organization, they tend to present what Hodgson calls a ‘consummatory’ view of sectoral evolution. Sectors develop an appropriate form of governance (out of a variety of potential forms) and then remain unchanged (the consummate their potential).

Can we construct a macro-level evolutionary argument, that is to say, one about national economies in a global political economy rather than simply firms or sectors? Two issues immediately seem to leap out. First, the GPE is a complex social order. Second, because the GPE is a complex social order, what I will call social exhaustion matters as much if not more than material exhaustion. Can evolution make sense of the emergence of these more complex social orders in addition to change and differentiation among the individual components of the biological order evolution tries to model? Arguments that complex ‘social’ order promotes reproduction of DNA are consistent with evolutionary theory. For Darwin, a complex social order can arise as the unintended consequence of the interactions among conflicting self interested individual units. But the plans or intentions of individuals make no difference at all to whether they survive, as it is the environment that exerts selection pressure. Organisms can use complex forms of organization to transform the environment. Think E. O. Wilson’s ants. But most of these examples of complex social order are drawn from organisms whose behavior seems strongly instinctual and pre-cognitive. By contrast, complex human social orders superficially appear to be consciously constructed and managed, fluid, and capable of rapid adaptation to changes in the environment.

A focus on social order helps explain variation and differentiation among units in the GPE, because the imperfect reproduction of social order is at the heart of common descent among human organizations. Absent common descent, differentiation among human social orders could be, as constructivists seem to argue, purely a matter of chance without heritability. This would invalidate an analogy to evolution. What is the source of common descent in the GPE? Humans, like other organisms, harvest energy from their environment to assure reproduction. What makes humans different from most other organisms is the variety of ways humans harvest energy. Most of these are novel social forms of organization that mobilize human labor more effectively, rather than novel biological structures. Consequently variation

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42 Darwin’s outlook here is similar to and perhaps influenced Max Weber’s core concept of ‘action behind the backs of actors,’ or auslese, which literally means ‘selection.’
45 Rapid is of course a relative concept. Fruit flies can mutate into new species over a period of years. But given that there are only about 55 centuries of complex societies (starting with Sumer in 3500 BCE), and that many species are stable over geological time measured in hundreds of thousands of years, human innovation of socially organized adaption to environmental changes is fairly rapid.
in human social forms does not create new physical species. Inuit, Patagonians and everyone in between can all reliably interbreed – the true test of speciation.

By contrast, different forms of social organization can hybridize in their search for more ways to efficiently utilize human energy in pursuit of organizational goals, including, most importantly, organizational reproduction. The GPE is a collection of social strategies for harvesting more energy, understood as directed human activity. We call these strategies firms, clusters of firms, and states. These three obviously exhibit variety, differentiation over time, and selection, both among and within themselves. What unites all three, their common descent, is that they are constellations of social power, what Lewis Mumford called ‘megamachines,’ and what Michael Mann (1984) disaggregates in *Sources of Social Power*. Almost all forms of organized, non-individual power in the GPE are descended from and in general refinements of the original mega-machines Mumford identifies in the neolithic revolution.

These megamachines are the basis for what we call civilization, because they enable some humans to enforce specialization and coordination of production on other humans. By coordinating production across time and space, megamachines can generate enormous increases in output from both more extensive production and more intensive production as compared with tribal or nomadic societies. Intensive production is particularly important after the agricultural and industrial revolutions, which is to say, after the emergence of capitalist forms of social organization. Mumford’s and Mann’s humans do not naturally build pyramids, irrigation systems, and central granaries. Instead, elites harness human bodies to these tasks through various forms of social organization, like religion, civil and military bureaucracy, or sale of wage labor in a market. Megamachines are the organism or unit in an evolutionary understanding of the GPE.

This coercion centered view is contrary to that in Ridley, where voluntary exchange, not coercion, is the source of greater energy capture through specialization and comparative advantage. Plausibly both views are correct, although temporally it appears that states emerged just as much to control long distance trade as they did to literally harvest a local surplus from agriculture. So the relevant organism in the GPE is not individual humans but rather different kinds and forms of social organization that cage humans inside routinized behaviors that benefit elites. As Mann (1984) argues, this caging works better when it takes the form of self-motivated behaviors by individuals reacting rationally to a structure of power rather than openly coerced behaviors. This is the essence of his distinction between infrastructural and despotic power.

The overlap between routinization of exploitation and elite interests creates heritability, albeit imperfectly, in human social organization. Heritability occurs through what Dawkins (1976) labeled memes and what the rest of us call standard operating procedures or logics of appropriateness (March and Olsen, 1989). Organizations tend to select and promote individuals whose identity and behavior match those of the organization. And organizations exist to capture energy in the form of human labor and creativity, prestige, money, and material resources. The more carefully these megamachines assure compliance with organizational norms, the more likely it is that they will continue to mobilize energy and labor, as well as pass those norms along to future versions of the organization.

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48 Social reproduction combined with social adaptation could imply either a Lamarckian view of social evolution, in which new behaviors that emerge from interactions with the environment become heritable in future iterations with the environment, or an epigenetic view, in which it is standard operating procedures that are modified.
What creates variation among megamachines? Two phenomena drive variation. First, the reproduction of memes is imperfect. Unlike ants, whose behavior is reliably coded in their DNA, humans maintain social organizations by transmitting cultural information (i.e. memes) from generation to generation inside organizations as much as they do inside family lines. One of E. O. Wilson’s books (with Hölldobler, 2011) is subtitled Civilization by Instinct. While Thorstein Veblen makes much of the Instinct of Craftsmanship, this is a far cry from what Wilson and Hölldobler describe for ants.49 Instead, as Berger and Luckmann (1966) describe, contestation occurs over the meaning and operationalization of memes because actors understand that memes are carriers of social relations and creators of social power, and also because subsequent generations lose important contextual knowledge about standard operating procedures. This tends to make standard procedures inflexible and unresponsive to changes in the environment.50 Second, variation and differentiation emerges from both conflict and cooperation. By observing other organizations, and organizations interact and try to make their routines mesh, these organizations learn new techniques to mobilize labor. This institutional isomorphism does not always promote efficiency.

Finally selection operates because megamachines compete with each other for control over human bodies. This competition eliminates organisms with relatively inefficient or ineffective routines. As Realist IR and GPE both emphasize, strong selection pressures like war force societies and organizations to develop and replicate memes for organizing human production and violence more efficiently than those with whom they compete. All other things being equal, societies whose elites can extract more resources and mobilize more labor will tend to prevail in conflicts with other societies, whether that conflict is cultural, economic, or military. So organizations face strong pressure to replicate their operating systems in ways that expand their control over resources Elites at the top of religious organizations want more adherents; states want more citizens and territory; firms want more market share. Conflict among megamachines selects for those megamachines that are better able to mobilize the kinds of human labor and material resources that the environment provides, or to innovate new social technologies that make new or more efficient sources of human labor and material available.

But diversity does not emerge solely from conflict. Diversity also creates and reinforces diversity, as Ridley argues. Interaction with other units creates pressure to specialize based on societies’ differential abilities to tap into resources in the global economy. Just as an expanding Darwinian tree of life creates more ecological niches for organisms and species, an expanding division of labor can create new economic niches in which different kinds of firms and societies can thrive. The Varieties of Capitalism literature provides one way to understand this differentiation at the level of firms, though Spruyt provides an (probably incorrect) analysis of competition producing homogenization among state forms in late medieval Europe.51 Greater complexity produces instability and disruption that in turn exerts selective pressure on units in the GPE, as when an economic crisis drive firms into bankruptcy or triggers social revolutions.

The second big issue emerges from the first issue of social complexity. In nature, only material exhaustion matters for individual and species survival. Wolves that are too efficient at catching sheep may cause a collapse in the population of sheep that in turn drives down the wolf population. Wolves

49 Thorstein Veblen (1964, c1914) The instinct of workmanship, and the state of the industrial arts, New York, Norton
50 This can be seen in 1970s Germany, where the SPD set up a new technology ministry to generate research in biotechnology, electronics and atomic energy. Only the latter was strongly successful, because the normal policy routines favored the wrong kinds of firms (Jasanoff 1985; Giesecke 1999).
can’t negotiate a lower rate of consumption among themselves. But in the GPE we have a complex interplay between material and social exhaustion. Material exhaustion is easy to understand; imagine the exhaustion of (cheap) oil production in the face of rising demand for liquid fuels. But what is social exhaustion? Social exhaustion occurs when relatively docile and thus low cost human bodies suddenly become less compliant with the megamachine trying to mobilize their labor. Low cost means lower levels of supervisory labor input to get a given level of work output. Low cost implies bodies that are self-propelled, require little supervision, accept their social role, and, most important, adapt that role to changes in the environment in ways that comport with a continuation or expansion of the relevant megamachine.

Understanding social exhaustion requires some elaboration. Assume that the global environment at time one is characterized by two abundant resources. One is material – cheap oil; the other is social – a pool of semi-skilled male labor made exceptionally docile by mass conscription and the experience of global war. We also have a set of countries that differ in their institutional capacity to use those available cheap and abundant resources. Some economies may already be organized around mass production and have a spatially extensive economy. Some may already have mass production but spatially concentrated economies. Others may already be organized around small and medium enterprises that are also spatially concentrated. Given cheap oil and docile semi-skilled labor, the first economy will prosper, which in evolutionary terms means that it will expand its share of the GPE faster than the other economies. The market selects for firms able to turn docile labor and cheap oil into goods.

Because units in the GPE are capable of social adaption, the other two societies in this example will tend to shift their production systems towards readily available resources. Moreover, social pressures to adopt ‘best practices’ will reinforce this tendency. Better adapted and thus better performing economies will be lauded as the model for all other economies. This institutional isomorphism shifts deviant economies toward a greater use of the cheap and abundant resource. So both social and market pressure pushes countries and firms to emulate the successful models at time one.

But the fallacy of composition matters here for material resources, and perhaps social resources as well. If all economies try to use the cheap resource, it stops being relatively cheap. (Gazelles might be the best food for predators, but if all predators hunt gazelles, zebra live quiet lives and the total number of lions, hyenas, wolves, etc. falls.) If all economies shift towards an oil based and spatially expansive economy, then demand for oil will rise as production processes consume more oil and distances travelled increase. As oil prices rise, firms and countries characterized by lower consumption of oil will be favored by the new environment.

By the same token, imperfect transmission of social or cultural information behind standard operating procedure or logics of appropriateness also leads to social exhaustion in this example (Berger and Luckmann, 1966:66-70). An expansion of assembly line production beyond the existing supply of semi-skilled labor made docile through war might bring in workers less inured to assembly line routines. New, younger workers who never experienced the disciplining effects of wartime military routines might similarly revolt against the rigors of assembly line discipline. This exhaustion of the social basis for compliance with routines directing human labor makes assembly line production relatively less successful as a production strategy, causing firms or economies based on this strategy to lose market share relative to firms relying less on docile semi-skilled labor. (We will return to this example in the

proofs of concept below.) So time two is characterized by material and social exhaustion that shifts selection pressures to favor economies characterized by smaller enterprises and spatial concentration. So both CHL and NW miss an essential dynamic factor operating at the macro-level. At the risk of some repetition— but think of it as a recasting— reconsider the brief sketches above. The 19th century saw a dual evolution of absolutist states into modern nation states, and very small family owned firms into larger firms based on wage labor. Within agriculture a parallel transformation from peasant production to capitalist (family) farming occurred. In other words, forms of social organization (organisms) that were unable to master the new nation state or new production formats largely disappeared. While family based production expanded on the back of the expansion of commercial agricultural production, family based production units relatively lost ground to more formal organizations. These organizations ultimately had absentee ownership. At the level of the GPE, a very interventionist British state, sometimes aided by other European states, developed a highly articulated global economy moving unprecedented volumes of manufactures out of northwestern Europe in return for equally massive return flows of raw materials. Huge flows of people and capital accompanied these flows of goods.

Easily available resources material and social resources drove this transformation. In the material world, a whole range of easily exploitable common pool goods like cod, timber and minerals could be transformed into capital. Similarly, land previously occupied (but not ‘owned’) by nomadic or lightly settled populations in the temperate peripheries was easily engrossed and, via mortgage markets, transformed into capital. For example, world wheat acreage expanded by 78 percent from 1885 to 1929. Newly emerging nation-states played a critical role in the strip-mining of these resources by removing indigenous peoples, establishing title for those lucky enough to be the first to stumble on those goods or land, and providing enough public infrastructure to physically abet strip-mining. Strip mining plus public infrastructure simultaneously injected generous and parallel volumes of supply and demand into the GPE. On the one hand, strip mined raw materials could be sold; on the other hand, the corporations doing that strip mining and the owners of newly stolen land could raise and then spend capital based on the expectation of future income flows. Acquisition of these common pool goods provided an essential supplement to capital accumulation, because their sale allowed the social transformation of inert resources into real and fictitious capital.

The most important social resource was what seemed like an essentially unlimited supply of labor. As cheaply acquired land outside Europe and on Asia’s frontiers began producing ever cheaper food, urban populations started booming and uncompetitive peasants began moving off the land. This started a great and largely voluntary migration of Europeans to new temperate zone production sites and an equally great and largely involuntary migration of Asian indentured labor to tropical zone production sites. Including ‘internal’ migrants heading to frontier zones in places like Manchuria, Siberia, Borneo, or Cochin China, perhaps 150 million people shifted location in the 19th century.

Relatively ineffective states, societies and firms vanished or shrank in the face of competitive pressure from more effective organizations. Although many states tried to emulate the European military model, few did so quickly and correctly enough to ward off predation by European empire builders. European handwork production also largely evaporated in the face of machine-powered production. Nonetheless,

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The most important social resource was what seemed like an essentially unlimited supply of labor. As cheaply acquired land outside Europe and on Asia’s frontiers began producing ever cheaper food, urban populations started booming and uncompetitive peasants began moving off the land. This started a great and largely voluntary migration of Europeans to new temperate zone production sites and an equally great and largely involuntary migration of Asian indentured labor to tropical zone production sites. Including ‘internal’ migrants heading to frontier zones in places like Manchuria, Siberia, Borneo, or Cochin China, perhaps 150 million people shifted location in the 19th century.

Relatively ineffective states, societies and firms vanished or shrank in the face of competitive pressure from more effective organizations. Although many states tried to emulate the European military model, few did so quickly and correctly enough to ward off predation by European empire builders. European handwork production also largely evaporated in the face of machine-powered production. Nonetheless,
continued growth required continuous inputs of the initially abundant material and social resources. Both were exhausted by the end of the century. The closing of the US frontier was followed hard on by the closing of the Argentine, Australian and Canadian frontiers; North American forests near navigable waterways were already timbered out. Socially, as Hatton and Williamson (1998) have shown, wages in the north Atlantic area had steadily converged from 1850 to 1913, by which time the gap was less than 2:1 between western Europe and the US. The convergence of north Atlantic wages and the ever growing scale of factory production slowed emigration and led to a growing labor movement in western Europe. An ecology characterized by extensive production and depletion of almost all common pool resources started to give way to one based on intensive production.

We can recast the expansion of the GPE after the Second World War in the same way. It too rested on new organizational forms and the availability of cheap material and social resources. We have already hinted at the most important of these – oil and docile semiskilled labor – in section three. A second socially important resource was acceptance of state management of economies that had come to be characterized by assembly line based mass production. The emergence – often state enforced – of large firms using continuous flow production required macro-economic stability and labor quiescence. Continuous flow production systems were highly productive and thus potentially highly profitable, but they could reap the benefits of that increased productivity only by running at high levels of capacity utilization. Social and balancing supply and demand in this situation required the state to enforce – both in the sense of ‘force on’ and the sense of ‘guarantee’ – a class compromise over wages. Though this compromise naturally varied from country to country, in all countries a generation of conscripted men was available for factory work, and willing to accept factory discipline in exchange for stable employment, steadily rising wages, ad a social safety net. States that could stabilize wages and keep wages rising in tandem with productivity not only maintained these class compromises but also maintained steady economic growth (Shonfield, 1965).

Yet by the late 1960s and early 1970s each of these resources was exhausted. Materially, cheap oil at stable prices gave way to expensive and volatile oil. Socially, the new generation of factory workers revolted against the older generation of union leaders, producing a wave of unauthorized strikes. And states came under increasing pressure from financial elites to deregulate the economy. As noted in section three, economies characterized by spatial concentration (e.g. Japan) or small and medium sized firms using skilled labor (e.g. Germany) had relative advantages in this new environment. As in the 19th century, the very success of a set of organisms – institutions – had in expanding their population based on a set of cheap resources led to resources exhaustion and a ‘die back’ of those units. Instead, firms with smaller factories flourished, and many firms began outsourcing to reduce their footprint. States shifted from direct management of investment towards pure monetary stimulus (though this was disguised as a retreat from Keynesianism rather than a retreat into keynesianism).

Thus the steady exhaustion of a crucial abundant factor characterized each of the three periods of capitalism discussed in the first section. The competitive capitalism period relied on the availability of abundant and easy to plunder natural resources, including the great food supply regions in the temperate zones and Siberia. Without these, an economy with a huge oversupply of labor and metallic currencies could not have raised consumption above the subsistence level. Every increase in productivity would have been swallowed up in falling nominal prices, including wages. Not until the middle of C19, when the great extra-European food supply regions (including Siberia) came on line, did real wages began to rise and mass purchasing power began to turn industrial economies inward. In turn, that made it rational for continuous flow firms to begin production targeting this newly liberated purchasing power. The steadily shrinking supply of these common pool goods relative to European and US demand brought the era of rising real wages to an end. The US frontier closed at the end of C19,
roughly the same time the US ceased to be a net exporter of grains and meats. At that point in time food prices began rising and real wages falling again.

Similarly, organized capitalism relied on cheap oil – a widely recognized factor – as well as supplies of docile labor (NB, docile, not cheap). Most analyses stress the end of capital controls as the decisive break-point from the Bretton Woods/fordist period. Certainly financial capital was a steady loser on account of the combination of immobility and the steady (if slight) inflation that characterized the fordist period. As Keynes expected, this inflation was an important social and economic lubricant that continuously freed up purchasing power, much like the common pool resources in C19. But the rise in labor militancy in the 1960s is equally important as a decisive force for change. Labor militancy provided a motivation for industrial capital to join with financial capital to increase capital mobility. Cheap oil and docile labor were public goods provided by the US state and states, through incomes policy, in general.

Finally the era of financial and franchise capitalism has also relied on two cheap and abundant resources. As with organized capitalism, one is well understood: cheap labor in Asia. The second, though, is less observed: steadily declining nominal interest rates. These created purchasing power and profits two different ways. First, steadily declining nominal interest rates gave the financial sector a one way bet (albeit with unpleasant bumps) in which they could lend long term to consumers and firms at higher rates than their current short term funding. Second, falling nominal rates permitted homeowners in countries with housing finance systems like the US to compensate for stagnant wages by borrowing at steadily decreasing rates. Each of these resources was exhausted by the 2000s. Even though more Chinese (and African) labor is available, most of it is cheap only in terms of absolute wages and not relative unit labor cost. And even absolutely, Chinese labor is no longer as cheap as it once was. Manufacturing wages began to rise in coastal China from 2005 onwards as the wage gap between rural and urban labor began shrinking (this precisely parallel to the exhaustion of European transatlantic migrants). Similarly, nominal interest rates rose in the mid-2000s. While public responses to the financial crisis depressed them again in 2008-10, the great flood of liquidity those responses created is likely to push up inflation and nominal rates over the long run.

In principle each of these processes of exhaustion should have produced a search for new micro, meso and macro routines to cope with novel challenges in the environment. At Blyth forcefully argues, the macro challenge rises to the level of true knightian uncertainty. Unlike earlier periods a path out of the current crisis is not entirely obvious. The crisis of competitive capitalism produced a wide range of social movements that either shared two big ideas or focused on one of them: a commitment to a capital-labor bargain as a route to increased productivity and a desire to address the lack of aggregate demand relative to potential production. Though an explicit wage-productivity bargain did not feature in all of these, it is easy to see how the two pieces could be put together in support of the three crucial public goods noted above; that is, a viable concept of accumulation.

Similarly, the crisis of organized capitalism gave rise to a whole range of attacks on centralized bureaucratic control over the economy (from both left and right), and on the regulation of capital flows. Deregulation of capital flows and costs, as well as deregulation of the economy in general, and reticulated services in particular, all reduced firms’ capital costs and enabled firms to increase the rate of inventory turn (the circulation of capital). Again, it is easy to see how a coalition spanning both manufacturing and finance could line up behind these big ideas to disassemble the public goods of the

57 Schwartz, *Subprime*.
58 Kees van der Pijl, MARC.
59 Nowell, Hilferding world versus Walmart World
prior period. This disassembly was not simply negative, because it facilitated the shift to a franchise goods based economy.

The current crisis, by contrast, has not thrown up a similar set of ideas. Why? By their very nature, franchise goods firms lack any inherent common interest. Any given firm and many broad sectors have an interest in forms of public regulation that maximize their particular profit stream/rate. But nothing binds firms and sectors together. As noted above, any given firm’s or sector’s higher profits come at the expense of profits (and perhaps demand) in other sectors, making lobbying a zero sum game. Instead of social movements, what we have is an acceleration of lobbying in pursuit of regulation supporting profit maximization. In the US, lobbying expenditures have risen steadily from $1.44 billion in 1998 to $3.47 billion in 2009 (Opensecrets.org). Lobbying in the EU has also risen, though data on money spent is harder to come by (Mahoney). This form of political activity does nothing to resolve the underlying disjuncture between supply and demand characterizing the last two decades (Brenner, 2000).

As Blyth has argued, Frank Knight’s distinction between risk and uncertainty helps us make sense of the moments in which ideas about ideal institutional forms and policies might affect policy debates. If new and/or old models matter, then models should have the greatest influence over policy choices at moments of knightian uncertainty. This uncertainty should be greatest at the point in time at which the abundant resource finally gives out. Is it possible to show that this is so? What models are floating around out there, and does the objective structure of the economy actually account for the failure of new ideas capable of resolving knightian uncertainty and providing a new concept of accumulation

4: Showing how ideas matter

Here, frankly, is where another large chunk of real research needs to be done. Disjunctions throw up all sorts of models. I propose to focus on models generated by the political science academy and its near neighbors in think tanks. Unlike economists’ models, political science creates stylized models that often contain implicit or explicit normative views of what constitutes a problem or an achievement. This makes those stylized models politically valuable, given that policy makers must both justify their choices and mobilize support for them. These models are thus more political in both senses. They are better glue for a coalition than economists’ drier models. This does not imply that I take for granted that logics of appropriateness (“ideas”) rather than logics of consequence (“interests”) determine behavior, or to put it differently, that historical institutionalism provides a better explanation for behavior than rational choice approaches (Derthick and Quirk 1985; Dobbins 1994). Nor is this project intended to sort out the long standing issue of whether ideas matter more than interests. It is perfectly plausible that self-interested actors might pick up and articulate specific ideas in pursuit of the policy outputs and outcomes that best serve their interests, even if individual rational behavior is collectively irrational. This could be called a “hands” view of ideas – actors wield ideas like tools. It is equally plausible that actors’ elective affinities make them accept and deploy ideas that conform to their existing world view, regardless of whether that view accurately describes the world. This could be called a “hearts” view of ideas – actors have emotional attachments to ideas that order their worlds. Finally the project also abjures arguments like Thomas Kuhn’s (1962) that there is some typical process by which new ideas replace older ones. Let’s call this a “heads” view of ideas, since it supposes that actors are Bayesian updaters who believe themselves to be adopting a more accurate model in response to new information, regardless of the model’s consequentiality or appropriateness.

Instead, the issue here is how ideas come into the heads, hands or hearts of actors. Answering this question helps us understand how the production of ideas in the political science community affects real-world (or non-academic) policy making. I expect to find that two channels matter most in the
transformation of new, potentially heterodox ideas into a new orthodoxy or conventional wisdom. First, some models may capture a disproportionate share of foundation grant money, and thus constitute a new orthodoxy through weight of publications. Second, ideas may be adopted by or produced in think tanks and then disseminated through the media. Finally, which ideas are more likely to capture the attention of granting agencies, the media and eventually politicians? Here it is important to note that political science models are much more likely to carry explicit or implicit normative content along with their policy message. Actors will pick up on ideas that are attractive to them through elective affinities or will deploy ideas that are highly useful to them for strategic purposes. Actors thus seek or select what they understand as “proper” models, where proper means both potentially efficacious and morally attractive. By comparing turning points between competitive, organized and financial/franchise capitalism, I hope to understand why we have not seen compelling policy solutions to the current crisis. I do not expect to find a Kuhnian, punctuated equilibrium process (as in the overly simplistic “heads” model in Legro, 2005). Rather, I expect to see ideas prevailing through their combination of heads, hands and hearts, in a political process that is more Feyerabendian than Kuhnian (Feyerabend).

5: Conclusions

When I have some evidence, I’ll have some conclusions.