

Down the Wrong Path: Path Dependence, Markets, and Increasing Returns

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Abstract

Practitioners of historical institutionalism have recently sought a micro-foundation for this approach through a codification of the concept of path dependence in which increasing returns prevent actors from changing institutions. This codification sequesters change or path initiation into exogenously caused critical junctures whose outcomes emerge from small causal forces, and stasis into endogenously caused path maintenance. I argue that this codification conflicts with the causal logics historical institutionalists advance, that codified path dependence contains several antinomies, and that existing arguments about collective action suggest that rising long run average cost curves characterize most political and economic life. Codified path dependence's unit level focus unnecessarily exogenizes change and endogenizes stasis, while reducing the space in which actors can do anything significant.

Introduction

Two interesting issues intersect at the heart of current comparative political economy. While everyone agrees that history matters, no one agrees *how* history matters. Likewise, while everyone agrees that institutions matter and that some institutional formats are economically or socially inefficient, no one agrees *why* those sub-optimal formats are generally impossible to remediate. What then explains the combination of change and stasis the real world presents? One currently popular answer to these questions is that many economic, social and political phenomena are “path dependent,” and that path dependence (PD) explains the self-reinforcing persistence of inefficient institutional structures and/or technologies.

Two related features of the PD argument account for its popularity. First, intellectually, it appears to provide a theoretical basis for explaining how history matters by providing a micro-foundation for historical institutionalism. Historical institutionalism would otherwise largely be an empirical intellectual enterprise, notwithstanding claims by its codifiers.¹ What I will call “Codified PD” appears to

¹ As Peter Hall and Rosemary Taylor, “Political Science and the Three New Institutionalisms,” *Political Studies* 44, December 1996, pp. 936-957, note, historical institutionalism is theoretically eclectic. PD appears to provide a common frame for understanding *how* institutions structure the ‘games’ real actors play, and the ways that actors perceive their interests. Paul Pierson and Theda Skocpol make this claim explicitly in “Historical Institutionalism in Contemporary Political Science,” paper presented at the American Political Science Association annual meeting, Washington DC, September 2000, pp. 10-12, and many of the contributors to James Mahoney and Dietrich Rueschemeyer, ed., *Comparative-Historical Analysis: Innovations in Theory and Method* (forthcoming) make similar claims. Kathleen Thelen “Historical Institutionalism in Comparative Politics,” *Annual Review of Political Science* 1999, pp. 369-404 at p. 372 and especially in Thelen in Rueschemeyer and Mahoney (forthcoming, p.1) argues that Historical Institutionalism does not inherently lack a theoretical basis but that codified PD lends “greater precision to previous formulations.” She is also clear that increasing returns are the major explanation for PD patterns, and that increasing returns are the basis not just for utilitarian based PD but also legitimation based PD and power based PD (see pp. 19-21). Note that no one, however, is claiming that PD should be seen as *the* or *the only* theoretical basis for historical institutionalism. Mahoney and Rueschemeyer in James Mahoney and Dietrich Rueschemeyer, eds., *Comparative Historical Analysis: Innovations in Theory and Method* (forthcoming), chapter 1, for example, are clear that PD is just one of several approaches that constitute “comparative historical analysis.”

anchor historical institutionalism theoretically because it shows why rational actors enjoying (or confronting) increasing returns will be unable to pursue collective remediation of sub-optimal outcomes.² This fixes one of historical institutionalism's theoretical problems by providing a non-cultural, non-cognitive micro-foundation for actors' apparent inability to change institutional structures, allowing practitioners to generate a range of theoretical propositions about institutional (in-)stability.

PD's second attraction flows precisely from this apparent regularization and grounding of historical institutionalism. Codification would permit the regularization of explanations generated in what are now seen as early – and often unselfconscious – efforts at PD analyses. PD thus allows historical institutionalist accounts to identify the mechanisms that create and maintain the institutional constellations that historical institutionalism sees as causally important in explaining a given society's historical trajectory. This effort is laudable, because, as Mahoney notes, any loosely defined PD collapses into unsystematic arguments that “history matters.”³ Were this effort successful, it would also be laudable as an effort at

² In this paper, codified PD refers to Paul Pierson, “Increasing Returns, Path Dependence, and the Study of Politics,” *American Political Science Review* 92:4, June 2000, pp. 251-267; James Mahoney, “Path Dependence in Historical Sociology,” *Theory and Society* 29:4, 2000, pp. 507-548 and *Legacies of Liberalism: Path Dependence and Political Regimes in Central America* (Baltimore: Johns Hopkins University Press, 2001); Kathleen Thelen, “Historical Institutionalism in Comparative Politics,” *Annual Review of Political Science*, 1999, pp. 369-404 and the treatment of PD by Thelen and others in the papers that will be published as Rueschemeyer and Mahoney, eds. All of these works self-consciously justify the combination of comparison, historical inquiry, institutionalism and PD as a particular methodological approach that encompasses earlier less codified and less self-conscious efforts like David Collier and Ruth Collier, *Shaping the Political Arena: Critical Junctures, The Labor Movement and Regime Dynamics in Latin America* (Princeton: Princeton University Press, 1991), Barrington Moore, *Social Origins of Dictatorship and Democracy* (Boston: Beacon Press, 1966), or Arthur Stinchcombe, *Constructing Social Theories* (New York: Harcourt Brace, 1968). Let me note that none of the authors I characterize as codifiers are chosen in an effort to personalize this debate; I single them out because of the strength of their arguments and their ambition to provide a more rigorous meaning for PD. This is a laudable effort.

³ James Mahoney, “Path Dependence in Historical Sociology,” *Theory and Society* 29:4, 2000, pp. 507-508, 510. Contrast Sewell's fuzzy definition: “What happened at an earlier point in time will affect the possible outcomes of a sequence of events

unifying otherwise disparate mechanisms under one theoretical construct. In this case, the apparent unity lies in a specific sequence of events in which mechanisms for the production of a given set of institutions are replaced by mechanisms that reproduce those institutions.

However, codified PD fails to provide a stable base for historical institutionalism. What PD codifiers have done is mix old, good wine with indifferent wine and throw a whiskey label on the new bottle. Put bluntly, the core assumptions behind this codification of PD are wrong, and when they are abandoned, codified PD collapses – much as Mahoney predicts – into aphoristic appeals to historical inertia based on heterogeneous and sometimes incommensurable mechanisms. In addition, codified PD blurs the distinction between events and mechanisms. Codified PD never really confronts the fact that the structure of events it describes – outcomes produced by one mechanism yet sustained by another – is logically distinct from the mechanisms themselves. Methodologically speaking, a mechanism that cannot be abstracted from the historical events that it describes remains just that, a description. Kathleen Thelen, one of the practitioners/codifiers discussed below, notes this point even as she multiplies the list of potential mechanisms she houses under the PD label.⁴ Similar events can have different mechanisms, but applying a common label to similar events obscures this dissimilarity in mechanisms. Codified PD thus obscures explanations based on other older, well-established mechanisms, while highlighting events. In addition, although practitioners of historical institutionalism want to restore agency to their analyses so as to explain why change can occur, codified PD does so by pushing aside all the constraints on individuals that made historical institutionalism a useful critique of equilibrium based rational choice models in the first place. PD conflicts with historical institutionalism's emphasis on institutions as a causal force. On the credit side of the ledger, PD and codified PD do usefully call attention to the differences between mechanisms of production and mechanisms of reproduction for social institutions. But Stinchcombe had already established this distinction in 1968, rooting institutional persistence in the use and maintenance of power.

occurring at a later point in time.” William Sewell, “Three Temporalities: Toward an Eventful Sociology,” in T. J. MacDonald, *The Historic Turn in the Human Sciences* (Ann Arbor, University of Michigan Press, 1996), at pp. 262-263.

⁴ Kathleen Thelen, “Historical Institutionalism in Comparative Politics,” *Annual Review of Political Science* 1999, pp. 369-404.

Why care about Codification of PD?

There are two reasons to worry about the problems in codified PD. First, PD's codifiers have engaged in a bit of intellectual imperialism, herding any analysis in which institutions or temporality matters into the PD corral. Thus PD codifiers present the analyses of Alexander Gerschenkron, Thomas Ertman, and Barrington Moore as examples of PD/historical institutionalism, because temporality and institutions feature in all of these.⁵ Yet it is not all clear that these analyses fit the original definition of PD or historical institutionalism. PD arguments pertain only to the class of events that involve a critical juncture with contingent outcomes, and in which the mechanisms that produce the critical juncture can be differentiated from the mechanisms that sustain the outcome produced by the critical juncture. Temporality is an important part of PD arguments (because production necessarily precedes reproduction). But while all PD arguments necessarily are temporal, not all temporal arguments are path dependent. The same is true for arguments about institutions.

Consider Gerschenkron's argument about late development, an analysis in which temporality and institutions obviously matter, but in which a PD logic is not present. The mechanism of production – relative economic backwardness – is a constant cause, not a historic cause, for the institutional structures Gerschenkron observes. Gerschenkron argues, and the historical record suggests, that once a country has caught up, the institutional arrangements he noted are likely to wither away. In the US, Imperial Germany, and Japan, catch-up led to waning bank and state influence in industry. Conversely, the recreation of conditions of capital shortage and backwardness in the losers of both World Wars restored some of the conditions favoring the salience of banks in capital markets, with predictable results. So the mechanisms sustaining these institutions are self-liquidating, not self-reinforcing. PD codifiers have also retrospectively laid claim to Barrington Moore's and Gregory Luebbert's temporally based arguments about how different patterns of class conflict translated into regime outcomes. But doing so runs against HI's insistence that historical institutionalism studies mid-range phenomena – neither classes on the one hand nor individuals on the other – and that it does so in order to

⁵ See the claims in Thelen (forthcoming), Mahoney 2000, and Pierson 2000. Thelen, p. 1, for example says, "some of the major works in comparative historical analysis can be read as illustrations of path dependence and social and political development." Alexander Gerschenkron, *Economic Backwardness in Historical Perspective* (Cambridge: Belknap, 1962); Thomas Ertman, *Birth of the Leviathan* (Cambridge: Cambridge University Press, 1997).

explain variations in policy choice and outcomes, not regimes.⁶ It also runs against HI's insistence that preferences are not given but rather arise from institutional contexts.⁷ By herding these analyses together with classic historical institutionalism analyses codifiers co-locate processes with a similar structure of events – a period of significant change followed by stasis – but with different underlying mechanisms.

The one area where codified PD's insistence on increasing returns as a mechanism of reproduction appears to work most strongly is in the production of memes. Current efforts to codify PD thus present a second danger. By providing a plausible intellectual focal point and a language for analysts opposed to rational choice approaches to politics and less insightful than the master practitioners to whom codified PD pays tribute, it threatens to crowd out other, older, equally plausible approaches with better micro-foundations. Memes and language, after all, are one place in which increasing returns may really operate.

What's wrong with codified PD?

Codified PD stands on three logically connected legs: one assumption, one logically consistent argument, and one bit of analogical reasoning. Just as with a stool, all three are a logically necessary part of a systematized PD argument. Removing any one leg reduces the notion of PD to the simpler assertion that history matters, or raises the question of why we should re-assign older mechanisms for understanding political outcomes to a meta-argument called PD. It could be argued that by insisting on the logical interconnections I am constructing a straw man by deliberately picking the weakest limbs from various codifiers' arguments and weakly gluing them together. But these three legs were logically connected in economists' original arguments about PD, and the analysts themselves consider them conjoined.⁸

⁶ By way of example, see Thelen 1999, Thelen 2000, and Rueschemeyer and Mahoney (forthcoming) for the labeling of Moore and Luebbert, and see the introductory essay by Sven Steinmo and Kathleen Thelen, eds., *Structuring Politics* (Cambridge: Cambridge University Press, 1992). Thanks to X for pointing this out to me.

⁷ Jonas Pontusson made this point strongly in his review essay, "From Comparative Public Policy to Political Economy," *Comparative Political Studies* 28:1, April 1995, pp 117-147, but the message seems to have been lost.

⁸ Thus Mahoney, *Theory and Society* 2000 at p. 508, notes that "Self-reinforcing sequences often exhibit what economists call "increasing returns," and at p. 510 defines PD in terms of three minimal conditions – sensitivity to initial events, contingency, and "inertia," i.e. a mechanism of reproduction – which I have here collapsed into the two features of contingency and increasing returns. Pierson, 2000,

While any one of these three legs unquestionably characterizes some social phenomena, allowing the presence of any single one of them to qualify a phenomenon as a PD phenomenon blurs the distinction between PD and other, non-PD mechanisms. This reduces PD's utility as a theoretical anchor for historical institutionalism by returning what are already only analogic arguments into the aphoristic appeals to history codifiers wish to render rigorous. What are the three legs, how does the PD argument logically connect them, and why are these legs necessarily logically connected?

First, codified PD *assumes* that small causes with contingent outcomes at the beginning of a path can have large, long term, and sub-optimal (institutional) consequences. Contingency is an essential part of this leg because absent multiple, distinct potential equilibria, there would be no alternate "paths." Logically, these initial causes must be small for two reasons. PD arguments rest on the important and valid distinction between the mechanisms that produce a path (in Stinchcombe's language, "historical causes"), and the mechanisms that reproduce a path (the new "constant" causes).⁹ If the historical causes that provided the mechanisms of production for a path were larger in both effect and duration than the purported mechanisms of reproduction, then Occam's razor would suggest that these structural, historical causes continue to be the primary causal source for the behaviors or institutions observed. But if this were so, then the distinction PD wants to make between mechanisms for reproduction and mechanisms for production would collapse.

Consider the role of peasant unrest in Perry Anderson's *Lineages of the Absolutist State*.¹⁰ From codified PD's point of view, various nobilities' search for security against rising peasant unrest – a critical juncture – led them to shift power upward into new absolutist states. This historical cause in turn created a new external danger, because the enhanced coercive power inherent in these new state machineries could be turned against other states. This new constant cause (what Stinchcombe instead labels a "continuing tension") then reinforced the existence of these states. Does this then fit a PD argument? No, because peasant unrest did not disappear with the rise of these new states, and thus the historical cause did not disappear. Absolutist states' rapacious tax extraction to fund both internal and

links contingency, small causes, increasing returns (again as "inertia"), and timing in his bulleted definition of PD.

⁹ The classic application of this approach is of course Collier and Collier, *Shaping the Political Arena*; see especially chapter 2.

¹⁰ Perry Anderson, *Lineages of the Absolutist State* (London: Verso, 1974).

external security motivated yet more peasant unrest, and this in turn reinforced the concentration of coercive resources into these absolutist states.

It is possible to adjudicate whether peasant unrest or external threats mattered more in the second period. But logically, for a critical juncture argument to work, any initial historical cause that continued to operate would have to be smaller in its effects than the later constant causes that reproduced a given path. And generally speaking most historical causes do continue to operate. This is why codified PD's search for the micro-foundation behind the (admittedly highly useful) distinction between production and reproduction leads them to the argument about increasing returns, which are a suitably large enough (constant) cause for path reproduction to balance the (historical) contingencies that produce a given path.

Thus, second, codified PD *argues* that increasing returns to political and social institutions explain actors' reticence about changing those institutions. Actors seeking to change or maintain institutions and organizations almost always confront collective action problems. But for PD to be a meaningful analytic concept that does not simply collapse into the usual arguments about collective action problems, it needs a mechanism that goes beyond normal collective action dilemmas, as I will show below. The argument about increasing returns is thus an essential leg of the PD stool, because absent increasing returns no durable mechanism locks actors into a particular, contingently derived path. If extant institutions garner increasing returns, actors confront not only the usual difficulties that burden collective action, but have lower expectations about their net payoff from changing collective institutions. In its strongest possible formulation, a situation of increasing returns should crowd out all alternatives.

But what about other sources of institutional durability? Various analysts have offered up "sunk costs," cognitive processes, legitimacy, and functionality as alternative sources of durability. All are indeed plausible sources of durability. But they are not specifically sources of path dependent durability. First, Gerard Alexander makes a persuasive argument that sunk costs are lower than is commonly thought.¹¹ However, if set-up costs are low, codified PD is hard pressed to explain the barriers to a shift in technologies or institutional structures. And if sunk costs are indeed high, then we are back to increasing returns. Second, the strongest arguments about shared cognitive frames or norms can be assimilated into an increasing returns framework; indeed, the original economists' arguments about path dependence had a cognitive component. Not all cognitive/normative arguments could or should be

¹¹ Gerard Alexander, "Institutions, Path Dependence, and Democratic Consolidation," *Journal of Theoretical Politics* 13:3, July 2001, pp. 249-270.

assimilated into an increasing returns framework. But those lacking an increasing returns foundation are precisely the ones in which empirical research has shown constant incremental change, which calls into question the production/reproduction dichotomy upon which PD rests. In addition, PD codifiers use “increasing returns” loosely enough to encompass cognitive arguments.

An increasing returns framework makes mechanisms of reproduction more salient than mechanisms of production or other historical causes, and thus raises the question of why change occurs at all. Thus, third, codified PD magnifies the apparent difficulty of change, although it correctly observes that incremental, evolutionary change is a pervasive feature of all societies.¹² Yet massive change also occurs, requiring some explanation. Thus, codified PD *analogizes* from evolutionary theory, morphing the idea of punctuated equilibrium into the notion of critical junctures. Exogenous critical junctures – akin to punctuated equilibrium’s asteroids or exogenous climate changes – periodically provoke massive institutional change, which then gives way to a prolonged period of normal, gradual and possibly insignificant evolutionary adaptation.¹³ Critical junctures allow PD to segregate mechanisms for production and reproduction respectively into exogenous and endogenous locations.

It is possible to make less codified PD arguments without the tight logical connections among these legs. Indeed, much of the critical juncture and PD literature in its actual practice does not adhere to the logic I present, and of course, as I noted above, much comparative historical work in which institutions feature as a dependent variable is not really PD at all. The latter set of work does not display the problems I will discuss below. In the former works, though, however admirable they may be, the absence of tight connections between the three legs of the PD argument means that they lack adequately specified mechanisms. The loss of any of these legs seriously undermines PD’s utility as a theoretical foundation for historical institutionalism. Absent small causes with large consequences, PD morphs into typical structural arguments that suppress the importance and reality of agency, and this in turn eliminates the puzzle that surrounds persistent sub-optimality. Absent increasing returns, PD can be assimilated to older arguments about the generic difficulty of collective action, the varying degrees of difficulty faced by different kinds of groups attempting collective action, and, as we will see, typical dialectical

developments in politics.¹⁴ Absent the analogy to punctuated equilibria, the origins and termini of paths become impossible to identify, reducing PD to the unsurprising (but sometimes wrong) claim that yesterday is an important predictor for today, and returning us to an unsettled debate about history.

In the following sections I attack all three legs of the codified PD stool. The idea that contingent outcomes arising from small causes can cumulate into meaningful differences in optimality is unlikely. Big consequences usually require big causes, and the effects of actor driven contingency are typically quite limited with respect to large-scale social phenomena. Increasing returns do not characterize most social and political institutions; like most economic phenomena, social and political institutions eventually face decreasing returns as expansion exhausts the readily available inputs upon which expansion was premised initially. This is why paths are not, as Mahoney claims, inherently “inertial.”¹⁵ Moreover, in politics, as in economics, “increasing returns” are often externalized: successful collective action by one set of actors often sparks or makes possible collective action by other, necessarily opposed actors. Finally, the analogies to punctuated equilibrium and evolution, while not entirely mistaken, focus overmuch on competition to extinction and endogenous reproduction while unnecessarily abstracting these analogies from the broader causal implications of the evolution and ecological literatures, where endogenous production of new situations is pervasive as growth to limits occurs.¹⁶ Similarly, “lock-out” is just as common in ecological models as is lock-in; once a niche is filled other species find it hard to get in. From this perspective, efforts to accommodate both exogenous and endogenous sources of changes house incommensurable mechanisms together under one roof, prompting fears of an inevitable divorce.¹⁷ Moreover doing so would force PD to specify yet more mechanisms when it has hardly begun the task of specifying those behind its initial model.

The next section (one) thus examines codified PD and its origins in the economic literature on PD, highlighting codified PD’s three essential legs. Each

¹² The last quarter of Thelen (forthcoming) is concerned with this issue.

¹³ See also Stephen Krasner, “Approaches to the State,” *Comparative Politics* 16, 1984, pp. 223-246.

¹⁴ Mancur Olson, *Logic of Collective Action* (Cambridge, Mass., Harvard University Press, 1965); Claus Offe and Helmut Wessenthal, “Two Logics of Collective Action: Theoretical Notes on Social Class and Organizational Form,” *Political Power and Social Theory* 1, 1980, pp. 67-116.

¹⁵ Mahoney, 2000, p. 511.

¹⁶ See Richard Lewontin, “Adaptation,” *Scientific American* 239:3, September 1978, pp. 212-230.

¹⁷ This is what Thelen 2000 attempts; see especially pp. 3-5.

following section shakes a leg. Section two disputes the idea that small causes can have large consequences. Section three argues that increasing returns in social and political phenomena are implausible, by considering collective action under different conditions. Section four follows logically from this discussion, casting doubt on the evolutionary and punctuated equilibria metaphors. It shows that an emphasis on exogenous change creates antinomies with historical institutionalisms' insistence that institutions are causally significant. Codified PD and historical institutionalism thus coexist uneasily.

The conclusion argues that codified PD is an unsatisfactory base for historical institutionalism. This does not mean that the critical junctures approach should be abandoned, but that the codification effort be dropped in favor of a return to the well-identified mechanisms in earlier work.

1: Codified PD

Codified PD suggests that history matters because an almost randomly caused choice of institutional or technological structure in the past can lock actors into sub-optimal institutions or technologies over the long term. Agents who inherit those sub-optimal institutional structures will be unable to change those structures because they enjoy increasing returns from them, and because they face insuperable coordination difficulties trying to change those structures. Stasis thus has endogenous causes. Although paths are characterized by incremental (i.e. evolutionary) change, dramatic change can only come about through exogenously caused critical junctures that change returns or actors' perceptions about long-term returns.

This codification of PD in Pierson's, and, to a lesser extent Thelen and Mahoney's work has its roots in Brian Arthur's formalization of PD to explain the persistence of apparently inferior technologies.¹⁸ Arthur assumed a point in time at which actors could freely and randomly choose from a range of available technologies. This is codified PD's critical juncture: a point in time in which an essentially unpredictable (and thus contingent) outcome sets in motion an irreversible chain of events.¹⁹ Note that for Arthur the initial contingency is truly random. In, for example, the Polya Urn experiment, any color ball could be chosen.

¹⁸ W. Arthur Brian, "Competing Technologies, Increasing Returns, and Lock-in by Historical Events," *Economic Journal* 99, March 1989, pp. 116-131. Arthur built on work by Paul David and others. Thelen's efforts at codification largely draw on Mahoney and Pierson.

¹⁹ See Mahoney, 2000, pp. 508, 510-512, where he explicitly adverts to the Polya Urn experiment, and pp. 513-514 where he defines contingency as a situation in which "rerunning" of history would not yield a determinate outcome.

Arthur then argued that four factors could "lock-in" users to the particular (relatively inefficient) technology they initially opted for: large initial set-up costs yielding increasing returns as more users adopted the technology, strong learning effects that yielded increasing returns for established users, coordination or network effects such that the greater the number of users the greater the returns to all users, and adaptive expectations that convinced existing or potential users that others were choosing one (inferior) technology rather than another (evidently superior) one. The first three created increasing returns – in the literal, narrow, economists' sense of a monetary return – for users of the existing but inferior technology. The last we recognize as a version of the cognitive or sociological argument, couched as a self-fulfilling prophecy: wise actors picked the technology they thought other (presumably stupider) actors would perceive as the better choice, so that they (the wiser actor) could then be compatible with the other users.²⁰

Users retained inferior technologies because the short run benefits of shifting to a better technology were substantially lower than the short run benefits of using a known technology that continued to generate increasing returns per unit. Lock-in occurred because users of the inferior technology continued to enjoy increasing returns from each incremental unit produced (or from each new user adopting a networked technology). A superior technology would only generate similar returns after considerable production volumes and after enough users switched to that technology. Moreover, because increasing returns are a function of network externalities, the difficulty of coordinating a choice for the superior technology meant that it would always be more rational to stick with the inferior technology than to shift, unless any given individual knew that other users were shifting.

Increasing returns

Arthur's argument, and thus that of codified PD, relies heavily on the presence of increasing returns, because the last factor retarding a change in technologies is purely psychological or cognitive: a sense that the conventional wisdom favors a given, but inferior, technology over some better technology, and

²⁰ The similarity to J. M. Keynes' "animal spirits" and George Soros' observations about "reflexivity" in the stock market is striking; see George Soros, *Alchemy of Finance* (New York: Simon & Schuster, 1987). Even in this economist's formulation of the problem, there is an entry point for a culturalist or cognitive argument.

thus that established users and new adopters will not change.²¹ Without increasing returns, each additional user of the relatively inferior technology will face a smaller and smaller incentive to adopt that technology instead of the better one, and eventually the alternative will be more attractive. At that point even established users of the inferior technology will rationally drop that technology in favor of the greater, known long-term gains from the superior technology. Adaptive expectations, by contrast, are a purely cognitive phenomenon: people who *do* know better make the bad choice anyway, because they conform to the behavior of the ignorant herd rather than accept the costs of running against the herd.²²

Arthur and his emulators suggest two strong implications from this phenomenon. First, if stochastic outcomes from relatively small causes at the beginning of a process induce or propel users to adopt the wrong technology, then it is possible that small, trivial causes can have strong, cumulative, and continuing effects down the road. These accidents are not “averaged out” by history. Second, because accidents matter, there are multiple possible equilibrium outcomes from a given choice point in which increasing returns are available. The sequence of events is thus as important as those events themselves. Small causal forces early matter more than the same “causes” later, because users are already locked in.

Pierson and Mahoney have argued that Arthur’s framework can and should be applied to the analysis of political and social phenomena, most importantly the study of the development of large institutional complexes like regimes, welfare states, and regional economies. Pierson argues that “factors such as the prominence of collective activity in politics, the central role of formal, change resistant institutions, the possibilities for employing political authority to magnify power asymmetries, and the great ambiguity of many political processes make this a domain of social life that is *especially prone to increasing returns processes* [emphasis supplied].”²³ He further argues that a PD perspective is worthwhile as a corrective to the view that “large” outcomes have “large” causes, and that rational

²¹ Pierson (2000, p. 251) is quite explicit – as he should be, given his reliance on Arthur and the first two words in the title of his article – that increasing returns are central to a PD analysis. So is Kathleen Thelen, “How Institutions Evolve,” in Rueschemeyer and Mahoney eds., (forthcoming), p. 23.

²² Following James March and Johan Olsen, *Rediscovering Institutions* (New York: Free Press, 1989), we might note that stasis could be the result of logics of appropriateness, rather than increasing returns and its associated logic of consequence.

²³ Pierson, 2000, p. 252.

actors can design and implement optimal solutions to their problems. Because Mahoney presents two flavors of PD – the second being the ‘reactive sequence’ – he is less wedded to the idea of increasing returns, but he emphasizes the idea that small contingent causes can have large long-term effects.²⁴

Removing increasing returns removes one of the legs in the PD tripod. Absent increasing returns, economically inefficient institutions and technologies can persist for only three reasons: cognitive problems, the deliberate application of some form of power to preserve the status quo, or generic collective action problems. Note, however, that this means that not all instances of the persistence of sub-optimality reflect PD processes as economists understand them. It is increasing returns that make continued sub-optimality a specifically **PD** problem.

While Mahoney also invokes power and legitimation mechanisms as alternative sources of PD, he does not do so because he sees something fundamentally wrong with increasing returns based arguments.²⁵ He offers them as alternative mechanisms. But by dropping increasing returns as the core causal mechanism driving PD he takes a very large step away from the core of the PD arguments elaborated by economists. It is precisely this sort of concept stretching that is troubling about current PD arguments, because Mahoney’s non-increasing returns type of path dependency, the *reactive* sequence, merely re-labels old fashioned dialectical arguments: a sequence of events in which each antecedent action provokes a logically connected reaction. This is strongly reminiscent of older Marxist dialectical arguments about politics, just as the association of critical junctures with “once only” events like expansion of the franchise or the creation of a proletariat suggest Marxist stage theories.

²⁴ As Mahoney (2000, p. 509) notes, “For a reactive sequence [a causal chain in which each step is a reaction to antecedent events] to follow a specifically path dependent trajectory, as opposed to simply representing a sequence of causally connected events, the historical event that sets the chain into motion must have properties of contingency. Furthermore, the overall event chain itself must be marked by processes of ‘inherent sequentiality.’”

²⁵ Mahoney (2000) actually offers four sources, but his other two explanations – functional (the institution serves some function) and utilitarian (the institution generates returns) – collapse into one category. If institutions were completely dysfunctional (if they generated negative returns) they would generate no utility for anyone and no one would have any incentive to maintain the institution. All surviving institutions necessarily generate utility for some actors and so are “functional” for them.

Endogenous path maintenance, exogenous critical junctures

It also follows from Arthur that users will rarely if ever voluntarily depart from a given path; *endogenous* processes thus maintain paths. Given increasing returns, an actor's calculations about relative benefits will always suggest staying "on-path" until some new, exogenously generated critical juncture changes the parameters that structure that and other actors' calculations. Stasis thus has endogenous causes. Although Pierson (and Mahoney and Thelen even more so) are careful to stress that change can and does occur inside a given path, they all see a sharp distinction between the exogenous, "accidental," and contingent nature of the critical juncture that starts a given path, and the relatively deterministic, evolutionary, and incremental change along a path. Formative periods involve more contingency and choice than what follows, because the existence of increasing returns means that the probability that actors will follow the same post-critical juncture path is high and increases over time. But this change is quite limited: while institutions, etc., on a path will change, codified PD assumes that this change is incapable of changing the parameters that structure actors' calculations about retaining the institutional status quo. Endogenous change is incapable of moving institutions and actors off-path.

PD arguments thus rest on three legs. An exogenously initiated critical juncture containing not only contingent elements but minor contingencies constitutes a new path in which those minor contingencies have large downstream consequences, and which foreclose various of the multiple possible equilibria that could emerge from the juncture. Exogenous forces are largely important only at these formative moments. Change does occur within paths, but this largely incremental change is endogenously contained by actor calculations about the relative lack of gains from exiting the status quo even when a better situation exists. The primary barrier to remediation is actors' receipt of increasing returns from the status quo, but the cost of coordinating with other actors to change a network is also a deterrent. Actors thus voluntarily chose the status quo. In the next sections I show that each of these assumptions is unlikely to hold in the real world, making PD arguments less useful than the usual hypotheses about power and collective choice.

2: Trivial Causes with non-Trivial Consequences?

The PD literature suggests that small causes can trigger big changes that are not averaged out in history.²⁶ Reduced not quite to absurdity, kingdoms *can* be lost

²⁶ Consider Mahoney (*Legacies of Liberalism*, Johns Hopkins University Press, 2001, p. 7), in his only sustained piece of empirical analysis: "...small events and random processes can shape developments during a 'critical juncture,' leading to the

because farriers do a bad job nailing in horseshoes.²⁷ Here, as with its metaphor to evolution, codified PD abstracts a single mechanism from a more complicated setting and thus makes it appear as if small factors can have large consequences. Horseshoes only matter when structural conditions make them matter, in this instance when monarchs personally controlled their own military forces. Moreover, horseshoe failure is not a perfectly random event. Given a statistical probability that people with absolute power will abuse their subordinates, there is always some chance the farrier will mis-nail the shoe out of spite or fatigue, and that in repeated competitions with less abusive (though not necessarily nicer) would-be monarchs the Richard III's of the world will lose their kingdoms. The *collectivity* of these individual outcomes thus would exhibit some regularity, and in this sense these contingencies are averaged out (are not non-ergodic). Relatively speaking, the smaller the cause, the more likely it is that there will be repeated trials over multiple polities. Over the long run, horseshoe failure will average out as a variety of would-be monarchs contend for control of kingdoms. The only situations in which horseshoes won't average out would be singular, large-scale, non-repeating "events" like the emergence of the absolutist state itself or a wallersteinian "world system." But it seems implausible that these unique developments rest on relatively small contingencies, and in any case they are not within the self-styled domain of historical institutionalism.

adoption of options that could not have been predicted by theory. They demonstrate that the explanation of Path Dependent outcomes may require a careful analysis of the historical events that condition distant selection processes." Mahoney could be understood as offering up an analogy to the randomness introduced by evolutionary theory's "founder effect." Pierson 2000, p. 251 says "large consequences may result from relatively small or contingent events," and later link small causes to large outcomes when he defines contingency as "2. Contingency. Relatively small events, if they occur at the right moment, can have large and enduring consequences."

²⁷ In contrast, the conventional wisdom, well summarized by Ira Katznelson with reference to Perry Anderson's work on the emergence of the Absolutist state, argues that big changes come from big causes, that these causes are structural, and that causal pressures are both endogenous and exogenous to a social structure (to the extent that this can be determined. Ira Katznelson, "Periodization and Preferences: Contributions of Comparative Social Science" paper presented at the American Political Science Association Annual meeting, Washington DC, September 2000.

Consider the structural analysis of the rise and fall of various pre-modern empires Michael Mann presents.²⁸ Random events (death or assassination of a ruler, weather induced famine, etc.) created contingent outcomes that affected the longevity of any given unit (kingdom/empire). But the collectivity of empires, of social forms, exhibited law-like regularities structured by the difficulties in projecting military power in a pre-mechanical era, and by the limits of ideological power. Both factors combined to produce a regular dialectic in which power was centralized and decentralized over various territories.

There is a second way in which codified PD misunderstands how events are averaged out in history and economics. The PD literature's classic cases for little causes having big effects are the adoption of the QWERTY keyboard or the choice of the VHS standard for videocassettes over Sony's Beta standard.²⁹ It is certain that a cost-free redesign of the keyboard today would not reproduce Qwerty.

Nonetheless, economics is not only about static comparisons of relative efficiency, but also about the selection of alternatives in an environment in which all choices are constrained by relative costs. Qwerty's presence has not blocked innovations that have dramatically reduced the time needed to produce a document. Successive improvements on the theme of the typewriter – electric power, typing balls, the PC, and voice recognition – all caused a rough doubling in the number of (correct) words per minute that could be typed. Qwerty per se did not bar substantial tweaking of the typewriter's capabilities because actors pursued not a static, binary comparison of keyboards, but a range of routes to overcome a given barrier to increased information flows. Did actors think about the coordination difficulties involved in changing keyboards as compared with other solutions to speed up information flow? Naturally, because economics is about opportunity costs. But then Qwerty was at most a minor impediment to improvement.

To be sure, Pierson is correct that greater uncertainty surrounds the choice among "political" technologies and institutions. But the point here is that even with

²⁸Michael Mann, *Sources of Social Power, Vol. I* (Cambridge: Cambridge University Press, 1986).

²⁹ Mahoney (2001) makes the usual metaphor to Qwerty at page 7; Pierson, 2000, uses Qwerty and Beta/VHS to introduce a discussion of Brian Arthur; Thelen (forthcoming) adverts to Qwerty as a paradigmatic case for PD at p. 19. S. J. Liebowitz and Stephen E. Margolis, "The Fable Of The Keys," *Journal of Law & Economics* 33, April 1990 presents strong arguments that neither Qwerty nor VHS were inferior technologies. They argue that overall, Beta was actually inferior in the things that the market valued, above all a long playback time.

a greater zone of uncertainty, static comparisons among political and social institutions do not bolster the analytic utility of the codified PD argument, or explain why actors are hesitant to make changes that are in their interests. Technologies and organizational formats do not exist isolated from their uses and users, and social programs and institutions, like typing, do not emerge accidentally.³⁰ Qwerty, or more precisely typing, represented not a completely 'chance' outcome, but rather a deliberate choice among competing design imperatives, and the emergence of typing reflected strong social needs for more rapid information flows inside expanding firms. Equally so the distributional and institutional differences in, for example, OECD welfare systems reflect political actors' best *ex ante* assessment of those distributional consequences, and their efforts to tilt institutional structures towards their own interests. Different actors, later in time, may have regrets about their predecessors' distributional choices. But those choices were likely to have been made on the basis of small, random factors. If there was contingency – as PD understands it – in those choices, then this was contingent in the same way that the horseshoe was contingent: a probabilistic outcome whose consequences flowed from the fact that actors' choices were made with reference to large structural conditions that continued to operate after the critical juncture and thus constituted on-going "constant causes." Meaningful technological and institutional choices emerge from large social forces. Small and accidental factors can and most likely do affect outcomes, but only at the margin. The relative losses imposed by Qwerty (if any) are more than offset by the gains from typing per se and from new typing technologies. In short, much as in touch-typing, looking at the keyboard means you're looking at the wrong thing.

We can see this by considering both political and economic phenomena. In *Legacies of Liberalism*, Mahoney argues that the paths his five societies traced depended on an initial contingent choice for radical or reformist liberalism and on the after-effects of external interventions that presumably also qualify as contingent events. Yet elites in his three most developed economies all opted for radical liberalism, while those in his two less developed economies opted for reform liberalism. That is to say, elites who stood the best chance to benefit from aggressively entering world markets, and who had the resources to deploy coercing peasants into that market, took more decisive steps to do so than elites who had a smaller chance of benefiting and who did not have the resource base large enough to

³⁰ For strong versions of this argument see, among others, Robert Thomas, *What Machines Can't Do* (Cambridge: Cambridge University Press, 1994), or David Noble, *Forces of Production* (New York: Knopf, 1984).

give them a reasonable chance that coercion would work. This seems to fit a probabilistic causal argument relating the level of development to the choice of policies that, by expanding the operation of the market in the local economy, favor further integration. Mahoney does not offer a plausible argument why elites might have opted for a different choice, suggesting that the choice was not contingent in the sense that Mahoney uses. Even in his two cases of external intervention, both intervention and the outcomes appear to be strongly conditioned by the prior level of economic development, and are thus not contingent in Mahoney's sense. The United States intervened in the two societies whose economies were developed enough to be worth imperializing, yet weak enough to make imperialism successful. Mahoney offers no causal argument about intervention – it is truly asteroid-like.

In economics, Nicholas Kaldor's idea of cumulative causation is a well-established explanation for the diverging economic fortunes of different regions. In Kaldor's model small initial differences do cumulate into larger divergences.³¹ But the truly random differences – initial resource endowments or locational advantages – are not social in nature, while the social differences, e.g. security of property rights, land to labor ratios, etc., clearly have structural roots. Moreover, as in most ecologies, the divergence between different regions is as much externally maintained – one region's success both defines and constitutes another region's failure – as it is an outcome of the initial conditions. One region's prior industrial success locks another region out of that kind of industrial success, much as in Gerschenkron's argument. This does suggest, as codified PD argues, that there are necessarily multiple possible equilibrium outcomes. But, as I will argue in section four, it also suggests that institutions are dependent variables, and that, contrary to much historical institutional work, any given institutional complex cannot be considered in isolation from other institutional complexes. It also implies that “contingency” cannot mean that the same outcome can emerge in all units. I will pick this theme up in the fourth section when I discuss the differences between evolutionary and ecological metaphors. First, however, I must deal with the issue of increasing returns and endogenous maintenance of a given path.

³¹ Nicholas Kaldor, *Economics without Equilibrium* (Armonk, NY: M. E. Sharp, 1985). Contrast North's analysis of Spain and Britain, which largely proceeds as if the two were not locked into a zero-sum struggle for empire. Or consider the consequences Jared Diamond, *Guns Germs and Steel* (New York: W.W. Norton & Co., 1998) traces from an initially uneven distribution of domesticable seeds and animals.

3: Increasing Returns, Economies of Scale and Growth to Limits

Absent increasing returns, a strong codified PD argument is hard to make; PD deteriorates into conventional arguments about sunk costs and actors' reticence about accepting losses.³² If actors do not enjoy increasing returns from a relatively sub-optimal technology or institutional structure, then new adopters will have an incentive to defect to the better technology and, if network externalities matter, offer old users side payments in return for switching. In other words, institutional “lock-in” will not occur and the possibility of institutional change would exist outside of “critical junctures.”

Instead, I will argue that increasing returns without a rising long run average cost curve are implausible in political life. The “variable” costs of maintaining an organization are non-trivial, diminishing the scope for increasing returns even when the “constant” or fixed costs of creation are high. I will also argue that successful political collective action is almost always likely to provoke an effort at counter mobilization that limits the returns from any given prior organization. In short, there are both internal and external limits that convert increasing returns into the typical rising long run average cost curve. While this does not invalidate some of the kinds of arguments codified PD makes about why people support organizations, it also means that these arguments do not stray much from the traditional realm of collective action problems. Codified PD thus unnecessarily re-labels older arguments about economies of scale and collective action.

Pierson, Mahoney and Thelen argue that at least some political processes are subject to increasing returns. Neither provides much evidence that this is true in non-trivial ways.³³ Pierson cites Theda Skocpol's research showing that a high percentage of organizations founded in the 19th century are still around. Is this a function of increasing returns? Pierson argues that most political processes provide some form of public good, whether of the pure or olsonian form. Collective action does incur large fixed costs. It is plausible that once an organization is established it can be used over and over again, amortizing the costs of organization over a large

³² D. Kahneman and Amos Tversky, “Prospect theory: An analysis of decision under risk,” *Econometrica* 47, 1979, pp. 263-291. Sunk costs (machinery and training) did not deter businesses from junking dedicated word-processors in favor of PCs in the 1990s, and states similarly junked citizen armies in favor of professionals.

³³ Mahoney (2000, p. 508) notes that “economists have not fully specified the ways in which institutions deliver increasing returns over time.” But he does so after noting that increasing returns underlies self-reinforcing sequences, one of his two major kinds of path dependent sequences.

number of political interventions. However this argument suffers from three defects: it confuses economies of scale with increasing returns, it ignores the dialectical processes inherent in collective action, and it assumes that the persistence of the form implies the persistence of the function. This can be seen by considering how collective action works under conditions of increasing and diminishing returns. I will cast this analysis in the usual rational choice terms, and look at individual level behaviors and returns. But this is consistent with the use of increasing returns presented in Pierson and Mahoney. The logic should be the same for both individuals and organizations.

Can collective action have increasing returns? Imagine a world in which collective action involves large initial fixed costs but no variable costs, and in which each additional user thus adds to the utility all users experience. In this world, initial adopters have an incentive not only to organize themselves, but also to induce or coerce late adopters to join the organization, because each additional member raises the total pool of benefits that can be distributed. In this scenario the entire population ends up joining the collectivity because membership is costless and there are net benefits. But once everyone is inside the organization, there is no basis for politics around that issue. Instead, other, previously latent cleavages animate politics. These cleavages are organized around issues for which there are constant or declining returns. We have historical examples of this kind of situation in the explosive growth of new “world religions” like Buddhism, Islam, and Christianity. Moreover, while the best examples of this phenomenon involve “identity” issues like religion, none of the great world religions has attained complete penetration of the population. Identity, after all, requires an “other,” which suggests that even here there are declining returns to scale.

What happens if returns decline beyond a certain point? This is classic case examined by Mancur Olson in *Logic of Collective Action*, which is based on the assumption of a rising long run average cost curve for collective action.³⁴ Rising long run average costs occur when the benefits that firms making large fixed investments accrue from economies of scale are offset by the rising cost of the least abundant variable inputs for a given production process. Past that point, the cost of additional inputs (read: recruits) rises, and the net benefit to all participants falls. At that point increases in production (recruitment) stop.

This logic produces the patterns we generally see in political life. The costs of initially organizing a union (or business organization, or political party, or lobby) are high, and just as surely a union (etc.) once established can turn its sights from

organizing more workers over wage issues to other economic (e.g. pensions – seeking economies of scale) and political issues (e.g. left parties – seeking economies of scope). An organization’s membership must be mobilized in pursuit of new targets or public goods. This does incur costs. But the net benefit accruing to a given member from each extension of an organization’s mission yields diminishing returns as the organization stretches its members’ loyalty beyond its core goals, and as it begins to recruit members for whom the marginal benefits of joining the organization are smaller and smaller, and thus for whom the costs of recruitment are high. Thus successful organization around core economic issues reveals new cleavages over age, race, gender, or insider/outsider status. We can also see this in a much smaller scale in the typical trajectory of a reform coalition. If a reform coalition is composed of heterogeneous units, some units will defect once the movement gets big enough to attain some of its goals and satisfies those units with the smallest desire for change. This is why reform coalitions are inherently fissiparous. Even when units are perfectly homogenous, the satisfaction of some demands for change will ultimately reduce net future gains from adherence to the coalition relative to the commitment of political resources in pursuit of some other goal. At that point, everyone defects from the coalition. Political and social organizations thus suffer diminishing, not increasing, returns as they move beyond their core organizational goals.³⁵

This is why increasing returns processes rarely characterize collective action. The only way an organization could keep growing would be if the cost of organization fell faster than the benefit of having additional members, just as with a “networked” technology like e-mail. But organizations are not like e-mail. Unless a group’s potential membership is perfectly homogenous – in which case, per Olson, mobilization will be quite difficult because no “k” group exists – the “Nth” recruit logically benefits less from membership than earlier recruits, and thus costs the organization more to recruit. They logically must benefit less or they would have joined earlier, and conversely the earliest joiners are likely to be those who enjoy the greatest return from a given organization. Similarly, the extension of a given mission will not necessarily return benefits to older members who joined because of the first wave of benefits created by the organization’s original mission. This is why

³⁴ Olson, *Logic of Collective Action*, p. 22.

³⁵ Consider the classic analyses of the dilemma of social democratic parties: Adam Przeworski, *Capitalism and Social Democracy* (Cambridge: Cambridge University Press, 1985), and Adam Przeworski and John Sprague, *Paper Stones: A History of Electoral Socialism* (Chicago: University of Chicago, 1986).

the whole thrust of the literature on collective action is about its difficulty, and not about how increasing returns made collective action a trivial undertaking.

This is especially clear when we consider the question of who actually experiences “increasing returns” as a real resource flow, and thus who will contribute to the maintenance of the organizations that materially constitute an institution. If, as economists like Alfred Marshall or Allyn Young argued, increasing returns are largely experienced as external, sectoral or economy-wide economies, then the question of institutional maintenance becomes problematic.³⁶ Why will individual actors or organizations freely choose to maintain other organizations by returning resources to those organizations? The literature on unions, business organizations, and parties, all relatively durable organizations as compared with other kinds of social movements, shows that in the absence of *coercion*, organizational maintenance, and thus the maintenance of an institution’s material foundations, is difficult.

This suggests that the (variable) costs of organizational *maintenance* are high and constant, even without mission extension. As Offe and Weisenthal argued in their classic article on the two logics of collective action, union maintenance requires large and constant infusions of political energy and cash.³⁷ As the literature on corporatism tells us, many of the durable business organizations (and unions) in Europe have required state coercion in the form of representational monopolies, legalized control over selective incentives like unemployment or sickness insurance, or mandatory extension of negotiated contracts to non-participants in order to assure both their continued existence and the extension of the membership rosters to the entirety of their “natural” constituency.³⁸

³⁶ Allyn Young, “Increasing returns and Economic Progress,” *Economic Journal* 38:152, December 1928, pp. 527-542.

³⁷ Claus Offe and Helmut Weisenthal, “Two Logics of Collective Action: Theoretical Notes on Social Class and Organizational Form,” *Political Power and Social Theory* 1, 1980, pp. 67-116.

³⁸ To pick three examples: Wolfgang Streeck: “Community, Market, State - and Associations? The Prospective Contribution of Interest Governance to Social Order,” pp. 1-29 in Wolfgang Streeck and Philippe Schmitter, eds., *Private Interest Government* (London: Sage, 1985.); Charles Maier, “Fictitious Bonds of Wealth and Power” in Charles Maier, *In Search of Stability* (Cambridge: Cambridge University Press, 1987); Bo Rothstein, “Marxism, Institutional Analysis and Working Class Power: The Swedish Case,” *Politics and Society* 18:3, 1990, pp. 317-345.

Similarly the few political parties that have maintained more or less continuous rule did so by fusing themselves with the state, and benefiting from the state’s monopoly of *coerced* tax extraction. They thus assured themselves of constant streams of “costless” (to the party) revenue that could be turned to the task of organizational survival. Think of how Tammany Hall, the Mexican PRI and the Japanese LDP used public spending, and in contrast think of how the Progressive movement emptied Tammany’s pork barrel so as to undermine the “institution” of ethnically based municipal socialism. The key role that state-enforced monopolies of representation or delegated enforcement powers play in organizational maintenance is a clear signal that organizations do not experience increasing returns. Without coercion, organizational and institutional “paths” are not self-sustaining, and so require constant struggle to maintain. The original literature on critical junctions sees this quite clearly.³⁹

If organizations are neither cheap to run nor maintain, then increasing returns are unlikely to be a pervasive feature of social organizations after the first few easy extensions of the scope of their action. This is not to deny that established organizations possess substantial advantages as compared to new entrants. But the persistence of a formal organization under the same name does not confirm a PD argument. Instead it suggests that it is often easier to change an existing organization’s mission, or to take over an existing organizational shell (or brand name) and divert it to new purposes than it is to start an organization *de novo*.⁴⁰

There is yet another reason to suspect that decreasing rather than increasing returns characterize most political activity, and that successful organization is self-limiting. Olson argued that in a world of perfectly homogenous individuals it would be hard to generate any collective goods voluntarily. Russell Hardin amended this by noting that in a world of heterogeneous actors receiving different returns from collective action a “k” group might form based on its disproportionate receipt of returns from collective action. But both assume that the losers from successful collective action (the rent-payers) are a homogenous and necessarily larger group

³⁹ Collier and Collier, *Shaping the Political Arena*, p. 37, and as noted above, Stinchcombe argued for the exercise of power as the major source of institutional persistence. Note that while the classic arguments about the other “PD,” prisoner’s dilemma, suggests that there are *gains* from cooperation whether coerced or not, these are one-time gains, and not increasing returns *per se*.

⁴⁰ Thelen, “How Institutions Evolve,” (forthcoming), pp. 24-29 notes precisely this point but fails to observe that by advancing ‘layering’ and ‘conversion’ as mechanisms for change she undercuts the argument for PD.

who are thus unable to organize. However it is plausible that the creation of one rent-seeking (or identity shaping) “k” group makes it easier to form an opposed “k” group by clarifying the interests (identities) of people and organizations that naturally have mixed interests.

Consider a situation in which we have 100 people, who each have a preference schedule containing the same two items, but with varied preferences for those two items. Actors at either end of the spectrum have a pure preference for one good; those precisely in the middle are indifferent. Those with a preference for A organize to achieve A. But if A involves rent seeking, a growing coalition for A raises the costs imposed on those who prefer B, and thus increase the benefits of organizing to oppose A. Successful organization by the first group of actors triggers counter-mobilization by a second set of actors disadvantaged or threatened by the first round of collective action. The first act of collective organization clarifies the interests of the individuals remaining outside the first organization and polarizes them against the first group.

Consider, for example, the battle over tariffs and quotas on U.S. sugar imports. The group supporting these trade restraints is a classic rent-seeking, privileged group in which fewer than twenty firms capture more than half the benefit of trade restraints. A quite heterogeneous organization composed of smaller organizations of (corporate) sugar consumers, anti-tax organizations, and environmentalist organizations opposes this privileged group.⁴¹ This counter-mobilization limits the returns to sugar producers from their prior mobilization. But this counter-mobilization is impossible to imagine in the absence of producers’ prior mobilization. Absent a common enemy in rent-seeking sugar producers, this loose coalition could not exist, because the pro-regulation environmental groups would polarize against the anti-regulation low-taxers, and the corporate sugar consumers have conflicts over market share in the consumption of sweet foods. The emergence of the anti-(trade)protectionist coalitions identified by Oye with respect to the 1930s and by Destler and Odell with respect to the 1970s and 1980s operated precisely through this mechanism of interest polarization. So too does the dialectical development of union federations and business organizations identified in Ingham’s classic work.⁴²

⁴¹ See the Coalition for Sugar Reform at <http://www.sugar-reform.org>.

⁴² Kenneth Oye, *Economic Discrimination and Political Exchange: World Political Economy in the 1930s and 1980s* (Princeton: Princeton University Press, 1992); I.M. Destler and John S. Odell, *Anti-Protection: Changing Forces in United States Trade Politics* (Washington, DC: Institute for International Economics, 1987); Geoffrey

This dialectical pattern means that the environment in which a given organization operates changes because of strategic interactions. Does this strategic interplay constitute a “path” in which the increasing returns from a given set of organizations stabilized both organizations and their interactions? In Ingham’s dialectic between unions and business organizations, stability along a path almost always required state intervention that legally codified the rules of the game by imposing parameters on the tactics and content of collective bargaining, or that forced actors to negotiate under the shadow of hierarchy via imposed settlements. In short, power stabilized paths, not increasing returns.

Strictly speaking, none of this invalidates the theoretical possibility that if increasing returns actually did exist in political and social life, they would produce the kinds of behaviors the PD model predicts. But the bulk of the empirical literature on collective political action points towards rising long run average costs and counter-mobilization. The lack of compelling evidence for long run increasing returns highlights the limits to the codified PD model. If increasing returns are absent, codified PD does not have a micro-logic that explains why actors’ normal behaviors will maintain the institutions or technologies that constitute the path; it will not have a mechanism for endogenous replication. Absent increasing returns, there is no reason to suspect that actors will prefer path maintenance to path change, and the utility of the codified PD model becomes purely heuristic.

On the other hand, perhaps it could be argued that these are examples of Mahoney-style “reactive paths.” But if this is so, the codified PD literature once more has simply relabeled the bottle containing Marx’s and Weber’s old wine about how almost all social phenomena develop in a dialectical fashion.⁴³ Mahoney’s definition of a reactive sequence after all requires a strict logical connection, an “inherent sequentiality” between each step of this sequence, just as Marx posited logical connections between the rise of the bourgeoisie and the subsequent creation of a proletariat. Moreover, if increasing returns processes and reactive processes share only a common structure of events and not similar mechanisms, why aggregate them into one theoretical construct? Even the commonality in event structure is

Ingham, *Strikes And Industrial Conflict: Britain and Scandinavia* (London: Macmillan, 1974).

⁴³ At a lower level of analysis, Ernst Mandel’s discussion of recurrent business cycles (*Long Waves of Capitalist Development*, New York: Cambridge University Press, 1980) as a series of moves and countermoves shows that a dialectical approach need not remain limited to epochal transformations.

weak, as increasing returns paths are characterized by the same “move” over and over again, while reactive sequences are composed of moves and countermoves.

In the next section I will suggest that the presence of a rising long run cost curve helps us understand how codified PD misunderstands evolution. Evolution occurs because actors who prefer institutional replication inevitably end up changing the structures that constitute the path as they react to rising long run average costs. This is so because economic (and institutional) growth by definition always relies on and exploits the most abundant and thus cheapest resource. But resources are not infinitely abundant. Growth inevitably encounters limits as this abundant resource is exhausted. Resource exhaustion produces change for the sake of avoiding change through logics of appropriateness, as well as amplifying the attractiveness of alternatives to a given path. In other words, as I will argue in the next section, the distinction between *mechanisms of reproduction* and *mechanisms for production* that lies at the heart of codified PD is hard to maintain in a form that is consistent with both the analogy to evolution codified PD wants to make and historical institutionalism’s desire to have a micro-foundation. Mechanisms for reproduction are often mechanisms for production (and the reverse).

If PD analysts concede that incremental institutional reproduction creates substantial change – as Thelen (forthcoming), for example appears to do – then efforts by organizations and thus, implicitly, institutions to accommodate themselves to changes in their environment are hard to segregate into “production” and “reproduction” except perhaps as a purely heuristic exercise. This is why the next section argues that an ecological analogy suggests equally good ways to understand “path”-like phenomena as does codified PD’s analogy to evolution and punctuated equilibrium.

4: The Analogy to Evolutionary Competition and Punctuated Equilibrium

Both codified PD’s puzzle and its model rest on an analogy to evolution and punctuated equilibrium that distinguishes mechanisms for production from mechanism for reproduction. This analogy locates mechanisms for production outside the institutions in question and the mechanisms for reproduction inside those institutions. This makes sense given codified PD’s insistence on increasing returns, and is partially consistent with historical institutionalism’s empirical effort to explain why things do not change. But there is an antinomy – a conflict of laws – between the analogy to punctuated equilibrium and institutionalism’s insistence that institutions shape outcomes by shaping individuals’ interests. It is also probable that path dependence is a system and not unit level phenomenon, and this conflicts with institutionalism’s desire to use path dependence as a basis for an argument that units (institutions) are the most important causal variable.

Put briefly, PD makes more sense as a system in which paths are exogenously reproduced by the system and endogenously produced by unit level behaviors, while the historical institutionalist punctuated equilibrium argument of course argues for exogenous change and endogenous maintenance. I will first lay out the antinomy between institutionalism and a punctuated equilibrium PD based on increasing returns, and then lay out the antinomy between a system level PD and unit level institutionalism. My point is *not* going to be that various of the phenomena to which the PD/institutionalist argument points do not exist, but rather that the package of phenomena cannot co-exist. Then I will show this through a quick analysis of the line of reasoning in one typical PD analysis.

4.1 The first antinomy around increasing returns and HI

Recall that an important part of the PD argument is that because different institutions produce different outcomes, multiple potential final equilibria are latent in any critical juncture. If this were not so, then the institutions that intermediate between large structural variables (e.g. the presence of market forces) and individuals would be uninteresting as a source of causal variation. For example, if we observed a kind of equifinality in which different causal mechanisms operating through different causal paths generated different institutional forms that generated functionally equivalent outcomes, then there would be good reason to prefer functional arguments based in human nature over PD arguments. Similarly if we observed the same large structural forces producing different institutional forms that nonetheless generated the same outcomes, there would be good reasons to prioritize the study of structural forces over institutions. Thus if there were a relatively monotonic increase in public and private welfare spending as GDP rose, and if the incidence of poverty was fairly similar in rich countries, we wouldn’t see very many articles about Sweden’s institutional distinctiveness, and would instead be reading about how humans naturally preferred decreased risks as their incomes grew.⁴⁴

For historical institutionalism, institutions are causally important because they shape actor interests in ways that assure institutional reproduction. This means that institutions become the crucial variable preventing change and causing

⁴⁴ For example, despite large differences in institutional structure the pension systems of Sweden, Denmark, and the Netherlands produce a fairly similar incidence of poverty among pensioners; see Karen Anderson, “Small States with Good Pension Systems: Benefit Adequacy and Financial Sustainability in Sweden, Denmark and the Netherlands,” paper presented at the American Political Science Association Annual meeting, August 2002.

reproduction. This is why codified PD sequesters change outside the path and into critical junctures. But doing so creates two problems.

First, if institutions are prior to individuals because they shape individual interests, then we are left at a loss for an explanation of the causal sources for change. Logically, if the mechanism for reproduction rests on increasing returns, then actors (whether individual or organizational) rationally avoid large changes, although PD does not rule out “on path,” intra-path change. Stasis thus has *endogenous* causes, because PD arguments locate the causal origin of stasis – again understood to encompass evolutionary change inside the path – in actors’ calculations about the continued likelihood of increasing returns from a given technology or organizational structure.

These cost-benefit calculations are wholly endogenous, in the sense that actors will not organize to change the parameters that structure their calculations. Doing so would mean that actors were consciously opting for a different technology or institutional structure, and thus foregoing the increasing returns that presumably locked them on path. Actors instead opt to retain the essentials of the technology or institutional format that so far has generated increasing returns for them. This version of PD thus should push virtually all serious change out of the path into some exogenously caused change, akin to an asteroid, to the parameters that structure actors’ calculations.⁴⁵ These “asteroids” radically disturb actors’ calculations about the relative returns of different institutional formats by radically changing the environment surrounding those institutions. Thus, in codified PD, critical junctures cannot emerge out of the normal processes of change inside a path.⁴⁶

In punctuated equilibrium, the sources of change are truly exogenous: the asteroids that allegedly obliterated the environment to which dinosaurs had adapted are “outside the system.” But the pure version of this kind of explanation involves non-social factors, and thus is clearly inadequate for most social scientific explanations, although equally clearly in a few cases it will be correct.⁴⁷ We also still have a problem accounting for stasis: who or what is it that experiences

increasing returns? For the sake of logical purity – institutions being prior to individuals – we must assume that organizations first and foremost experience increasing returns.⁴⁸ But this pushes the problem of reproduction from institutions down to organizations. To misquote Jan Elster, if institutions and organizations are the glue that holds society together, what glue holds organizations together? How can organizations assure that individuals will reproduce organizations?

Codified PD could create a social explanation for change if it dropped the argument about increasing returns. It could return to institutionalism’s original roots in the sociological critique of rational choice by arguing that logics of appropriateness maintain institutions. Doing so would permit actors to change institutions (and institutions to re-socialize actors around new norms) by changing their understanding of and action upon those logics. But bringing in logics of appropriateness as a basis for institutional stasis creates the second problem.

As Berger and Luckmann observed in the *Social Construction of Reality*, the reproduction of social realities (i.e. logics of appropriateness) confronts two obstacles. While it is precisely the opaqueness of social realities (i.e. institutions) that creates their power, or, in the language of institutionalism, creates their ability to shape actor interests and identities, this very opacity creates problems of transmission from one cohort to the next. To use codified PD’s evolutionary metaphor, even in a constant environment random mutations will occur as the second cohort misunderstands and then mis-reproduces the institutional “genes” or “memes” it inherits from older generations. Second, the imperfection of intergenerational reproduction means that actors have the ability to manipulate social realities. This why Berger and Luckmann saw social realities as expressions of power: “The confrontation of alternative symbolic universes implies a problem of power – which of the conflicting definitions of reality will be ‘made to stick’ in the society. . . . He who has the bigger stick has the better chance of imposing his definitions of reality.”⁴⁹

⁴⁵ The large number of PD studies – both self-identified or retroactively labeled – dealing with Latin America may account for the analytic preference for seeing exogenously caused change and endogenously maintained paths.

⁴⁶ Mahoney (2000, p. 523 and elsewhere) does argue for endogenous origins for change in his “reactive” PD sequence. But again, all he has done is re-label 19th century dialectics, and by doing so subsume a relatively clear category under a newer label that encompasses other causal mechanisms.

⁴⁷ As in Jared Diamond’s argument about biotic potential in *Guns, Germs, Steel*.

⁴⁸ Note that while H. Peyton Young, *Individual Strategy and Social Structure* (Princeton: Princeton University Press, 1998) provides an argument for the emergence of stable institutions (his “curb sets”), individuals are logically prior to the institutions in his analysis, in contrast to institutionalism’s insistence that institutions are prior.

⁴⁹ Berger and Luckmann, *Social Construction of Reality* (New York: Doubleday, 1967), pp. 109. Note the similarities to Paul Feyerabend’s arguments about science in *Against Method*, London: Verso, 1978, and to

This means that when we observe “stasis,” that is, observe an equilibrium outcome, it reflects constant churning and conflict among participants in the institution, rather than some voluntary or contractarian adaptation to a settled reality. Codified PD’s static aftermath is an unstable crust over a pot just below the boiling point. Codified PD thus faces an antinomy between increasing returns and punctuated equilibria on the one hand, and institutionalism’s core belief that institutions shape actor interests on the other. Its equilibria are unstable, and this very instability creates the periods of institutional breakdown PD views as critical junctures. Significant change – a critical juncture – thus has endogenous roots if you assume institutions are maintained through logics of appropriateness.⁵⁰ But you cannot discern this if you start out assuming increasing returns as a mode of reproduction.

This second problem could also be recast as an argument for endogenous change and exogenously maintained stasis by resorting to an ecological metaphor rather than an evolutionary one. This argument was already hinted at in the criticism of the increasing returns argument above, and suggests that PD needs to justify its choice of explanatory metaphors. Suppose institutions initially experience increasing returns only because they are exploiting some newly abundant factor, and that they thus confront declining returns as this factor becomes exhausted and then becomes a limiting factor. Species (read: firms, organizations, parties, etc.) rarely exist in isolation, and so may be providing resources for other institutions or organizations. As any given institution or technology expands and matures, it exhausts the abundant factors on which its initial growth was premised just as a given population will boom until it exhausts resources in a given ecosystem. Change would be constant, pervasive, and mutual, in contrast to codified PD’s analogy from arguments about punctuated equilibrium. At the same time, the fact that a given organism occupied a given niche would imply that some other organism could not also occupy that niche. Occupation of one “path” thus helps constitute other “paths” through exclusion or mutualism. In this analogy, mechanisms for reproduction (adaptation to the environment) are also ultimately mechanisms for substantial change of both the environment and of its constituent institutional units. This is

Microsoft’s alleged efforts to coerce computer hardware vendors to pre-load its software.

⁵⁰ Again, this is not to deny that some people who label their studies as “path dependent” document endogenously generated junctures. The point is that this phenomenon is not consistent with a simultaneous belief in or resort to increasing returns as a mechanism of reproduction.

precisely the dialectical model for change Schumpeter (and Marx for that matter) posited.⁵¹

Consider Schumpeter’s argument that economic growth rests on the periodic recurrence of growth waves (read: critical junctures plus developmental path). Each wave involves a new cluster of “leading sector” technologies and/or the associated political and social institutions that support them. The expansion of these technologies and institutions is premised on the availability of some cheap input, like petroleum and former agricultural workers in the automobile cluster that started in the US in the 1920s. For a while, the expansion of firms (and technologies) that constitute this sector actually cheapen this input, as e.g., mechanization of farming drove people off the land and cheaper prime movers lowered the cost of distributing gasoline to service stations. In other words, the process of path formation creates its own initially increasing returns. But eventually the leading sector exhausts both growth opportunities and its underlying cheap resource, leading to a rising average cost curve. Thus the saturation of rural markets eliminated further releases of agricultural labor into the economy and the sheer number of automobiles pushed demand for fuel above the available supply (itself already constricted by declining investment in response to falling prices). Historically this factory and fuel crisis provoked substantial (but slow) institutional changes not only across the economy but also in the institutions of that old leading sector. Here the new critical juncture arises endogenously (and dialectically) from the “path’s” own internal logics, not exogenously. Change allows reproduction and efforts at reproduction bring about changes that close off the path.

This comports with the empirical evidence of continual, incremental institutional change to which codifiers, especially Thelen, themselves point. Thelen addresses this issue by borrowing the concepts of institutional *layering*, a partial renegotiation of institutions, and *conversion*, which brings institutions into alignment with new norms, from other scholars.⁵² But aside from magnifying the already thorny historiographic problem of demarcating junctures from aftermaths, this also suggests that substantial change cannot be segregated into the critical juncture and stasis into the aftermath.⁵³ Whence came the new norms? Who renegotiated and

⁵¹ This choice is not accidental: Schumpeter’s concept of a rather static “circular flow economy” is remarkably akin to the situation codified PD describes.

⁵² Thelen, “How Institutions Evolve,” (forthcoming), pp. 24-29 .

⁵³ Collier and Collier (1991), pp. 31, 37, also recognize this problem, noting that there is often a gap between juncture and reproduction, and that their cleavage is the emergence of a “significant” working class (see p. 31, fn 14). By this they

why were they able to do this? Answering either returns us to the problems of reproduction identified by Berger and Luckmann long ago, and thus either to a dialectical position on institutional reproduction or to the instrumental use of norms and power by individuals seeking to reshape institutions. In other words, it takes us out of the realm that institutionalism identifies.

4.2 *The second antinomy between codified PD and HI*

Not with standing everything above, it is possible to observe instances in which what I have been calling codified PD operates. But in those situations institutions do not play the causal role that institutionalism assigns them. Codified PD operates as a system level phenomenon, a phenomenon in which the system structures the kinds of outcomes that are possible and in which units simply populate the system. To return to the evolution / ecology metaphor that pervades PD, the environment (system) presents a variety of niches that organisms (units, institutions) may fill. But the organisms do not create their environment (and thus the niches). To return to the example above, mass production structured a niche for batch and custom production even as it occupied many other production niches in the twentieth century.⁵⁴ Thus the causal logic is the reverse of that which institutionalism seeks: systemic outcomes define the range of units that may exist rather than units structuring outcomes.

Codified PD can work precisely as economists expect it to, but more so with reference to economic geography and self contained economies than technologies or institutions. In these situations, contingent outcomes based on non-social randomness and founders' effects are magnified by externalized increasing returns, thus preserving a variegated set of outcomes. Economy-wide increasing returns will produce exactly the kind of fine-grained division of labor that supports a multitude of differentiated units occupying mutually incompatible niches. Efficiency

apparently mean the emergence of a significant *industrial* working class, but they do not specify what counts as “significant.” Using a behavioral definition – the emergence of open, organized class conflict between unions and owners or unions and state – is problematic, because it implies that working class organizations have formed and thus some degree of institutionalization has already occurred. This in turn creates a problem distinguishing between antecedent and ‘legacy’ institutions, and the interests that each set of institutions creates.

⁵⁴ Michael Piore and Charles Sabel, *Second Industrial Divide* (NY: Basic Books, 1986).

then rests in the system as a whole, not in specific units.⁵⁵ This is not to argue that a pleasant symbiosis exists between all organisms. Adaptation, and politics, is about conflicts over resources and conflicts to constitute an “identity” in the pursuit of resources.

The appropriate metaphor here would not be the evolutionary one deployed by codified PD and much of economics, but rather an *ecological* metaphor: different species (i.e. different institutional complexes that constantly adjust themselves in response to price or quantity signals from the environment) jointly constitute their environment.⁵⁶ While they do compete for resources, they also contribute resources that other complexes consume – they benefit from mutualism, and they also deliberately reshape the environment to suit their own needs. These units would sort themselves out into different paths based on their relative capacity to capture different resources, thus constituting a range of mutually dependent paths. But their conversion of resources into wastes and growth changes the mix of resources available to other units in that given environment. This incremental change impinges on those other units, causing them to slowly modify their behavior so as to take advantage of the changing mix of resources.

This kind of externally caused self-modification should cause units to gradually evolve in ways that take advantage of the environmental changes other “paths” introduce into the environment. Thus there can be exogenous causes for incremental change that nonetheless cumulate into substantial divergences between what were once fairly similar units. Jumping “off the path” would imply an effort to enter an ecological niche which is already filled; it is the prior filling of the niche that makes path jumping difficult (i.e. makes it yield low returns), not a set of endogenously generated parameters for a given species (path) that makes the returns low. The behavioral constraints that each unit (and presumably constituent organizations and individuals) faced thus would have exogenous origins, rather than endogenous constraints deriving from increasing returns. Indeed, actor behavior inside a path would largely appear in this model to be concerned with adjusting that path so as to prevent returns from continuing to diminish, rather than towards the enjoyment of increasing returns.

⁵⁵ See Karen Orren and Steven Skowronek, “Beyond the Iconography of Order,” in L. C. Dodd and C. Jillson, *Dynamics of American Politics* (Boulder CO: Westview, 1994) for a similar argument about mutual adaptation of U.S. political institutions.

⁵⁶ Note that while Mahoney (2000) argues that critical junctures can arise from the collision of two different units, he does not see these units as engaged in process of constant mutual adjustment, which is what I will describe in the next few paragraphs.

To sum, a PD in which endogenous forces maintained the path would raise the issues of power and of social reproduction rather than increasing returns. Crisis and change would have endogenous roots rather than an exogenous critical juncture, and thus institutions would be causally important but would not be carriers of legacies as institutionalism posits. By contrast, in a PD in which there were exogenous junctures and endogenous maintenance in response to various external stimuli, institutions do not play the causal role institutionalism ascribes them.

4.3 Scully's "X" factor, by way of a summary

All of the problems noted above can be seen in a typical work that falls into the PD camp. Timothy Scully's *Rethinking the Center* self-consciously uses a language of critical junctures and is frequently mentioned in surveys explicating the PD approach to politics.⁵⁷ Scully argues that party politics in Chile represent the crystallization of three basic social cleavages over religion, the incorporation of urban workers, and the incorporation of rural workers. In each juncture a dichotomous cleavage produced a tripartite party system as one political party sought to colonize the center of the cleavage. In each critical juncture, politicians' voluntaristic efforts to displace these conflicts (contingency resting on small causes, perhaps personality) set up durable political parties ("institutional legacies" theorized simply in the observation that "[e]stablished party systems are resistant to change...[because they] adopt[ed] core identities") that then constituted a self-reproducing system of political identities.⁵⁸

Scully's analysis displays the problems identified above. These problems cast doubt on the party system as an independent variable while highlighting social groups whose origins lay in changes in the world economy. While Chile's tripartite politics are perhaps unique in Latin America,⁵⁹ they are by no means unique to settler

⁵⁷ Timothy Scully, *Rethinking the Center: Party Politics in Nineteenth and Twentieth Century Chile* (Stanford: Stanford University Press, 1992). See pp. 11-16 for his explication of critical junctures and punctuated equilibria.

⁵⁸ Scully, p. 13.

⁵⁹ Post-Independence "Argentina" also arguably had a tripartite politics, if one considers the region as a whole rather than considering Buenos Aires in isolation from the interior. This politics pitted Buenos Aires merchant elites against Buenos Aires landowners against interior landowners. Although the major cleavage was over fiscal/federal issues it also included a religious cleavage. The question is which was more important, the specific issue over which polarization occurred or the

societies like Argentina, Australia, or New Zealand. These and other southern hemisphere settler societies had a similar tripartite politics – complete with parties that could be described as "centrist" – based on conflicts between merchant/financiers, large landholders, and a rural (but later urban) proletariat.⁶⁰ Religion was more salient in the Southern Cone than Australasia, but the players lined up the same ways on tariff, labor control and land issues. If Chile differed slightly, this was because its larger indigenous peasant population confronted landowners with greater social control problems than landowners confronted in the other societies.

Each society also faced similar exogenously created critical junctures as the changing composition of world demand and changing price levels brought forward the issues of the form of labor control, capitalization of a transportation infrastructure, and accommodation of nascent urban industrial groups. Outcomes differed, to be sure. In Australia, for example, merchant/financiers took control over the mining sector, while in Chile landowners controlled mining. But the party structure was determined by the sectoral composition of the economy, whose shape in turn derived from the structure of world market demand. Crucial political choices did not emerge from voluntaristic choices about conflict displacement but emerged from common structural dilemmas.

Thus Chilean Christian Democrat Frei's desire to pursue a thorough-going land reform reflected a typical structural problem in these economies: import substitution industrialization required an expansion of the volume of domestic demand that could not occur given an impoverished rural proletariat. His problem did not emerge from the structure of the party system. The outcome was not determined by the party system either, except in so far as the parties and state institutions themselves reflected the relative underlying strength of social groups.

Thus party structure – the institutions on which institutionalism focuses – determined little. In short, Scully presents a classic case of PD, but by looking at parties as institutions focuses not on the causal variables but on dependent variables. If parties and voluntary policy choices by party personnel mattered, then we would not expect to see similar party structures, policy conflicts and, to a lesser extent, policy outcomes across the settler societies. Scully confirms that we can observe a

structural position actors occupied in relation to world markets which polarized them in the first place?

⁶⁰ See Donald Denoon, *Settler Capitalism: The Dynamics of Dependent Development in the Southern Hemisphere* (New York: Oxford, 1983) for a comparative analysis marred only by the lack of space to consider North America.

pattern of rapid, exogenously driven change followed by more gradual change, analogous to the economists' original PD. But the mechanisms for this are neither consistent with the economists' model, nor with a focus on parties as institutions. The X-factor in Scully's analysis is the ability of local social groups to translate resources into power, and to use power to maintain institutions. His narrower focus on parties obscures this.⁶¹

5: Conclusion

Codified PD is an effort to provide a micro-foundation for historical institutionalism, and thus explain how history matters and why actors do not voluntarily remediate sub-optimal social and/or political institutions. Without codified PD (or some other micro-foundation) historical institutionalism lacks any consistent mechanisms for change and has a very structural bias towards stasis in its analysis. Historical institutionalism is thus unable to explain why individuals and organizations occasionally do overcome the constraints institutions impose on those individuals and organizations. Codified PD locates the source of this constraint in actors' calculations about the relative merits of retaining those institutions. So long as actors enjoy increasing returns from an institution, they will retain that institutional format even though it might generate less utility than some other institutional format over the long term. Stasis, or path reproduction, is thus endogenously caused. Moreover, PD appears to provide a convenient explanation not only for stasis, but also for the diversity of institutional formats we can observe. Contingent events at critical junctures can shunt units into an institutional format that they then rationally replicate. These contingencies matter because it is only during critical junctures that actors are truly free to choose among competing alternatives. Post-juncture, the logic of increasing returns locks actors into their choice.

Unfortunately, there are good reasons to suspect that some mechanisms codified PD advances are wrong, and that these errors come from an excessive focus on unit level phenomenon. Increasing returns are probably not a pervasive feature of political and social life. The contingencies that are present at a critical juncture are not independent of the paths that precede or follow them. Contingency is structurally generated as actors attempt to differentiate in an effort to capture and retain control over diverse resources. Institutional persistence usually flows not

from increasing returns but from the application of power to secure a flow of resources. If we assume that intentionality characterizes this process of resource retention and acquisition, then the best place to start is probably by considering the important place that power occupies in the acquisition and retention of any resource. This suggests the importance of looking at the creation of elite identity (or identities) and group coherence – understanding the norms that animate institutions as a form of class formation and ongoing class conflict – rather than looking for a micro-foundation in individual utilities and the linked phenomenon of path dependence.

Finally, codified PD contains antinomies. While the effort to provide a micro-foundation for historical institutionalism is laudable, codified PD arguments end up being profoundly anti-agency.⁶² They imply that agents remain passive because increasing returns erect insuperable barriers to collective action. If PD's actors could “only connect,” they might right their situation and move from a sub-optimal situation to a more optimal one. In contrast, following Berger and Luckmann, it seems more likely that actors are constantly active in only partially successful efforts at social reproduction. Competitive pressures in political and economic markets (if indeed there is a difference between the two) force actors to constantly adjust the political and economic institutions they inhabit to their changing environment. However, agents' efforts to reproduce their institutions in the face of constant change brings about even more changes in the environment that then reverberate back as additional pressure for institutional change.

Most of what agents do, including and especially collective action, thus involves an effort to maintain structures that ironically ends up substantially changing structures. Like *Alice in Wonderland's* Red Queen, most agents are running in place, but while they run they churn the ground beneath to the point where running becomes impossible.⁶³ Or to put it less metaphorically, their efforts at reproduction exhaust available resources, create declining returns and thus set in motion forces for more substantial change. The limits on deviation from the path are thus not set by increasing returns and network externalities, but rather by the diversion of actors' energies into holding their place, until some profoundly limiting factor forces entrepreneurs (political or economic) to catalyze the adoption of new technologies and institutions that overcome those limiting factors.

⁶¹ See also Theda Skocpol and Margaret Somers, “The Uses of Comparative History in Macrosocial Inquiry,” *Comparative Studies in Society and History* 22:2, April 1980, pp. 174-197 on the dangers of missing important causal processes in single case studies.

⁶² For a thorough-going critique of “agency” within various institutionalist perspectives, see Aida Hozic, “Markets, Networks, and Hierarchies: The New Institutionalism in Theory and Practice,” unpublished paper, Cornell University, 2000.

⁶³ Leigh Van Valen, ‘A New Evolutionary Law,’ *Evolutionary Theory* 1, 1973, 1-30.

The real danger from the particular efforts to codify PD addressed here is that the one area where PD probably does operate is in the field of memes. There are increasing returns from the use of linguistic short hands, and PD is cropping up everywhere in institutional analyses. By providing an either an incorrect model for the presence of institutional stasis and change, or an impossibly broad one, codified PD threatens to crowd out other, plausibly better understandings of how history matters and why units are differentiated in markets and other political systems. Historical institutionalism does need a micro-logic. But an increasing returns-based, unit focused PD is not the micro-logic it needs.

History matters. We don't choose freely. But arguments that seek to locate that loss of free choice in increasing returns deriving from institutions contingently created from small causes are an evolutionary dead-end. They clash with empirical evidence for continuous changes that adjust institutional structures derived from large, non-random causes that typically continue to operate for considerable time after the new institutions arise. They obscure classic mechanisms for institutional change driven by class conflict, the search for power and the dynamics of local and world markets. A codified path dependence model could have real utility if it were able to unify phenomena that initially were thought to be driven by disparate mechanisms under one theoretical roof. This after all is one way in which science is thought to proceed. But the codified PD model unifies phenomena that do not appear to have common mechanisms, and it does so in ways that create antinomies with historical institutionalism's argument that institutions matter causally because they shape the interests that determine mid-range phenomena. All political phenomena have a temporal structure, and most political phenomena probably involve institutions one way or the other. Arguing that these phenomena share temporality – a similar structure of events – only returns us to the observation that history matters. But the problem is to determine how history matters, that is, to determine what mechanisms animate that structure of events, and what place institutions have in that causal chain.

Portage: Path Dependence and Increasing Returns in U.S. History. —. Hoyt Bleakley. In the following decades, river traffic increased markedly and was dominated by small craft such as keelboats and atboats, which were poled up and down the river. In theory, these boats could pass through the Falls of the Ohio during the spring, when the water level was at its highest. However, this was a risky undertaking, and many, if not most, chose to cart their goods around the falls rather than risk losing them. This book brings together Professor Arthur's pioneering article and provide a comprehensive presentation of his exciting vision of an economics that incorporates increasing returns. After a decade of resistance from economists, these ideas are now being widely discussed and adopted, as Kenneth Arrow recounts in his foreword. Path dependence and increasing returns. Analysts are increasingly inclined to invoke the concept of path dependence, but clear definitions are rare. In practice, usage tends to fluctuate between a broader and narrower conception. With increasing returns, actors have strong incentives to focus on a single alternative and to continue down a specific path once initial steps are taken in that direction. Once an initial advantage is gained, positive feedback effects may lock in this technology, and competitors are excluded. Institutions and Path Dependence: Positive Feedback and Increasing Returns. What do we mean when we say "path dependence"? As Paul Pierson (2000) rightly notes, the concept has been used often, and haphazardly, in political science (p. 251). Path dependence has an immediate bearing on the question of predictability in the social sciences. If we assume that paths are created or altered through events that are random, then we must come to terms with the fact that even though paths may be stable, we can never be certain that an exogenous shock will not enter and disrupt the system itself, nor can we be certain what such a shock will be.