Geopolitics and the Social Sciences

Macro-parasitism and the design of remedial programs

David Smiley

VERY LARGE international programs dedicated to improving the human condition have been far from successful. "Count up the results of 50 years of human rights mechanisms, 30 years of multi-billion dollar development programs and endless high level rhetoric and the general impact is quite underwhelming ... this is a failure of implementation on a scale that shames us all," in the view of UN Human Rights Commissioner Mary Robinson.[1]

Similar criticisms may be levelled at environmentalism, whose conventions are widely regarded as unaffordable; and the mechanisms of peacekeeping, which address national rather than civil wars and certainly not the new asymmetric conflicts of protest and terrorism. Ad hoc conferences, summits and peacekeeping missions appear to be conservative or reactive rather than offering reformist strategies that might prevent recurrence.

Why this failure? David Smiley reports that an eight-year research project suggests that institutional patterns of power over land and natural resources were a major determinant of success or failure of these programs.

In this essay, the author asks: Were the architects of global programs at fault, or were they critically misinformed by the social sciences?

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THE HUMAN SITUATION can be described as the result of population pressure upon scarce natural resources and the use of technology to relieve that scarcity. Most of what we know of population, natural resources and technology comes from the physical and life sciences. Demography quantifies human populations in terms of fertility, mortality, life expectancy, wealth, health and education, and the effects of migration, plague, famine and conflict upon these. Anthropology identifies aspects of human behaviour such as identity, culture and social differentiation, and the operation of kin-ordered (clan) and tributary (rent paying) societies. Geography identifies surface and climatic characteristics of the earth and its natural and political divisions and, in conjunction with land economics, defines land use and its rent in terms of population density, productive yield and positional value. The earth sciences identify our energy and mineral resources and the life sciences describe our ecosystems. These disciplines are separately well understood and their data are readily available. The problem lies elsewhere, in the structural relationships between the building blocks of all social systems: people, natural resources and capital.

I will use the term *natural resources* to cover land, water, mineral and energy resources, the ecology and the environment, and the term *rent* to cover all related economic and psychic values. When *natural resources* excludes land this will be clear from the context. The physical and engineering sciences identify and deliver technology, which I will call *capital*, or man-made means of production.[2]

How well do we understand structural relationships? Most of what we know comes from the social sciences, for example: sociology, political science, and economics. They attempt to describe what these relationships actually are. Concerns for what these relationships *ought* to be, concerns scattered throughout the social sciences in the name of *equity*, are formalised in theories of justice in jurisprudence and imperfectly approximated in domestic and international law. Social scientists usually divide history into eras: pre-modern, modern and global, for example. The pre-modern era, encompassing hunter-gatherer and agrarian societies, is sometimes referred to as tributary (tribute-taking) or feudal. The modern era, associated with European expansion and industrialisation, is sometimes referred to as industrial or capitalist, sometimes dated from the establishment of the modern nation-state at the treaty of Westphalia, sometimes from the industrial revolution. The global era, also referred to as post-modern, is sometimes dated from about halfway through the twentieth century.

Since most of the world's population lives in a pre-modern mode, coexisting with those living in a modern mode in a much disputed mode we call global, I will start by placing these three modes in a geopolitical

context. Then I will present a geopolitical critique of the programs of development, human rights, sustainability and peacekeeping, and finally a critique of the role of the social sciences in informing these programs.

Geopolitics in the pre-modern mode

HOW DID pre-modern society use capital to adapt nature? Hunter-gatherer populations were held in check by high natural mortality, but also by infanticide, abortion, famine, plague and warfare. Ponting[3] suggests that the world population of 4m some 10,000 years ago represented the limit of hunter-gatherer society. Subsequent population growth was to depend on the agrarian revolution. The concept of land rent emerged early. "Claims to the exclusive use of a given tract of land are made even by hunting and collecting peoples ... Among the Andamanese it was usually about 16 square miles; in Australia it often exceeded a hundred square miles. The intrusion of outsiders is resented, and wars ... are often due to the violation of hunting rights".[4] The concept of capital also emerged early. "Although other animals use tools, humans are the only ones to make them," and thus the first capitalists, combining their labour with natural resources to produce capital, introduced technological change as early as 400,000 years ago.[5] This process led to the agrarian revolution and continues today with the green revolution and genetically modified foods.

What social, political and economic relationships developed? A common feature was social differentiation according to the distribution of property rights in natural resources. "Inequitable distribution was inherent in stratified tributary social relations where the majority were denied access to the sources of livelihood as a social structure of landlords and landless, of haves and have-nots, came into existence ... .all pre-modern civilisations remained relatively stagnant technologically after their initial breakthroughs in agriculture and the crafts ... Inadequate productivity necessitated a ruthless extraction of all available surplus through the use of slavery, serfdom, debt bondage, rack- renting, or other inventive forms of exploitation. Studies of tributary societies, whether ancient, classical or medieval, indicate that ruling élites made up only 1 to 2% of their total populations but appropriated not less than half of the total income."[6] Specific examples such as feudalism and the caste system are variants of systems of monopolistic land ownership operating over the last 5,000 years.

McNeill traces the evolution of what he calls macro-parasites far beyond biology.[7] "A conqueror could seize food from those who produced it, and by consuming it himself become a parasite of a new sort on those who did the work. In specially fertile landscapes it even proved possible to establish a comparatively stable pattern of this sort of macro-parasitism among human beings." Later we track some important mutations of

McNeill's *macro-parasites*; in pre-modern society they simply consume agrarian surplus rather than investing it in technology. Thus population is constrained by macro-parasitism to some four million in the hunter-gatherer world and perhaps one billion in the world of settled agriculture, with land rent, the staple food of macro-parasites, stabilised at about half of rural product.[8] Details of its operation are provided by Todaro: " ... production falls below the subsistence level, and chronic poverty becomes a way of life. Peasants are forced to borrow even more from the moneylender at interest rates ranging from 50 to 200%. Most cannot repay these loans. They are then compelled to sell their land and become tenants with large debts. Because land is scarce, they are forced to pay high rents. If they are sharecroppers, they typically have to give the landlord 50 to 80% of their crop."[9]

Geopolitics in the modern mode

DURING THE Industrial Revolution world population past the one billion mark. By that time the tributary nature of society was already changing. If modern Europe depended on the land enclosures, which were shifting whole populations off the land and into the cities, its colonies depended on a similar expropriation of land, for example in Africa. In Algeria the whites, 3% of the population, took the best 50% of the land. In Southern Rhodesia 3% took 63%. In South Africa 25% took 88%. In South West Africa 16 % owned 60 %.[10]

Independence, self-determination, and the subsequent intrusions of transnational corporations (TNCs) and even the World Bank may have changed the ownership but not the class structure of these ratios. In Latin America the bulk of the population is still landless; a third of the population owns only 1% of the land. In Africa the bulk of the population owns only 4% of the land. While industrialisation boosts populations, wars, famines and plagues keep them in check. Contradictions in property rights over natural resources in the 20th century possibly claimed 100m lives in wars, 35 to 50m in the Great Leap Forward alone, and explains why some 50m people die of hunger each year in countries that can and do produce enough food for their populations.

Though food still dominated the struggle against nature, other natural resources were now being exploited. Mineral exploitation not only explains why Europe created the Third World, but the legacy of this exploitation goes a long way to explaining much of the Third World's subsequent failures in self-determination, and Africa's contemporary attempts at self-destruction. For example, "King Leopold of the Belgians actually sold Katanga with its rich copper deposits to a mining company in return for the company financing the conquest of what became in the early twentieth century part of the Belgian Congo. Two-thirds of all European investment in Africa until the 1930s went into mining

enterprises ... copper from the Congo and Northern Rhodesia together with gold and diamonds from South Africa ... The introduction of poll and hut taxes, which had to be paid in cash, forced African workers into the labour market to work in the mines and plantations."[11]

Rural land monopolies, shifting peasants into the industrial misery reported by Marx and Engels, led to investment in technologies which eventually raised living standards in some countries but not in others. For example, "Between 1850 and 1913, the real wages of British and French workers roughly doubled." And, despite a threefold increase in Europe's population between 1750 and 1914, substantial improvements in health and in worker benefits were achieved. But, where Indian hand spinners had taken 50,000 hours to process 100 pounds of cotton, English workers now took only 135 hours.[12]

The modern age, according to Ponting, started when Europe extended its systems of tribute to its colonies and empires. To pre-modern macro-parasitism was now added a tributary system in which colonial surpluses in natural resources were both consumed and invested in economic growth, but in Europe rather than in the Third World. Levels of social differentiation in Europe now increased according to property rights in both natural resources and the products of the new technology. Political relationships were defined in the sovereign rights of the European nation-state over its populations and territories. By 1920 these rights covered nearly half the population and half the territories of the world. In our model of modern society, surplus is substantially invested in technology rather than being consumed as in pre-modern society. As a result, standards of living of modern societies became many times higher than those of pre-modern subsistence, and the value of land rent began to reflect not only fertility, but positional value for residence, mineral and energy exploitation, and the strategic interests of the nation state.

Geopolitics in the global mode

THE WORLD'S population is 5,974m and growing at 1.0 % per year. It is expected to level out at 11bn by 2,200AD.[13] From World Bank tables we see that, for high-income countries (basically those of the OECD), per capita GDP (gross domestic product) is US$ 25,730 and growing at 2.1 %. For the rest of the world, per capita GDP is $1,240, one-twentieth, and growing at 1.4 %. If we exclude India at 4% and China and the Asian Tigers at 8 %, the remainder of the world's per capita GDP growth would be close to *minus* 5%. Two regions, Sub-Saharan Africa, and Middle-East and North Africa, regions with the greatest political turmoil, highest unemployment, lowest economic growth rates, and greatest reliance on the export of depletable natural resources, are reported by the World Bank as having the highest rates of population growth, 2.6 and 2.2% respectively.

The earth's land surface is about 13.5bn hectares. Of this about 10% is now farmed, 20% could be farmed, and 70% is unsuitable given present technology. In general, food resources are absolutely abundant though relatively scarce. "Output of cereals, the world's main food source, has increased 2.7% per annum since 1950, while population has grown by about 1.9% per annum."[14] According to Susan George: "Today's world has all the physical resources and technical skills necessary to feed the present population of the planet or a much larger one."[15] Surface values of the planet rise with population, lifting rent and depressing wages net of rent. Sub-surface resources, such as energy and mineral reserves, are known, but developed countries' exhaustion rates are unknown since inventions, substitutions and conservational attitudes are unpredictable. In developing countries (those least able to afford inventions, substitutions and conservation), energy resources consumption, presently one-third of world total, will rise to two thirds by 2060 AD.[16]

Since pre-modern and modern worlds coexist in the global era I will now summarise their characteristics and then examine how their coexistence has created new forms of macro-parasitism.

In pre-modern society a social surplus in the form of land rent is consumed unproductively by landed élites. Samuelson[17] explains this macro-parasitic structural relationship by combining two building blocks, the Malthusian population model and David Ricardo's land rent model. Samuelson then adds to this structure Adam Smith's capital investment building block showing, in modern societies, how this shifts both wages and land rent upwards. But the staggeringly large surplus that technology has delivered to modern societies is not all consumed in higher standards of living or invested in productive growth. Much is "invested" in unproductive and unstable land speculation, increasing the amplitude of business cycles and sending additional household members out to work to pay increased rents and mortgages.

The global age has also encouraged new mutations of macro-parasites that extract rents from many natural resource bonanzas. Here are four examples.

- As a result of the green revolution bonanza "the large landowners, who had the necessary resources, were able to become richer, expand their holdings, buy up peasant land and turn the peasants into landless labourers".[18] As a result, the number of landless peasants had risen from 1.5 million in 1950 to 5 million in 1980.[19]
- As a result of agricultural subsidies, OECD farmers extract monopoly rents from OECD taxpayers while damaging third world farmers.
- The staggeringly large economic rents created by natural resource windfalls, such as in oil and mineral discoveries, and the huge waste of unproductive activity in bribery and corruption to secure and then

misuse these rents. "On one estimate nearly 75 % of the money ... was diverted into officials' pockets, construction frauds, and overseas bank accounts."[20]

- TNCs and some development banks collude with local macro-parasites to enclose sufficient land for a development project. Surplus labour is excluded and migrates to what is left of the original rural sector, or to the urban informal or formal sectors, raising land rents and poverty levels in each case. Increases in natural resource rents in the enclave sector will be shared by the two monopolies. In these enclave economies foreigners pay very low rents for the rights to use land and then repatriate earnings which are erroneously shown as part of GDP in a form of world trade between rich nations and the expatriate nationals of rich nations.[21]

If macro-parasitism is such a powerful institution shaping the human situation, then recognition of its characteristics should have shaped the design of development, human rights, sustainability and peacekeeping programs. These programs, however, appear riddled with contradictions inherited from pre-modern, modern and global macro-parasitic structures.

A critique of global programs

I WILL REFER collectively to all international initiatives as *programs*, under four headings. *Development* will cover the operations of aid organisations, TNCs, the World Trade Organisation (WTO) and various protectionist, anti-trade and anti-capitalist initiatives; *human rights* will cover all protocols and treaties related to the International Covenant on Economic, Social and Cultural Rights (ICESCR), the International Covenant on Civil and Political Rights (ICCPR), various third world responses to these such as the Rights of Solidarity, and activities targeting refugees, political prisoners, and crimes against humanity; *sustainability* will cover declarations and treaties aimed at reducing the degradation and depletion of the planet's natural resources; and *peacekeeping* will cover all initiatives aimed at avoiding armed conflict or reducing its effects.

Development attempts to lift living standards by applying essentially reproducible labour and capital to natural resources, which are essentially fixed, depletable or degradable.

Sustainability attempts the peaceful rationing of natural resources within and between generations.

Peacekeeping attempts to prevent coercive allocations of natural resources.

Human rights, by constructing a code of human behaviour, attempts to repair violations identified by this code, including those arising from failures of development, sustainability, and peacekeeping.

This restatement of objectives in terms of natural resources will now

simplify the analysis of contradictions embedded in each of these programs.

1. **Institutions.** Olson's 1996 research[22] concludes that differences in the growth of countries have almost nothing to do with differences in endowments of human, physical or natural capital but are almost entirely due to differences in institutions.
2. **Land values.** Development programs tend to raise land values and therefore rents, displace populations, and degrade the environment, and so reverse the outcomes expected from apparently separate health, food, and other humanitarian programs.[23]
3. **Famines.** During all recorded famines there was enough food to feed entire populations, often with some left over for export,[24]
4. **The natural resources myth.** Is poor performance caused by a shortage of natural resources? Not so. The star economic performers for 30 years have been resource-poor countries such as South Korea and Taiwan, growing at 10% per annum, while countries rich in oil and minerals typically exhibit negative growth rates.[25]

Human rights anomalies

THE Universal Declaration of Human Rights (UDHR) was adopted in 1948 and followed, in 1966, by the adoption of the twin Covenants, the ICESCR and the ICCPR. Incredibly, neither document was ratified until 28 years after the adoption of the UDHR and, since neither addresses the fundamental economic causes of human rights violations, neither has ever been effectively implemented. Why? Perhaps partly because a third set of rights, those of Third World solidarity including the right to development,[26] has revealed too many contradictions in the first two sets. Here are two:

- **Land expropriation.** In none of the conventions, protocols and treaties are there any mechanisms to prevent, or correct the human rights abuses arising from land expropriations and population displacements by colonialism, transnational corporations, or even the World Bank.[27]
- **Self-determination.** Article 1 in each of the twin Covenants states that all peoples have the right of self-determination and freedom to dispose of their natural wealth and resources. However, it is not uncommon in poorer countries for 90% of the natural wealth and resources to be owned by foreign or local élites, leading to questions as to the meaning of "self" in self-determination. An extensive analysis of the contradictions of human rights is offered by Steiner and Alston.[28]

Environmental programs, curtailing production and consumption, contradict those of development, that aim to increase production and consumption. An attempt to reconcile this contradiction, called sustainable development, has created a further contradiction by reducing both

incomes and equity for those within a present generation least able to afford sustainability.

With exceptions such as the recurring Indo-Pakistan conflicts, war between two sovereign states is now rare. Far more common, civil wars may often be minority responses to "unfair" allocations of natural resources imposed by the state, or simply a rent-seeking coup by a regional group that perceives a comparative advantage in that region's position or resources. A third type of war, what might be called asymmetric conflict with only one side clearly identified, is described as terrorism, guerilla warfare, struggles for freedom, liberation and self-determination, or peacekeeping, punitive and destabilising operations, depending on viewpoint. Two contradictions are identified here:

- All these armed conflicts, international, civil or asymmetric, concern allocations of natural resources. See Michael Klare[29] for an extensive treatment of this subject. However, most corrective interventions maintain these allocations, without addressing the sources of conflict in the economic and social consequences of these allocations.
- Peacekeeping agreements may simply give both sides time to build up resources for the next battle over disputed allocations of natural resources.

Options for geopolitical reform

IT SEEMS that international programs have inherited the geopolitical contradictions of history. Are there any reforms that might resolve these contradictions? That land reform lies between the egalitarian buoyancy of the Tiger economies and the stagnant poverty of the rest of the Third World does suggest some approaches.

Land redistribution. "In all three of Asia's biggest successes – Japan, South Korea and Taiwan [and China] – the groundwork for both fast growth and the income equality that eased the social strains of development was laid by a radical land reform."[30] However, land redistribution is unpopular with the World Bank and with governing élites. Thus, in "numerous 'policy guidelines' concerning land reform ... in nations most assisted by the Bank, the government prefers to develop large-scale cash-crop agriculture, taking care of the small peasantry, when pressed, through a well-oiled repressive machine ... If it [the Bank] were firmly committed to reform of land-tenure structures and to the redistribution of national incomes to the bottom half of the population ... the World Bank could make all its loans conditional upon structural changes in the recipient countries."[31]

Land rents as public revenue. Unlike land redistribution, the treatment of resource rents as public revenue is not coercive, encourages economies of scale, and is not limited to agricultural land.[32] In the context of international programs, this fiscal policy would resolve development

contradictions one, two and three, human rights contradictions one and two, that of sustainability, and peacekeeping contradictions one and two.[33]

Removal of agricultural support. "[F]armers in poor countries struggle to compete with heavily-subsidised farmers in Europe and America ... and even see their own market destroyed when food surpluses are dumped. Lost trade costs poor countries an estimated $700 billion each year, says the UN, a figure that dwarfs aid spending."[34]

Green taxes. Though the need for these is generally accepted, and they would certainly resolve development contradiction number four, the reason for including green taxes here under land reform is to make the point, often overlooked, that the huge revenues that would flow from rent-as-public-revenue and the removal of agricultural support would solve many of the problems for those who otherwise cannot afford sustainability.

Any of these reforms would be directly or indirectly beneficial to development, human rights, sustainability and peacekeeping. But there appears to be considerable confusion as to how to respond to problems of ownership and use of natural resources, such as how to separate private rights of ownership and use from public rights to the economic rents that are socially created. If, then, those who design and manage our international programs are confused, is the source of this confusion located in the social sciences?

A Critique of the Social Sciences

SOCIAL SCIENCE is an immense, Western-dominated industry. Each year it generates over 100,000 articles.[35] Of these, some 11,000 are focussed on relatively narrow topics related, for example, to education, health, crime, and racial and gender discrimination, and characterised by scientific method and statistical analysis.[36] This body of professional specialist work is not relevant to this inquiry. What *is* relevant is a much larger body of publications, focussed on global issues, and characterised by descriptive rather than quantitative analysis. To these we may add, each year, some tens of thousands of articles in the world's principal newspapers and millions of reports attempting to guide the operations of the huge networks within UN, regional, national and some 5,000 NGOs. If all these authors are informing the designers and managers of international programs, then who informs these authors? Each year, in the world's tertiary education institutions, our future designers, managers and users of these international programs are exposed to social science concepts, recent research, and authoritative opinion in millions of lectures, tutorials and discussion groups. To help understand this process I completed 24 undergraduate units in economics, politics, history, anthropology and sociology. I met with a

number of surprises that I now express as three linguistic and five structural problems.

Linguistic problems. First, I followed the evolution of the social sciences from the irrationality and superstition of the pre-modern era, through the scientific enlightenment of the modern era, and back into the irrationality, contingency and ambivalence of the post-modern era. I checked this out. "Post-modernism ... has simply detached itself from empirical reality" and now, as a result "sociology is quite free to tell what stories it likes."[37]

Second, I encountered profoundly different, often emotionally partisan, interpretations of common words. For example, economics may equate capitalism with productive investment and profit with return on that investment, while other social sciences may equate capitalism with what economists call monopoly, profit with what economists call economic rent, and profiteering with what economists call rent seeking. In a controlled experiment in the uses of terminology I found that, to get high grades, the student must figure out which particular ideological cloud the professor inhabits, and then precipitate appropriate definitions and value judgements from that cloud.

Third, I found that the mathematical mode of discourse of economics is quite opaque to other social scientists, indeed to 99% of the general population. Yet economics offers logically consistent explanations of many problems traditionally addressed by social scientists, for example in drug addiction, crime and punishment, discrimination, family and gender matters, and conflict resolution, as can be found in the works of Gary Becker. I found sociology to be also but differently opaque. For example: "Some post-modern theories ... while emphasising the crisis of the metanarratives, have never been sufficiently self-reflexive in recognising their own paradigmatic and chronic foregrounding of the temporal."[38]

Structural problems. First, the building blocks. Unlike the conciseness of the physical sciences and economics, fundamental concepts in history, politics and sociology are extensively defined by reference to a history of competing interpretations of the particular concept.

Second with sub-contracting. Unlike the physical sciences and economics, the teaching of tools such as experimental design and statistical analysis is usually subcontracted to other disciplines and therefore seldom applied in second and third year units by professors who are therefore incompetent to provide the necessary guidance. Thus: "[T]oo much contemporary history ... consists merely of mindless accumulation of data on a particular subject of popular concern merely because these data exist".[39]

Third with zones of competence. I found the boundaries of

anthropology, economics, history, law, political science and sociology blurred by an imprecise and aggressively contested term, *globalisation.* Straying outside their zones of competence, a large number of papers on the management of globalisation might appear, to those trying to manage its realities, to have come from some twilight world of utopian aspiration.

Fourth with vertical integration within a discipline. As a graduate and post-graduate from the physical sciences it astonished me to find that, with the exception of economics, second and third year social science units seemed to rely remarkably little on the use of fundamental concepts and tools that, in the case of the physical sciences, would have been laid down in the first year.

Finally, with horizontal integration between disciplines. Without a common language or any conceptual integration, crossing the fault lines between the disputed territories of the social sciences is courageous, impudent or misguided, depending on viewpoint. There is, however, a substantial literature on one such attempt at integration, between economics and law. But the economic illustrations of problems of crime and punishment, families, property rights, and public goods, for example, lead inevitably to models of equilibrium, utility, indifference, and revealed preference, requiring lawyers to have considerable familiarity with economics. It is therefore not surprising that double degrees in economics and law are now common. However, law and economics have well-established genealogies and share a common concern for linguistic precision, factors that might make other double degrees in the social sciences unworkable. For example, sociology "has an ambivalent genealogy and a controversial recent history ... The difficulty of defining the subject is indicated by the easiest possible form of this entry: namely, a cross-reference to every other entry in the dictionary [of sociology]"[40]

All the sciences competently address well defined but separate components of the human situation, such as population, natural resources, and capital. These I have called the building blocks that some sciences then assemble into structures. But whereas the technical and economic sciences have constructed generally applicable models of production, transport, and administration, attempts by other social sciences to construct generally applicable models of the human situation, though highly controversial, continue to lay exclusive claim to competence in global issues. In the special context of this essay, I will now challenge some of these.

Anthropology is the study of human cultures, a discipline famous for the concept of cultural relativity. But the appearance of contradictions in this concept has bedevilled human rights for 40 years, and spawned a literature on the clash of civilisations. Yet beneath the world's

extraordinary cultural diversity lies an astonishingly uniform culture of macro-parasitism. Bernstein[41] further defines macro-parasitism as "A system characterised by exploitation by a landholding class of those who work the land through the extraction of rent. It is 'parasitic' because the income extracted is not reinvested to maintain or enhance the productivity of farming", and it is a system that encourages collusion with other monopolistic systems such as colonialism, neo-colonialism and some transnational corporations. But it is social historians and economists, not anthropologists, who have identified, in each of the world's regions and cultures, what is seen here as the most important of all anthropological phenomena ... macro-parasitism.

The High Income region, with less than 2% of its population working on the land, now exhibits new mutations of macro-parasitism such as agricultural support schemes. To the external damage, $700bn a year for the Third World, must be added internal damage, for example: "In Britain [farm] subsidies amount to 40% of the output of the industry and the consumer has to pay an extra £2bn a year because prices are kept above world levels".[42]

The Latin America and Caribbean region is summarised by Bernstein.[43] "The *hacienda* in colonial (and subsequently independent) Spanish America typically involved a form of tenancy much closer to *serfdom*," and its present position is summarised by Ponting.[44] "In Latin America two-thirds of the land is now owned by just 1.5% of the total number of landowners, a third of the population own just 1% of the land and many are landless labourers".

The South Asia region is also defined by Bernstein as *Parasitic Landlordism*, exemplified here by the Indian caste system. Rent seeking reactions to famine are described by George: "Rich Bangladeshi farmers stood in line all night at fiscal registration bureaux in order to buy, literally at 'famine prices', land that famished small peasants were selling as a last resort. Each famine takes more land from the poor and thus sets the stage for the next one".[45] In Sub-Saharan Africa "three-quarters of the agricultural population own just 4% of the land."[46] Bernstein identifies new mutations of macro-parasitism in *bureaucratic rent*, a collusion between state and landlord.[47] The growth in income per capita was zero from 1965 to 1980 and has been negative ever since, even though the region is the richest in the world for minerals, a sad illustration of the *natural resources myth*.

The Middle East and North Africa region, though highly endowed with oil wealth, has a consistently negative growth rate in per capita GNP, a further illustration of the natural resources myth. Despite the region's low population density the historical dominance of élite intermarrying families of landowners, merchants and religious leaders created a domestic

tributary society[48] long before the oil bonanza added an international tributary dimension.

In the East Asia and Pacific region, since more than 80% of its population belong to the so-called Tiger economies (Japan, Korea, China and Taiwan) I will consider these only. "[W]here, thanks to historical accident or upheaval there has been decisive transformation in the entitlements to land, this has had salutary effects on both agricultural growth and equity."[49]

Demography has delivered models of fertility and global ageing, while leaving the correlations of population pressures with poverty, political instability and environmental unsustainability at best to other social sciences, at worst with the bandwagons of society's doomsday demagogues. Similarly, demography has established that rising per capita incomes leads to falling birth rates, while not explaining the transition from macro-parasitism to economic growth. The Samuelson model described earlier does explain the West's transition to phenomenal economic growth but not the stagnation of the Third World. Elsewhere, however, Samuelson does explore a possible answer in the form of a heavy tax on land rent.[50]

Economics, as the study of how scarce resources are efficiently allocated, appears to be poorly understood by other social sciences and the general public and, partly for this reason, it is heavily criticised for its indifference to equity, the utility of job security and the psychic value of egalitarianism, for its opaqueness of language, and for its perceived ambiguity over terms like capital.

Equity. Economics is widely criticised for apparently ignoring equitable allocations. According to Parsons: "For approximately 100 years Western neoclassical economic thought has developed within the premise that economists could take the social framework, the institutional order, for granted, as something which it was the professional responsibility of someone else to understand".[51]

Opaqueness. Economics is perhaps most strongly criticised for the opaqueness of its mode of discourse, the use of graphs and mathematics. Given these discouraging characteristics it is hardly surprising that the political protestations of youth, and the pursuit of property windfalls by the more mature, are found to be more rewarding activities than the technical appraisal of Adam Smith's theories of markets and economic growth, of neoclassical theories of market failure, of David Ricardo's theories of the benefits of trade, and of the views of Adam Smith, David Ricardo, and Henry George on the ethics of appropriating land rent.

Capital. Classical economists distinguished between land, in which they included natural resources, and capital. Neoclassical economists then demonstrated the substitutions possible between all factors of production

thus accepting land as a form of capital. More recently, mainly through environmental economics, conservation movements, and land rights movements, land and natural resources are increasingly being recognised as in fixed or depletable supply as opposed to other factors of production such as labour and capital, therefore acquiring social and intergenerational values, almost in the nature of public goods.

Taxation theory. While the concepts of distributional justice, equity, compliance costs, and avoidance are familiar to taxpayers, those of incidence and efficiency are not. Taxation is not only a revenue generator but also perhaps potentially the most powerful instrument of behaviour modification. The rent-as-public-revenue policy scores highly on all these criteria, particularly on efficiency since it is the only public charge that encourages productive activities, but Samuelson, in his demonstration of its power, defines it as a political, not an economic issue.[52]

As a result, it is hardly surprising that other social sciences and the general public, faced with an inscrutable rationality, should respond with their own rationalities of protest against trade, capitalism and globalisation.

History is traditionally the study of events in chronological time that constructs models, often large and heroic, of sequential stages, such as kin-ordered, tributary, and capitalist. But unresolved contradictions lie embedded in the ambiguity of these terms and in the arbitrary nature of the transition points. *Capitalism*, to take one example of ambiguity, may be used to describe the productive investment in technology that has defeated macro-parasitism and dramatically improved standards of living. It may also be used to describe a polity that supports industrial and armaments monopolies at home, and undemocratic and repressive regimes abroad. Furthermore, the extraction of territorial tribute and the capital investment in tools cannot be demarcated in historical eras but stretch seamlessly from prehistoric times to the present day.

Law is the body of enacted, customary or proposed rules in which documentary research delivers new structures that are then added to an immense, essentially undisturbed collection of earlier structures. This layering process inevitably leads to contradictions and successive attempts to resolve them by further layering. Nowhere is this more apparent than in questions of sovereignty and human rights. Concerning sovereignty, Akehurst says "it is doubtful whether any single word has ever caused so much intellectual confusion and international lawlessness."[53] The sovereign state in international law comprises a population, a territory, and a recognised government. First, the legitimacy of the state over its population is now increasingly challenged in the name of ethnicity, aboriginality and cultural relativity. Second, it has been suggested by Jones that we must "challenge the commonly accepted notion that

societies have exclusive rights in the [natural] resources that fall within their territories".[54] Third is the matter of recognition, itself "one of the most difficult topics in international law...a confusing mixture of politics, international law and municipal law."[55] Concerning human rights, it is doubtful that any domestic issue has generated more legislation and less effectiveness than that of indigenous land rights, or that any international issues have confounded human rights proposals more than those of cultural relativity and the right to development.[56] It is the function of jurisprudence to help legislators to avoid such contradictions by reminding the law of its origins in theories of equity. How successful has this been?

Jurisprudence. "The reason for the superabundance of references to equity and to equitable principles (concepts which do not fall within any formal category of law and of which there is no material definition) in international law over the past thirty years is that we are in a period of history when the entire system is foundering upon new contradictions."[57] Confining our attention to natural resources, the problem of global equity was first stated by Mill: "'The social problem of the future we consider to be, how to unite the greatest individual liberty of action with a common ownership in the raw material of the globe". [58] Mill later moved some way towards an equitable resolution of this problem by advocating the treatment of resource rents as public revenue, but only in a domestic context, that of the Irish land problem.

Explorations of equity in an international context, through global rights to natural resources and through taxation, are now starting to appear along the edges of international law. For example, rights to global commons are being explored in relation to the seabed, Antarctica, World Heritage Sites, and even in a proposal to make world grain stocks a common heritage of mankind.[59] Chapter 16 of Steiner and Alston[60] discusses proposals for forms of international taxation. These include the Koranic 10% annual wealth tax, and a proposal for the differential transfer of all aid from income rich to income poor countries in proportion to the difference of per capita GDP above and below $700 per annum. However, with the exception of a similar international transfer of natural resource rents from resource rich to resource poor countries, not as yet proposed, none of these measures satisfy important criteria of efficiency and equity.

Political science is the study of power that constructs models, large and heroic as are those of the historians but, like those of development economics, context-dependent and therefore contestable. For example, Henry Kissinger's bipolar model was relevant to ideological conflict between the first and second worlds, and Fukuyama's *The End of History*[61] was then relevant to the first world's ideological triumph. Neither was ever relevant to the four-fifths of humanity occupying the

Third World for which a more appropriate model was, is and will remain, the macro-parasitic manifestations in colonialism, neo-colonialism and in transnational intrusions.

Huntington's *The Clash of Civilisations* model[62] assumes conflict along what he describes as civilisational fault lines, whereas every known political flashpoint has its origins, ultimately, in disputes over natural resources. This can be modelled as the clash of two different, internal and external, modes of political control. On the one hand, macro-parasitism leads to internal social discontent. Then: "As supplies contract and the price of many materials rises, the poor will find themselves in an increasingly desperate situation – and thus more inclined to heed the exhortations of demagogues, fundamentalists, and extremists who promise to relieve their suffering through revolt or ethnic partition [or terrorism]".[63] On the other hand, and clashing with this internal mode of political control, are the external modes of control, of regional stability where energy imports are perceived to be threatened, and of regional instability where potential arms exports are perceived to be threatened. This political contradiction is clearest in the history of the USA, whose democracy welcomed poor migrants from feudal Europe, then from feudal Latin America, whose ideals of freedom then overcame fascism, but whose external mode of political control now paradoxically supports undemocratic and monopolistic foreign regimes little different from feudalism and fascism.

It is not surprising that Klare's model predicts that the wars of the future will be fought over the possession and control of increasingly scarce land and natural resources. Unlike earlier models, Klare's model is ideologically transparent and is historically seamless. "Human history has been marked by a long succession of resource wars – stretching all the way back to the earliest agrarian civilisations."[64] The main locus of power and the catalyst of conflict continue to lie in the highly differentiated property rights in natural resources, both within and between states.

The contradictions exposed here seem adequately explained by our geopolitical history and in turn they seem adequately to explain the failures of development, human rights, sustainability and peacekeeping programs. How may these contradictions be resolved?

Language and the Problem of Design

MARY ROBINSON'S criticisms appear valid, not only for development and human rights but also for the programs targeting sustainability and peacekeeping. Less valid is the implicit assumption that the problem lies in program implementation rather than in design. On the contrary, program outcomes, at best unintended consequences, at worst complete failure, are pre-determined by institutional constraints connected with property rights in natural

resources, and there is little evidence, in the contradictions exposed here, that these constraints are fully understood by program designers or by those social sciences that inform them. How can these contradictions be resolved to allow the power of social sciences' building blocks to be recombined into ways that lead to more robust program structures? What is needed is the development of a common language, geopolitical models and case studies, and the means of delivering these to program designers.

Developing a common language. This requires precise, unambiguous definitions, for example those of the *Oxford Dictionary of Economics* (1997), *Oxford Dictionary of Politics* (1996) and *Oxford Dictionary of Sociology* (1998), and the use of plain language in place of the linguistic excesses of post-modernism. Where plain language lacks conciseness or is ambiguous there is a case for mathematical expression. However, by adulthood most people have lost any mathematical abilities beyond those of simple arithmetic and are generally unhappy with any graph depicting more than one variable. There is a way around this problem. Many adults and most students are now aware of the use of computer spreadsheets in learning concepts and for making predictions, for example in household budgeting. Many socio-economic concepts can be learned in this way by providing the learner with a model spreadsheet and the means of changing the parameters and observing the results. For example by changing fertility rates one can observe the effects on wages (the Malthus model) and on land rent (the Ricardo model), or by introducing technological change one can observe the effects on both wages and rent (the Samuelson model). As confidence and curiosity increase the learner can explore the effects of making changes to the formulas themselves, often in natural language or through menus. Some "what-if" experiments along these lines were reported by Smiley.[65]

Developing geopolitical models. Imprecise models of social differentiation and macro-parasitism, diffused throughout the social sciences, may be given some precision by monopoly theory. The institutional constraints of monopoly are already well understood, and calculations of the inefficiencies of rent-seeking and deadweight loss, and the inequities of the appropriation of economic rent, can be directly applied to geopolitical constraints in land. Models of externalities and corrective taxation are also well understood and have been directly applied by Tietenberg[66] to geopolitical constraints in natural resources. Models of the effectiveness of taxation have been developed by Tideman and Plassmann.[67] The calibration of all these models requires data on the economic rents involved. For land rents in OECD countries see Banks and O'Brien,[68] and for the Third World see Doreen Warriner,[69] Colin Clark,[70] Russell King,[71] Michael Todaro[72] and Robert Andelson.[73]

Developing case studies. Many case studies, for example those of

Bernstein or Todaro, are descriptive rather than quantitative. Here are some examples of geopolitical "What-if" questions and, in parentheses, some models providing quantitative answers.

- The unintended effects of hydro-electric, irrigation, agricultural technology and other development schemes upon land rents and wages (the Samuelson model) and upon the distribution of benefits (Gini coefficients of land ownership).
- The effects on national income and growth of taxing labour and capital (the Tidemann and Plassman model[74]), and of taxing land rent.[75]
- The effects of agricultural support schemes (the UNDP model reported in *The Economist*[76]).
- The unintended effects of human rights initiatives on employment and wages (*The Economist*[77]).
- The unintended effects of land reform legislation on employment and wages.[78]
- The side effects of sustainability upon employment and wages (Tietenberg).
- The side effects of natural resource discoveries (*The Economist*, "The natural Resources Myth"[79] and Tollison and Congleton on rent-seeking[80]).
- The effects of alternative reform strategies upon national solvency, sustainability, and the incidence of civil wars (Smiley[81]).
- The relationship between skewed patterns of land ownership and political trouble spots such as Palestine, Kashmir and the Philippines (Gini coefficients of land ownership).
- The effects of rural and urban patterns of land ownership upon poverty in rural, urban formal and urban informal sectors, and on inter-sector migration (Smiley[82]).

While program failures remain uncorrected, the economic and human costs will continue to be enormous. There must, therefore, be a very large number of people, employees of UN organisations, national governments and NGOs and social scientists, who are concerned and who are seeking answers. The answers suggested in this essay are, at this point, naive and in need of evaluation, testing and development. In view of the extraordinary importance of the issues raised, no apology is made for the audacity of the following scenario.

Using the professional expertise apparent in the last three issues of *Geo*philos, it would take perhaps a year for an international team to construct a website of geopolitical tools. Then, inviting selected NGOs to participate, it might take a further year to add in a set of geopolitical case studies. Then, approaching selected universities, developing formal course material might take a further year. A possible outcome might be the

offering, internationally, of a Graduate Diploma in Geopolitics, drawing on a very large catchment area of present and future designers and managers of the programs of development, human rights, sustainability, and peacekeeping.

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