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Evolutionary Realism and Historical Political Economy*

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Towards a Scientific Theory of Long-Run Historical Political Economy

As a project in itself and as a framework for comparative political economy of Australia and other settler societies, I'm trying to develop an evolutionary approach to the very long-run historical interconnection of economies, geopolitics, and civilizational cultures. Putting it another way, this paper and a series of linked papers reflects a struggle to define and ground successfully an evolutionary social theory and, consequently, provide a more plausible account of the complex global history of capitalism and its variants during the past half millennium. Capitalism is a historically and contingently developed specific form of socio-economic organization with a complex history of internal variation.¹ This may seem a simplistic statement of the obvious but, unfortunately, social enquiry in the past century has largely moved away from its roots in the 18th and 19th Centuries and earlier in such a historical understanding of the world to a position where collective amnesia and ahistoricism have been added to the teleologies of earlier times such as to forget the historical origins of the capitalist world that we all now inhabit and which is evolving in ways that we desperately need to comprehend.

The approach must be able to provide a viable conceptual basis for an explanation of actual complexities of the very long-run history of capitalism and not just of contemporary, advanced capitalism. The historical accounts, comparisons, and explanations of all the complexities and varieties of capitalism are the real aim, towards which theoretical work must contribute.² An evolutionary theory that only deals with capitalist firms, for example, or modern neo-liberal capitalism, would be of little use for firms as we know them are a very recent innovation and the extension of commodification to all aspects of social and personal life is a recent development. Similarly, a concentration on economic growth in the modern sense is unable to help with economic evolution and continuity in far distant eras, as Smith, Marx and Weber knew.

From the economic history and historical political economy literature we can see there are essentially four philosophically-based approaches to constructing theories of long-run socio-economic change:

1. Newtonian approaches, which postulate economies as mechanical systems of interacting components with linear dynamic relationships and equilibration mechanisms that somehow become altered through endogenous or, more likely, exogenous disturbances in the balance of energetic forces inherent within them. While disturbances and shocks are not predictable, the effects they have can be explained, supposedly, by systemic equilibration processes that act to try to force the system back into stability at some point or other because of its linear internal balances. While geological and cosmological history may be broadly explicable this way (and of course relativity and catastrophe theory have eroded their power), social

¹ Varieties of capitalism include the broadly defined Settler Capitalist variant of the past two centuries that has an overall peculiar structure and trajectory and significant internal variations in the actual cases within the category. More on this later in the paper.

² My ideas have come out of an ongoing engagements with the work of Marx, Weber, Schumpeter, Wallerstein, North, Geertz, Gould, and Runciman; of attempts to develop a critical realist approach to historical methodology; of more recent attempts to comprehend institutionalist, evolutionary, and regulation theory; and most recently with the arguments of Richerson and Boyd, Witt, Dopfer, Potts, and Foster, and most recently of David and Mokyr..

change cannot convincingly be explained through such conceptions, so there is usually resort to adhoc assertions about equilibration mechanisms.

2. Dialectical-structuralist approaches, which postulate economies as unfolding processes of the realisation of human and social potentials that drive the holistic system spontaneously and endogenously in a certain direction and possibly towards a goal. Human or divine attributes are the dynamic elements that somehow explain how the social whole responds to the ‘desires’ of those ahistorical, extraordinary forces.

3. Rationalist-individualist approaches, which postulate economies as behavioural aggregates that arise from the rule-following nature of human subjects. The rules in turn govern the limits of knowledgeable decisions and social interactions. Individual and collective decisions that employ knowledge of the rules, somehow endogenously lead to aggregate change in behavioural patterns because of the postulated innate drives of agents to maximise individual utility.

4. Ecological / Evolutionary approaches, which postulate economies as integrated, emergent, and hierarchical systems of social relations and cultural norms, in which innovations emerge and spread through the system, while leaving most of the system unchanged over lengthy periods of time. Unlike the other theories, here there is systemic (rather than structuralist or individualist) integration and usually no nomological necessity.

All particular theories can be interpreted as employing one or more of these conceptual frameworks. Implicit combinations of them have been common. But we must be careful not to take at face value the self-descriptions of particular theories. For example, most 19th Century so-called evolutionary theories, being pre-Mendelian and Social Darwinistic, should be seen as combining Newtonian and dialectical principles rather than genuinely evolutionary principles. Moreover, most or all theories until recently have been explicitly or implicitly teleological, thus rendering them unscientific or proto-scientific at best. The expunging of teleology is a hallmark of scientificity in all domains of science. In the early to mid-19th Century geological thought began to move away from teleology and Darwin cemented this momentous development. Marx groped for it in social science but, depending on the interpretation of his work, didn’t quite make it. Neo-Darwinism, plate tectonics, cosmological science – all the historical sciences of nature that emerged in the 20th Century – have rejected teleology in favour of directionless, long-run history as a process without a subject and so without an eschatology. The task for social science should be to achieve the same kind of natural scientific understanding. Little success has been achieved so far.

Historical understanding in the social sciences is still redolent with teleologies, often centred on an essentialist belief in the supposedly unfolding of social relations out of the desires and potentials inherent in the nature of human subjects as creators of their world. But history is too often written backwards from these assumptions, ignoring contingency, transformation, the very long run; and too often posits an unwarranted holistic and transcendent collective intentionality. Societies do not have intentions or make choices any more than do species. Just as teleological biology saw humanity as the necessary eschatological end of biological history, so teleological socio-economic

history today tends to see global capitalism as the triumphant necessary conclusion of humanity's innate desires and drives. In different eras different end states were postulated, such as Western Christendom's innate destiny or the Prussian military state or British imperial dominance or American manifest destiny.

Science is not just anti-teleological, it is historical and critically realist in the sense that the objects of enquiry are contingently emergent structures and systems that change over time and whose complexity of structure and process do not simply inhere in the phenomena of the world. Scientific enquiry that is sceptical and critical of the sensory appearances of the world and of itself is necessary to examine dispassionately and explain the counter intuitive systemic reality of the world. Science is de-centring and debunking of human conceits and hubris.

Convergence on an evolutionary approach to history is now coming from several points of view. For example, Douglass North's latest book (North, 2005) is avowedly evolutionary in a non-Darwinian sense, in spite of his earlier commitment to rational choice institutionalist explanations of economic behaviour. However, implicit teleology is still present, especially when he uses his approach to explain 'the rise of the west', which is an account written backwards from the end state and sees the 'rise' as more or less inevitable once certain initial conditions were established. The conflating of powerful initial conditions with the inevitability of a trajectory is a mistake that teleological natural historians long made. The contingencies of the emergence, selection, and adoption of innovations within medieval Europe, the contingencies of Europe's later dominance of other regions, and the alternative evolutionary trajectories that were occurring in Europe and other regions prior to Europe's 'inevitable' conquests, are all ignored in his teleological account. The ruptures, catastrophes, turning points, and accidents, as well as structural continuities, have to be part of any scientific historical account. At any historical moment there were and are alternative possibilities and, as Stephen Gould once observed, if the 'clock' of evolution was set back to the beginning again it would never follow the same path no matter how many times this was tried. This applied equally well to socio-economic history. Contingency and unpredictability is always present in such dynamic, chaotic systems. But of course history is still explicable, once it has occurred.

Is An Evolutionary Theory of Economies Useful or Even Necessary? The Issues Involved

What the objects of explanation are deemed to be makes a big difference in the social sciences. If we take an exclusively phenomenal-behavioural view then it is individual and collective actions and patterns of behaviour and events that must be studied and there is no structural-systemic social reality beyond those phenomena and the motivations that social actors have as individuals. If we take a structural-systemic view then there are both collective social phenomena and structural-systemic realities and their interconnections to be studied, as well as individuals. Almost all approaches to social explanation more or less agree that society, economy, and culture somehow 'exist' but not on the nature of that existence. Do they exist in the sense that they can be studied more or less separately from the decisions, beliefs, behaviour, and events in which they might be supposed to inhere? Are they merely virtual and so existing

only when resulting in behaviour? Or do they have histories of change, development, decline, an account of which can be given that is not just an account of all the behaviour and events that occurred during that history? If so, a fundamental task for social science, then, is to explain the long-run history of socio-cultural systems and, as a central part of that, the history of economic change, including what has been, in recent centuries, the remarkable history of economic expansion and growth in parts of the world while other parts have not experienced that. Can a combination of critical realist methodology and non-teleological evolutionary theory be used to provide persuasive, scientific, explanations of economic history? Before discussing what realist evolutionary theory of economic history is and could be, which is a highly contested topic, we should try to outline what evolutionary theory tries to do that other kinds of theory do not.

Evolutionary theory in general conceives of change as arising endogenously and causally from prior states of a system. This idea is a product of the Enlightenment 'discovery' of social history although there were earlier intimations of it in various parts of Eurasia. The obviousness of social evolution in this general sense became apparent to enlightened Western opinion in the 17th and 18th centuries with the growth of knowledge of and thinking about the wide variety of societies. It later came to be understood in the 19th Century that it is organizations and systems that evolve to produce new states or new systems. Evolution is not the same as the life courses of either entities or systems. Individual entities have either continuous, unchanging states or they have life courses with definite beginnings and ends. Elements of dead entities may be preserved within new entities but that is not an evolutionary process. Evolved systems have a series of states, each of which emerged from the prior state or through the prior state being combined with the prior state of some other system or systems. An evolved state of a system preserves much of the previous state, particularly of fundamental features, and thus over lengthy periods of time there is evolved a historical series of states which, by degrees, traces a path of the system and may mark the transformation over long periods of time of the system into something quite different from earlier states. Such an evolutionary trajectory may leave a record of some kind to be discovered or from which the history can be inferred. In reality transformation is rarely or never complete for certain fundamental elements of some original or intermediate states of the system are usually preserved in some way within evolved systems that act as indications of those earlier states. That is, the later states of a system contain clues to the earlier states. Evolution is thus a process of both change and preservation rather than obliteration. Powerful forces of path dependency and continuity operate within all evolutionary processes. Processes of change that obliterate prior states are not evolutionary changes. Life courses often result in obliteration or dissolution but the life courses of entities that are parts of systems contribute to the maintenance of system reproduction and integrity. Thus evolved systems contain processes of life and death within them but are not usually themselves subject to such processes of life and death, at least not in the short term. Systems can, of course, also degrade and die.

To postulate that a system is evolved or undergoes an evolutionary trajectory directs attention to the emergent historical nature of that system. But such a postulation does not of itself indicate that the process of evolution is continually happening or that the process proceeds in a smooth fashion or that the process is goal directed. Indeed, we know from the study of the long run history of certain evolving systems that rates of

change can vary a great deal. It may be that all evolving systems exhibit a historical trajectory of punctuated equilibrium because they follow a chaotic path marked by large (even catastrophic) shifts between stable states.³ Possible mechanisms that produce such a pattern in all evolving systems can be hypothesised as the outcome of the unstable and changing balance between forces of equilibrium or path dependency and forces of innovation or change. Long-run societal history seems to exhibit such a pattern, which can be discerned only by taking a very long-term view.⁴

What can evolutionary theory provide that is an advance on or fills a gap in the constellation of possibly relevant theories of economic change? This is not always easy to establish for some of what passes for 'evolutionary theory' in economics is in fact the elaborate and often obscure articulation of sets of concepts devoid of all empirical reference or application in research. Evolutionary economics, like most areas of economic theory, is prone to analytical-conceptual constructions that do not arise out of problems in empirical enquiry and often seem to have no relationship with explanatory usefulness. They seem to be purely analytical with little or no synthetic features.⁵ Of course this is not true of all evolutionary economic theorising but there does seem to be a strange lack of connection sometimes between assertions of evolutionary explanation, which surely must be focussed upon historical change, and research into actual historical processes. Alone among the great domains of empirical enquiry, there is this perplexing gulf between theory and empirical enquiry in economics generally. Of course all fields of empirical enquiry have divisions of labour between theorists and researchers but these divisions should always be practical in the sense that not everyone can concentrate on theoretical and laboratory and/or fieldwork enquiry at the same time. But work in evolutionary economic theory and research and explanation of economic history often have a very big gap between them.

I argue that the basic tasks for evolutionary theory of economies must be to develop theories that can help explain all of the following in a single conceptual framework:

- (a) the integral interconnection that economic systems, narrowly conceived in terms of economic production and exchange, have with structures of social relations, rules and institutions of regulation and governance, and culture;
- (b) medium and long-term change in actual economic systems such that differing degrees and rates of economic change can be understood;
- (c) the punctuated equilibrium pattern that marks the history of societies; and
- (d) the wide variety of divergences and convergences over millennia in economies and societies.

Work in the sciences of sociology, politics, political economy, and anthropology over decades and even centuries have brought us to this possibility but which is not one yet widely agreed upon. That is, in this conception, it is theorised that evolution of economic systems as such can only occur within the wider systemic context of which

³ The punctuated equilibrium literature includes the collection in Somit and Peterson (1989).

⁴ A punctuated equilibrium pattern in history, which is perhaps the same as a pattern of successive revolutions, was theorised by Marx as the consequence of a dialectical mechanism. Such a natural and social mechanism can perhaps be redescribed in modern parlance as being that of a chaotic system whose nature as a system is to be in an unstable and non-linear stochastic dynamic between different poles of attraction that produces periods of stability interspersed with periods of rapid change.

⁵ For example, Dopfer et al (2004)

production systems are part. Economic activity and processes are embedded, as Polanyi famously argued, within social and cultural systems. Another way to say this is that they are mutually implicated and integrated as a complex real social system. Nevertheless, it does seem to make sense still to employ the abstractions of 'economy', 'politics', 'governance', 'social structure', 'culture' and so on. The development and use of these concepts over centuries has brought us to our present fields of enquiry as themselves evolved emergent systems of concepts that we cannot easily escape. But the interconnections between these real sub-systems at higher levels of integration must not be ignored through *ceteris paribus* assumptions that violate the real causal structures.

In assessing the usefulness of evolutionary theory the first task, then, is to establish what is the class of phenomena and their changing systemic interconnection that needs explaining. In orthodox economics the phenomena are the patterns of behaviour, decisions, and events that are defined as economic in that they involve production and exchange of goods and services within an organised, rule-governed, division of labour. Institutional and evolutionary economics take the view that these patterns are only the phenomenal level of a social system of institutionalised rules, roles, relations, and processes. Some institutional-evolutionary theorists say that the institutional system has as much a reality of existence as the phenomena and that there is a history of change and development in both the patterns of phenomena and in the rules, roles, and relations of the institutional structure, which are inextricably linked together.

Thus institutional-evolutionary theory has a realist conception or presupposition of the basic structural entities of the economy. This means that there is an acceptance of the reality of the non-phenomenal structure of the economy as a real system of rules, roles and social relations that has causal power. The nature of that causal power and how it inheres in phenomena is a basic task for research for that connection is thought to be somehow a crucial issue in explaining economic evolution.

Taking the argument the next step, then, involves delineating the nature of the system that links and somehow plays a role in 'producing' the phenomena. That system must be more than 'merely' economic for the institutionalised structure has to be one that is self-organised and regulated, at least at some level of generality. Regulation is crucial to all systems, even open systems, and that must be a combination of self-regulation and environmental regulation. The self-regulatory power has to come from the institutionalised nature of the system's rules and structure and the motivations and actions of the persons that occur within and are delimited by those rules and relational structures and so that must, in turn, involve social relations and motivations that go beyond the economic exchanges that are at the heart of the system. Regulation in social systems of all civilizational kinds (ie all societies of greater complexity than small-scale foraging societies) comes from the combination of formal rules and substantive norms and relations of social behaviour. Thus economies are integrally connected with governance arrangements, social structures, and cultures. While economic behaviour can be abstracted from this wider and deeper structure, and is by orthodox theory, institutional-evolutionary theorists argue that to do so is to tear it from its essential and integral regulatory context at a fatal cost to explanation. Abstraction that is unsupported ontologically and epistemologically reduces the explanatory power of theory.

For convenience we can call the overall system a political economy or a social economy, but always bearing in mind that it is really more than some combination of politics, social relations, and economic behaviour. It is the complex self-organised system or set of systems consisting of many structures, institutions, processes, practices and events that we must study and comprehend in order to understand any part of it and its history. Is its history necessarily an evolutionary one or could we theorise the processes of change in some other way? Clearly, in the very general sense mentioned above, its trajectory must be evolutionary, unless we are to invoke some kind of nonsensical religious or mechanical argument. Economies or political economies or societies usually do not have life-course beginnings and ends but are emergent from prior states and evolve into new states in a punctuated equilibrium pattern. This much we can be certain of from the historical record. How to explain this kind of process is the issue.

The next question is one about whether there are populations of political economies at any one time and if so of the interconnections between them. Is a population necessary for an evolutionary theory to be relevant to explaining systemic change through emergence and spread of innovations? Richerson and Boyd argue (2005, p 6) that population thinking is essential to evolution theory because the task is to explain why innovations (such as new beliefs, ideas, and practices) arise, spread, and persist while others do not. This is perhaps a question of aggregation and disaggregation as well as of geography and history. It could be argued that human society today with global communication is really a single system and undergoes evolution as a whole system. But that has not long been the case so there have been multiple social systems in the past. Nevertheless, there has always been, even today, populations of various kinds – we can argue about whether individual actors, institutions, cultures, groups, practices, sub-systems and components of many kinds, are the populations that constitute the system at various levels of aggregation. Perhaps they are all populations of different kinds.

The problem of the nature of existence and properties of these sub-systemic populations is a central one (see the discussion of the next section). Communication is crucial and is the analogy in social systems of the sharing of genetic information among a breeding population (a species) in biology. Genes are coded information for biological reproduction. Ideas, cultural forms, beliefs, concepts, shared practices, rules, all contain information necessary for social reproduction through the behaviour of individuals and groups who are part of and cannot exist separately from the overall organised system of knowledge held within a social system that has formal and substantive existence. It is clear, then, that individual people are not the population units of social systems for they cannot exist, communicate, and reproduce their social ‘organisms’ or, to put it more sociologically, their cultural and practical entities, without being part of organised social groups. These groups of various forms are the population among which innovations spread to bring about evolution of both the populational groups at various micro and meso levels of aggregation and the whole macro social system.

The Ontological Problem in Evolutionary Political Economy

Institutional-evolutionary theory in economics and political economy distinguishes itself, as argued above, from other branches of economic theory fundamentally on the basis of a presupposition or empirical claim about the ontological nature of the object of enquiry as being an evolving real social system of some kind. (cf Lawson and discussion in Vromen 2004) This presupposition or claim is distinguished from alternative, more orthodox views that see the object of enquiry as the phenomenal products of largely static lawlike ‘rules’ or ‘laws’ (ie, universal behavioural characteristics and individual preferences within those constraints) and not socially systemic.

However, the complex interrelationships of ontology to epistemology to methodology to theory to empirical research, have always been problematic and contested in the broad discourse of studies of explanation. It now seems well established (at least to me, cf Lloyd 1986, 1993) that *a priori* ontological claims or axioms cannot be well founded as such. A ‘first philosophy’ move by those wishing to ground their science in some fundamental way has long been discredited, certainly since Kuhn and Popper overthrew the axiomatic-deductive program. Pragmatic groundings, at best, are all that are warranted. Ontological claims, since the various but always powerful arguments of Quine, Putnam, Harré, Salmon, Rosenberg, and other philosophers of explanation built the move away from apriorism, should always be embedded and integrated within a comprehensive and mutually-supporting set of epistemological, methodological, and theoretical concepts. Ontological assertions or assumptions that claim to stand as unrevisable or axiomatic foundations independent of historically derived frameworks of philosophical and methodological claims and concepts that have evolved through a process of ongoing enquiry into the nature of the world, cannot be other than dogmas. (cf Lloyd 1986 for a detailed discussion of this argument.)

Problems about the existence and nature of individual persons, social relations, social groups, social structures, social systemic integration and regulation, generative social power, conditioning social power, social agency, social emergence, and so on can be seen as not ontological as such but are *theoretical* in that the development of solutions should take place within the process of concept formation and enquiry rather than within philosophy as such. All these concepts refer to the nest of problems about social existence and its problematic connections with behaviour and social events. What pertains to and is fundamental to the natural entities of the domain of the social is the issue in such discussions. Establishing the domain concepts of naturally occurring structures and phenomena, of the natural ‘boundaries’ of domains, and of the fundamental characteristics and systemic interconnectedness of domain entities, are theoretical advances crucial to the advancement of scientific understanding. (cf Shapere 1984 and Lloyd 1986] In Economics, Political Economy, Sociology, and associated social science fields, these issues are far from settled. These *theoretical* advances are essential for scientific work in the social fields. Of course much effort is expended on these problems and some progress gets made, in the sense that clusters of agreement emerge from time to time and among certain groups of people who come to share certain concepts. But the agreements are not widespread and break

down over lack of empirical success.⁶ The old and gaping divide between those who concentrate on individual and patterned behaviour and its psychological and rational motivations and those who concentrate on social relational systems and their integration, emergence, and evolution, seems still to be quite wide. But this is not to say that economic enquiry is not a science just because it has no widespread agreement. Better tests of scientificity are openness to historicity, abandonment of teleologies and other dogmas, and the commitment to general causal explanation. *No part of a scientific framework should be unrevisable and no phenomena should be deemed somehow to be unamenable to explanation of its natural causes.*

The issue of systemic existence is central to the issue of domain existence and conceptualisation. All the advanced scientific domains of scientific enquiry in which the fundamental concepts and theories are well established, well attested, and well supported by long histories of successful empirical enquiry and applications of knowledge through engineering, are built upon concepts and discoveries of systemic structure and integration. Most of those domains are also intrinsically historical in that the natural systems they examine are evolving. The domains of cosmology, biology, and geology are organised around general theories of integration and historical processes. The domain of physics has also become increasingly historical as the present structures and systems have come to be understood as outcomes of cosmological history. Inorganic chemistry is the least historical of the great domains for its enquiry is essentially about the present chemical structures of inorganic nature as observed today throughout the universe but there, too, there is a growing convergence with the domains of physics and cosmology.

Can there be a similar development of systemic and evolutionary concepts in the putative domain of the social? Of course there have been many attempts to develop such concepts, beginning mainly with a few Renaissance ideas and especially with Enlightenment thinkers. What are the fundamental principles of social systemic structure and emergence, if such exist? In what ways do social systems exist and integrate? Can they exist as forms of reality beyond human social behaviour, human intentions, and individual consciousness? If so, what are the structuring and integrating forces? And what actually evolves in an evolving social system? Social science awaits its Darwin or Einstein or Wegener to theorise persuasively on these matters, notwithstanding the powerful contributions of Marx, Weber, Parsons, Luhmann, Bourdieu, Runciman, Boyd and Richerson, et al. Many argue now, of course, that the social science Darwin is in fact Darwin himself: that social systemics and evolution should be but a branch of biology or, if not exactly a branch at least centrally informed by a direct generalisation of Darwinian principles. In other words, social systemics and evolution are governed by forces and processes that are best theorised and studied by the same concepts as biology. Such 'Universal Darwinism' cannot plausibly be extended, clearly, to the other great domains of historical enquiry of nature. Bio-social explanation, this argument says, should be seen as a single domain in which the fundamental problems are to do with socio-biological integration, replication or equilibrium, inheritance, innovation, selection, and change.

⁶ One of the best 'accounts' of a scientific enterprise grappling with an extremely complex system and unable to develop a scientific consensus about it because of its complexity and opaqueness to human understanding was provided in the novel *Solaris* by Stanislaw Lem.

So, the first problem, debated endlessly for centuries in social theory and for millennia in social philosophy, is the connection between human social organization and forces of biological nature both within humans and in their external environments. Clearly, human sociality must be an emergent property of human biology because it is intertwined with those other emergent properties unique to humanity – intelligence, self-consciousness, language, and complex co-operation. Sociality and culture, and all the organisational and technological developments that have followed from that, have emerged and evolved from human nature. But that is not to say that socio-cultural evolution depends on and/or proceeds in the same way as biological evolution. Obviously it does not and cannot for socio-cultural evolution, once begun in the relatively recent past of the late Pleistocene, is not simply determined by biological evolution. ‘Not be genes alone’, as Richerson and Boyd have persuasively argued.

Socio-cultural evolution has followed a trajectory quite separate from biological evolution, with its own time scale, its own mechanisms, and its own separate systemic states. Nevertheless, human bio-psychological nature must always play a role. Humans, like many species, have a natural basis for their sociality. But sociality does not translate simply into society. Sociality does not evolve but societal organization does. Humans naturally have sociality, social organization, and culture, in a very general sense. A few other animal species, such as birds and insects, also have rudimentary material culture, which is unconsciously produced. Human social organization and culture are consciously produced and, unlike with other species, there seems almost no natural limitation on the evolutionary possibilities of social organization and culture. The deep continuities of human bio-psycho nature provide very wide scope for macro societal history even if certain crucial aspects of small-scale social interaction – such as reciprocity, esteem, competitiveness, selfishness, altruism, mate selection, and familial bonds – are always naturally present within all social organizational structures. The dynamic between natural human sociality, social structure, and social evolution is an empirical issue.

Thus the emergence of socio-cultural systemic reality and its evolutionary trajectory independent of the evolutionary trajectory of human biology means that the domain of socio-cultural history is one of the great domains of reality, on a par with cosmology, physics, chemistry, geology, and biology. Each has emerged from a prior domain – physics from cosmology, chemistry from physics, geology from cosmology and physics, biology from geology and chemistry. It has long been argued by some philosophers, ever since Plato and including Popper, that consciousness or mind is of a similar autonomous emergent status but this is uncertain at best and probably not warranted for it seems clear that mind is not separable from culture in the broad sense and may even be synonymous with it. On the other hand, an interesting case could be made for the autonomy of culture from socio-economic systems. In either case, the significance of the mutuality and interpenetration of culture and socio-economics is something that the conceptualisation of the field of political economy or socio-economics rests upon.

Is The Darwinian/Biological Metaphor Useful to Social Explanation?

It has already been argued that social evolution cannot be part of biological evolution but is an emergent-evolutionary domain of its own. But are the Darwinian

evolutionary principles discovered in biological science applicable to social science as a heuristic or some kind of universal concept of systemic change as argued by Dawkins. Darwinian principles are quite simple: [cf Schatzki (2001) and Witt (2004)]

- inheritance as fundamental
- limited variation at generative micro level of complex structure
- selection of innovations at macro (phenotypic or organic or organisational) level
- adaptation of macro level through variation and selection.

In biological evolution, the discovery of the ever-changing nature of inorganic environments was essential to the later postulation and confirmation of the necessity and possibility of biological adaptation to those changing environments as well as the possibility of increasing variation and the corresponding theorisation by Darwin of the necessity of a process of adaptation and variation that led to speciation. It is speciation that needs explaining. In social evolution there is an analogous problem – social variation over time or what we can call *institutionalisation and societalisation*. But social evolution does not have the same sort of adaptationist necessity to a changing environment. The incorporation of the idea of adaptation has been a mistake in social evolutionary theory. That is, social evolution is not driven by this fundamental requirement. Of course people have to *conform* to social situations and structures in order to reproduce those situations and to live normal lives. While innovations in genetics are seemingly random, social innovations, on the other hand, arise for all sorts of rational and non-rational reasons. And then why and how they are selected and propagated, and their systemic effects, are at least as much to do with unpredictable structural contexts then to do with knowledge and rational choices.

A further difference between biological and social evolution is in the specification of the populational aspect and in the corresponding more complex specification of the phenotypic levels that evolve. In biology it is species that emerge and then undergo limited species-level evolution or species drift. Species emerge from or separate from a parent species essentially because of geographical separation, as Darwin famously discovered with the Gallapagos finches. Geographical separation comes about largely because of environmental change. The population is made up of the organic individuals of a species. In social evolution, the separation argument applies in some historical cases (see the discussion below on Settler Societies) but the more important process is within each society and at several levels within each society. And the boundaries of a society are nowhere nearly as tightly defined as the boundaries between species although they are real and powerful enough.

It can be argued that the ‘organic’ aspect in society is, fundamentally, the small-group level of closely-interacting persons who work and/or socialise together as an integrated ‘team’ who communicate intimately and constantly and who bond together more in a substantive than formal way. This ‘organic’ unit is age-old and could be said to be the primordial social unit that is fundamental to human behaviour. It is not persons who are the social counterpart to organisms for persons cannot behave socially except within such social groups that enable their very socio-biological existence. Persons and their motivations and actions are in fact the generative level of social structures and their motivations and actions can occur only within their group context. At a more complex level, there is institutional or organisational structure in which small groups play essential roles, with more or less well-defined rules and

norms. Thus it is institutionalised organizations that are the ‘species’ counterpart. Thirdly, at the larger societal level, which has a linguistic and organisational boundary in the form of a cultural and state structure, there is a large population of organizations. And fourthly, whole societies, defined in this way, are part of a global population of societies.

The Significance of a Critical Realist Approach to Ontological Issues: The Micro-Meso-Macro Proposition and the Centrality of Culture, Social Relations, and Agency to Systemic Regulation

If a basic task for social science is to explain social change, that means the task is to explain change in social systemic structures and the productive processes, behavioural patterns, institutions, and cultural forms that are essential constituent elements of those complex systems. Just as branches of the biological sciences came to see that their tasks of studying particular biochemical processes, particular organisms, and particular ecosystems all depended on a foundational set of concepts and theories about biological evolution, so the social sciences should come to see that social evolutionary theory will come to provide a similar foundational level that will be vital for the study of particular societies and particular parts of them, including their economies and institutions.

All emergent evolutionary processes require at least a micro/macro (or individual/systemic or generative/phenotypic) structure for change to occur. That is, if an evolved sequence of partially-transformative states and local divergences of a system or population is observed or postulated, and change is being experienced in the present, the explanation requires the discovery of the dynamic relationship between (a) continuous macro structures, (b) mechanisms of micro-level innovations, (c) mechanisms and processes of adoption of innovations, and (d) the resulting structural and/or populational changes. Of course these are not linear steps or stages in causation but are circular or cyclical, involving continuous feedback.

It is crucial to see that innovations cannot occur at the macro level for the macro social level has no generative agential power. The power or capacity to innovate cannot be an attribute of social relations and social rules and social classes, however real they may be. Innovative power is a function of semi-autonomous self-activating agents. But the lack of generative power does not mean the macro level is devoid of all power. The power it has comes from its capacity to stimulate and condition the generative power of the micro level. A critical realist conception of macro structure rests upon an idea of existence and causal power wider than the inherent agential properties of self-activating organisms. While macro relational structures do not self-activate and have no physical or mental properties they do pre-exist agents and regulate and stimulate the behaviour and actions of agents. Indeed, agency is impossible except within such structures. There is a mutuality of power, then, between agents and social structures which warrants the critical realist ascription of actuality to relational and rule structures. Having agency means having the capacity to act semi-autonomously but always within and on ‘behalf of’ a structure of rules, roles, and relations in order to reproduce and/or change that structure. Methodological individualist models of society are unable to grasp this reality of emergent structure.

Dopfer, Potts and Foster (2004) have recently proposed to modify this broad micro-macro schema for economic change by adding an intermediate meso level of reality that plays a vital role in economic evolution. Apart from basic problems that vitiate their work,⁷ the idea of a more complex selection and propagation structure for innovations in economies is useful. As they say, the meso concept is already widely used in certain ways in evolutionary economics. But this issue of the hierarchical nature of economic systems and therefore of their evolutionary processes is bigger than they seem to be aware. In defining economies as economic rule systems they seem, at least implicitly, to want to abstract economic systems from their social, cultural, and political embeddedness. The ontological status of rules and their properties are not well articulated, if at all. How do agents ‘embody’ or ‘carry’ rules and how do they ‘activate’ rules to make choices and decisions? The biggest missing feature of their theory is an account of the social context of rules and the limits of rule-governed behaviour.

The Dopfer, *et al*, approach can be compared with the Regulationist approach of Boyer, *et al*, who, being influenced by Marx and Polanyi, have built a social structural economic theory that accords ontological centrality to social relational networks that strongly delimit, condition and often distort the effects of agency.

Regulation theory emphasises the limits of rational calculation in creating the relations that define the positions of agents: as soon as radical uncertainty prevails and groups of agents adopt strategic behaviour, the unintended effects and paradoxes of composition destabilise the expectations of even the most well endowed agents. Agents can orient themselves only through constraints, common references, procedures and patterns that transmit or support collective arrangements of rules, conventions and organisations ... these arrangements are not governed by pure economic logic; rather they arise from the construction and maintenance of a social bond. Furthermore, it can be demonstrated that individuals reduced to pure economic rationality would be incapable of resolving the simplest problems, for example, the question of coordination (Boyer & Saillard, 2002, 36–37).

All evolutionary change is systemic structural change that is the product, as argued above, of the causal interconnections between micro genetic and meso and macro systemic forces or, to put it in terms of the principles, the causal interconnections between the sources of innovations, the selection conditions of innovations, and their diffusion conditions. In social systems, the only source of innovations can be humans who are agents only within small concerted groups. Assertions that there are other sources of innovations, such as firms, social classes, or large groups of various kinds, lacks plausibility for none of these are true agents. Of course it may seem that such entities are agents but they have to be analysed into their sub-structures in order to find the true sources of agency. Large groups or organizations or institutions or classes constitute the meso level of social reality and provide strong pressures for

⁷ such as providing no empirical reference or accounts of real cases; the self-limitation they impose of being supposedly relevant only to the ‘restless nature of market capitalism’ (whatever that might be; but does it mean that evolutionary theory of their kind is not relevant to other kinds of economies? In that case it would seem to be an absurd proposition); their unexamined presupposition that market economies ‘develop’; and their complete ignorance (shared by Popper) about the potential relevance of Marx’s work to evolutionary theory.

stability and/or innovations by agents. Social innovations are generated by the only force that has the agential power to make decisions and act in new ways – conscious, deliberative, humans acting collectively in small groups. These groups have to be very closely inter-communicative with a high degree of shared consciousness if new ideas and practices are to emerge and then begin to be selected or rejected at meso levels. Isolated individuals, even if they can exist, have little or no social power.

There has never been a time when humanity was not socially constructed. The mutuality of human life, agency, and society is fundamental. Thus it is group consciousness, decisions, and actions that constitute the generative micro level of social systems and is the ultimate source of social historical change. But the vast majority of decisions and actions are routinised and reproductive of social relations and social contexts rather than being innovative. Innovatory decisions and actions in everyday social life are unusual and most of the attempts to be truly innovative are not selected. And what turn out to be significant innovations are often unintended to be so, as the Regulationists and structural sociologists have always argued. History on the societal level occurs without conscious design although very powerful groups, such as political and bureaucratic groups, have a disproportionate power to affect change.

In the realm of economic decisions and actions within modern capitalism there is a much higher premium placed on innovations, their selection, and their propagation. But this recent history is apt to blind us to the more fundamental feature of *social reproduction* within societies in all times and places.

Foundations of Historical Political Economy as a Radically Historical Science – the Contributions of Regulationism and Evolutionism

Returning to the problem of domain delineation and theory construction, the basic presuppositions and concepts of political-economy/socio-economics, viewed as an evolving historical system, pertain to the complex structure of the system of production in general and of how local formations vary in their embodiments of those generalities, and of the processes of economic regulation and evolution as a whole and in particular local historical forms.

Thus I see the fundamental problem for explanation in this field as being to explain the *evolving structural (or systemic) integration and regulation of production systems as socio-institutional organizations*. Explanation at this structural level is necessary for explanation of the phenomena to be observed in these sub-fields. That is, the phenomena of events, behaviour and processes of production are theorised to be causally generated and interconnected by the deeper systemic context in which they occur. In this field, the specific causal interrelationships between firms, other capitalist organisations, labour organisations, governance institutions, political processes, and cultural/ideological structures, and the patterns of decisions and behaviour that occur within and between these organisations, are evolving *systemic* interconnections of a specific character.

This social domain could be described at its most broad (if it includes all social relational elements), as the domain of social science. More narrowly, it could be

defined as *the domain of historical political economy* for the centrality of material production is the core or foundation in which culture, governance, and social relations are embedded in a systemic fashion. There have long been attempts to unify this domain through theory: structural-functionalism held sway in the 1950s and 60s; historical materialism has always been influential; rational and social choice approaches are fast becoming dominant in all the social science sub-fields, seductively crowding out alternative approaches. Institutionalism in one form or another has always been the main alternative approach to rational choice in explaining structural formation and evolution in sociology, economics, political economy, industrial relations, and management. (On institutionalism old and new see Rutherford, 1996) Indeed, it has long been argued that it is institutions or organisations, not supposedly autonomous rational individuals, that are actually the ‘cells’ of society. New Institutional Economics (NIE) has claimed to solve problems of both orthodox economic rational choice approaches and of institutionalism but their conception of institutions is only of the rules of rational choice and not of the relational-structures in which choice and action occurs, the focus of the older tradition shared by Marx, Weber, Veblen, Schumpeter, Polanyi. And the Regulationists.

All systems are regulated by endogenous mechanisms and all interact with environments from which they also draw limiting principles of equilibration. The most important contribution to conceptualising and theorising the system of socio-economics or political-economy has come from the social systems of production tradition of theorising. This broad tradition has developed in various ways over the past half century or more on the resurrected foundations of political economy that were laid down in the 19th century before the methodenstreit of the social sciences of the late 19th and early 20th century divided the social sciences into a structural-historical-empirical-inductivist tradition and an abstract-ahistorical-positivist-deductivist tradition. Marxist, American evolutionist, and Schumpeterian contributions were important before the seminal attempt by Parsons and Shils to build a social systemic and evolutionary approach to social explanation in the 1950s on Weberian and Durkheimian foundations. Since then five streams have advanced the cause of trying to build the concepts and theories of structuralist political economy: (a) Parsonian evolutionary theory, (b) American and Schumpeterian evolutionism, (c) Polanyian substantive political economy, (d) Rational choice and New Institutional political economy (e) Regimes of regulation and accumulation theory. All five are indebted in various ways to the old, pre-methodenstreit ways of thinking while transcending them in various ways. But three new elements have now come to play a vital role in theoretical advancement within all these approaches – systems regulation theory, Neo-Darwinian evolution theory, and critical realist philosophy of explanation. I think it’s now possible to affect some sort of a synthesis employing all eight elements to various degrees.

The dovetailing of ideas of evolution and social systems structure and regulation with critical realism are best achieved, it seems to me, through the use of French Regulation Theory as the foundation (itself strongly influenced by Marx, Durkheim, and Polanyi) because it is the most comprehensive attempt to build a theory of political economy even though it lacks a full articulation of all the other dimensions.

The Regulationist concept has been summarised by the diagram on page 44 of Boyer and Saillard (1995).

Evolution in such a systemically regulated structure of political economy can occur only from the effects of innovations made by agents at micro levels of integration, as the following diagram attempts to summarise.

[diagram 1. Source: Lloyd 2002 – see Appendix One]

History is central to this argument. History should play a dual role – philosophically and methodologically – in social science. Philosophically, history unites and transcends ontological and epistemological concerns by arguing for the processual, ongoing, dynamic, interactive connection between ontological presuppositions and hypotheses, epistemological and conceptual constructions, and empirical enquiry, that together form a historically-specific and real path to knowledge formation over time. Methodologically, a historical perspective grounds the process of enquiry in an empirical, real stratum of understandings of specific events and processes in nature, external to perception, accounts of which require narrative explanations that employ causal colligatory concepts. Evolutionary theory and historical explanation require narratives to link them together into coherent, temporally and spatially truthful, accounts. Narratives can take several forms: diagrammatic representations, data sets, words, pictures, music, films, and so on.

The Interesting Case of the History of Settler Economies ⁸

When we examine Settler Capitalist political economies we find an interesting evolutionary pattern of a variety of ‘species’ within the ‘genus’, which lends itself to a comparative and evolutionary approach. The settler societies of recent centuries, born out of the imperial conquests of European societies and large numbers of European immigrants (and some ethnic groups from other places), carrying their capital, culture, social relations, and institutions with them, of regions where the indigenous populations were marginalised or decimated and so not on the whole incorporated into the new hybrid societies, present a picture of wholesale adaptation and innovation of practices, socio-economic relations, and institutions. Yet the histories of the members of this class of societies over the subsequent centuries, with their similarities as well as differences of foundation and geographical conditions, diverged, converged, and evolved in remarkably different as well as similar ways. Four main theoretical approaches have been developed to help explain the comparative histories of the settler economies:

(a) Orthodox Ricardian economic approaches that examine flows of factors of production within global trading networks and the rates of return on staple extractive industries, assuming rational maximising behaviours within a capitalist incentive and rewards system.

⁸ An extended discussion of settler economies is contained in Lloyd and Metzger 2005 and Lloyd 2005b

- (b) Structuralist approaches (Neo-Marxist and others) that examine the dynamics of class formation in both core and peripheral zones of an evolving world system that provided the socio-political context for capitalist development everywhere.
- (c) Institutional-culturalist approaches to social choice and social outcomes that emphasise initial conditions of foundation and ongoing metropolitan-colonial influences on the institutional context of subsequent settler development.
- (d) Geographical, resource, and technological approaches that emphasise the significance of climate, soils, minerals, distance, and technologies of production and transport that have responded to these natural conditions.

Particular theories have been developed using a combination of these approaches. [Wallerstein, Schwartz, Acemoglu et al, Denoon] Many have significant weaknesses springing from the fundamental problem of the vestigial, backwards-looking teleologies they have inherited and seem unable to abandon. None that I'm aware of try to articulate a radical historical approach of the evolutionary and regulationist kind defended in this paper. What would such an approach look like?

First, a radical historical approach would truly be historicist (not in the Popperian sense of the misconstrual of this term) in the sense of seeing every event and action only within the context of its time and not as a step along a path leading in some necessary direction or other. That is, the backwards-looking reconstruction of the outcomes of events and processes as necessary results, rather than radically contingent, has to be abandoned. The Gouldian commitment to contingency has to be made central.

Second, contingency has to be seen as conditioned by structural continuity or path dependency. Continuity springs ultimately from initial conditions, with a somewhat arbitrary definition of 'initial'. The degree of 'initialness' depends on the moment of the 'beginning' or foundation that is used as the starting point. In the case of settler societies and their economies this is more easy to define than in many other societies for there is often a founding moment or process of conquest or colonisation from which the subsequent evolutions can be traced. Famous examples such as the Spanish conquest of Mexico (1519-21) the British colonisations of Virginia (1587 and 1606) and Massachusetts (1618), The French colonisation of Quebec (), the British colonisation of Australia (1788), are the settings for the establishment of initial conditions but in all these cases there was too, obviously, a background of social evolution, in both the metropolitan and the indigenous societies, that went back indefinitely into the past.

Thirdly, in all these settler societies there was established a particular regime of capitalist accumulation and regulation. They were all founded more or less under capitalist impulses at different stages in the era of European nascent capitalism and so the fundamental institutions of economy, society, and governance were oriented towards extractive capitalism in one form or another. These were not colonies that tried to separate or could have separated themselves radically from the metropole in the way that ancient Greek colonies did. They remained as colonies with formative relationships with the imperial state. Depending on when and how and by which state they were founded these formative relationships were crucial. Economic and governance institutions, culture, social classes, trading relations, investment flows,

were all formed and controlled from the metropole in alliance with dominant colonial groups.

Fourth, while the institutional and cultural conditions of foundation were fundamental to subsequent history, so too were the indigenous ethnic, cultural, political, economic, and geographical conditions. Settler societies and economies were hybrids or fusions from which came new paths of history. The radically new forms of the foundations were possible because of acts of great violence by Europeans within these contexts. Much of that violence came from biological invasion of European organisms that often had the effect of an almost 'wiping clean' of the territory of conquest, upon which the invaders could then innovate radically. Even the social foundations greatly reflected the social structures, cultures, and institutions of the founding metropolises. This fact alone is powerful evidence that social agency can only ever be activated within existing socio-cultural conditions that always predate social action wherever it occurs. Colonists far from home still carry their cultures and social relations with them, as we have seen throughout human history.

Fifth, extractive settler capitalism was structured and regulated in a variety of ways that were variations on a theme that arose from the similarities and differences of initial conditions. The combination of (a) metropolitan culture, social, relations, and institutional forms of the colonists, (b) local geographical conditions, (c) indigenous culture and economic systems, (d) global economic and geopolitical networks and institutions, all interconnected to produce peculiar socio-economic systems within each settler society.

Given these forces, a set of categories can be proposed from which to begin historical analyses of all the societies as a group, of each sub-group, and of each particular society. This set of categories can be developed in the first place using certain obvious structural characteristics that employ the notion of Regimes of Regulation, articulated a moment ago.⁹

⁹ See the extended discussion in Lloyd (2005 and Lloyd and Metzger (2005)

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Appendix One: The Spread of Innovations (from Lloyd, 2002)

