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Forum on Economic Reform

Development and Social Goals: Balancing Aid and Development to Prevent 'Welfare Colonialism'¹

Erik S. Reinert (The Other Canon Foundation, Norway & Tallinn University of Technology, Estonia)

This paper was prepared for the High-Level United Nations Development Conference on Millennium Development Goals, New York, March 14 and 15, 2005.

'...just as we may avoid widespread physical desolation by rightly turning a stream near its source, so a timely dialectic in the fundamental ideas of social philosophy may spare us untold social wreckage and suffering.'

Herbert S. Foxwell, Cambridge economist, 1899.

Stating that creating economic development and employment always has been the best social policy may appear to be a particularly silly statement. However, today – with the Millennium Goals – the world community is approaching the social problems in the poor countries in a way which in my view makes this statement highly relevant. The Millennium Goals are noble goals for a world which sorely needs action to solve pressing social problems. Compared to how the world has solved problems of poverty over the last 500 years, however, the Millennium Goals represent completely new principles, the long term effects of which are, in my view, neither well thought through nor well understood. In this paper I shall attempt to explain why I do not think the Millennium Goals represent a good social policy in the long run.

The novelty in the Millennium Goal approach lies in the large emphasis on foreign financing of domestic social goals rather than developing/industrializing countries so they themselves, internally, can solve their own problems of redistribution. Disaster relief used to be of a temporary nature. Now, with the disastrous lack of economic development in many countries, disaster relief finds a more permanent form in the Millennium Goals. In countries where already more than 50 per cent of the government budget is financed through foreign aid, huge additional resource transfers are planned. One big question mark is to what extent this approach will put a large group of nations permanently 'on the dole', a system similar to the 'welfare colonialism' which will be discussed at the end of the paper. The question is similar to that of starting foreign wars: what is our exit strategy?

Several UN Development Decades were only of limited success. In this perspective the Millennium Goals may appear as the United Nations institutions abandoning the project of developing the world poor, abandoning the effort to treat the *causes* of poverty and instead concentrating on an effort that to a large extent attacks the *symptoms* of poverty. In this paper I shall argue that in my view too much of the development effort has been abandoned: to a considerable extent *palliative economics* has taken the place of *development economics*. Indeed the balance of development economics – radically changing the productive structures of poor

¹The author is grateful to Carlota Perez, Wolfgang Drechsler and Rainer Kattel for constructive comments. The usual disclaimer applies.

countries – and palliative economics – easing the pains of economic misery – is, in my view, the key issue, and I think we are planning for a serious imbalance where the extremely high costs will be much less important than the long term negative effects. There is little debate around key issues. It is unfortunate that the Millennium Goals have acquired the proverbial status of motherhood and apple pie, institutions that no one in their right mind will speak against. I shall still make an attempt.

How we used to deal with problems of development

In spite of a distance of less than one generation, the contrast between the type of economic understanding behind the Marshall Plan on the one hand, and the type of economic theory behind today's multilateral development discourse and the Washington Institutions on the other hand, is abysmal. The Marshall Plan grew out of recognition of the poverty and misery caused by its forerunner, The Morgenthau Plan, in Germany. While the goal of the Morgenthau Plan was to de-industrialize Germany (to prevent further wars), the goal of the Marshall Plan was to re-industrialize not only Germany, but to establish a *cordon sanitaire* of wealthy nations along the borders of the communist block in Europe and Asia, from Norway to Japan.

In terms of the number of nations and number of people lifted into relative wealth, this re-industrialization plan was probably the most successful development project in human history. The fundamental insight behind the Marshall Plan was that economic activities were qualitatively different, those of the countryside (which we could call diminishing returns activities, or agriculture and raw materials) differed from those of the cities (which we could call increasing returns activities, or industry). In his famous June 1947 speech at Harvard, US Secretary of State George Marshall (who was later to be awarded the Nobel Peace Prize) stressed that 'the farmer has always produced the foodstuffs to exchange with the city dweller for the other necessities of life'. This division of labour, i.e. between increasing returns activities in the cities and the diminishing returns activities in the countryside, was 'at the present time...threatened with breakdown'. He then made a remarkable recognition of the cameralist and mercantilist economic policy of previous centuries: '*This division of labor is the basis of modern civilization*'. Civilisation requires increasing returns activities, something that economists and politicians from Antonio Serra (1613) to Alexander Hamilton, Abraham Lincoln and Friedrich List had already been saying for a long time. The principles behind the toolbox used by nations going from poverty to wealth through the creation of 'city activities' (Appendix 1) have been surprisingly stable from when they were first used by Henry VII of England starting in 1485 until their use in Korea in the 1970s. I claim that many of today's problems are due to the conditionalities of the Washington Institutions classifying the toolbox needed to create increasing returns activities – a toolbox employed by all countries that developed after Venice and Holland – as 'illegal activities'.

After World War II, the toolbox did not produce the same success in every country. The most successful countries temporarily protected new technologies for the world market under competition.(e.g. Korea). The least successful permanently protected mature technologies for often small home markets under limited or no competition (typically the small countries of Latin America). However, the key fact here is that – from Mongolia to Russia and Peru – this inefficient industrial sector produced *higher real wages* than these same countries enjoy today when this

structure has been considerably weakened² (See [figure 1](#)). For centuries it was understood that having an 'inefficient' industrial (increasing returns) sector produced higher real wages than no industrial sector at all, and that this 'business inefficient' sector ought to be made more efficient rather than being closed down.

In its most simple form this argument is born out of the inclusion of both increasing and diminishing returns in trade theory, as the starting points respectively of virtuous and vicious circles of growth or poverty. A praxis ignoring these mechanisms may cause factor price polarization rather than factor price equalization. Increasing returns, virtuous circles, and large economic diversity were first established as necessary elements for wealth by Serra (1613), who specifically says these mechanisms are not available in the agricultural sector. The principle thus created was understood almost continuously – with brief interruptions – up until and including the Marshall Plan, but was in practice abandoned with the Washington Consensus. Deindustrialisation used to be something one would impose on a vanquished enemy, like on France after the Napoleonic War. Since the 1980s, 'structural adjustment' produced this same effect in many poor countries. Ruling theory at the time said this would not matter, to the contrary, a free trade shock would – in the vision of first WTO Secretary General, Renato Ruggieri – unleash 'the borderless economy's potential to equalise relations between countries and regions'.

In the 1930s, placing the gold standard (Keynes' 'barbarous relic') and budget balances as the untouchable core of economic theory and practice locked the world into a sub-optimal equilibrium, for a long time preventing Keynes' policies to be carried out with the approval of mainstream economics. In a similar way, placing free trade as the ideological centrepiece of development policies – *to which all other goals become subservient* – since the fall of the Berlin Wall has locked the non-industrialized countries into a very sub-optimal equilibrium. In my view, rather than continuing world policies based on the most simplistic version of mainstream trade theory, we must again take the conflict between free trade and real wages in non-industrialised countries seriously. A specialisation in diminishing returns activities with increasing population pressures also has serious environmental consequences.³

In my opinion the poverty we can observe in so many countries in the Third and former Second World is not caused by transitory problems, but by permanent features of nations having different economic structures. When the US started industrialising, few (although some) had the ambition for the country to be as wealthy as England. They just wanted to create a less efficient copy of the kind of production structure they could observe in England. This required tariffs. Successful industrialisation under protection, however, carries the seeds of its own destruction. By the 1880s US economists – using the same arguments based on scale and technology that were used to protect US industries in the 1820s – now argued for free trade. The same tariff that for a while created manufacturing industry, was now hurting the same industry.⁴ This is why List, the protectionist, was also the first visionary of global free trade: when all countries had achieved a

² This analysis is complicated by the fact that wages and the income of the self-employed as a percentage of GDP are falling in most countries, whereas the FIRE sector (finance, insurance, real state) increases. In Norway this wage/self employed share of GDP has been close to 70 per cent, in Peru it was around 23 per cent when the national statistical office stopped publishing this figure in 1990.

³ Reinert, Erik S. 'Diminishing Returns and Economic Sustainability: The dilemma of resource-based economies under a free trade regime.' Published in Hansen, Stein, Jan Hesselberg and Helge Hveem (Eds.), *International Trade Regulation, National Development Strategies and the Environment: Towards Sustainable Development?*, Oslo, Centre for Development and the Environment, University of Oslo, 1996.

⁴ Schoenhof, J. *The Destructive Influence of the Tariff upon Manufacture and Commerce and the Figures and Facts Relating Thereto*. New York, published for the New York Free Trade Club, 1883.

comparative advantage outside the diminishing returns sector.⁵ The disagreement is not over the principle of free trade as such, only over its timing.

If one, instead of accepting Adam Smith as an icon of free trade and laissez faire under any circumstances, reads what he says about economic development at an early stage, one will find that he is very much in line with classical development economics, where industrialization is the key recommendation. In his early work, *The Theory of Moral Sentiments* (Smith 1759/1810), Adam Smith argued passionately for 'the great system of government' which is helped by adding new manufactures. Interestingly, Smith argued that new manufactures are to be promoted, neither to help suppliers nor to help consumers, but in order to improve this 'great system of government'.

In fact, it is possible to argue that Adam Smith was also a misunderstood mercantilist, someone who firmly supported the mercantilist policies of the past, but then argued that they were no longer necessary for England. In other words, Adam Smith played the same role later played by Schoenhof (see above, footnote 3) in the United States. He praises the Navigation Acts protecting English manufacturing and shipping against Holland, arguing 'they are as wise... as if they had all been dictated by the most deliberate wisdom' and holding them to be 'perhaps, the wisest of all the commercial regulations of England' (Smith 1776/1976: I, 486-487). All in all, Smith described a development that had become successfully self-sustained, a kind of snowballing effect, originating in the wise protectionist measures of the past. Only once did Smith use the term 'invisible hand' in the *Wealth of Nations*: when it sustained the key import substitution goal of mercantilist policies, when the consumer preferred domestic industry to foreign industry (Smith 1776/1976: 477). This is when 'the market' had taken over the role previously played by protective measures, and national manufacturing no longer needed such protection. If one cared to look, Adam Smith also argued for tariff protection at an early stage as a mandatory passage point to development as did Friedrich List. Studying economic policy without discussing the context is one of the destructive vices of economic practice.

The praxis of economic development has been to assimilate and produce less efficient 'copies' of the economic structure of wealthy nations. The key features of the economic structure of wealthy nations have been a large division of labour (a large number of different industries and professions), an important increasing returns sector (industry and today also knowledge-intensive services). This understanding was made into economic theory by economists who codified what actually took place in wealthy countries: Antonio Serra (1613), James Steuart (1767), Alexander Hamilton (1791) and Friedrich List (1841). These principles are at times unlearned when the natural harmony of physics-based economics totally takes over, as in France in the 1760s, in Europe in the 1840s, and in the world in the 1990s. These periods come to an end because of the great social cost they create. Physiocracy in France created shortages and scarcity of bread, and started the process that led to the French revolution.⁶ The free trade euphoria of the 1840s met its backlash in 1848 with revolutions in all large European countries, with the exception of England and Russia. Every time Ricardo's trade theory is proven wrong when applied asymmetrically to increasing and diminishing return industries⁷, Ricardo is proven

⁵ Reinert, Erik 'Raw Materials in the History of Economic Policy; or, Why List (the Protectionist) and Cobden (the Free Trader) Both Agreed on Free Trade in Corn.', in Parry, G. (editor), *Freedom and Trade. 1846-1996*. London, Routledge, 1998.

⁶ See the works of Steven Kaplan, e.g. *The Bakers of Paris and the Bread Question, 1700-1775*, Durham, Duke University Press, 1996.

⁷ This asymmetry is the core of the argument in Frank Graham's 1923 article, a basis for Krugman's New Trade Theory.

right that the 'natural' wage level is subsistence. The free trade euphoria of the 1990s has again backlashed and created widespread poverty, but this time our response is wrong. We are too much attacking the symptoms rather than the causes of the problem.

The situation today

Today's standard economics tends to see development as largely being driven by **accumulation**, by investments in capital, physical and human.⁸ Standard economic theory which underlies today's development policies is normally unable to recognise qualitative differences between economic activities. I have argued elsewhere that globalization in the periphery therefore has had the effect of a Morgenthau Plan in many of the world's small and poor countries: 'removing the basis of modern civilization'. If we look at the list of today's failed or failing nations, we will find that they all fail George Marshall's test for what creates modern civilisation: They have very weak manufacturing sectors, unable to create the virtuous exchange between city activities and countryside activities that Marshall recognised. They also have a very limited diversity in their economic base, a very limited division of labour, and are specialised in diminishing returns activities.

Historically, modern democracy was born in the nations where the civilising trade between urban and rural areas had already been established, in the Italian city states. A key feature of the most successful city states was that power was not in the hands of the landowning (diminishing returns) class. The scarcity of arable land made this easy in Venice and The Dutch Republic, and the fact that the few islands of wealth in Europe also geographically tended to be islands was not lost on the early economists. In other areas this was only achieved through constant political fight. In Florence, 40-odd landowning families had been banned from political life already in the 13th century, enabling what we later in this paper shall call Schumpeterian cronyism: political and economic interests 'colluded' in a way that created widespread wealth. Dependency on raw materials would create feudalism and/or colonialism, neither of these situations leading to political freedom. If we wish to establish genuine democracies, we may also here at the moment be starting at the wrong end of the problem, attacking symptoms rather than real causes of political freedom. The US Civil War was essentially a war between landowners with vested interest in agriculture and cheap labour (the South) and those with a vested interest in industrialization, what the most visionary of the 19th century US economists called 'a high wage strategy' (the North). The history of Latin America is in many ways the history of a group of countries where the South won the Civil War.

The alternative paradigm, which we could broadly call evolutionary and historical – which I refer to as The Other Canon of economics – the key force in development is **assimilation**: learning to do what more advanced countries are doing, 'copying' not only their institutions, but more importantly their economic structure.⁹ In fact institutions like patents and protection, scientific academies and universities were key elements in the strategy to change national economic structures in order to assimilate that of the wealthier countries. In this tradition, economic growth

⁸ This discussion builds on a recent paper by Richard Nelson, 'Economic Development From the Perspective of Evolutionary Economic Theory', draft, Sept. 18, 2004.

⁹ Historical evidence for this practice in the European theatre is found in my paper 'Benchmarking Success: The Dutch Republic (1500-1750) as seen by Contemporary European Economists', in *How Rich Nations got Rich. Essays in the History of Economic Policy*, Working Paper Nr. 1, 2004, SUM - Centre for development and the Environment, University of Oslo. Downloadable on <http://www.sum.uio.no/publications>

tends to be **activity-specific**, tied to clusters of certain economic activities exhibiting increasing returns and rapid technological progress. This process requires capital, but the difficulty lies in transferring and mastering the skills and, above all, in creating a viable market for the increasing returns activities in nations where the absence of purchasing power and massive unemployment tend to go hand in hand, each factor reinforcing the other in a deadlock. By generally insisting on using models assuming full employment, the Washington Institutions avoid facing a key factor in the mechanisms that lock nations into poverty: the lack of formal employment. Historically, since 16th century Holland and Venice, only nations with a healthy manufacturing sector have achieved anything close to full employment combined with a lack of sizable rural underemployment.

Today's reigning economic theory represents what Schumpeter called 'the pedestrian view that it is capital *per se* that propels the capitalist engine': development is seen as largely driven by the accumulation of capital, physical or human. 'The premise of neo-classical theory is that, if the investments are made, the acquisition and mastery of new ways of doing things is relatively easy, even automatic', as Richard Nelson says. Even more important, the core thesis of standard economics, albeit seldom expressed, is that economic structure is irrelevant, capital *per se* will lead to economic development regardless of the economic structure into which the investment is made. In the alternative Other Canon theory, economic activities exhibit very different windows of opportunity as carriers of economic growth. An intuitive example: Bill Gates is not likely to have achieved his present economic success specializing in herding goats or growing broccoli: the technological wave that created Microsoft is not replicable in a company or country specialising in goat herding or growing broccoli. In other words we have to get rid of what James Buchanan calls 'the equality assumption' in economic theory, probably the most important and the least discussed assumption.¹⁰ The ability to absorb innovations and new knowledge – and consequently **profitably to absorb investments** – at any time varies enormously from one economic activity to another.

The problem: As a result of seeing capital *per se* as the key to growth, loans are given to poor nations which their productive/industrial structure is unable to absorb profitably. Interest payments will often very fast exceed the rate of return on the investments made. 'Finance for Development' may therefore take on the characteristics of a pyramid game or a chain letter fraud: the only ones to gain are those who started the scheme and are close to the door.¹¹ Correspondingly on the human side: Investments in human capital are made without corresponding change in the productive structure that creates a demand for the skills acquired. As a result education may tend only to promote emigration. In both cases Gunnar Myrdal's 'perverse backwashes' of economic development will be the result: more capital – both monetary and human – will flow from the poor to the rich countries than the other way around. My claim, based on the study of 500 years of history's laboratory, is that the main explanation for this lies in the type of economic structure – locked into a vicious circle of lack of supply and lack of demand and the absence of increasing returns – that characterises poor nations. This circle cannot possibly be broken unless we again listen to 500 years who speak in favour of the set of policies listed in Appendix 1. Abraham Lincoln stands out as a proud representative of this type of national economic strategy, and US industrial policy from 1820

¹⁰ At its core, the Enlightenment project was one of ordering the world by creating taxonomies or classification systems, of which that of Linnaeus is the best known. Neo-classical economics achieves its analytical accuracy precisely because it lacks any taxonomy: everything is qualitatively alike. Therefore its conclusions, like factor-price equalization, are essentially already built into the assumptions.

¹¹ See Kregel, Jan, 'External Financing for Development and International Financial Stability, UNCTAD G-24 Discussion Paper Series, No. 32, October 2004. Downloadable at www.unctad.org.

until 1900 is the best example for the Third World to follow today until – as the US was towards the end of the 19th century – these nations are ready to participate fully in and benefit truly from international trade.

Recommendation: *As was the case with the Marshall Plan, financial funds must be matched with the establishment of industrial and service sectors that profitably can absorb both the physical and human investments. A diversification out of raw material production is absolutely indispensable in order to create a basis both for democratic stability and increased welfare. Initially these sectors will not be able to survive world market competition. As this process always has required, since England's ascent to industrialization starting in 1485, this incipient industrialisation needs special treatment of the kind the Marshall Plan afforded after 1947. This requires interpreting the Bretton Woods agreement as it was done in the post-WW II era, not as it is presently interpreted.*

Part of the problem also lies in neo-classical economics' poor understanding of successful business. It is almost curiously amusing that at the core of the economic theory behind capitalism is a situation of perfect competition and equilibrium, a situation where no one makes any money to speak of. In standard economics successful businessmen like Bill Boeing and Bill Gates – who both contributed importantly to the wealth of Seattle – are 'rent-seekers', generally an odious term. In fact it is the poverty-stricken Third World that most closely corresponds to the conditions assumed in international trade theory, diminishing returns and perfect competition. The rich countries, whose export items are produced under Schumpeterian dynamic imperfect competition, are 'rent seekers' whose rents, spreading through society as higher wages and a higher tax base, are what we call 'economic development'. This failure to understand development as Schumpeterian imperfect competition is at the root of the present arguments against an industrial policy. Anything which causes imperfect competition tends to be seen as 'cronyism'.

Keynes saw investments resulting from what he called 'animal spirits'. Without this 'animal spirit' – without the initiative to invest in uncertain conditions – capital is sterile, both in the world of Joseph Schumpeter and in that of Karl Marx, each representing one side of the political spectrum. The motivating force behind this animal spirit is to make profits, to break the equilibrium of perfect competition. *From this businessman's point of view the very simple explanation for the lack of investments in poor countries is the lack of profit opportunities.* He does not invest because he sees no opportunity to make profits outside the extraction of raw materials. This lack of opportunities for profitable investments is largely tied to the extremely low purchasing power and the very high unemployment rate. Subsistence farmers do not represent profitable customers for most producers of goods and services. Tariffs create incentives to move production into the labour markets of the poor. Historically, this has been seen as a conscious tradeoff between the interest of man-the-consumer and man-the-producer. The idea that industrialization would cause a rapid increase in employment and wages that more than offset the temporary higher cost of manufactured goods was at the core of the Prebisch import-substitution industrialization, but also of US economic theory around 1820.¹²

The idea that greater 'openness' in any way should improve the situation of the poor countries is both counterintuitive and contrary to historical experience. If anything, the first effect of sudden

¹² See e.g. Raymond, Daniel, *Thoughts on Political Economy*, Baltimore, Fielding Lucas, 1820.

'openness' in a backward society is likely to kill off what little manufacturing activity that might exist, making the situation worse.¹³ In effect historical experience shows that opening up for free trade between nations of very different levels of development tends first to destroy the most efficient industries in the least efficient countries (The Vanek-Reinert Effect), from the unification of Italy in the 19th century to the integration of Mongolia and Peru in the 1990s. [Figure 1](#) visualizes how the highly successful export increases that followed the opening up of the Peruvian economy were accompanied by falling real wages. In Peru, as in many other Latin American countries, real wages peaked during the period of 'inefficient' import substitution. The ports, airports, roads, power stations, schools, hospitals, and service industries that were created by this inefficient industrial sector, led by rent-seekers, were *real* and could not have been created without the demand for labour and infrastructure that this inefficient industrial sector generated.¹⁴ Economic theory must again open up to understanding synergies of this type, where temporary 'business inefficiency' in certain sectors activates more efficient activities and/or the upgrading of human capital in other sectors, in the end leading to increased welfare.

The timing of the opening of an economy is crucial. Opening up the economy too late will seriously hamper growth. Opening up an economy too early results in de-industrialization, falling wages¹⁵ and increasing social problems. An anonymous traveler who in 1786 observes the effects of economic policy in different European countries reaches this same conclusion: 'Tariffs are as harmful to a country after manufacturing industry has been established there, as they are useful to it in order to introduce this industry'.¹⁶

In Southern Mexico we can observe the destructive sequence of de-industrialization, de-agriculturalization¹⁷ and de-population. That large numbers of subsistence farmers should be made 'uncompetitive' by subsidized First World agriculture is a relatively new, but alarming, trend that may persist even if the subsidies are removed. There are around 650 million farmers in India, and a large proportion of them are as 'uncompetitive' as their Mexican colleagues if and when free trade opens up, but without the possibility to migrate to the US. In the poorest countries today a tradeoff exists between maximizing international trade – which is what present policies achieve – and maximizing human welfare ([Figure 1](#)). In my view we must address this tradeoff in a different way than trying to compensate the losses of the poor countries through increased aid.

More than five centuries of history – from England's ascent starting in 1485 – show that there is only one point where the complex deadlock of vicious circles of poverty and underdevelopment can effectively be attacked: by changing the productive structure of the poor and failing states. This means increasing diversification away from the diminishing returns sectors (traditional raw materials and agriculture) into an increasing returns sector (technology intensive manufacturing), creating a large division of labour and the synergies and social structures which emerge from this structure. This is also the only way to make it possible for subsistence agriculture to break away from its chains: creating an urban market for their goods, which will induce specialization and

¹³ I have showed this effect in 'Globalisation in the Periphery as a Morgenthau Plan: The Underdevelopment of Mongolia in the 1990s', in Reinert, Erik (editor), *Globalization, Economic Development and Inequality: An Alternative Perspective*, Cheltenham, Edward Elgar, 2004. See also my paper 'Increasing Poverty in a Globalised World: Marshall Plans and Morgenthau Plans as Mechanisms of Polarisation of World Incomes', in Chang, Ha-Joon (editor), *Rethinking Economic Development*, London, Anthem, 2003.

¹⁴ I am grateful to Carlota Perez for having formulated this insight.

¹⁵ But not necessarily falling GDP/capita. See footnote 1.

¹⁶ Anonymous (1786). *Relazione di una scorsa per varie provincie d'Europa del M. M... a Madama G.. in Parigi*. Pavia: Nella Stamperia del R. Im. Monastero di S. Salvatore. p. 31. I am grateful to Sophus Reinert for this reference.

¹⁷ As imported and subsidized US food takes over from local maize and wheat production.

innovation, bring in new technologies and create alternative employment. Foreign markets cannot play the same role, they break economies into advanced and backward sectors and regions: the key to cohesive development is a national¹⁸ interplay between increasing and diminishing returns sectors.

The arguments against industrial policy: Malthusian vs. Schumpeterian cronyism.

2005: A Filipino sugar producer uses his political influence in order to achieve import protection for his products.

2000: Major Daley in Chicago does not listen to the Chicago economists, but provides subsidies to already wealthy high-tech investors through an incubator.

1950s and 1960s: Swedish industrialist Marcus Wallenberg uses his close political contacts with Labour Party Minister of Finance, Gunnar Sträng, to achieve political support and favours in order to carry out his plans for companies Volvo and Electrolux.

1877: Steel producers in the United States use their political clout to achieve a 100 per cent duty on steel rails.¹⁹

1485: Industrialists use their political connections to King Henry VII in order to achieve subsidies and an export duty on raw wool that will increase the raw material prices for their competitors on the Continent, slowly killing the wool industry elsewhere, e.g., in Florence.

These are all blatant examples of crony capitalism, very far from the nice perfect level playing field we are all supposed to prefer. These are all rent seekers that purist economic theory tends to abhor. There is, however, a crucial difference between the first example and the rest. The Filipino crony differs from the other cronies in that he gets subsidies in a diminishing returns raw material that competes under perfect competition on the world market. He is a Malthusian crony leading his country down the path of diminishing returns (in spite of technological change which counteracts this). The others are Schumpeterian cronies, producing under what Schumpeter calls historical increasing returns (a combination of both increasing returns and fast technological change). If we couple this to trade theory we see that the tilted playing fields providing Schumpeterian cronyism produce widely different results than those of the Filipino crony.

Bismarck used to say that there are two things whose production process one should better not watch: sausages and government budgets. We should probably add industrial policy to this group of aesthetically unpleasant production processes. We can live without sausages, but not without government budgets or industrial policy. And, as Keynes said, 'the worse the situation, the less laissez-faire works'. If we insist that we cannot have industrial policy because moving away from perfect competition will cause some cronies to get rich, we have totally misunderstood the nature of capitalism. Capitalism *is* about getting away from perfect competition; this is what people spend years at business schools learning.

¹⁸ Essentially within the same labour market.

¹⁹ Taussig, F.W. *The Tariff History of the United State*, New York, Putnam's, 1897, page 222.

Economic development is caused by structural change which breaks equilibrium, creating rents. Insisting on the absence of rents is insisting on a steady and stationary state. This is the reason why tariffs in many ways are the least crony-friendly of the policy tools. However, there is still the need to choose which activities to protect, which almost by definition will create cronies. Abraham Lincoln protected the steel cronies, and he was very proud of it. He saw that by paying a little more for steel²⁰, he managed to create a huge steel industry with many jobs paying high wages that also provided a base for government taxation. Economic development strategy is about getting the public interests of the nation lined up with the private vested interests of the capitalists. As stated above, the failure of standard economics to understand the dynamics of the world of business is a serious problem. This also leads to a failure to understand the economic essence of colonialism. At its economic core colonialism is a technology policy: the colonies were not allowed to have manufacturing industries. The economic activities with high potential for economic growth and mechanization were to remain in the metropolis, the diminishing returns activities went to the colonies.

The immense transfers that accompany The Millennium Goals process will necessarily also lead to cronyism. Some people will get wealthy through this initiative, and a huge aid industry-cum-lobby is working very actively. Crony-free economics only exists in neo-classical models. My choice is that we go for Schumpeterian cronyism more than aid-based cronyism, because in this way we also make it possible for the poor countries to free themselves from economic dependency. Is it because the apparent motivation of the businessman is greed and avarice, while the apparent motivation of the aid lobby is charity that the presently preferred solution tilts so heavily in favour of charity rather than development? Again we may have unlearned our basic Adam Smith: it is not by the charity of the baker, but by his greed that we get our daily bread.

We also seem to have unlearned the logic behind policy tools for economic development. Patents and modern tariffs were created at about the same time, in the late 1400s. It is crucial to understand that these rent-seeking institutions were created by the very same understanding of the process of economic development. To create protection and rents in order to produce new knowledge (in the case of patents) and to make it possible to move the new knowledge in order to produce with this new knowledge in new geographic areas (the case of tariffs) are two aspects of the same understanding of Schumpeterian economic dynamics. From the point of view of those who think that perfect competition is the ideal economic situation, both patents and tariffs represent legalized rent seeking in order to promote goals that are not achievable under perfect competition.

I suggest looking at this set of problems as the poor countries might look at them. Why is the rent seeking and crony argument not applied also against patents, only against tariffs and other policy instruments used in poor countries? Why does the economic profession accept legalized rent-seeking by pharmaceutical companies and by Bill Gates, but abhor the rent-seeking of an industrialist who tries to set up a small business in Lima, Peru? The poor countries may, with some justification, say that the wealthy countries are establishing rules that legalize constructive rent seeking in their own countries, but prohibit them in the poor countries. Over time industrialization has proved as beneficial to mankind as many highly protected drugs.

²⁰ That the steel tariff later got as high as 100 per cent, was a result of technological change and rapidly falling prices in a situation where the tariff was not based on value, but determined in dollars per ton.

The Washington Consensus and sequential single issue management.

By the time of what The New Yorker appropriately called the 'triumphalism' following the fall of the Berlin Wall, neo-classical economics with its variations had become the only game in town. The logic of the post-WW II years that had built wealth along the belt bordering communism, from Norway to Japan, was gone, and economics had fossilized into a war between two utopias: the communist utopia that promised that each should give according to ability and receive according to need, and the neo-classical utopia that promised that under capitalism everyone would receive the same wages world-wide (Paul Samuelson's *factor-price equalization*). Both of these theories, the communist planned economy and neo-classical economics, were based on David Ricardo's theories (1817). Ricardo and his successors show a disregard for economic structure, for technology and innovations, for entrepreneurship and leadership, and for the fact that economic activities are qualitatively as different as carriers of economic welfare. In both its communist and its liberalist forms Ricardian economics sees no need for a state (Marx' 'withering away of the State').

However, neo-classical economics was, to use Nicholas Kaldor's term, an *un-tested theory*. Neo-classical theory had provided an effective ideological shield during the Cold War, but no nation had ever been built on this type of theoretical framework. In its most extreme form, as it was practiced around 1990, the only predicament was that nations should 'get their prices right' and economic growth would follow automatically, disregarding economic structures. Because it is so counterintuitive (why should stockbrokers and shoe-shine boys get the same wages just by being put in different nations??), Paul Samuelson's theory of factor-price equalization had long been the pride of the economics profession. Now, by 1990, policy recommendations were formulated as if this 'law' of factor-price equalization was comparable to the law of gravity. This neglected not only important theoretical contributions pointing elsewhere (Krugman, Grossman, Helpman, Lucas, etc.), key insights of the founding father of neo-classical economics, Alfred Marshall, were also neglected. Alfred Marshall not only describes taxes on diminishing returns activities in order to subsidize increasing returns activities as a good development policy, he also emphasizes the importance for a nation to produce where most technical change is found, and the role of synergies (industrial districts). These are the principles behind all successful catching up since Henry VII started the industrialization of England by taxing diminishing returns activities (an export tax on raw wool) in order to subsidize industry manufacturing woolen cloth. These elements, representing first successful practice and then sound theory over more than 500 years, have disappeared from the policy space.

In the 1990s, as the world economy failed to deliver results corresponding to the crudest version of Samuelson's law of free trade, the search began for other explanations. This search was, and still is, always based on the premises of neo-classical economics, the search is for a factor which *in addition to* neo-classical economics would set free the magic of the market in providing factor-price equalization with instant global free trade:

- 'get the prices right'
- 'get the property rights right',
- 'get the institutions right',
- 'get the governance right',
- 'get the competitiveness right'

- 'get the national innovation systems right'
- 'get the entrepreneurship right'

The vision of 'the borderless economy's potential to equalise relations between countries and regions' was based on the wrong theory. This theoretical fantasy developed into a practical nightmare in many poor countries. None of the sequential focuses on single issues will unleash a magic of factor-price equalization under instant free trade; this never existed in history nor will it ever exist. Economic growth is by the very nature of things an uneven process, and only wise political intervention can even out the factor-price polarizations which are the natural results of an unrestrained market. The latest fad in the sequence, attributing poverty to a lack of entrepreneurship, comes across as being particularly uninformed. As contrasted to most people in the wealthy countries who can safely live within their mostly routine jobs, the poor of the world have to prove their initiatives and entrepreneurship every day in order to ensure physical survival for themselves and their families.

The problem is that the sequence of theoretical fads for policy fails to address the fundamental blind spots of neo-classical economics: a) its inability to register qualitative differences, including the different potentials of economic activities as carriers of economic growth, b) its inability to register synergies and linkages²¹, and c) its inability to cope with innovationists and novelties, and how differently these are distributed among economic activities. Together, these blind spots of present-day mainstream economics prevent many poor countries from developing. The successful ones, like China and India, have, both for more than fifty years, followed the recommendations of the Marshall Plan: creating a division of labour between urban and rural activities.

Learning is a key element in development, but learning may spread in the economy also simply as falling prices to foreign consumers. The key insight of Schumpeter's student Hans Singer was that learning and technological change in the production of raw materials, particularly in the absence of a manufacturing sector, tend to lower export prices rather than to increase the standard of living in the raw material producing nation.²² Learning tends to create wealth to producers only when they are part of that finely knit network that was once called 'industrialism': a dynamic system of economic activities subject to increasing productivity through technical change and a large division of labour. The absence of increasing returns, dynamic imperfect competition, and synergies in the raw material producing countries are all part of the mechanisms that perpetuate poverty. Part of the explanation is also that only 'industrialism' gives the necessary critical mass and political clout to create the countervailing power of labour unions. What the French Regulation School economists call 'fordism', that workers' pay raise parallel to productivity improvements, was an important part of industrialism.

Further explorations along the mainstream route taken since 1990 are in my view rapidly running into diminishing returns. Huge resources are employed by well-intentioned governments along a largely sterile path of inquiry, a main problem being that radically different

²¹ The slogan 'get the national innovation systems right' proves an exception, because it does refer to a synergetic phenomenon. However, this does not lead very far because of the theory's inability to recognize the different windows of opportunity for innovation in Microsoft, under hugely increasing returns, and in a goat herding firm in Mongolia, under critically diminishing returns. In standard analysis, Schumpeterian economics tends to be added like a thin icing on a thoroughly neoclassical cake.

²² Singer, Hans W. 'The Distribution of Gains between Investing and Borrowing Countries'. In *International Development: Growth and Change*. McGraw-Hill, New York. 1964 (1950)

alternative theoretical approaches are not financed or explored. In my opinion the only way to raise the standard of living in the poorest countries of the world is to follow the only successful formula that ever worked, from England in 1485 to Europe and the Asian Tigers in the 1960s and 70s and China today. This formula is included as Appendix 1. The best social policy is to create development, not by the rich creating subsidized reservations where the poor are kept, largely underemployed and 'underproductive'. The Indian reservations in North America are sad examples of a policy of the kind that subsidizes without changing productive structures. In short, the Millennium Goals are in my view far too much biased towards palliative economics rather than structural change, towards treating the symptoms of poverty rather than its causes. I am not denying they could be an unavoidable emergency measure under the present critical conditions, but without confronting the deeper roots of the problem it is simply poor social policy.

Conclusion: Are we creating 'welfare colonialism'?

Present policies run a risk of creating serious imbalances between the efforts to create development and the palliative efforts of aid. What we may be creating is a system that could be described as 'welfare colonialism'. This term was coined by anthropologist Robert Paine to describe the economic integration of the native population in Northern Canada.²³ The essential features of welfare colonialism are: 1) The often observed colonial drain of the old days is reversed, the net flow of funds is to the colony rather than to the mother country, and 2) the native population is integrated in a way that radically changes their previous livelihood, and 3) they are put on the dole.

In Paine's view, welfare colonialism identifies welfare as the potential vehicle for a stable internal 'governing at a distance' through the exercise of a particularly subtle, 'non-demonstrative' and dependency-generating form of neo-colonial social control that pre-empts local autonomy through 'well-intentioned' and 'generous' – but ultimately 'morally wrong' – policies. Welfare colonialism creates paralyzing dependencies on the 'centre' in a peripheral population, a centre exerting control through incentives that create total economic dependency, thus preventing political mobilization and autonomy. The social conditions in which the native inhabitants of Arctic North America find themselves today, show us that in their case the final effect of massive transfer payments was to create a dystopia rather than a utopia.

We already see aid and transfers creating passivity and disincentives to work in poor nations. My Haitian colleagues point to family transfer payments from the United States creating disincentives to work for a going rate of 30 US cents an hour in Haiti. A Brazilian research project on the highly laudable Zero Hunger project, carried out at different government levels (national, state and local) on different programs targeted to fight hunger, concludes that to a large extent these projects are ineffective, since they treat symptoms of poverty either by distributing food or by subsidizing food prices, rather than creating situations where the poor are converted into breadwinners.²⁴ These are welfare colonialism type effects: results of treating symptoms rather than causes of poverty.

²³ Paine, Robert (editor), *The White Arctic. Anthropological Essays on Tutelage and Ethnicity*, Institute of Social and Economic Research, Memorial University of Newfoundland, 1977.

²⁴ Lavinhas L and Garcia E. (2004) *Programas Sociais de Combate à Fome. O legado dos anos de estabilização econômica*, Rio de Janeiro, editora UFRJ/PEA, Coleção Economia e Sociedade, 2004.

The idea of nations producing under increasing returns (industrialized nations) paying an annual compensation to nations producing under constant or diminishing returns (raw material producers) is not a new one. It is a logical conclusion from standard trade theory once both increasing, constant, and diminishing returns are included, and this recommendation – a forerunner of the Millennium Strategy – is present already in a US college textbook from the 1970s.²⁵ Until very recently, however, the favored option was to industrialize the poor countries, even if it meant that for a long time these industries would not be competitive on the world market. Making free trade the linchpin of the world economic system – one to which all other considerations must yield – has made a type of welfare colonialism *appear* as the only option. We must compensate the poor for the welfare loss from free trade, seems to be the underlying idea. The other option, to develop the poor world, is not there because we do not wish to abolish free trade as the core of the world economic order. However, the long term and cumulative effects of having groups of nations specializing in pre-industrial economic structures will be staggering. In my view the policies successfully followed between 1485 and the 1960s are – in spite of their being decidedly out of fashion – still the better alternative.

There are also neo-classical tools that could be used with great benefits. The Washington Institutions should stop using models assuming full employment also in countries like Haiti, where only between 20 and 30 per of the potential workforce have a job. By using shadow prices they will find back to the original logic of the Bretton Woods Institutions and their rules as they were interpreted in the 1950s and 60s, making possible the reconstruction of Europe. This will mean that we *temporarily* must let the principle of free trade yield to the principle of economic development and structural change.

Both after 1848 – in order to solve the perennial ‘social question’ in Europe – and in 1947, political pressure from the spectre of communism unleashed successful development practices. Few are aware that Karl Marx stated that the only reason he was in favour of free trade was that it hastened the revolution. In 1947, the free traders in Washington had to yield to the political need for protectionist development policy around the communist block. This Marshall Plan was a truly astonishing success. It is perhaps a faint hope that today’s terrorist threat will unleash a similar situation where free trade is temporarily abandoned in order to create development as a *political*, rather than as a *social*, goal.

During the Enlightenment, civilization and democracy were understood, through the analysis of people like Montesquieu and Voltaire, as products of a specific type of economic structure. We find the origins of this understanding already in Francis Bacon more than 100 years earlier:

‘There is a startling difference between the life of men in the most civilised province of Europe, and in the wildest and most barbarous districts of New India. This difference comes not from the soil, not from climate, not from race, but *from the arts*.’²⁶

When German economist Johan Jacob Meyen in 1770 stated ‘It is known that a primitive people does not improve their customs and institutions later to find useful industries, but the other way around’, he expressed something which could be considered common sense at the time. We find

²⁵ ‘Thus the country which eventually specializes completely in the production of X (that is, the commodity whose production function is characterized by increasing returns to scale) might agree to make an income transfer (annually) to the other country, which agrees to specialize completely in Y (that is, the commodity whose production function is characterized by constant returns to scale) (Chacholiades, Miltiades, *International Trade Theory and Policy*, New York, McGraw-Hill, 1978, p. 199; see also Reinert 1980)

²⁶ Francis Bacon, *Novum Organum*, 1620.

the same idea – that civilisation is created by industrialisation – in the 19th century in thinkers across the whole political spectrum from Abraham Lincoln to Karl Marx. Industrialisation 'draws all, even the most barbarian, nations into civilization' as Marx puts it.

We ought to use our understanding of successful policies in past history, which is the only laboratory economics has, in order to create something brand new and adequate for solving today's challenges. We should attempt to create something as brilliant and practical as did the visions and accompanying policy recommendations of Alexander Hamilton and Abraham Lincoln, but firmly grounded in an understanding of the present technological and historical context.

We ought to be as enlightened again in understanding the connection between production and civilization, by moving our theoretical focus away from trade and on to production. Compared to Meyen's statement above, our present understanding has reversed the arrows of causality, and we therefore risk creating an increasing number of failed states. We now ought to focus on how differently technological development hits different economic activities, creating huge variations in the windows of opportunity to innovate, and how this makes it possible for nations to specialize in being poor and uneducated. We should focus more on core issues like economies of scale, scope, speed and specialization, on avoiding the negative effects of diminishing returns and lock-in effects, on the *assimilation of knowledge* rather than the *accumulation of capital*, on changing the economic structures of poor countries so they become more like those of the rich ones. We should read not only Schumpeter on technical change, but also Schumpeter's essay on imperialism. Read not only Schumpeter on 'creative destruction', but also open our eyes and minds to the type of 'destructive destruction' that can be observed.

Appendix 1.

'Mercantilist' Economic Policies of the Generic Developmental State.

Continuity of policy measures and tool kit from England in 1485 (Henry VII) to Korea in the 1960's: a mandatory passage point for economic development.

...the fundamental things apply, as time goes by.

Sam, the pianist, in 'Casablanca'.

1. Observation of wealth synergies clustered around increasing returns activities and continuous mechanization in general. Recognition that 'We are in the wrong business'. Conscious *targeting, support and protection* of these increasing returns activities.
2. Temporary monopolies/patents/protection given to targeted activities in a certain geographical area.
3. Recognizing development as a synergetic phenomenon, and consequently the need for a diversified manufacturing sector ('maximizing the division of labor', Serra 1613 + observations of the Dutch Republic and Venice)
4. Empirical evidence accumulated showed that the manufacturing sector solves three policy problems endemic to the Third World in one go: increasing national added value (GDP), increasing employment, and solving balance of payment problems.

5. Attraction of foreigners to work in the targeted activities (historically religious prosecutions have been important)
6. Relative suppression of landed nobility (from Henry VII to Korea). (Physiocracy as a landowners' rebellion against this policy)
7. Tax breaks for targeted activities.
8. Cheap credits for targeted activities.
9. Export bounties for targeted activities.
10. Strong support for agricultural sector, in spite of this sector clearly being seen as incapable of independently bringing the nation out of poverty.
11. Emphasis on learning/education (UK apprentice system under Elizabeth I, Child (1693)
12. Patent protection for valuable knowledge (Venice from 1490s)
13. Frequent export tax/export ban on raw materials in order to make raw materials more expensive to competing nations (starting with Henry VII in late 1400s, whose policy was very efficient in severely damaging the woolen industry in Medici Florence).

Source: Reinert E. & S. 'Mercantilism and Economic Development: Schumpeterian Dynamics, Institution Building and International Benchmarking', in Jomo, K. S. and Erik S. Reinert (editors), *Origins of Economic Development*, London, Zed Publications, forthcoming 2005.

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Game Theory: a Refinement or an Alternative to Neo-classical Economics?

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This paper¹ is not intended to say much that is new, rather it takes issue with the traditional manner in which economics has presented game theory. In particular this paper emphasises that game theory has some quite radical implications; these are however smothered by a heavy emphasis in textbooks and in teaching on what is neo-classical about game theory rather than presenting game theory as a very different way of modelling economic life. As in a previous paper² I take for my texts three books that form the core of many masters programmes in microeconomics.

Neo-classical economics, Game Theory and General Equilibrium

The intellectual centrepiece of neo-classical economics is general equilibrium. "The view of the economy central to microeconomics is that it is an interrelated system of markets through which one particular resource allocation is achieved out of infinitely many which are possible. Until now³ we have been considering the constituent elements of this system: households, firms, goods markets, and factor markets. We now have to synthesise all these elements into a model of the equilibrium of the economy as a whole." (Gravelle and Rees, 1992, p438).

There is nothing inherently neo-classical about general equilibrium. For example Keynesians postulate that an economy may become stuck in an underemployed equilibrium. An equilibrium in game theory may be equivalent to one in general equilibrium. In the example (fig one) below (Up, Left) represents a Nash Equilibrium, a Dominant Strategy Equilibrium and we could suggest, a General Equilibrium of a simple two-person economy.

Figure One

		Player Two	
		Left	Right
Player One	Up	(3,3)	(0,0)
	Down	(0,0)	(0,0)

The key assumption that distinguishes a game theory world from a neo-classical economy is that of interdependence. In game theory the payoffs or utilities of any strategy depend on the strategy of the other player(s), or even the expectations of the strategy of the other player. In the above

¹ Many thanks to Alan for invaluable editorial assistance.

² Matthew McCartney, "Dynamic versus Static Efficiency: The Case of Textile Exports from Bangladesh and the Developmental State", *post-autistic economics review*, issue no. 26, 2 August 2004, article 4, http://www.btinternet.com/~pae_news/review/issue26.htm

³ This is chapter 16.

example the possibility of player one getting a payoff of 3 from choosing Up is contingent on the choice of Left by player two.

There are a variety of assumptions in the neo-classical version of general equilibrium necessary to prove the *existence*, the *uniqueness* and *stability* of equilibrium. Important among those assumptions is independence. For the *stability* of equilibrium, "if all goods in the economy are gross substitutes, then the time path of prices, $p(t)$, determined by the tatonnement adjustment process...converges to an equilibrium." (Gravelle and Rees, 1992, p450). An equilibrium may not exist in the case of goods that are complements. If there is excess demand for a particular good such as CDs the price in a Walrasian type economy will rise. This will have the undesirable (from the perspective of equilibrium) effect of reducing the demand for CD players. Such complications from interdependent markets may prevent the economy converging to a stable equilibrium. For *uniqueness* the neo-classical version of general equilibrium likewise demands that choices be independent. What happens otherwise can be best illustrated by another example of a game.

Figure Two

		Player Two	
		Left	Right
Player One	Up	(3,3)	(0,0)
	Down	(0,0)	(3,3)

In this example (fig two) there are multiple equilibria⁴. Once the utility from a strategy or choice by one individual depends on the strategy or choice of another individual, any presumption of uniqueness of equilibrium breaks down. This then is the crucial difference. Game theory drops the assumption of independence. The implications of this are profound: they open the door for a completely different way of analysing the stability and efficiency of an economy, the role of the state, expectations, and the role of conflict in economic exchange. I will return to this later. First I will try to make the case that so completely has game theory been colonised and smothered by neo-classical economics that these implications may escape us.

Is Game Theory a Theory?

I would argue that game theory is perfectly entitled to stand alone as a theory of how economies behave in a situation of interdependence in decision making. Game theory is though commonly presented as an appendage. "Game theory *by itself* is not meant to improve anyone's understanding of economic phenomena. Game theory (in this book) is a tool of economic analysis, and the proper test is whether economic analyses that uses the concepts and language of game theory have improved our understanding." (Kreps, 1990b, p6). Kreps (1990b) further argues that game theory comprises "formal mathematical models that are examined deductively" (p6), and "a taxonomy for economic contexts and situations" (p37), to "ask questions about the dynamics of competitive interactions" (p87).

⁴ More precisely three, two pure strategy and one mixed strategy equilibria. The latter are not considered here.

Game Theory and Methodological Individualism

Despite game theory being a “representation of a situation in which a number of individuals interact in a setting of strategic interdependence.” (Mas-Colell et al, 1995, p219) there is still a heavy bias towards the methodological individualism of neo-classical economics. “Thus it is easy to portray game theory as an extension of a theory of rational decisions involving calculated risks to one involving calculations of strategies to be used against rational opponents, competitors or enemies; that is, actors who are also performing strategic calculations with the aim of pursuing their goals and, typically, attempting to frustrate ours”. (Rapaport, 1970, p45).

Formalism, Rationality, Equilibrium and Game Theory

Game theory has been subjected to the same formalism common to much of neo-classical economics, in fact “game theory (as developed by people who have come to be recognised as game theorists) is properly a branch of mathematics” (Rapaport, 1970, p49). Like neo-classical economics game theory has been heavily saturated by the concept of rationality: it is “the branch of mathematics concerned with the formal aspect of rational decision.” (Rapaport, 1966, p16). Likewise any reading of a basic game theory text reveals the central, almost defining, importance of equilibrium. With this it clearly shares with neo-classical economics a “slavish devotion to the concept” (Keen, 2001, p164).

Glancing through Mas-Colell et al (1995), chapters seven to nine reveal the exclusive emphasis of its exposition of game theory on formalism, rationality and equilibrium. The basic elements of game theory are outlined with relevant definitions, proofs and corollaries (formalism). The exposition runs through dominant strategies, rationalisable strategies, sequential rationality, backward induction, reasonable beliefs and forward induction (rationality)⁵. These rationality assumptions are extreme. The combination of consistent alignment of beliefs and common knowledge of rationality implies that instrumentally rational individuals with the same information sets must converge in their expectations. The remainder is concerned with Nash equilibrium, Bayesian Nash equilibrium and Subgame perfection (equilibrium). The notion of equilibrium refinement is an important avenue in game theory (see for example Kreps, 1990b, p108-128). In the narrow world of neo-classical game theory this trinity contrasts with the other in general equilibrium, the sacred truths of existence, uniqueness and stability.

Gravelle and Rees (1992) do not deal explicitly with game theory, but use it to model the behaviour of oligopolies (Chapter 12). Their treatment is a specific example of all of these general points. They seek a “precise prediction of the market equilibrium” (p298); it is certainly mathematical and formal. “Each firm is assumed rationally to think through the consequences of its choices, in the knowledge that the other firm knows the situation and is also thinking things through.” (p302). Happily for the non-mathematical reader “the general issues of existence, uniqueness and stability of equilibria are not dealt with.” (p300)⁶.

⁵ Kreps (1990a) is little different but does have several pages dealing with ‘irrationality’ (p480-9). Such value-laden terms in supposedly positive economics is evident. If players do not play the way the equilibrium of the game says they should they are ‘irrational’. The theory is correct by its by its own definition.

⁶ The “interested reader is directed to the more specialised references at the end of the chapter for a fuller treatment” (p300).

Like neo-classical economics, game theory as it exists places an immense and rarely questioned burden of information on individuals. “A central concept of game theory is the notion of a player’s strategy. A strategy is a *complete contingent plan*, or *decision rule*, that specifies how a player will act in *every possible distinguishable circumstance* in which she might be called upon to move.” (Mas-Colell et al, 1995, p228). The information requirements become even more burdensome when we consider ideas such as iteration of dominated strategies or rationalisable strategies. These require that we “assume that all players are rational and that this fact and the players’ payoffs are common knowledge (so everybody knows that everybody knows that...everybody is rational)” (Mas-Colell et al, 1995, p239).

The Developmental State, Efficiency and Expectations and the Radical Implications of Game Theory

Game theory cleanly and simply models a number of situations very different from neo-classical economics and its corollary general equilibrium. Those that are discussed here include the developmental role of the state in both its ‘market failure’ and ‘political conflict’ guises and also the role of expectations and multiple equilibrium.

The Developmental State

Fine and Stoneman (1996) suggest there have been two broad approaches to the developmental state - the economic and political schools⁷. The first focuses on the role of the state as correcting market failures, such as externalities, economies of scale, infant industries, asymmetric information, etc. The second examines the political capacity of the state to identify and implement growth promoting interventions. Game theory can help present these two approaches in a very straightforward manner and capture key points of both arguments. The two relevant generic approaches are co-ordination games (the economic role of the developmental state) and chicken games (the political role of the developmental state)⁸.

a) Co-ordination Games

A very interesting implication of a game theory economy is that of multiple equilibria. Only if we share such a narrow neo-classical view of the world can we accept Kreps (1990b, p95-105) that the presence of multiple equilibria in game theory is a problem. With multiple equilibrium we can have no presumptions of efficiency in a market economy. In Fig three below there are two (pure strategy) mixed equilibria, (Not Invest, Not Invest) and (Invest, Invest). While the latter is Pareto optimal there is no necessary reason why an economy stuck in the inferior equilibrium should move there. This is an example of a strategic complementarity (Cooper and John, 1988); there are Pareto ranked multiple equilibria. In a decentralised system there is no incentive for a single

⁷ See also Fine (1999).

⁸ Grabowski (1994) attempts a synthesis of these two approaches using game theory, Fine and Stoneman (1996) are not particularly complementary about his efforts.

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firm to increase production because it will take the actions of other firms as given. The externality is generated by demand linkages that firms do not internalise.

In terms of a practical example (fig three) from development we could consider firm one to be a steel industry and firm two to be a ship-building industry. The steel industry supplies inputs for the ship-building industry. The two firms are only jointly profitable in the case of simultaneous investment. Investing alone will create excess capacity for the steel producer and losses of (-5), while lonely investment for the shipbuilder will create a shortage of steel inputs, driving up their price and leading to losses of (-5). This is an example of a co-ordination failure.

Figure Three

		Firm Two	
		Not Invest	Invest
Firm One	Not Invest	(1,1)	(0,-5)
	Invest	(-5,0)	(3,3)

The problem was theorised by Rosenstein-Rodan, Scitovsky in the 1940s and 1950s as the 'Big Push' approach to economic development. With interdependence change (industrialisation) would not be automatic. Only simultaneous investment across a wide range of industries would be viable. It could be possible for investors in a complementary project to agree to a contract though this will be costly to draw up and monitor, (Chang, 1999). Such transactions cost considerations would be particularly relevant in the case of a large upstream industry supplying inputs to a large number of firms. This could be the case with a railway system that would then be used by a host of small firms, (Murphy et al, 1989). The takeover mechanism could provide a solution but profound capital market imperfections during the early stages of development are likely, (Bardhan, 1999). Foreign investment in crucial sectors may be seen as an unacceptable loss of domestic economic sovereignty. In East Asia the state played an important role in resolving this kind of co-ordination failure. Such interventions can be simply modelled using game theory. Intervention in the capital market to subsidise credit, changes the payoffs in the game to make (Invest, Invest) more likely⁹. The organisation of Chaebols in South Korea can be thought of in a stylised manner as a merger of the two firms in this game. The choice for the single firm would be straightforward Invest for a profit of 6 or not invest for a profit of 2¹⁰. The state itself may undertake the investment, as in Taiwan, which largely retained crucial large-scale upstream industries in the state sector. Indicative planning exercises may provide a focal point for private sector co-ordination between such complementary investment projects. (Chang, 1999)¹¹.

b. Chicken Games

⁹ Gerschenkron (1962) emphasised the importance of state supported development banks among late industrialisers in Europe.

¹⁰ The combined profits of the two independent firms.

¹¹ An otherwise sterile analysis of 'focal point equilibria' can be found in Kreps (1990a, p554).

A Chicken game is represented in Fig four. Individuals can be aggressive or concede. The two positions that optimise the social surplus (Concede, Aggressive) and (Aggressive, Concede) require that one player concede. The worst outcome is mutual aggression, which leads to a negative outcome for both players. There is an inherent conflict because outcomes are unequal; for both to gain, one player must resign himself to an inferior position.

Figure Four

		B	
		Aggressive	Concede
A	Concede	(2,5)	(0,0)
	Aggressive	(-2,-2)	(5,2)

The chicken game can illustrate an aspect of the second issue facing the developmental state noted by Fine and Stoneman (1996). The political capacity of the state to identify and implement policies, specifically that conflict over income distribution can prevent reforms or perpetuate inefficient institutions over time.

This game captures nicely the notion that development is an inherently conflictual process. Chang (1999) notes that development is the process of shifting resources from low to high productivity areas. Less mobile assets are likely to become obsolete, leading to unemployment and income inequality. Those with a vested interest in the status quo will resist such changes. The diffusion of technology may be blocked in order to protect economic rents. This need not occur solely through opposition from those likely to be displaced¹², but because new technology and economic change may simultaneously affect the distribution of political power. Acemoglu and Robinson (1999) propose a 'political losers' hypothesis - groups may resist technological change that would otherwise erode their political power (rather than more typically economic rents). The market failure is the lack of any credible commitment to compensate political losers after economic changes have occurred. In the game above there is no mechanism to allow a credible commitment to compensate the player who concedes. In a dynamic political economy context, the resulting income inequalities may be perpetuated over time. The wealthier player may be able to institutionalise influence on the state and bias future changes to his own benefit. This approach has been followed by Knight (1992), who explains the development of institutions not in terms of responses to collective goals or benefits but rather as a product of distributional gains. The main goal of institutional development is to gain a strategic advantage over other actors. This view of institutions introduces the concept of power. There are numerous practical examples of this in the development literature. Sokoloff and Engerman (2000) argue initial inequalities in Latin America and the Caribbean in the early years of colonisation were perpetuated over time, resulting in the slow spread of the voting franchise, literacy and education. Harriss (2002) gives an example of agrarian institutions in Eastern India as inefficient institutions that have persisted over time. Usury and speculative trading in food grains were privately profitable for a small class of landowners to the extent that there was little incentive to make productive investments in agriculture. These inefficient institutions supported and were supported by the power of the landowning oligarchy

¹² Most famously the Luddites, skilled weavers who attempted to block the introduction of new machines.

with a strong vested interest in the reproduction. The chicken game can also help explain the paradox of land reform, Bardhan (1999). Without significant scale economies in farm production and problems of monitoring hired labour, the family farm is the most efficient institution for production. Land reform has been fiercely resisted by landowners despite possible efficiency gains. Landowners have tended not to lease or sell land to family farmers to secure the surplus from expanded production. There are problems of monitoring, insecurity of tenure and fear the tenant will gain occupancy rights. Imperfect credit markets and insecure property rights mean small farmers are frequently unable to afford a market price. More generally we could consider the game as representing the overall process of industrialisation. This requires the allocation of property rights to form a class of capitalists, either player A or B must concede and become a worker. Industrialisation will lead to an improvement in aggregate income (2,5) or (5,2) but also to increased levels of inequality. Political opposition to increasing inequality, especially if it is structured on regional or ethnic lines, may lead to conflict and an outcome of (-2,-2) instead.

c. Expectations and Self-fulfilling Crisis

Game theory can easily model how expectations can have a fundamental impact on the real economy and any efficiency properties of the market economy disappear. Keynes assigned an important role to expectations as an autonomous causal factor. Woodford (1991) shows that changes in beliefs become important in generating fluctuations in circumstances in which they tend to become self-fulfilling. A lot of the literature emphasises particular economic structures which enable revisions of expectations to become self-fulfilling.

Figure Five

		B	
		Hold	Sell
A	Hold	(5,5)	(-2,2)
	Sell	(2,-2)	(1,1)

Fig five shows a situation in which the optimal social position is for both players to hold (retain possession of a share, currency or other financial asset). If either player has any expectation that the other is likely to sell the best thing to do is to sell, avoid a loss and settle for a positive if lower payoff. Negative expectations can become self-fulfilling without any change in the underlying economic fundamentals. A lot of the literature about the 1997 Asian Crisis is framed in just these terms. Herd-like behaviour can be important; fund managers would be faulted for not getting out when others do but not for making losses when everyone else does. The effect will be compounded by imperfect information, when entry or exit by one actor is interpreted as his having access to superior information. As Krugman says:

“The lesson for the real world is that your vulnerability to the business cycle may have little or nothing to do with your more fundamental economic strengths and weaknesses: bad things can happen to good economies.” (1999, p10).

The problem of multiple equilibrium is not a fault of game theory but a justifiable reflection of how a real economy works. The particular structure outlined above was created by financial liberalisation in East and South-East Asia in the early 1990s. Inexperienced domestic banks were able to take out large dollar denominated loans from foreign lenders. Deregulation of the domestic economy allowed these loans to be on-lent for construction and real estate investment and speculation. The inflow of short-term capital created a game-like scenario in which investors had to consider the decisions of other investors. The reintroduction of capital controls by Malaysia in 1998 effectively removed the sell option. Wade (1998a+b) criticises the IMF for pushing for bank closure in countries without full deposit insurance - in effect raising the cost of being caught holding when the other player sells. The IMF stand-by credits and loans would, it was hoped, mitigate this effect by reducing the cost of not selling early.

Conclusion

Game theory can and should be a theory that stands on its own to model economic processes that occur in a situation of interdependence. It offers a radical alternative to neo-classical economics. Game theory illustrates just how non-robust are the efficiency properties of neo-classical economic theory, it provides a neat framework in which to model and justify a developmental role for the state and can neatly illustrate how expectations can, contrary to neo-classical economic theory have an important impact on the real economy. Game theory deserves better than to be emasculated by the obsessions of neo-classical economics, its formalism, rationality and its slavish devotion to equilibrium. Perhaps there is a case to be made for a heterodox Microeconomics text book that begins with game theory as the standard case and introduces general equilibrium as a special case?

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Symposium on Reorienting Economics (Part III)

Towards a Framework for Pluralism in Economics

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Introduction

In her contribution *Pleas for Pluralism* to this journal, Esther-Mirjam Sent (2003) suggests that the plea for pluralism, as found in many contributions to the post-autistic economics movement, has a strategic motivation. Although I tend to agree that this is true of some contributions, it seems necessary to spell out the non-strategic motivations by which one can defend plurality and pluralism before we evaluate whether (heterodox) contributions are not *really* pluralistic.

Discussing the idea of pluralism, and elaborating a framework in which the different aspects of the concept are located, will be a fruitful step to deepen the heterodox standpoint, as many heterodox pleas (e.g., many contributions to this journal) do refer to plurality and pluralisms. It might take away the unease some people feel with the use of pluralism, cf. Jacques Sapir (2001): "Having gone so far in support to the post-autistic approach I must confess some unease about the widespread use of the term "pluralism" in the *PAE-Newsletter*."

Motivations for pluralism

Let us start by making the various possible motivations underlying a defence of pluralism more explicit. I believe that at least five different motivations can be identified.

a. the ontological motivation

Firstly, there is *the ontological motivation* for pluralism, which appeals to features of the world, in particular, its complexity. An example can be found in Caldwell's (2004) recent contribution to this journal: "Some may agree with Lawson and me that pluralism makes good sense; the complex nature of social reality may also mean that it is inevitable." As such, ontological complexity or disunity results in the plurality of existing approaches.

Another example of this motivation in the economics literature is to be found in the contribution of Kurz and Salvadori (2000), as discussed by King (2004): "Economic reality, they note, is widely believed to be very complicated. (...) Since no theory can consider all relevant factors in any particular economic context, there is a strong *prima facie* case for theoretical pluralism. Different theories will often be complementary rather than alternative." In this quote, economic reality is characterised as very complex, hence it might be impossible to be represented by a single theory, and as such it might be the source of pluralism. But this quote is slightly ambiguous, as you might deduce from it that the author considers our cognitive capacities to be too limited to get all relevant factors at once into one theory. If so, then the source of pluralism would be a different one, namely the following.

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b. cognitive limitations as a reason for plurality

Pluralism can be motivated by the cognitive limitations of the human inquirers, cf. Esther-Mirjam Sent (forthcoming): "(...) when economists made the agents in their models more bounded in their rationality, they had to be smarter because these models became larger and more demanding econometrically. As macroeconomist Thomas Sargent (1993) explains: 'Within a specific economic model, an econometric consequence of replacing rational agents with boundedly rational ones is to add a number of parameters' (168) because we 'face innumerable decisions about how to represent decision-making processes and the ways that they are updated'."

Thus, the plurality we encounter in economics can be the result of the decisions qua focus or angle we have to take – due to cognitive limitations – in describing economic processes. These limitations can legitimise pluralism.

c. historical and geographical situatedness as source of pluralism

In discussing arguments for pluralism, King also mentions the work of Geoff Hodgson (2001), and his idea that: "the notion of a single, 'general' theory applicable to human behaviour in all societies, at all points in time, is a dangerous delusion that has led astray not only neoclassical economists but also many heterodox theorists." (King, 2004) Hodgson warns us here of the dangers of theorizing that is too general: "(...) the cost of excessive generality is to miss out on key features common to a subset of phenomena." (Hodgson, 2001:16).

Here, we can identify a third motivation for pluralism, namely one based on the realisation of the *historical and geographical relativism* of (economic) knowledge, namely that we develop our theories based on particular (historically, geographically and/or socially relative) and potentially transformable situations or positions; imposing or defending a universal and timeless monistic theory is inappropriate once you realise the perspectivism and relativism of our particular historical situation or reality (note that this does not imply that *anything goes*). Chick and Dow (2001) as referred to by King (2004), can be situated here as well.

d. the pragmatic motivation

The fourth motivation for pluralism that can be identified is *the pragmatic motivation*. It rests upon the idea that one (economic or other) phenomenon can be legitimately studied from different perspectives, depending on our epistemic goals and interests. As there is no objectively correct set of goals and interests, there is not one correct (and complete) representation of or perspective on the world (cf. Kitcher, 2001:55-62). I have shown how this can be understood for explanatory pluralism in the social sciences (cf. Weber and Van Bouwel, 2002). Briefly put, we can allow different forms of explanation (e.g., structural explanations, rational choice explanations, etc.) in explaining one social phenomenon, depending on the explanation-seeking question asked about that phenomenon.

e. the strategic motivation

Finally, we have *the strategic motivation*, mentioned by Sent (2003) in relation to contributions in heterodox economics. The idea of strategic pluralism was introduced by Ron Giere (forthcoming) and refers to groups that advocate pluralism as "primarily just a strategic move in the game of trying to dominate a field or profession. Those in the minority proclaim the virtues of pluralism in an effort to legitimate their opposition to a dominant point of view. But one can be pretty sure that, if the insurgent group were itself ever to become dominant, talk of pluralism would subside and they would become every bit as monistic as those whom they had

replaced." Here, pluralism is being used as a kind of social lever, and we might question whether this motivation represents a *really* pluralistic stance (cf. introduction), or whether it will eventually lead to monism?

I want to stress that this list of motivations is not exhaustive, and that it may be that a combination of motivations underlie a defence of pluralism.

Forms of pluralism

I am convinced that trying to identify which of these (or other) motivations underlie the different contributors to heterodox economics, will be a fruitful exercise in the development of a strong alternative to mainstream economics. But, merely mentioning the different possible motivations leaves unspecified the form of pluralism offered in particular cases. A second step – besides clarifying the motivations or sources of pluralism – should therefore be to specify which form of pluralism one is discussing when defending pluralism.

Tony Lawson, a pluralist?

I want to discuss some of the above questions in relation to the work of Tony Lawson, an important heterodox scholar, which gets a lot of attention in this journal.

In an earlier paper (Van Bouwel, 2004) I have argued that Lawson's guidelines for the explanatory praxis of economists are based on a doubtful transcendental argument, which supports his *a priori* ontological framework. As such, Lawson commits the *ontological* fallacy (analogous to the *epistemic* fallacy committed by mainstream economists) and risks throwing out some of the handy instruments *mainstream* economists have to offer. For example, I have defended the view that explanations following the covering law model might be poor instruments to answer some explanatory requests (e.g., those motivated by therapeutic interests), but that they can provide us with information that Lawson's contrastive explanations do not give us, such as information that enables us to predict whether and in which circumstances similar events will occur in the future. Although this kind of prediction is certainly not the only goal of the social sciences, it is one of them (e.g., to control social outcomes, to be confident that proposed measures will have the intended effects, etc.).

The way in which Lawson develops guidelines for explanatory praxis and his rejection of the covering law model, give a good illustration of what form of pluralism Lawson is defending. By presenting *mainstream* economics as a monolithic unity as is done by Lawson, he invites critics to reject it *en bloc*.² As is obvious in Lawson's work, and which I have illustrated in considering his proposals concerning explanation (cf. Van Bouwel, 2004), Lawson's quest for heterodox economics is not so much focusing on elaborating compatibility and complementarity with *mainstream* (or neo-classical) economics, but rather creating his own alternative, that would be the new (monist) standard.

If we call Lawson's contribution pluralist, as he does, we can distinguish two different forms or conceptions of pluralism. Firstly, Lawson's work is pluralist in the sense that it provides us with an alternative to the mainstream, and as such we have more than one alternative (hence we have plurality). Secondly, we can understand pluralism as engaging in a conversation, as

² Contrary to Lawson, Ester-Mirjam Sent (forthcoming) illustrates the failure to achieve monism on the part of mainstream economics.

exchanging ideas, and not merely developing different isolated (and essentially monist) alternatives.

Lawson's account does not defend this second kind of pluralism. He does not develop a form of pluralism that shows how the different schools or alternatives can be used for different occasions. He rejects the *mainstream* completely, without considering possible positive contributions. He does not elaborate a form of pluralism that might show the complementarity of the schools or make us understand the origin of the differences between and the plurality of schools. What is missing in general in Lawson's work is a framework for pluralism in economics, including an account of the origin or motivation for pluralism (cf. the five possibilities mentioned above).

Conclusion

Using Tony Lawson as an example of heterodoxy in economics, I have illustrated that the heterodoxy's account of pluralism should be made more explicit. I claim that a *really* pluralistic approach should engage in a conversation, in spelling out compatibilities and complementarities between the mainstream and the heterodox approaches (both sides should be engaged). The pluralism of Lawson risks leading us to an isolated diversity, to a lack of exchange of ideas. In order to avoid this risk, Lawson and the heterodoxy should be more explicit about the origins and motivations for pluralism, otherwise the suspicion that the plea for pluralism is merely strategic will remain. I hope spelling out the different possible motivations for pluralism is a good starting point to further elaborate the fascinating project of post-autistic economics.

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Finding a Critical Pragmatism in *Reorienting Economics*

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There is an "ology" that pervades the essay in which Tony Lawson (2003) launches *Reorienting Economics*. The preface would lead us to believe it should be ontology. However, while ontology receives starring credit, it is epistemology that plays the starring role.

This first essay is structured into four theses. In his first thesis (2003: 3-8), the focus is on the mode of explanation of modern economics. This is argued to be deductivism, defined as explanation in terms of event regularities. Lawson refers to systems exhibiting event regularities as "closed", which can make his work difficult to read for someone with a General Systems background. For someone more accustomed to thermodynamic or causal closure, it is helpful to mentally translate "closed" as "event-regular" everywhere Lawson uses the term. The argument proceeds that this mode of explanation in terms of event-regular systems leads to the peculiar types of mathematical formalisms with which we are all familiar.

In his second thesis, Lawson points out the ill-health of the "mainstream project" (2003: 8). This consists in large part of remarks taken from mainstream economists that reflect upon this poor state of health. It is conceded that they rarely lay the blame on the peculiar type of mathematical formalism that forms the touchstone of mainstream economics. However, with respect to "ology" sighting, the essential point is Lawson's conclusion:

" ... there is quite widespread agreement that the modern discipline is not in too healthy a condition, and that whatever explains the fact that the formalistic mainstream project has risen to such dominance ..., it has little to do with this project's record so far in explaining the social world in which we live. (2003: 11)"

In the first two theses, Lawson has been laying the foundation for the critique presented as the third thesis. Yet the foundation for his ontological turn in economics is epistemological. He argues that it is not the content of the theory in the mainstream content that is stable over time, but rather its mode of explanation. To justify an interest in the ontology to follow, he presents a picture of the mainstream project in ill health. Yet the symptom of ill health is that it is not succeeding in explaining.

In the third thesis Lawson enquires what ontology is implied by event-regular systems, and how closely does this match the ontology of social systems? Lawson argues (2003: 13-15) that there is an extremely strong bias (although not an ironclad necessity) toward an atomistic view of such systems, where the individual agents are simple and react in at least stochastically deterministic ways in response to given conditions. There is also argued (2003: 15-16) to be a strong bias toward viewing systems as isolated systems. This argument is easily followed, since a system composed of nothing but deterministic, atomistic agents will not be homeostatic, so that the state of such a system becomes indeterminate if the system is exposed to indeterminate external influences.

Lawson (2003: 16-17) then claims a variety of characteristics of social reality. For example, positions in social reality are internally related, the social realm is structured, and it contains value and meaning. As none of the features in this list can be exhibited by a *purely* atomistic and isolated system, it is concluded that much of what economics needs to be explained is incompatible with its implicit ontology.

Lawson (2003: 18-20) argues that this incompatibility is responsible for the constant appearance of the central fictions of mainstream economics. These central fictions are a familiar fixture. They bear a surface similarity to the isolating fictions of scientific theory. For example, a natural scientist will adopt the fiction of a weight dropping through a vacuum to eliminate the real additional influence of wind resistance. However, because deductivism is constructing a theory in a fictitious world that is supposed to correspond to events in the real world, it seems that its fictions cannot be restricted to the absence of forces that are in fact likely to be present. They must also include the presence of fictitious forces to take the place of real world influences that cannot be expressed in an atomistic and isolated system.

While ontology is brought on stage here, it is certainly not appearing solo. The essence of the argument here is that the mainstream mode of explanation is not capable of explaining what Lawson wishes to explain. Certainly, it may be granted that Lawson's wish to explain particular aspects of reality is an ontological concern. However, the capabilities of a mode of explanation is an epistemological concern, and that is certainly the crux of the argument. Without the limited capabilities of the mainstream mode of explanation, the critique falls over. With the limited capabilities there is something of substance to the critique, even if one differs with Lawson's ontology.

The final thesis is the conclusion of the critique. Adherence to a mode of explanation in terms of event-regular systems is the reason for the lack of health, and is indeed the constraint preventing mainstream economics from being scientific. It is argued that even where science deliberately constructs event-regular systems in an experimental setting, it does so to form a cause and effect theory applicable to non-event-regular systems. (Lawson 2003: 22-26) The argument may be seen as claiming that the mainstream mode of explanation is not a scientific mode of explanation. Here, too, the argument seems as much epistemological as ontological.

It should be stressed that this argument has substantial merit. Constructing a theory in an abstract event-regular system is not, in fact, the same thing as constructing an experiment – an artificial event-regular system in the real world. In the former case, the event-regular system has no necessary connection with a real world non-event-regular system. In the latter case, the fact that it is constructed in the real world of real components provides the connection with the same components interacting in a non-event-regular system.

While the starring role of epistemology is the strength of the argument, the anonymity of the star is a weakness. Possessing a mode of explanation that implies an inadequate ontology is not necessarily a critical flaw. As long as the explanatory process allows the worst mismatches to be replaced by less severe mismatches, one can hope that the mode of explanation may evolve toward one that implies an adequate ontology.

The central question, therefore, has not changed in a century, because while theoretical stances within the mainstream project have proliferated and shifted ground, essential aspects of its mode of explanation have not changed in a century. That question is, why do mainstream economists not engage in evolutionary science? (Veblen, 1898). Of particular interest for the past 60 years is how a determined effort to subject theories to statistical analysis have left the mainstream project every bit as stalled as it was a century ago.

Lanis and McFarling (2004) point in the direction of one flaw. We construct a highly artificial, highly regular scenario in the context of explaining the degree of disclosure of accountants in the context of different national accounting and economic institutions. However, the scenario we have constructed is non-functional. That is, legal, professional and commercial institutions

will establish norms for what *must* be disclosed to provide an adequate report, what *may* be reported, and what ought to be reported in exceptional circumstances, and what ought not to be reported.

Any mathematical relation connects elements from its domain to elements from its range. In our artificial scenario, we relate a score on a synthetic index of social attitudes to the degree of disclosure within the accounting institutions of a nation. A functional relation connects either one or many elements from the domain to one element in the range. Any relation that connects either one or many elements from the domain to multiple elements in the domain is therefore non-functional. Regression analysis, where it is used correctly, overcomes the problem of relating to multiple scattered observations by constructing the function in terms of a probability distribution, so that the scattered observations are interpreted as different samples drawn from the same distribution.

However, the regularity in our scenario is on the bounds on reporting. Even if one viewed this range of discretion as a probability distribution, each shift in the bounds would result in a new probability distribution. The degree of discretion, which will vary from one institutional context to another, implies that the regularity is not functional – it is one collection of institutional norms to many possible degrees of disclosure. Therefore, any effort to fit the best function will necessarily fail. It appears that functional regularity is equivalent to Lawson's event-regularity. We point out several statistical techniques that may be used with better effect – techniques which will only be picked up outside the mainstream project, if Lawson's argument regarding the event-regular epistemology of the mainstream mode of explanation is correct.

In any event, here is part of the answer to the puzzle of why sixty years of determined empirical testing has left the mainstream project stalled. If your tool for finding and correcting mismatches with the real world fits functions to data, you will be left blind when the problem involves a regular relationship that is not a function.

A more specific epistemological query than the mode of explanation is the unit of analysis. Any analytical explanation will involve one or more units of analysis, so that the phenomena to be explained are explained in terms of the unit of analysis. In McFarling (2004), I find that the unit of analysis in a particular corner of the mainstream project to be selection from alternatives, followed by performance. It may be noted in passing that this is essentially the same neoclassical unit of analysis that is ably dissected and subjected to acid critique by Veblen (1898) as part of an increasingly obsolete natural law approach, which he contrasts with a modern, evolutionary approach. However, this unit of analysis was originally unearthed in the work of Posner (1995). Thus, even if much of the theory of the mainstream project is in a state of flux, this unit of analysis clearly exhibits greater longevity.

I then pose the question whether it is possible to arrive at a theory of culture with such a unit of analysis, and argue it is not. If culture acts in part as a restraint on action, then situating culture in the selection will erode those restraints. And if culture is simply embedded in the constraints on decisions, then culture is a *deus ex machina*, affecting the outcome but not explained by the unit of analysis. Culture cannot be analysed with selection followed by performance as the unit of analysis – it can at best be taken as a given.

What is the point of identifying the unit of analysis? Being informed that the mainstream project is deductivist, based on presumed event-regularities, may make it easier to identify a mainstream economist. However, it does not go very far in explaining how the mainstream economist is reproduced. The unit of analysis, on the other hand, goes a long way toward

explaining the reproductive process. The first thing a nascent researcher needs to learn is what type of questions to ask. And the unit of analysis provides a trio of questions that can be asked about individuals in a wide variety of settings. What selections are faced by this individual? Which one is likely to be selected? And what performance is likely to follow that selection?

The attraction of this unit of analysis is that there are always more puzzles to solve. If you try to provide a complete theory of the economy with a unit of analysis that is blind to important aspects of the economy, each new trial solution will prove to be a misfit when it encounters the affects of one or more excluded aspect. And if the reaction to a misfit is to start over with the same trio of questions, there will always be a permutation of available selections and likelihood of occurrence that has not been tried before.

Given this unit of analysis, a question that arises is whether ontology *can* be used to reorient mainstream economics. Supposed this is your unit of analysis in developing new explanations, and suppose econometrics is your tool for finding out what the problem is with your explanations. How will you react when being told that there are certain features of the social world that do not fit the ontology implicit in your method? You will interpret these features in terms of your unit of analysis.

Indeed, you may devise econometric tests to determine whether the features as you have interpreted them are present in the data you have available. If you get statistically significant results, you may even publish the outcome in a respectable mainstream journal. Yet you are not likely to have made a step toward evolutionary science. When interpreting the features with your unit of analysis, you will omit what is incompatible with your unit of analysis.

Indeed, in McFarling (2004), I find hope in New Institutional analysis. This comes from the argument that the New Institutional unit of analysis is the transaction, followed by performance. Yet there is not necessarily an ontological advance here. Indeed, it may be that New Institutional analysis maintains its credibility within the mainstream project in part by adhering to the same flawed ontology as follows from the neoclassical unit of analysis (though see David Dequech 2002). However, by placing the selection in the context of a transaction between two individuals, the unit of analysis admits questions regarding relationships between individuals that the neoclassical unit of analysis does not admit. The conclusion is not that New Institutional economics *is* an evolutionary science, but rather that it is not prevented from being an evolutionary science by its unit of analysis.

The dangerous face of epistemology is the invitation to focus on the ways that we understand the ways that we understand things. And it is when I consider the mode of explanation in this essay that I come upon a concern. Event-regular systems are classified as closed systems. Everything else are classified as open systems.

One thing this blinds us to is any other kind of regularity. Suppose that an individual has a regular response to a cluster of events, where a response consists of one of a range of actions that are meaningful in that context. Response-regular systems are not necessarily event-regular, but it is a form of regularity. Suppose that an individual has a response that is within regular bounds, with clear discretion within those bounds. Boundary-regular systems are not necessarily event-regular, but it is a form of regularity. Suppose that a system is homeostatic, so that the response to an event is contingent on the discrepancy between the current internal state of the system and the target internal state. A homeostatic system would only approach event regularity in a perfectly homogenous environment where events are

sufficiently infrequent so that the state prior to the event closely approximates the target state. Yet not only is homeostasis a form of regularity, but a collection of homeostatic systems can create regularity in a wider system.

In other words, in this system of classification, we are to label event-regular systems as closed and all other systems as open, whether or not they exhibit one or several other forms of regularity. If you need event-regular systems to be a reputable mainstream economist, this may suffice to tell us whether a person is pursuing that status or rejecting it in favour of status with some other peer group. However, suppose we accept Lawson's argument that adequate economic theory will normally have to be compatible with an "open" system. We have a simple dichotomy here, and the positive category is the one to be avoided. Reorientation is required because the pursuit of theories of closed systems is and will continue to be fruitless in generating effective explanations. Yet saying that the reorientation will take open systems as the object of theory is to say that it will take "not-event-regular" systems as the ultimate object of theory. It is, in short, simply a restatement of the "though shalt not" dictum, except that this time the "not" has been located inside the term "open".

Thus in trying for a positive statement, Lawson must elaborate on what kind of open system he means. That elaboration appears to be whatever kind of open system is compatible with social ontology and his realist transformational model of social activity. And it is here that the argument appears to become controversial. As Vromen (2004) points out, there is a substantial inconsistency between the qualifications with which Lawson wraps this model, and the ultimate authority that Lawson grants it as a final arbiter between properly and improperly oriented economic theory.

This is the crux of the question of whether ontology or epistemology should have the starring role in this play. If we have the "right" ontology, how did we discover that it is the right ontology? And if we have a way of discovering the right ontology, which is more fruitful to convey: the method of discovery; or the ontology itself as received wisdom?

Of course, this is a counterfactual. As strongly suggested by the qualifications that Lawson places on his ontology – that it is "... practically conditioned, historical and fallible" (Lawson 2003, 61) – it would appear that at most we can say that our ontology seems to be the best we can do at the moment. As Vromen appears to be arguing, this is a weak basis for launching a revolution.

The implicit recognition of this is built into the structure of Lawson's first essay. Accepting that the mainstream project is generating a flurry of explanations without succeeding in explaining anything is supposed to generate interest in considering the suitability of the underlying ontology. Epistemology is providing the wedge intended to create an opening. Lawson's particular social ontology is then supposed to enter the gap that is created.

Yet how are we to discriminate between different explanations, once we have reoriented ourselves to open systems? I skip past the ontology of the second essay and the realism of the third to the essay on explanations in social science. Lawson describes a method of forming hypotheses in terms of relative contrasts that are to be expected if a hypothesis is correct. He then argues that "The hypothesis that performs best in terms of empirical adequacy in this sense over the widest range of relevant conditions can, with reason, be accepted as better grounded. (2003: 97)"

What we have here, of course, is a pragmatic criterion for judging the epistemological fitness of a mode of explanation and unit of analysis – or units of analysis, since the criterion accepts successful eclecticism as readily as successful and rigorous modes of explanation. Note that this is a basis for a pluralism that extends beyond those approaches that we agree with. We can accept that a mode of explanation is progressing under this criterion even if we think its ontology is flawed and that its conclusions are fallacious. Indeed, one can hope that if it continues to pursue a broader range of successful explanation, it will either eliminate the source of the fallacies, or it will develop an explanation that shows why we have misunderstood the question all along.

This, then, is Lawson's critical pragmatism. I naturally refrain from systematising it, since in that case it would be my pragmatism rather than his. Its core is the epistemology that Lawson works out as a side-effect of bridging the gap between his critical realism and a potentially scientific practice of economics. I conjecture that it is narrower in scope than the virtual blank slate offered by the concept of the open system, but broader in scope than the social ontology constructed in terms of his realist transformational model of social activity.

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