IDEOLOGY AND THE EVOLUTION OF VITAL INSTITUTIONS:

A SYNOPSIS

Earl A. Thompson, UCLA

ABSTRACT

Charlie Hickson and I have recently completed a book with the same main title as this paper. Dedicated readers who get past the abstract social-theory, evolutionary-game-theory, and early history in the introductory chapters are typically enthusiastic about the book's unique line of argument. But readers who quit before completing this material are frequently nonplused. Perhaps we should have started with a contemporary issue, backed into the earlier history, and introduced the general theory only after developing the empirical-historical argument that suggests it. The following is a reader's guide for such a reverse-order reading and a heuristic synopsis of the book.

INTRODUCTION

The major movements in social and economic history can be separated into those concerning the distribution of wealth and those concerning the efficiency of the allocation of resources for a given distribution of wealth. We shall analyze both kinds of movements. Each analysis will develop its own, Paretian, policy implication. Nevertheless, as regards the modern world, the same institutional innovation will be seen to both eliminate the distribution-based malady and isolate the efficiency-based malady to a relatively small set of countries.

The innovation is to hand over control of world political institutions (like the UN) to the world's most militarily powerful nation with the proviso that its leaders credibly swear to uphold an Articles of Confederation, state's-rights, type of constitution, one that prevents dominant countries from exploiting weak ones by: (1) restricting international trade agreements (like those made by the WTO) to those that work towards the elimination of monopolistic or monopsonistic attempts to gain from international terms-of-trade effects, and (2) preventing monopolistic international lending institutions (like the IMF) from imposing discriminatory lending conditions on borrowing nations, conditions that are not objectively justifiable by their effect on the likelihood of loan-repayment.

This reform cannot, of course, be appreciated unless we inquire into the serious maladies it is designed to cure.

Our analysis of these maladies begins with the distribution of income. Here, in Section I below, we first discuss recent distributional trends and then go successively backwards into distributional history. Given these facts, we offer, in Section II below, a social-theoretical framework explaining the distributional data and rationalizing our rather urgent, time-sensitive, policy recommendation.

I. THE DISTRIBUTION PROBLEM (Part II of Chapter 2 of the book)

A. The Distributional Peculiarity of the "New Economy"

The widely heralded "New Economy" of the 1990's has featured both an exceptional expansion in foreign trade and the first extended, essentially full-employment, peacetime US economic boom in which real hourly wages fell. The unprecedented magnitude and duration of the boom highlight the peculiarity of the fall in real wages. Although one is tempted to explain the simultaneous boom in profits and fall in wages by asserting the presence of an exceptional boom in labor-saving innovation, the great software boom characterizing the era can hardly be thought of as reducing the demand for human relative to non-human capital. It thus appears that the exceptional magnitude of the rise in US profit rates during this boom can only be explained by introducing an exogenous shift reducing US real wages for the given, apparently stable, US labor force. What might be the source of such an exogenous shift?

While the wage-equalizing effects of the shift-up in foreign trade cannot be denied, nor can an increase in illegal US immigration, the rise in profit rates in third-world countries as well as the US tells us that much more was involved. More specifically, given the exceptional increases in foreign as well as domestic profit rates, the entire pattern of factor price changes cannot be explained unless we posit the existence of an upward shift in effective foreign labor supplies. What are we to make of the concurrent 1990's shifts up in both foreign trade and implicit foreign labor supplies? What is the cause of these basic shifts in the world economy?

IMF "globalization" policies, which have been expanding since the late 1980's, impose economic-ideology-driven, non-repayment-related, conditions on loans that are vital to third-world countries. These special loan conditions work mainly to: (1) help the WTO eliminate barriers to foreign trade and (2) raise middle-class tax rates and schooling levels, reduce welfare relief to indigent families, and increase state expenditures on criminal prosecution in third-world countries. A combined effect of the latter policies is to significantly expand the world's literate and stable workforce. So it is natural to attribute our "New Economy" to the globalization policies of our US-dominated international agencies.

B. The Root Cause of Globalization

The middle-class-tax-increasing, wage-reducing, globalization policies of our U .S.-dominated international agencies would have been infeasible prior to the end of the Cold War. Western powers had been competing with the East to attract the support of the masses. The harsh IMF "conditionality" policies that arose with the decline of the Soviet Union would have meant a movement by third-world masses towards the Eastern bloc countries, either individually or through collectivist social revolutions. In other words, prior to the end of the Cold War and the concurrent emergence of modern globalization policies, the dominant nations had been competing to attract productive people into their spheres of influence. .

The fiscal drag of unsuitable immigrants has predictably induced nations to somewhat restrict immigration into their countries. But this nationally efficient internalization of an understandable externality should not blind us from the larger picture of the world market for ordinary people prior to the demise of the Soviet Union. The competing ruling classes of the Western nations in this market could not trap valued working-class people and small entrepreneurs within fixed boundaries and thereby use exorbitant taxation to induce them to work long hours at subsistence incomes. The rulers of any Western state adopting such a tax policy would have faced either a mass exodus of productive individuals from their state or an Eastern-block-supported social revolution. Under globalization, however, the rulers of the world's dominant states determine the tax rates of all of the dependent states through the globalization policies of our international institutions, thereby preventing the states from independently competing for productive people. These rulers have thus been effectively organized to raise taxes on ordinary individuals.

Prior to the end of the Cold War, whenever the productivity of ordinary individuals substantially increased, the *after-tax* incomes of these people also substantially increased. For the international competition of states for people kept the tax rates levied on these people down to the state's relatively constant fiscal cost of maintaining these people. The Western productivity booms observed throughout most of the 19th and 20th centuries thus meant real income booms for our emerging middle classes instead of the aristocratic wealth and consumption booms to which the world had become accustomed prior to the 19th century.

C. The "Iron Law" of Wages and the Source of its Temporary Suspension

Going back to the early 19th century, we see that real wages in European cultures suddenly began their escape from what had just been convincingly "established" by Classical Economists as an "iron law" of wages during the 1820's. Thus, after remaining relatively stagnant at a form of subsistence from early antiquity to the 1820's, real wages in European cultures began their great expansion, rising an a-historic15-fold in the 150-year period from 1825 to 1975!

What happened during the 1820's to so dramatically alter the historic relationship between taxes and productivity?

A military shock occurring early in the Napoleonic wars represented a watershed in Western social history. The cost and effectiveness of rifles had, over the previous few centuries, declined sufficiently for France, the leader in metallurgy throughout these centuries, to finally impose a national draft on all able-bodied men to help in the war efforts. The size of other European armies soon ballooned to similar proportions. The subsequent wars of attrition were so costly in terms of manpower losses that, once the Wars were mercifully ended and the bitter lessons tallied up, it became clear that military attack was no longer a profitable method of obtaining the predominant foreign capital stocks of the period, the human capital stocks of the European nations. What followed was a hundred years of remarkably peaceful relations among the nations of the West. If a nation coveted a neighbor's human capital stock, rather than attack that nation, it would invite immigration, which the victimized country was unwilling to stop because it would mean a costly war. Western ruling classes began to steadily compete for ordinary people.[1]

Prior to the Napoleonic Wars, nations were not the economically competing legal entities that they were about to become. Rather, they were regions within which the people were sufficiently culturally distinct from their neighbors that their homeland could be readily identified by others. International migration thus generated reasonably easy detection. This made possible a legal or military response to emigration in which the parent region could punish the migrants or their new nations sufficiently to make international worker migration among different independent polities a comparative rarity. Independent polities prior to the Napoleonic Wars were thus labor-entrapping regions implicitly designed to prevent the free competition of states for productive people. Not only were after-tax incomes of the masses thus kept down to subsistence by the various Western ruling classes, but mobility between independent polities was largely limited to the exportation of groups of workers whose vociferously expressed ideas threatened a state's social order. Thus, whenever decreasing transportation costs or growing skilled wage premiums or profit rates began to attract Later Medieval or Early Modern labor forces or guild masters to neighboring states, the sizes of the states would grow to prevent a genuine political competition of states for productive urbanites and correspondingly higher wage costs and profit rates. Towns thus became city-states, city-states became provinces, and provinces became nations in a process that proceeded only so far as it had to in order to prevent an effective competition for these workers and small businessmen.

D. Ancient Globalization

A similar analysis explains the persistent, eventually successful, attempts to form ancient empires in the West in response to the city-state competition for people that arose, for example, in Classical Greece. Following the collapse of the Western Roman Empire, the various attacking Germanic tribes quickly re-centralized to an enormous scale of political operations, one in which mobility between the Early Medieval empires was impractical despite the administrative difficulty of keeping track of migration between the various Germanic baronies. These highly extortionary Germanic empires, like the Byzantine empire to the East and the Roman Empire that had preceded them, were basically earlier instances of Globalization. Ordinary people were trapped within their extensive imperial borders. After-tax wages and profits were kept down to rough subsistence because of the difficulty of political mobility made possible by the extensive size of these empires and the corresponding reliance on subsistence-generating imperial taxes.

E. The Feudal, Medieval, and Early Modern Entrapment of Ordinary People

Most telling of the basic desire of European ruling classes to keep their masses at subsistence was the response of 9th and 10th century Western European states to the sudden radical decentralizations brought about by the military attacks of the Normans, Saracens, and Turks. It no longer sufficed to tax the ordinary members of a state at a sufficiently high rate to keep net returns near subsistence. The states were too small. Without special precautions, people could move to neighboring fiefdoms without anyone knowing where they had gone. Competition for ordinary people thus suddenly threatening the newly decentralized 9th and 10th century Medieval states. These states quickly began to legally tie their workers to particular land parcels. Serfdom was thus the immediate response to the first real threat of interregional competition for workers in Western Europe. Because of the high economic cost of having an internal immobile workforce, it is no surprise that serfdom declined with the gradual restoration of people-entrapping provinces and nation-states in the Late Medieval and Early Modern periods. This continued until the shock in military technology that surfaced during the Napoleonic Wars.

F. The Upshot

Thus, there was, prior to the 1820's, an "iron law" of wages. But it was based neither on Malthus's ultra-pessimistic assessment of the growth of labor supply relative to the demand for labor nor on Ricardo's similarly arbitrary assertion that above-subsistence wages would increase the voluntarily chosen rate of population growth sufficiently to return wages to subsistence levels. Under either of these theories, for example, the cumulative negative labor supply shock produced by the early-mid-14th century plagues would have increased both wages and population growth for many decades, perhaps a century or two, after the end of the Black Death in 1352. What occurred instead was a rapid increase in post-plague taxes so that after-tax wages actually fell just a few years after the plagues. The incomes of the masses and population growth were actually below normal in the two-three centuries that followed the plagues and wars of the catastrophic 14th century. While there were bloody peasant revolts all over Europe following the tax increases of the mid-late 14th century, the revolts were uniformly ruthlessly put down. After-tax wages remained at approximate subsistence because the various ruling classes naturally wanted them there; there was no real competition of states for people, so wages remained around the same subsistence level that they had been in antiquity and would be until the early 19th century shock in military technology.

The sudden immigration boom following the Napoleonic Wars was a sure sign that the sea change underlying the corresponding boom in the incomes of the masses was a sudden introduction of competition among states for ordinary people. Workers and small business people were suddenly free to find their internationally most productive uses. Such a boom in immigration and middle-class income among competing Western states had not been seen since the aggressively competition for people seen in the neighboring cities of Greece during the 5th century BC. Only, in the modern case, the competition has included ordinary workers rather than just slave-possessing householders. So the ruling classes of the suddenly competing nation-states of the West proceeded to bid wages up in a spectacular, a-historic, fashion. Latent technologies with labor-saving potential, technologies that had been accumulating for centuries, even millennia in some cases, were cyclically implemented during each expansionary phase of the 150-year wage explosion.[2]

This golden age of populism and induced technological improvement is coming to an end.[3] Although one might reasonably applaud a slowing of the costly and bewildering rate of technological innovation, concerned individuals should feel quite damaged by the increasing fiscal and economic burdens that are facing our future workers and small entrepreneurs, a trend that, if history is any guide, will only end in basically subsistence standards of living for ordinary individuals and a return to an iron law of wages at that standard of living.

While the heritability of non-human capital helps cushion the blow, the incomplete benevolence of the masses towards their future generations tells us that the ongoing reductions in wage income will decrease inheritances until, in the not-too-distant future, the capital stock inherited by the typical member of the subsistence-wage class will be insignificant. Moreover, capital markets offer no certain way to protect the non-human capital values of the distant future generations of our masses. Individually, even the most benevolent of individuals have no way to protect their distant future families. Although average net asset values rise when wages fall, individuals have no assurance that <u>their</u> net asset values will rise. The Gambler's Ruin indeed tells us that almost everyone's heirs will eventually have to labor long hours to eke out a subsistence income. Thus, prior to the middle-class-income boom following the Napoleonic Wars, the number of wealthy families, those in the aristocracy, was quite insignificant relative to the number of people struggling to survive. What ultimately protects our family descendants is their human capital, which is essentially the result of an environment in which states compete for people. The post-Cold-War end to the competition of states for people has spelled an end to the low-tax-induced expected-income floors that have protected us and, absent Globalization, would have protected our descendants.

G. A Temporary Opportunity for a Paretian Policy Response

With rational individuals almost all worse-off in a world in which their heirs face such a grim expected future, only a small additional preference against an aristocratic distribution of income need be added to argue that a Paretian improvement is achieved by creating a world-institutional environment in which the many states are constitutionally provided sufficient fiscal independence to effectively compete for ordinary people. The additional, anti-aristocratic, preference is the common social benevolence that virtually all of us has acquired merely by being raised in a modern state. Even wealthy members of our ruling class must show such benevolence in order to attain leadership positions in large organizations. Although this preference is beginning to evolve out of the system as we begin to rationalize our less and less egalitarian distribution of income, the substantial benevolence that remains is plausibly sufficient to justify a Paretian argument in favor of a world with competing states and substantially above-subsistence incomes of ordinary individuals over a return to the highly inegalitarian distributions that existed prior to the 19th century.

We must recognize, however, that once we come to approximate the new long-run equilibrium toward which the evolutionary process is now taking us, the social benevolence that characterizes our modern, high-wage, society will be virtually gone. In its place will be the institution-preserving exploitative mentality that not only characterized European aristocracies prior to the 19th century but also that characterizes many modern third-world aristocracies that rationalize the near-subsistence incomes of ordinary people whose language and culture have prevented them from emigrating to competing states.

II. THE DISTRIBUTION ARGUMENT AND OUR EFFICIENCY PROBLEM

A. A Static Theory of Distribution (Appendix B.1)

The above historical observations repeatedly contradict the Lockean, "natural rights of man," theory of distribution that has underlain conventional wage theory since the "enlightened" days of Adam

Smith and his Western European predecessors. The facts reveal instead that ruling classes use their control over taxes to pay only those wages that are in their economic self-interest. Hence, when ruling classes can practically trap ordinary people within their borders, after-tax wages are near-subsistence.[4] And when, in contrast, the military technology induces states to compete for ordinary people, workers escape the "iron law," their wages rising with productivity to potentially enormous levels.

The social theory strongly suggested by these wage observations has all states controlled by a more-or-less transparent ruling class that establishes the state's tax structure and thereby unilaterally determines the distribution of wealth between the state's ruling class and its ordinary people. Unlike Locke, Rousseau and Marx -- whose theories have continued to dominate modern socio-political theories of distribution -- ordinary people in non-egalitarian states are not somehow "fooled" into accepting near subsistence standards of living, "fooled" out of their natural rights. Rather, it is the underlying military power of the ruling class over the masses – a power that is required for the ruling class to militarily protect the state from foreign powers – that creates the enormous gulf between the ruling class and the masses featured in most social histories. This power exists in all states; it exists in the populist states that have characterized most of the 19th and 20th centuries just as in authoritarian states. The humanism characterizing the ruling classes of populist states, which still substantially remains as part of a cultural lag, has only existed when ruling classes have had to compete for ordinary people and correspondingly assure their mobile populations of their promised tax benefits.

A pure theory of social organization generating this universal control of a ruling class over ordinary people has individuals sequentially selecting and communicating their strategies to one another. The first person to announce a strategy, or reaction function, which may be very difficult because it generally entails firmly committing oneself to the interpersonal reactions defined by that strategy, has a substantial advantage over the others because it enables the individual to credibly threaten punishments in order to influence the choices of all others in the state that are worth influencing. To the extent that the first person is unable to achieve a personal bliss point by such punishments, a second optimal reaction function, imposing punishments and promising rewards to still later strategy-selectors, is invited by the first strategy-selector. This hierarchical construction continues until an entire ruling class is filled out, with the others in the society maximizing their utility or profit subject to the punishments and rewards, the "institutions," presented them by the ruling class.

A "popular government" is a government in which initial strategy selectors allow other members of the ruling class to be approved or appointed by ordinary people, often through pre-set political institutions. Although this may appear to enable ordinary people to permanently control their tax system through their control over personnel, wealthier members of the ruling class can always combine to buy out the masses by offering them benefits that come at the cost of their children, the typical absence of lump-sum transfers between most ordinary parents and their young-adult children being indicative of the sort of incomplete benevolence that the wealthy require to buy them out. Thus, for example, current Social Security and Medicare can be expanded to the point that the future payroll taxes that finance them can effectively impoverish future generations of workers. The same re-assertion of aristocracy can be accomplished through sufficiently high levels of deficit spending. Similarly, political rules can be altered to dramatically decrease the influence of future low-income people on election outcomes. This is done by offering sufficient legislative favors for the current generation of ordinary voters to create laws that induce future political campaigns to largely by-pass the interests of ordinary people. Our massive Federal debt, the massive expected increase in our social security payroll taxes to keep the system afloat, and our decreasingly populist election processes all indicate the ease with which these aristocratic buy-outs occur.

B. The Static Theory of Efficiency

(Chapter 1, Appendix B.1 and Chapter 2, Part IC)

A second remarkable theoretical characteristic of the above-described game-theoretic interaction, is that the solution generates an efficient, Pareto optimal, equilibrium. The reasoning underlying this efficiency result (Thompson-Faith) is very simple. Suppose that the above-described, complete-information, individual-utility-maximizing, hierarchical solution (which always exists and is unique as long as we restrict ourselves to strict preferences among a finite set of social alternatives) were not efficient. Then there would be a social alternative that could make everyone in the society better off. In this case, the utility of the first strategy selector in this hypothetical solution would be either enhanced or remain the same if this person amended his or her reaction function to the following form: "I'll do my part in a new [Pareto superior] allocation if everyone else does; otherwise, I'll adopt the same reaction function as in the hypothetical solution." In view of this amendment, the second strategy-selector will amend to: "I'll likewise adopt my part in the new [Pareto superior] allocation if everyone else does; otherwise, I too will retain my original, hypothetical-solution, reaction function. Such communication proceeds among the ruling class and down through the simple utility-enhancing choices of ordinary people, who are sequentially offered a simple choice between a Pareto superior allocation and the original one. Since this is a strictly utility enhancing set of strategies for all individuals, the supposition that the initial, Pareto-non-optimal, set of strategies was a solution (*i.e.*, a utility-maximizing set of strategies) is false. This establishes a proof by contradiction.

The rapid dissolutions of dominant states in history, states whose ascendancy had left them temporarily unchallenged by their neighbors, tell us that the above theorem on the static efficiency of societies is not immediately applicable to the real world. States have in them some source of internal degeneration despite their theoretical efficiency, an efficiency that was evidently being displayed in some form during their ascendancy. The only substantial assumption of the above, efficiency-generating, social theory is complete information. Of course, in the real world, people certainly do not know the exact preferences of those below them in a social decision hierarchy. However, the above efficiency argument generalizes to familiar forms of incomplete information by simply converting the statements into their expected-utility analogues while recognizing that rulers can only estimate the preferences and choices of subsequent strategy-selectors. Expected efficiency then characterizes the social outcome. The only substantial assumption is then that ruling-class estimates of the preference of others are objective.

So here, in the non-objectivity of the ruling-class, is where we find our source of societal inefficiency. But why would the presumably relatively objective ascending states so quickly lose their objectivity upon reaching a condition of dominance within their civilizations? The answer can be found in the cartelized nature of free-entry intellectual establishments, whose ideas are biased in a direction that maximizes their own collective return by artificially increasing the ruling-class demand for their teaching and advice.[5]

Dominant states are particularly vulnerable to their domestic intellectual cartels. This is because advanced education is a luxury good and because dominant states have a demand for a kind of understanding that will enable them to run a unique, civilizationally dominant, state. The dominant state would not suffer from all this if the information made available to its ruling classes were not biased by the demand-creating incentives of the intellectual cartels that educate the ruling classes. The resulting demand-creating ideas are called "ideologies." The biases that they contain are the *only* social-theoretical source of inefficient social equilibria, the root of the decay of empires, the rapid demise of hegemonic states, and the persistent inefficiencies experienced by once-great, mature, societies.

The fact that our efficiency problem is laid directly at the feet of the intellectuals means that the theory will never be accepted by intellectual establishments, the ruling classes of the intellectual cartels responsible for the ruination of dominant states. This appears to us to be a shame because our evidence fairly conclusively shows that the theory is true. In a later, almost complete, volume, I plan to offer a reform of the scientific incentives that face economists and related social thinkers, one designed to eliminate its establishment and associated cartel incentive system.

C. **How Commitments arise in a Societal Context** (Chapter 1)

The ideas of social leaders motivating them to execute the reaction commitments contained in our static social theory are not self-constructed as utility-maximizing ways to think. Potential social leaders do not self-produce the ideas that motivate leaders to execute their punishment reactions rather than accept offers of small bribes from the threatened parties. Instead, social leaders are induced by ideas created in them by their *parents and teachers* to violate their narrow rationality, rising above their familiar, cooperation-preventing, ideas to adopt a broader kind of rationality, one motivated by mental exaggerations of the value of certain reactions. Leaders adopt these *broadly rational* exaggerations of the cost of certain forms of narrowly rational behavior through their economics-neglected-but-realistic utilities for high self-images. Early childhood education provides students with indelible social heroes, people of enormous, generally exaggerated, capabilities whose alleged social reactions the grown students will desire to emulate because such behavior will provide confirmatory evidence for the existence of their own enormous capabilities, thereby enhancing their self-images. The taught social reactions of these heroes comprise the "values" of a society and, through their isomorphic effect on ruling-class reactions, provide the institutions under which ordinary people live. The teacher-believed exaggerations generally require a cooperative, cartel, form of teacher organization, otherwise the teachers would collectively suffer from the existence of maverick teachers who individually profit from exposing their collectively profitable exaggerations, thereby sabotaging the teachers' otherwise productive social function. As long prospective social leaders are the objectively selected products of competing teacher cartels, each creating its own distinct set of reaction functions, these intellectual cartels and their corresponding exaggerations provide the society with the free choice of values necessary for social efficiency. But when a single teacher-cartel gains effective control over the education system and, directly or indirectly, teaches the society to appreciate only one set of exaggerations, the objective competition among the various teacher cartels to educate leaders is destroyed and an ideology has arisen.

III. THE EFFICIENCY PROBLEM, HISTORICALLY CONTEMPLATED

A. Introduction

Chapters 3,4, and 5 of the book examine the rise and fall of three different institutions. They are, respectively, guilds, the gold standard, and 20th century international institutions. After herein summarizing the book's political-economic analysis and the history of the first two episodes, Section IV will identify a social-evolutionary model from which the entire pattern can be understood. The solutions of this evolutionary model are identical to those of the above, static, social theory.

Common to Chapters 3,4, and 5 is a theory of taxation and national defense, published during the 1970's in a pair of **JPE** papers, showing that the basic US tax structure can be rationalized by a simple model of national defense. First on all, in this model, given an equilibrium distribution of property across nations, a certain type of capital, called "coveted capital," is an attraction to potential aggressors against the state. Its accumulation decreases national security unless there is a suitable increase in national defense expenditures. To internalize the corresponding "defense externality" resulting from individual accumulations of coveted capital, an efficient government taxes this capital, thereby adopting an overall tax system that violates the classical neutrality properties traditionally used to inappropriately criticize observed taxes.

Secondly, an efficient government must also solve a basic time-inconsistency in which the state, to defend its property, must commit itself to spend more on defense than the defended property is worth. Without such a commitment, some potential aggressor-state will make such a commitment, and the property will be theirs. To establish such a commitment in a democracy, the military authorities must, during a defensive emergency, over-ride the legislature, which is generally constrained by narrowly rational voters and thus unwilling to expend more on defending a piece of property than it is worth. The way the military achieves this over-ride is to employ conscription and similar expropriations, impose wartime price controls and rationing, and create government money. During peacetime, a large set of subsidies must be correspondingly established to induce individuals to accumulate sufficient amounts of capital whose expected private return is attenuated by wartime confiscations. As for the taxation of observed coveted capital, peacetime subsidies to various domestic industries, subsidies that have been roundly criticized by economists as unjustifiable special-interest gifts, are rationalized by this second, time-inconsistency-recognizing, property of efficient public finance.

The rationalization of national tax and subsidy policies that economists have traditionally criticized by suitably generalizing the traditional, albeit implicit, model of national defense is only one important feature of the above results. Another important feature follows from the fact that persistent qualitative errors in economic policies affecting the ability of a state to protect itself will make the state indefensible and result in its imminent dissolution.

Putting these features together, when economic intellectuals gain substantial control over the policies of democratic states through their influence on the education of politicians or their staffs, the predictable result is the systematic military failure of the ideologized state. We shall see that this extends to social as well as to economic ideologies, as cartels of social philosophers similarly profit from the claim that their insights inspire wholesale improvements in the policies generated by an alleged political over-sensitivity to narrow special interests.

B. Guilds (Chapter 3, Introduction and Part II)

Guilds are politically active, entry-restrictive, producer associations. Economists have traditionally argued that these political interest groups produce substantially monopolistic outputs. The first Western European guilds arose early in the dissolution of the Carolingian Empire and spread during the ensuing emergence of feudalism as an integral part of the small, investor-democratic, commercial enclaves that arose amid the violent, near-subsistence, living conditions of the 9th and 10th centuries. While feudal institutions were largely eliminated as a result of the political centralizations of the later Middle Ages, guilds actually strengthened during this period and did not systematically fall until the 18th and 19th centuries. While many authors have conceded the existence of a local defense function of the early guilds, they have also gone on to interpret the continued expansion of guild power during these later Middle Age and Early Modern centralizations as the result of the entrenchment of monopolist special interests.

However, these authors, historians as well as economists, have failed to deal with the fact that maximum prices and minimum quality restrictions imposed on the guilds largely eliminated their short-term monopoly power. (Under the standard theory of guilds, *both* consumers and the producers would have been better-off by replacing the anti-monopolistic price regulations and pro-monopolistic entry restrictions with output taxes, thereby generating the same outputs at lower total costs because of the improvements in factor proportions and reductions in administrative expenses.) These authors also fail to deal with the fact that royal towns, those organized to serve kings rather than local lords, adopted the same set of entry-restrictive guild regulations. It would seem highly imprudent, even if possible, to conspire to impose locally monopolistic prices upon one's king.

An alternative, non-monopoly, theory explaining the above anomalies recognizes the defense externality that each town investor imposes on the others. This theory implies, in the realistic absence of substantial peacetime local taxation, the efficiency of capital restrictions because there would otherwise be an excessive laissez faire accumulation of coveted capital. A complementary, wartime, aspect of this theory has guilds making substantial wartime sacrifices for the collective defense of their states.[6] This defense-oriented theory, which is shown to be capable of explaining the structure of historical guild institutions on a worldwide basis, also explains a long series of historical observations telling us that whenever, under the influence of one or another anti-guild ideology, Medieval democracies instituted anti-guild "reforms," they promptly succumbed to foreign aggressors. This historical pattern dramatically contradicts the inefficient-monopoly theory while supporting our own, defense-oriented, efficient government, theory. The first realization of this pattern beyond the Middle Ages occurred in Holland, Europe's first modern national democracy, whose meteoric rise to economic dominance had, by the 1660's, produced the West's first anti-regulatory economic ideology, one inspired by the internal laissez faire theories of Pieter de la Court. The corresponding attack on Holland's provincial craft guilds so disenchanted these previous defenders of the state that Holland was over-run by its neighbors by 1672 and spent the following two centuries as an effective dependent of France and England. Holland did have a national bank that might have helped her leaders finance an effective defense anyway, but its paper money supply was strictly limited by its asset base so that the bank offered no substantial financial flexibility during a national emergency.

Poorer, much more legislatively pragmatic, England, who soon thereafter established the second modern national democracy and similarly began to take off, waited for almost 40 years before she, too, abandoned her guilds. During these years, starting in 1695, England established a national bank that gave its flexible paper money supply value by guaranteeing to redeem each monetary unit for a fixed quantity of gold except during national emergencies, during which time such payments were suspended and the paper money supply expanded to finance the emergency. As Parliament became accustomed to legislating the painful post-war tax increases sufficient to restore post-war conversions, it soon recognized that bond financing provided a less painful and intergenerationally more equitable process, both during and after wars. Interest rates on these novel long-term bonds soon became remarkably low because it was soon understood that resuming payments assured English bond investors of a fixed long-term real interest rate in terms of gold. English war finance became the envy of Europe by the late 1720's. The emergency support function of guilds was then superfluous. And, with (1) national income taxes easier to administer than a system of emergency local guild levies combined with local guild entry restrictions and (2) the guild function of protecting local rents from the exactions of local bureaucrats no long a problem because of the highly law-respecting character of the new class of trained Protestant bureaucrats that arose soon after the Reformation, English guilds withered and died in the 1730's. Parliament somehow correctly perceived that English guilds had outlived their last vestige of social usefulness and could be replaced by simple income taxes. The same pattern repeats itself throughout the late 18th and 19th centuries: States captured by the re-emergent laissez faire ideology of the "Enlightenment" and thus prematurely attacking guild regulations promptly suffered military disasters, while states remaining quite pragmatic and eliminating guilds only after instituting gold standards subsequently experienced impressive economic growth.

C. Tariffs (Chapter 3, Introduction and Part III, and Chapter 5)

The defense-externality rationalizing guild entry restrictions and their policy successors (viz., national income taxes) also apply to a country's imports of coveted consumer durables. (While the same argument rationalizes a tax on the country's domestic production of coveted consumer durables, the fact that the latter goods are generally tailored to local markets and thereby induce more local monopoly means that there is already an implicit tax on the consumers of these goods. Hence, rather than a tax on the sales of all coveted consumer durables, governments should, and do, concentrate such taxes on imports.) These import fees should be particularly high when: (1) there are price controls on the goods during national emergencies, which excessively discourage the domestic peacetime accumulators of the capital that produces such goods; and (2) the country's social structure is "brutocratic," meaning that its underlying military leadership has been determined by an extended contest among many adversaries, in which case the eventual leader will be the biggest "brute," the one most willing and able to inflict pain on his adversaries. As elaborated in Section V.B below, such leaders are persistently threatened by several oppressed alternative ruling families, extended families that are kept in line only by the leader's cruelty. Early mercantile states in the Early Modern period, when Continental nation states were solidifying their federations, were largely brutocracies and hence called for extremely high protective tariffs on coveted consumer durables. Such efficiently high tariffs were indeed a remarkable feature of the era of "Classical Mercantilism."

The same 18th century Enlightenment ideology that prematurely eliminated guilds also led to widespread tariff eliminations. Previously legislatively pragmatic France, for example, was being increasingly ideologized by an "enlightened" court bureaucracy that attacked both guilds and tariffs immediately prior to the Revolution. The Revolution was initially, quite appropriately, directed against this ideologized bureaucracy. However, the bureaucracy gained the upper hand and France was subjected to an additional 80 years of laissez-faire-oriented rule until France's humiliating loss to an unfashionably "unenlightened" Prussia in 1870 finally generated an effective democratic revolution. The result, of course, was a final restoration of high tariffs, a gold standard, and rapid industrialization. Classical economics being the understandable villain in the story, the new schools of economists arising from the rubble were fashionably anti-classical. However, since the underlying defect in the classical model (its implicit treatment of national defense as a simple collective good and corresponding neglect of the above-described defense externalities) was not uncovered, they understandably resurrected the old school, thereby warranting their new label, "Neoclassical Economists."

Correspondingly, Austria and England, the respectively dominant states in Western and Eastern Europe and thus in European economic theory, were the only countries sufficiently enchanted by laissez-faire ideology to maintain free-trade policies up to WWI. This post-Classical "Liberal" ideology had to somehow ignore the increased national defense burden that objective thinkers, at least subconsciously, would have understood to result from of greater stocks of consumer durables. To ignore this effect, the new, modern, "Liberalism," treated war as "irrational," in which case the "rational defense expenditures" used in our theory are oxymoronic. (The book contains, in Section II.D.4 of Chapter 3, a simple theory of rational war, in which various wars in history are subsequently explained as the entirely predictable result of information differences that persist for very long periods of time because of the objectivity-eliminating effect of ideology.) So, returning to our story, the pragmatic neighbors of Austria and England, observing the insufficient defense preparations of these two imperial leaders, attacked them or their allies in the rational expectation of an insufficiently aggressive initial counterattack. The same pattern repeatedly infected these ideologized states throughout the 20th century. Nevertheless, WWII, which replaced European imperial domination of the West with US domination, must be more specifically laid at the feet of Keynesian ideology. Since this latter ideology is at the heart of almost all modern macroeconomic thought, we had better explain ourselves before returning to the topic of tariffs from the end of WWI to the current day.

D. The Gold Standard (Chapter 4 and Section II.D.5.c of Chapter 3)

From its inception, the gold standard (again, following the English model, a monetary system offering the free peacetime convertibility of paper money into a precious metal at an intertemporally fixed price) also allowed the state's central authorities to suspend gold payments during military emergencies. Once the emergency was over and the legal conditions excusing the suspension of payments no longer applied, Common law judges could be expected to enforce the original contract between the protection-requiring holders of paper money and the state. This legal protection was part of the "rights of man" that, although not the least bit "natural," laid at the foundation of the pioneering English democracy.

The advantage of a gold standard over other monetary systems, other than its statical efficiency, lies in its ability to finance emergencies. An increase in the wartime money supply, while bidding up wartime prices, increases the expected deflation to the future peacetime period when full convertibility will be restored and the price level returned to its normal, pre-war, level. While the expanded wartime money supply increases employment on the given capital stock and thereby somewhat increases the real profit rate, the higher expected rate of postwar deflation means that the relevant wartime money rates of interest will fall. This is important because it means the monetary expansion will increase the real money supply and thereby the government's wartime purchasing power. With every unexpected wartime monetary expansion thereby expanding the government's purchasing power, the government's expected potential wartime purchasing power is limited only by its future taxation power, such taxation being required in order to retire the abnormal wartime monetary issue. As pointed out above, such authoritarian wartime real monetary expansions are vital to effective democracies, whose legislatures are too rational to execute the commitment necessary to maintain their states in the face of broadly rational threats from potential aggressors.

In alternative, inconvertible, monetary systems, increases in the wartime money supply do not create a rational expectation of a post-war fall in prices. With rationally expected inflation rates thereby unaffected, real and nominal interest rates rise in response increases in the money supply, which means that the government's purchasing power from money falls during defensive emergencies. Since the real money supply is typically a small fraction of the state's real wealth, being seldom greater than 1% of the state's real wealth, the government cannot hope to raise more than a disappointing 1% of its real wealth through even the most extreme of wartime monetary expansions.

The resulting weakness of inconvertible monetary systems relative to the gold standards in providing emergency financial aid to democratic authorities has never been appreciated by economists. Keynes and his followers have so distorted the theory of capital that they have been led to the dangerously erroneous belief that monetary expansions lower real and nominal interest rates. A correct explanation of the "Gibson paradox" [the observation that interest rates rise and fall with output over normal (demand-side) business cycles] is not, as Keynes was forced to argue, that business cycles are all caused by real rather than monetary shocks. What is true instead is that monetary shocks have caused many business cycles but that a capital-theoretically correct macroeconomic model has real interest respectively increasing and decreasing with increases and decreases in the money supply.

The dangerous error in Keynesian and modern macroeconomic thought is therefore the belief that emergency expansions in the money supply in an inconvertible monetary system will increase the purchasing power of money. Such a belief is not only theoretically and empirically erroneous; it leads economists to fail to see that a gold standard or related form of convertible money was vital to the survival of Pre-WWII democratic states, which did not enjoy the protection afforded by a nuclear defense system. It correspondingly leads economists to fail to appreciate the critical social function of the postwar depressions that were a regular feature of guild-free democratic nations prior to WWII. Without postwar deflations, these democracies would never have been able to finance their emergencies. They, like the democratic government of late 17th century Holland, would never would have survived. In the same way, modern economists have failed to appreciate the analogous demand by third-world countries for institutions enabling them to credibly fix their exchange rates over extended periods of time.

Thus, when Keynes and his early followers led Britain, and soon the rest of Western Europe, to abandon the gold standard in the early-mid 1930's, these democracies were stripped of a vital institution and left for the gold-standard-retaining, less ideologically impaired, US to defend them against fascist aggression.

IV. IMPLICATIONS OF THE HISTORICAL PROCESS

A. The Powerful Efficiencies of Effective Democracy

(Appendix A.1; Chapter 2, Parts I.B and I.C; and Part I of Chapter 3)

One lesson of the above institutional histories is that the wealthiest states in any civilization have their peacetime regulations determined by democratic legislatures rather than an authoritarian legislative process. The competing city-states of Classical Greece, the Roman Republic, Byzantium, the early Medieval towns of Western Europe, the later Medieval city-states, the emerging nation states of the Early Modern period – all the great economic success stories of their day – were organized and run by cooperating representatives of various significant investors rather than authoritarian philosopher-kings. Special interest negotiations and correspondingly ad hoc business regulations, although entailing rent-seeking and related political process costs, somehow eliminate laissez-faire inefficiencies.

Appendix A.1 of the book develops a theory of investor interaction in which a new economic force, called "potential cooperation," generates unique, severely Pareto inefficient, under-investment equilibria. Consider, for example, a state containing a potential mine, a potential port, and a potential road connecting the mine with the port, each with its own distinct property owner. Each of the investments is highly profitable if the other two are in place. If the costs of investor cooperation were exceptionally low, the three property owners would jointly agree to profitably develop their properties. If the costs of cooperation were exceptionally high, the owners would independently develop their properties and a similarly substantial level of economic development would occur. For the first investor knows that, if she invests, the second will follow because he knows that, once the first and second investments are in place, the third investor will surely follow suit. However, the existence of *intermediate* cooperation costs necessarily induces severe industrial conflict: For, under intermediate cooperation costs, once, say, any two of the investments are made, the third investor will demand payment from the others for the favor of providing his final necessary input into the investment sequence. Recognizing this threat of "potential cooperation," which necessarily creates sufficient costs to make at least one of the other investors' profits negative, the other investments will not be made and the state will remain underdeveloped.

What democracy offers these unsatisfied potential investors is a shortcut, a method of partial initial cooperation that anticipates industrial conflict and acts to prevent it through various regulatory schemes. Thus, for example, the port and mine owner could cooperate in passing a law that nationalized the road, thereby eliminating the future cooperation whose associated future bargaining costs would otherwise destroy the profitability of their potential investments. Given the costs of various political associations, the existence and efficiency of the resulting democratic equilibrium is easily demonstrated.

This efficiency conclusion, however, requires objectivity on the part of the political participants. A social or economic ideology will, as described above, bias political calculations regarding the benefits stemming from various policies and thereby generate an inefficient outcome. Similarly, an ideologized bureaucracy, by failing to enforce seemingly irrational or unethical legislative enactments, will similarly imply inefficient outcomes. An ethic, which we call "civil reverence," enables government officials to avoid succumbing to these distractions and thereby immunizes the state against these perversions of the democratic process. Indeed, our historical study reveals that only civilly reverent states are effective in exploiting the enormous economic potential offered by democratic processes.

Modern style, popular democracy – although contributing a growth dynamic of its own (see note 2 below) – arises only when states must compete for people, as argued above. Democratic rights in an efficiency-generating state may be restricted to significant property owners. The recent, globalization-based, distributional trend discussed above is thus leading the US not to authoritarian rule but to the aristocratic democracy that it possessed prior to the late 1820's. However, the US's predictable Post WWII ideologization is also, as in the other dominant states in history, generating increasingly inefficient economic policies.

B. Vital Institutions (Part I of Chapter 2)

Consider a given "state," a self-defended society whose ruling class lives substantially above subsistence. Collective defense is "vital" for that state because the state will soon perish if collective defense is insufficiently supplied. Effective democracies have a problem in providing such defense because such polities act as rational maximizers. As emphasized in Section III above, such rationality makes it generally impossible to establish a defense commitment because a rational response to a foreign commitment to acquire some of the state's property is to conciliate, in which case the state will soon lose all its property to a sequence of broadly rational aggressors. Guilds and the gold standard were *vital* to the effective democracies they supported because they greatly facilitated authoritarian over-rides to democratic decision-making during military emergencies.

Economic ideology has induced modern intellectuals to join their earlier brethren in ignoring the fact that the highly successful, effectively democratic, states of the past would never have succeeded had states not evolved methods of overcoming the fundamental time-consistency, or defense-commitment problem, faced by these states. An ancient ideological failure, applied to contemporaneous coinage systems, similarly accounts for earlier collapses of dominant ancient democracies. All of this leads us to the belief that a long-term evolutionary process is at work, one in which ideology is quite endogenous. But there is more to this process than economic ideology and a simple civilization cycle.

C. The Evolutionary Model (Chapter 1, Chapter 2, Part 1, and Chapter 6)

1. Individual Strategies: Pascalian Rationality (Chapter 2, Part I.C.3). The static equilibrium model discussed in II.C above has individuals in each slot in the social hierarchy choosing (generally with the help of their parents) educations enabling them to adopt broadly rational exaggerations and, correspondingly, profit-maximizing reaction functions. However, a possibly quite lengthy, multiple-institution-creating, dynamic process is at work to generate any such social equilibrium, a process in which principles of imitation and Darwinian natural selection are the central dynamic forces.

The individuals in such a process cannot be realistically assumed to know much about the consequences of their reactions to other people, or even the effects of their education on their subsequent reactions. The only aspect of their thought process that can be relied upon is their education-enhanced human nature, their education-enhanced intuitive reactions to the behaviors of others in their environment. Yet, in most cases, our evolutionary model does not require more than this. For if a particular type of person, including educational background in the type, generates a lower payoff than another type, evolution will select toward the higher-payoff type. All that is required is a kind of constancy supplied by human nature, which supplies the individual with a given intuition and a complete sensitivity to differing educational systems. The society receives messages with respect to each type's productivity in a given hierarchical function and acts so as to encourage high-payoff types and discourage low-payoff types. The only semblance of rationality that our model requires involves vital institutions. Our hierarchical leaders must be able to perceive a threat to their society and appropriately respond. Since the payoffs, both private and social, are so high to the individual's getting it right, it is appropriate to allow rational choice in these cases.

We call the largely intuitive, but sometimes consciously rational, kind of individual appropriate to our evolutionary model "Pascalian." Pascal, of course, was famous for his faith in natural intuition and yet, when critically important issues were at stake, switched to a consciously rational mode of thought. When an ideology has interfered with a decision-maker's thought and naturally objective learning process, that decision-maker is no longer Pascalian.

2. Convergence Theorems, and Optimal Policies (Chapter 1, Parts V-XI, Chapter 2, Part I, and Chapter 6).

(a) Existence and efficiency results: Our central evolutionary results concern the relationship between the above evolutionary process and the static equilibrium discussed in II.C above. The first builds upon a well know convergence result appearing in modern evolutionary game theory. It is that, under objective learning, the evolutionary process converges to a static equilibrium. In our social hierarchical social interaction, this is the unique equilibrium described in Section II.C above. The distributional and efficiency results of the static model thus hold in an evolutionary framework. The speed to convergence is so slow in conventional evolutionary game models that they are seldom taken seriously. The static equilibrium will typically shift much faster than it is being approached. What makes our process fast, and thus the model realistic, is harsh natural selection, the business-style pressure towards rapid extinction introduced by the presence of vital institutions. Either the state gets these institutions right or it is soon replaced.

Secondly, under non-objective learning, the evolutionary process will also approach a quasi-long-run equilibrium, but that equilibrium is not efficient

In particular, in response to the vital-institution-attacking social and economic ideologies discussed above, a type of long-term equilibrium is reached when a civilizational empire is formed, a hegemonic state that assets military dominance over its generally-once-dominant inferiors. The lack of military competition among states in this imperial civilization implies, besides convergence to an inefficient static quasi-long-run equilibrium, a highly inegalitarian income distribution in its quasi-long-run equilibrium. The ancient Egyptian, Chinese and Roman Empires are early examples. The Byzantine, Frankish and Muslim empires appear later. All these empires display this quasi-stable, inegalitarian tendency. The recent, US-centered, "globalized" empire discussed in Section I above is also an example. But, eventually, referring to the previous empires, the economic and social ideologies of these states had so deteriorated the efficiency and defensiblity of the states that what had been insignificant border-states rose to overtake them.

(b) A new evolutionary principle: In the presence of mobile parasites or predators, long-run survival requires organisms to have re-evolved to where they benefit from their mobile parasites and predators. Absent such symbioses, the constant evolutionary wars between an organism and its enemies mean that, eventually, the organism will lose a war and become extinct. Plants, for example, have existed for over a billion years because they re-evolved to benefit from the existence of their mobile parasites (animals).

This evolutionary principle applies to states as well as organisms. Thus, in the ancient world, when the various contradictory Greek philosophies, each of which individually represented a society-threatening ideology, came to be all taught together in Western academies, the effect on students was to artificially broaden their minds, to lead students to exaggerate the likelihood of unlikely hypotheses. This Hellenistic education survives today in Western Universities and produces highly civilly reverent and flexible middle-level bureaucrats and managers, individuals who do not become wed to old or personally formulated ways of doing things, even when these ways are narrowly rational for the firm, because of the coordination, flexibility, and collective commitment demanded of an effective organization. But such "liberal arts" training similarly prepares individuals for advanced training in the professions, including economics, leading them to flexibly accept sometimes anti-social team-goals and the ideologies of their profession.

In any case, modern society has yet to re-evolve so as to benefit from the ideas of its professionally trained social and economic intellectuals. While the book's policy recommendation is an attempt at hastening such a practical re-evolution, a first-best solution to the ideology problem awaits a more idealistic future volume, one whose policies attempt to eliminate ideologies at their roots.

(c) Growth-enhancing ideologies: Political and legal ideologies have not worked to attack the vital institutions of their societies. While still generating inefficient evolutionary equilibria, these ideologies create no self-corrective tendency. Evolution does not work to reduce the costly features of these ideologies the way it works to reduce the frequency with which economic ideologies are held. Indeed, the most evolutionary successful of these "deeply rooted" political and legal ideologies substantially *enhance* social survivability at the same time that they deteriorate economic efficiency. As a result, modern political and legal institutions can be traced back to evolutionarily successful ideological innovations that arose over 2000 years ago and are now, unfortunately, considered part of the bedrock of modern civilization. The volume under discussion takes as given these political and legal ideologies and their corresponding inefficiencies. Convincing readers of the grossly inefficient character of these institutions, and of the practical nature of the institutional reforms that ideally respond to these inefficiencies, is no mean feat. We therefore hold off, for a separate and subsequent volume, the consideration of these ideal reforms. Not surprisingly, the reforms also apply to the first-best elimination of the inefficiencies resulting from economic ideology, an ideology extending well beyond the vital-institution-threatening ideologies dealt-with in the volume under discussion.

3. How Vital Institutions, and Vital Organs, Evolve (Chapter 2, Part I)

(a) A perplexing question: A basic question that immediately arises in our general topic is, how can a society ever evolve a vital institution? Or, considering the same question on the biological level, how can an organism ever evolve a new organ that is vital to its existence? In other words, our perplexing question is: "If a new institution or organ is truly vital, how can its society or organism ever have survived without it?"

The pre-existing, *ad hoc*, answer in biology is that the vital organ began as non-vital, but then gradually become vital as the organism came to increasingly depend on it. However, such an answer requires us to view earlier organisms as more versatile and robust than later ones, which become gradually more and more fragile. There is little evidence to support this generalization. Moreover, as regards the specific evolutionary patterns examined in the book, whose actual histories are quite well known, this *ad hoc* argument is simply incorrect.

An alternative, co-evolutionary, answer to our perplexing question, one consistent with observed evolutionary patterns, has *the society or organism quickly co-evolve both a new, non-vital element and a new, complementary, vital element.*

(b) The co-evolutionary answer for territorial societies or organisms: Regarding the above-subsistence societies that represent our central concern, one should expect one institutional change to come somewhat before the other. In particular, assume that the non-vital reform occurs first. Learning from the sufficiently impressive – albeit short-lived – successes of experimenting states plausibly leads other experimenting states to attempt to *durably* achieve the higher level of efficiency by complementing their own introduction of the new non-vital institution with additional institutional innovations. In this way, the partial imitators hopefully enable the new, necessarily-much-more-efficient, non-vital institution to survive. Where historical observations are present, this evolutionary pattern is indeed observed.

The strong empirical implication – that newly evolved non-vital institutions are *substantially more efficient* than the institutions that precede them – holds because democracy, our central non-vital institution, is indeed significantly more efficient than authoritarian government. Given our above-described underdevelopment-trap and democracy models, this is the theoretical expectation as well as the historical reality.

The above evolutionary pattern is not observed in nature. This is theoretically expected because new genes cannot be expected to emerge from the favorable experiences of others genes. Thus, consider territorial organisms, who, for slightly over 500 million years now, have been able to escape their Malthusian traps and live above-subsistence, Ricardian, lives. If one such organism had developed a new, non-vital, organ, one that had temporarily allowed the organism to live a more secure life but also required the complement of a new vital organ in order to survive to reproduction, its life experience would not have induced other organisms to experiment with new organs despite its impressive temporary success. Remarkably then, the eyes, ears, noses, heart, lungs, limbs, digestive systems, adaptive immune systems, etc, that characterize modern territorial animals also characterized such animals 500 million years ago. No new vital organs have evolved among these above-subsistence animals.

(c) The co-evolutionary answer for non-territorial societies or organisms: Regarding non-territorial organisms or states, our co-evolutionary answer takes on a completely different form. Here, with the organisms unable to collect Ricardian rent, population naturally grows on the limited supply of land as genetic success is enhanced with larger family sizes until all organisms are driven to subsistence. Endogenous Malthusian competition thus drives all organisms to a subsistence equilibrium, wherein *all helpful organs are vital*. The same holds for zero-profit, Alchianian equilibria, where each productive input must be efficiently utilized or else the firm cannot survive its long-run competition with other firms. The same holds for peaceful states who must compete for all of their resources.

A distinguishing feature of such equilibria is the relatively enormous returns they offer to significantly cost-reducing innovations. Here, a cost-reducing mutation will enable the mutated family to expand to a larger size, thereby increasing the cost of living and reducing the sizes of the non-mutated families, which allows for a further expansion in the size of the mutated family. For significant innovations, the mutated family will find the entire niche available to repopulate with its own kind. Such significant innovations in nature occur through experimental re-designs of an original form, designs of the sort emphasized by Lamarck. These re-designs occur through a partnership process such as the phagocytosis ("cellular eating") that formed nucleated cells out of primitive bacteria and such as the subsequent emergence of meiotic cell division, which resulted in sexual reproduction and the resulting hybridization of offspring. Within given niches, the lower cost-of-living of the mutated family meant a crowding-out and rapid replacement of the original organism. Hence, once nucleated cells and the microbiological basis for sexual reproduction were established around 900 million years ago, a phenomenally high rate of cost-reducing biological innovation occurred. Virtually all of the principles of macro-biological operation, all of the macro-biological organs that we now regard as vital, were evolved over the following 400 million years, after which territorial organisms began to appear.

In a territorial ecology, cost-reducing innovations create no gaping holes in the ecology to opportunistically fill, no new vital institutions, and only slow progress towards lower-cost organisms. Instead, territorial, or Ricardian, ecologies create relatively enormous returns to predation or parasitism, returns that are relatively small in non-territorial, Malthusian, ecologies.

Thus, after territorial organisms emerged around 500 million years ago, the direction of innovation rapidly switched from cost-reduction to aggression and defense. Surviving aggressors became better and better equipped to predate while others became better and better equipped to defend themselves. The notorious "red queen" treadmill thus arose in which organisms must run faster and faster merely to remain in the same place. As we have seen (in C.2.b of this Section), none of the involved organisms can achieve long-run survival in a sequence of these non-symbiotic, predator-prey, temporary evolutionary equilibria.

Territorial societies incur analogously wasteful arms races. Empires avoid such races, but have eventually, predictably, fallen via economic ideologization. An efficient long-run equilibrium through a world empire is possible, but requires a constitutionally constrained, de-ideologized, federation of peacefully competing states. This competition places a type of Malthusian pressure on inefficient states. The social-evolutionary analogue to the extremely rapid rate of cost-reducing innovation of non-territorial organisms occurs when states, like the early American Colonies, form their institutions by peacefully competing for all of their resources.

V. MODERN INTERNATIONAL INSTITUTIONS (Chapter 5)

A. The Initiating War Shocks: New Forms of Dependency (Introduction)

Both WWI and WWII showed the leading combatants the immense cost of competitive imperialism. The vague defense commitments that the competing imperialists had established to protect their colonies inevitably led to enormously expensive challenges, seriously costly tests of these old commitments by various late-comers to the imperialization process. The pragmatic response of the imperialists was to substantially free their old colonies while correspondingly shifting most of the defense responsibilities to them. These fledgling, still partially dependent, nations – at least to the extent that they were going to take advantage of the efficiency-enhancing effects of democracy – required the emergency-financial advantages of some form of gold standard in order to defend themselves. Such vital institutions were soon formalized for third-world countries by adopting the international gold standard created at Bretton Woods in 1944. And even after this gold standard was dismantled in the early 1970's (soon after Europe had joined the US in being protected by nuclear weapons), the International Monetary Fund (IMF) offered the partially dependent third-world nations emergency loans in order to facilitate the unilateral fixing of the exchange rates by third-world countries. To the extent that these financial policies provided a post-emergency country with a sufficient incentive to return toward its pre-emergency price level, the same emergency financial benefits could be achieved as under a gold standard.

The price of this emergency financial aid to the new, partially dependent, nations has largely been their acceptance of the artificially low tariff policies imposed, under the threat of the imposition of retaliatory tariffs, first through the Treaty of Versailles, then by the General Agreement on Tariffs and Trade, and finally by their successor organization, the WTO.

Now different countries have had significantly different requirements for defense-assistance, significantly different degrees of dependency on the dominant countries. The degree of dependency of a dependent nation determines its efficient response to the Post WWI and WWII policy impositions of the dominant countries.

Before we discuss the differential responses of different countries depending on their degrees of dependency, we should explain how states also substantially differ according to the magnitudes of their defense externalities.

B. **Brutocracy** (Part I.B)

An important generalization of the social theory described in Section II above has the leader endogenously determined. In particular, if there are very few contestants, then the rational winner adopts values of benevolence towards rivals in order to reduce their resistance to his or her leadership. It is similarly rational for the rivals to adopt values of respect for the leader, or "civil reverence," in order to maintain their favored positions in the social hierarchy. If, however, there are many contestants, many extended families, competing for social leadership, the winning leader cannot afford to be generous to all rivals in the ensuing equilibrium. In this case, as noted in III.C above, the winner is the person who adopts the cruelest values, the greatest psychological willingness to physically punish alternative leaders for small transgressions. The latter, "brutocratic," sort of society can be empirically identified by political imprisonment and torture as well as by the conditions that generate such an outcome, an extended historical contest for leadership among numerous families or regions in a series of frail confederations.

Brutocracy generally creates high defense externalities because capital accumulation by members of the favored ruling class threatens the existing leader with a coup or revolution by any one of the many disaffected extended families suppressed by the existing ruler. Additional national defense expenditures must be provided to defend against these internal threats against capital in brutocratic countries. So efficient income tax rates in such countries are abnormally high. So are tariffs. Thus, for example, the Early Nation-State period, the 15th through the 17th century, saw not only a great escalation of political torture and brutality to accompany the construction of the new nation-states; it also saw extremely high domestic regulation and tariffs, i.e., efficient mercantilism.

Brutocracy, which similarly characterizes most third-world countries, is a substantial economic liability. This is not only because it entails higher defense costs and thus taxation. It also breeds civil irreverence and corrupt bureaucracies that militate against effective democracy and hence the elimination of underdevelopment traps.

C. Exchange Controls: An Initially Optimal Response to Externally Imposed Trade Liberalization (Part I.C and I.D)

A dependent country can entirely avoid the undesirable domestic consequences of an elimination of its optimal tariffs by overvaluing its exchange rate. The resulting excess demand of imports over exports is then cleared by rationing the limited supply of foreign currency among the competing potential importers so as to effect, say through import licence fees, an equivalent to the original tariff system. Thus, following the introduction of the "Versailles System" imposing artificially low tariffs on the losers of WWI, we saw the then-unprecedented phenomenon of peacetime exchange controls immediately arise within these dependent countries.

This has, in fact been the almost universal policy-response to externally imposed trade liberalization observed in all countries that we will come to call "third-order dependencies." If no further policy response is forthcoming from the dominant countries, there is simply no significant effect of their attempt to encourage trade. Policy responses by the dominant countries are therefore quite inevitable.

Before demonstrating the inevitability of these policy responses, and their costly consequences for third-order dependencies, which are discussed at length in Chapter V, we should examine the effects of externally imposed trade liberalization on countries with some other orders of dependency.

D. The Final Consequences of Extenally Imposed Trade Liberalization

1. First-Order Dependency and Hyper-Repression (Part I.E). This is our simplest case. Here, the country, like the typical Central American country, is so dependent on the dominant countries that it cannot independently choose its own legislators. Acquiescence to the WTO's free-trade laws is therefore relatively complete. Exchange controls become quite weak in such states despite their generally brutocratic nature. Political repression is necessary, not only to prevent the various interest groups in the state from working to subvert the desired policies of the dominant countries, but also because the additional capital claims inefficiently accumulated by such countries can only be protected by such hyper-repression.

Dependent countries who are more independent than first-order dependents are able to choose their own leaders and, with some exceptions, their own economic policies. Critical here is the country's ability to adopt substantial exchange controls in response to an external imposition of free trade.

2. Second-Order Dependency and Hyper-Savings (Part I.F). Unlike first-order dependencies, a "second-order dependent" is able to freely choose its own leader and is therefore neither a puppet nor a policy-slave of a dominant country. Nevertheless, the second-order dependent is so dependent on the dominant countries that it is explicitly prevented from employing exchange controls. The second-order dependent must therefore respond in a unique way to an externally imposed elimination of its tariffs.

In particular, rather than restricting imports by overvaluing its currency in order to create an artificial domestic shortage of foreign currency, a second-order dependent creates an artificial scarcity of foreign currency and thereby restricts imports by artificially importing non-coveted capital. An artificial government demand for foreign currency creates an *artificially cheap* domestic currency and corresponding export boom. And the associated artificial accumulation of foreign capital creates artificially high.savings and temporary growth rates.

While the "economic miracles" induced by this policy (think Japan, Germany, and the "Baby Tigers") substantially suffer from a grossly excessive degree of consumptive sacrifice, the beneficiaries are the dominant countries, who receive an unambiguous terms-of-trade benefit from this policy response. The only way we can rationalize this policy imposition, at least for Germany and Japan, is to view it as a generationally directed form of punishment for WWII aggression.

3. ***Third-Order Dependency and Hyperinflation*** (Parts II-IV). While, *cet. par.*, a third-order dependent efficiently employs exchange controls in order to avoid the excessive importation of consumer durables occasioned by the external imposition of artificially low tariffs, we have already noted that dominant countries will react to this subversion of their policy intentions. In particular, the IMF insists on a devaluation to a realistic, market-clearing, exchange rate; otherwise, the dependent will not receive its upcoming IMF loan extension (or IMF line of credit). The third-order dependent has little choice but to submit and devalue.

However, these countries still have a way to prevent a corresponding increase in trade. They can increase their money supplies. Given their fixed exchange rates, this will enable them to return, at least temporarily, to an overvalued exchange rate and an optimally trade-restricted, equilibrium. Since the countries have, during the times that elapse between their devaluations and the approvals of their loan extensions, imported more goods than intended, their monetary inflations must exceed their devaluations if they are to move towards a restoration of their optimal stocks of consumer durables. So the IMF must, to achieve its goal of free trade, then insist on an even larger percentage devaluation than its original one. The dependent countries then again inflate, only at a larger rate than before.

The process of hyperinflation is thus underway. As the costs of inflation begin to bite, many countries will decide that the inflation costs are not worth the requested increase in trade. They will relent, accepting the unwanted increase in trade imposed on them by the WTO and IMF. However, countries with exceptionally high defense externalities will continue to increase their price levels, optimally bearing the costs of hyperinflation in order to work towards a restoration of their desired trade restrictions during those time intervals that they have inflated their price levels and the IMF insists on its next devaluation. The final equilibrium rate of inflation is achieved when the country's cost of inflation is so high that it ceases expanding the money supply at a rate that exceeds the IMF devaluation requests. At this point, the third-order dependencies will have acceded to the IMF desire for free trade during the time intervals between their devaluations and the IMF loan approvals and reduced its imports to its own statically desired levels during the time intervals between its loan approval and the next IMF-imposed devaluation.

The resulting theory of hyperinflation was tested by regressing inflation rates for almost all countries over certain 3-year intervals of the 1970-1990 period against various certain variables that pick up alternative theories and an interaction term reflecting both IMF membership and the extent of a country's exchange controls. The interaction term was, for all three of the episodes tested, the most significant of the many variables, with t-statistics of around 10. Alternatively, plotting inflation against exchange controls for non-IMF members for each of the episodes, there was essentially no relationship, a horizontal line fit the data because no cases of hyperinflation arose among non-IMF members. In contrast, the same plot for IMF members consistently produced an obviously tight positive relationship, showing how IMF members who were substantially forced by GATT restrictions to adopt extremely overvalued currencies and thus extensive exchange control systems were virtually certain to experience hyperinflation.

4. Fourth-Order Dependency and Costly Social Revolution (Part I.G).

A fourth-order dependent has sufficient potential independence to possibly avoid the above-described costs by operating independently of the international agencies. Such states may have a strong religious ideology enabling them to defend themselves without the aid of Western institutions. This occurs in the Middle East. Elsewhere, however, the process of acquiring independence is more difficult. What is generally required is an experience-based reaction against laissez faire ideology. The initiating reactions occur in brutocracies, where the cost of laissez faire ideology is the greatest. Initially, with the introduction of laissez faire ideology, historic trade barriers fall. The resulting excess accumulation of capital soon means that the nation, although militarily strong enough to defend itself against external take-over, can no longer defend itself against alternative internal ruling groups. The revolution comes from those who fail to benefit from the excessive accumulation of real capital, i.e., from a coalition of disaffected segments of the ruling class and an army of perennially oppressed masses. An anti-trade ideology is necessary to combat the initiating ideology and motivate the masses by arming them with both a sense of injustice and an over-optimistic estimate of the personal benefits from a new regime.

Marxism fills the bill very nicely. However, once the costly social revolution is achieved, the reality sets in that communism is at least as costly a peacetime economic ideology as laissez faire. These reactions predictably occurred first in Russia and China. Once in place, Russia and China began to subsidize costly social revolution in other, previously third-order, brutocratic dependencies. The revolutions in these other countries could therefore be more pragmatic and, although costly, less likely to lead to the disasters of extreme communism.

E. **Conclusion** (Part VI)

We thus find that virtually all of the unique economic phenomena arising soon after the ends of WWI and WWII are attributable to the ideologically inspired attempt to impose free trade on the many dependent nations arising after those wars. Peacetime exchange controls were unknown prior to the end of WWI. Yet they were immediately adopted by the dependent states arising at that time. Hyperinflation and costly social revolution were the predictable, and remarkably rapid, final responses in the countries in which they emerged. Hyper-repression was not far behind in the appropriate states. Also, after WWII, when the US simply denied the ability to adopt exchange controls to highly dependent countries, hyper-savings was induced. All these historically unique economic phenomena and their accompanying institutions, and small socialist economies as well, although quite unfortunate from the standpoint of world efficiency, were nationally efficient responses to the ideologically inspired international institutions set up after WWI.

Once the derivative Cold War emerged after WWII, free-trade ideology may have been an effective tool in attracting allies to the West given the analogous exaggerations being promoted by the

East. However, since end of the Cold War, when the failure of Marxist ideology had become so apparent to the nations of the world, there has been little point to exaggerate the benefits of free-trade in order to induce countries to subtly benefit the US by various terms-of- trade effects. More straightforward rent-collection is in order. The only transaction that appears natural is to have the dependent countries grant explicit administrative control of the United Nations to the world's most militarily powerful nation, currently the United States, in exchange for an Articles-of-Confederation type of constitution, one guaranteeing policy independence to the third-world countries and careful regulation of the world's international agencies. Such regulation would isolate freer-trade agreements to situations in which large countries might gain by employing trade restriction to influence world prices. And economic ideology would be isolated to a few countries rather than infecting the entire world. The outcome would be a much more efficient, and politically stable, set of competing nations who allow a worldwide middle-class to flourish rather than degenerate into the dismal, "iron-law-of-wages," aristocracies from which we sprang.

ENDNOTES

1. Like the Napoleonic Wars, the American Civil War can be interpreted as an ultra-conservative attempt to retrain a system of entrapped labor despite the prospect of incurring the extraordinarily high cost of resisting neighboring polities that had begun to offer competitive wages for their workers. The enormous human costs of the Civil War reinforced the lesson of the Napoleonic wars and ushered in an era of unprecedented American populism and peace.

2. The induced-innovation cycle is as follows: The relatively inelastic, perhaps backward-bending, supply response of relatively skilled labor to the general increase in after-tax wages occasioned by an increase in the degree of international competition of states for people implies an increased relative wage of these relatively skilled workers. The consequently substantial increase in the cost of using skilled labor then abnormally increases the profit to implementing new technologies that save on this more expensive labor. As the new technologies are brought on line, there is an increased demand for both relatively unskilled labor and the class of skilled labor specific to the new technology and its complements. These latter wage-increases, combined with the continuing fall in the relative supply of skilled workers as the general wage level rises, soon then accumulate to where they induce another wave of skilled-labor-saving innovation, etc.,etc.

Another historically unusual aspect of the 90's boom is, as mentioned above, the absence of a substantially skilled-labor-saving character to the new technologies introduced during the boom. The above induced-innovation argument easily explains this because a unique feature of the late 80's and early 90's is the absence of any increase in the general after-tax wage level and therefore any increase in the relative wage of skilled laborers.

3. Although one might think that a related series of labor-using, capital-saving, technologies would characterize the future era of wage decreases, such an effect is bound to be small because a return to relative wages that are largely the same as those that were observed in the past means that the appropriate technologies have already been largely implemented.

4. When ordinary people are asked to make extraordinary military sacrifices during wartime, it is beneficial to the ruling class to compensate them with above-subsistence peacetime wages in order to maintain their morale and willingness to sacrifice for the military victory of their state. So peacetime wages are noticeably higher in states that defend themselves with citizen armies rather than professionals or mercenaries. Thus, for example, peacetime wages noticeable rose soon after the English Civil War, when the extent of citizen armies dramatically increased in Western Europe. And US peacetime wages actually began their fall immediately after the Vietnam War, when the military failure of ordinary civilian soldiers led to the US replacement of conscription with wholly professional armies. The reason that the discussion in the text above omits these historical observations is that, once military sacrifices are subtracted from a typical person's civilian wage, which should be done in order to compute the person's discounted average lifetime wage, it is not clear that these this latter, more appropriate, wage did, for example, rise after the English Civil War or fall after the Vietnam war.

5. Other cartel forms restrict entry, in which case the incentives to expand demand is greatly attenuated. There is much less need to create an artificial demand for a product when its members can artificially restrict the supply of members into the cartel. Empirical applications of this idea are discussed in a forthcoming volume.

6. The prospect of wartime taxation is not a sufficient deterrent to peacetime investment to obviate peacetime capital restrictions. For one thing, prior to the emergence of centralized defense systems and nation states, capital restrictions served largely to prevent the growth of large shops, which would have radically decreased the number of owner-controlled shops. This would have been very undesirable because each master was also a military officer, and apprentices, workers forced to live with their masters during their prime fighting years, required some personal monitoring and discipline during war threats.

More generally, the observed capital restrictions prevented free-riding by investors who could, by avoiding the use of immobile durable inputs, enter and exit in between wars.

Most generally, in equilibrium, the marginal cost of defense increases as a town's capital stock grows. The resulting surplus to the defense function then shows up as a positive profit to each shop in the optimum. Preventing over-entry then requires a peacetime capital restriction.

REFERENCES

Thompson, Earl A. and Faith, Roger L., "A Pure Theory of Social Institutions," **American Economic Review**, 71, June, 1981, pp 366 - 381.

Thompson, Earl A. and Hickson, Charles R., ***Ideology and the Evolution of Vital Institutions: Guilds, the Gold Standard, and Modern International Institutions,***
Kluwer, 2001.