

Interlude: Environmental Parallels

We have seen in the previous chapters that feminists have critiqued the national accounts definition and measure of the economy for excluding non-market production. Feminists have also critiqued the attempt to expand the definition and measure to incorporate that production. These feminist concerns are the main focus of my thesis, but in this short “environmental interlude” I want to briefly suggest that there are parallel arguments in green political economy. Environmentalists have argued that the definition of the economy is too narrow because it does not take account of environmental limitations on, and costs of, economic activity. Again, the market focus of the accounts is problematic as environmental factors only enter the accounts when they enter the market economy. GDP apparently exists (or is assumed to exist) in an environmental vacuum.

As this is an “interlude” and not a chapter, I do not examine the environmental critiques in great depth. While they are important concerns in their own right and add to the overall critique of national accounting, I particularly want to focus on the parallels between green and feminist critiques. These parallels, firstly critiquing the boundaries of the official accounts, but also questioning the appropriateness of monetary valuation, provide a different standpoint from which to consider the feminist debates. They also open the possibility of expanding and strengthening the feminist critiques through the incorporation of ecological issues. Indeed, the environmental critique of the national accounts’ conflation of production (“the economy”) with welfare, offers valuable insights for a feminist informed economics by focusing attention on the importance, but also the limitations, of the neoclassical definition of production.

The environmental critique of national accounts can be considered under two headings: the treatment of defensive expenditures and environmental costs; and, the concern for sustainability.

Defensive Expenditures and Environmental Costs

The concern over defensive expenditures and environmental costs arises from the fact that there are no negative entries in national accounts. Any economic activity which results in a market exchange makes a positive contribution to GDP and economic growth. Thus, to use a

popular example, the infamous voyage of the Exxon Valdez was, in Marilyn Waring's words, "one of the most productive voyages ever".¹ The production and transport of the oil it was carrying was counted as part of GDP, but when it ran aground spilling that oil and creating an ecological disaster, that too added to economic growth as the clean-up, insurance and legal wrangles were also counted as productive activities (because they created marketed services). The general problem here is that polluting and environmental damaging activities are counted twice in GDP, once as the original production and again in the costs of environmental restoration - in a sense making them more 'valuable' than environmentally friendly activities.

However, if these activities are counted twice, other costs of economic activity are not counted at all. Thus for instance, if swamps are drained and wetlands are lost, there is no accounting for the loss of the wetlands' natural 'production' of fish, birds and purified water.² Values for more abstract phenomena like loss of biodiversity or habitat are even further from a national accounting which is both anthropocentric and market-centric. The bottom line of the accounts is that whatever happens, "the GDP spirals ever upward by adding everything, making no distinction between costs and benefits, well-being or decline".³

In response to this one directional accounting, green critics have been concerned to identify and account for both defensive expenditures and environmental costs. These are different but related concepts. Defensive expenditures have been defined as,

outlays with which the attempt is made to eliminate, mitigate, neutralise or anticipate and avoid damages and deterioration that the economic process has caused to living, working and environmental conditions.⁴

Classic examples of such defensive expenditures are police and security (which "defend" against crime), spending on pollution control/mitigation (eg. sewerage treatment or water filters), and health and transport costs associated with industrialisation and urbanisation. These expenditures are welfare enhancing in that the consumers and/or the public are made better off by that expenditure. But because they only prevent or repair social and

¹ Speaking in Terre (Director) Nash (1995) "Who's Counting: Marilyn Waring on Sex, Lies and Global Economics." National Film Board of Canada.

² Clifford Cobb, Ted Halstead, and Jonathon Rowe (1995) *The Genuine Progress Indicator: Summary of Data and Methodology*, Redefining Progress. p 27.

³ *ibid.*, p 8.

⁴ C Leipert (1989) "National Income and Economic Growth: The Conceptual Side of Defensive Expenditures" *Journal of Economic Issues*, Vol 23, September, p 844.

environmental costs they do not represent an overall increase in welfare. By contrast, environmental costs like loss of wetlands, arable land, habitat, or air and water quality are outright losses of welfare. Yet they are not necessarily associated with dollar costs because, unlike defensive expenditures, the loss is not necessarily directly related to actual expenditures.

Thus defensive expenditures and environmental costs are conceptually different. In relation to defensive expenditures the green critique is about *the way* defensive expenditures are recorded (as positives). With environmental costs, the problem is that they are not included at all in the national accounts. However in practice the concepts overlap, not least because the imputed value of environmental costs is often an estimate based on projected or actual defensive expenditure necessary to ameliorate the cost (the so-called maintenance cost approach).

More will be said below (and in Chapter 7) about the measurement of defensive expenditures and environmental costs, and the various critiques of such valuations, but it should be noted here that there are also arguments about the concepts themselves. Some more traditional economists have challenged the whole notion of “defensive expenditures”, arguing that concepts of “welfare” are the domain of philosophers rather than statisticians.⁵ However, this argument seems untenable given the welfare assumptions which, I argued in Chapter 1, are foundational in the neoclassical concepts of utility and production.

There are also practical demarcation issues around what expenditures are defensive, and what constitutes an ‘environmental cost’. Should, for instance, loss of biodiversity and the psychological losses experienced by people when they see an old-growth forest destroyed, be considered economic costs?⁶ Yet such demarcation issues, while important, cannot be considered to be insurmountable. As I argued in earlier chapters (and again, as Waring convincingly demonstrates), the official demarcation lines are also arbitrary - or at least determined by the concerns of the theories underlying the accounts.

⁵ H Adler (1982) “Selected Problems of Welfare and Production in the National Accounts” *Review of Income and Wealth*, Vol No. 28, p 124.

A more solid argument is that, if such defensive expenditures are deducted from national accounts, then some measure should be (or should have been) added for the original welfare created. Thus, if a deduction is made for loss of leisure, or the cost of repairing beach pollution, then an addition should be made for the utilities ‘produced’ by leisure time or clean beaches.⁷ Such estimates probably produce insurmountable data problems, and even if estimates could be produced, their magnitude would overwhelm the accounts.⁸

What this highlights is the problem of applying the economic logic of double entry accounting to issues of welfare. Underlying this is the conflation of welfare and economy. Notions of defensive expenditures and environmental costs are explicitly about measuring economic welfare. They are not about income and expenditure and need not be bound by the logic of double-entry production accounting. More importantly though, the conflation/confusion of production and welfare is not a product of the notion of defensive expenditures and environmental costs. Rather the conflation arises in the official accounts, both in their theoretical underpinnings and their uses.

GDP as a Welfare Measure

The point of the green critiques of national accounting in relation to environmental costs and defensive expenditures is not so much about the measure of production, but the fact that GDP - a production measure - is used as a de facto measure of welfare. As noted in Chapter 1, the term “production” carries a positive normative value and is tied at an epistemological level with the notion of welfare via the neoclassical definition. Production creates utilities and satisfies needs, and therefore adds to (individual) welfare. Economic growth - the production of more goods and services - then means more welfare. Growth is therefore, by definition, good, and becomes an (almost) undisputed goal of public policy. GDP, as a measure of that growth, then becomes, by implication, a measure of welfare.

⁶ Swaney and Olsen give a critical review of attempts to value environmental phenomenon like biodiversity. J.A. Swaney and P.I. Olson (1992) “The Economics of Biodiversity: Lives and Lifestyles” *Journal of Economic Issues*, Vol 26, No. 1.

⁷ Adler, *op.cit.*, p 125; Michael Young, Paul Walker, Mallawaarachchi, and Robert Smyth (1995) “National and GIS-Based Regional Resource Accounting in Australia” in J. Walter Milon and Jason Shogren (ed), *Integrating Economic and Ecological Indicators*, Westport: Praeger. p 172.

⁸ For instance, to take just one example where the original product has been included in extended national accounts, the additional product attributed to leisure time was 48.7% of GNP for Zolotas’ 1965 measurement, 96.6% for Kendrick’s 1984 measure, 101.5% for Nordhaus and Tobin in 1972 and 115.5% for Jorgenson and Fraumeni in 1982. All figures cited in Anwar Shaikh and E. Ahmet Tonak

Of course, when pressed national accountants and economists recognise that GDP is not a welfare measure. However such statements are often limited to an initial nod in this direction, followed by an uninterrupted analysis proceeding on the assumption that growth is the unquestioned goal.⁹ This mirrors the national accounts' treatment of non-market production: acknowledging non-market production as part of production/the economy, but then reifying the narrow GDP definition as "The Economy".¹⁰ Thus, it is with some justification that Waring dismisses the defence of national accountants and economists who claim that GDP was never meant to be a measure of welfare. Despite the denials, it *is* used to measure welfare and they do little to set the record straight.¹¹

In as much as the green critique of GDP in relation to defensive expenditures and environmental costs (as opposed to resource depletion) is about GDP as a welfare measure, the critique is not a direct parallel with feminist critiques which are about the 'proper'/extended measure of production. Yet these green critiques remain relevant to this thesis for a number of reasons.

Firstly, the green critique is important in its own right. Leipart estimated that defensive expenditures constituted more than 20% of economic growth in Germany.¹² Similar orders of magnitude are evident in other industrialised countries.¹³ These shortcomings in national accounting impact on our understanding and representation of the economy and economic development (see Chapter 7). Secondly, and more directly, this green critique has also been adopted and forwarded by (some) feminists in their critique of official accounting, perhaps most notably by Marilyn Waring. Waring's work was crucial, not only in popularising the feminist critique of national accounts, but also in attempting to draw feminist and green

(1994) *Measuring the Wealth of Nations: The Political Economy of National Accounts*, New York: Cambridge University Press. p 14.

⁹ Samuelson's classic economics text is a good example of this. The "not a measure of welfare" rider is actually on p 138. The rest of the book continues with the decontextualised, scientific behaviour of markets - which of course militates against more 'subjective' concepts like welfare. Paul Samuelson, William Nordhaus, Sue Richardson, Graham Scott, and Robert Wallace (1992) *Economics: Volume 2 Macroeconomics*, 13th ed., Sydney: McGraw Hill Book Company.

¹⁰ Again, see Introduction here, and Australian Bureau of Statistics (1990) *Australian National Accounts: Concepts, Sources and Methods*, Cat No. 5216.0. Canberra: ABS. p 5.

¹¹ Marilyn Waring (1988) *Counting for Nothing: What Men Value and What Women Are Worth*, Wellington: Allen & Unwin. pp 45 - 47.

¹² Leipart, *op.cit.*, p 854.

¹³ See the measures of economic welfare discussed in Chapter 7 here.

critiques together. Despite my criticisms of Waring's arguments,¹⁴ her work remains important.

Moreover, others have given more depth to the linkage between feminist and environmental concerns. Ariel Salleh for instance, draws links at an epistemological level where Western dualistic thinking positions man as centre and women and nature as Other. This androcentric, binary logic is what makes it possible to conceive of the acontextual "Economy" which is defined by the national accounts. It is an economy centred on men's work and clearly delineated and cut off from the Other.¹⁵ By contrast, many feminists (and greens) have posited the (GDP) "Economy" as resting on the Other - the unvalued reproductive contributions of nature and women. Thus, they have tried to envisage more holistic models of the economy.¹⁶

Most importantly though in terms of this thesis, the concern with defensive expenditures and environmental costs also begins to question the neoclassical notion that anything that is exchanged in the market contributes to welfare. The homogeneity of the neoclassical definition (what I will later refer to as the neoclassical nexus of production = market = economy = welfare) is challenged by the differentiation of economic activities into those that on net add to the welfare, those which simply repair the damage of other economic activities, and those which reduce welfare outright.¹⁷ The notion that production does not necessarily add to or equal welfare also begins to challenge the individualist standpoint of neoclassical economics. The collection of individual market purchases define production and welfare in the neoclassical paradigm, but some of these activities translate into environmental problems faced by the whole community. The green concepts of defensive expenditures and environmental costs, by definition, suggest a different, more collectivist or structural analysis. Individuals are seen to exist in social and ecological relations, rather than as the autonomous, decontextualised 'men' of neoclassical theory.

¹⁴ See chapter 2 here, and Greg Ogle (1997) "The Ghosts of Dead Economists: Marshall, Keynes and the Political Economy of National Accounting" *Policy, Organisation and Society*, Vol 14, pp 116 - 117.

¹⁵ Ariel Salleh (1997) *Ecofeminism as Politics: Nature, Marx and the Postmodern*, London: Zed Books.

¹⁶ See for instance, Waring, *op.cit.*, ch 12; Marem Jochimsen and Ulrike Knobloch (1997) "Making the Hidden Visible: The Importance of Caring Activities and their Principles for any Economy" *Ecological Economics*, Vol 20, No. 2, pp 107 - 112.; Sabine O'Hara, (1997) "Towards a Sustaining Production Theory" *Ecological Economics*, Vol 20, No. 2, pp 141 - 154.

¹⁷ There are further links here with feminist analyses of emotional labour, but this will be argued more fully in the next section of this thesis.

As we will see below and in Chapter 7, not all green critiques transcend the neoclassical paradigm. However, the collectivity implied in the green critiques opens the space for a more systemic or structural approach to political economy. In as much as the concept of gender is itself collective and/or structural, then the opening of this theoretical space is also a prerequisite for a feminist informed economy. Thus, the collision with the individualism of the neoclassical framework is a particularly important parallel between green and feminist debates. This argument will be developed further in the second half of the thesis.

Resource Depletion/Sustainability

The second area of environmental concern about the definition and measure of the economy relates to issues of sustainability: resource depletion and the environmental limits on production and the economy. Attempts to incorporate these factors into economic consideration are not new. Thomas Malthus may lay claim to such an endeavour, and Juan Martinez has documented the different efforts from Serhii Podolinsky and Edward Sacher in the 1880s through to Harold Hotelling's pioneering "modern" work on the economics of exhaustible resources in 1931.¹⁸ However, the issue of sustainability came to the fore with the "energy crisis" of the early 1970s and the report by the Club of Rome which produced mathematical predictions of the exhaustion of the earth's resources.¹⁹

In terms of national accounting, the focus on recording market flows means that there is no accounting for resource depletion or the (un)sustainability of production/economic growth. Thus, a nation could use up all its productive natural resources (its 'natural capital') in a year, but such unsustainable development would be included unproblematically as part of the current production (and welfare). This apparent absurdity, plus the growing environmental awareness at popular and official levels, has led to a general acceptance of the need for 'sustainability'. The question then is, what does "sustainability" mean? The ensuing debate has revolved around two concepts: so-called "weak" and "strong" sustainability.

¹⁸ G A Smith (1990) "Review of Juan Martinez, *Ecological Economics: Energy, Environment and Society*" *History of Political Economy*, Vol 22, No. 4, pp

¹⁹ (1972) *Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*, Sydney: Pan. This was the first attempt to use computer modelling to extrapolate possible economic and environmental scenarios, although Barry laments its "broadly 'reformist'" approach, the general thrust being "more technical than political". John Barry (1994) "The Limits of the Shallow and the Deep: Green Politics, Philosophy and Praxis" *Environmental Politics*, Vol 3, No. 3, pp 370 - 371.

Weak sustainability is a concept of economic sustainability based on a proper measure of income as the maximum value which can be consumed in a given period without leaving a person or country worse off than before.²⁰ In practice, this means that in deriving national income from gross production,²¹ the deductions for consumption of human produced capital should be extended to incorporate the consumption (depletion) of natural capital.²² Weak sustainability then is about sustaining income flows, not necessarily about sustaining/conserving the environment. It is more than possible for rapid natural resource depletion to be weakly sustainable if the income gained in the immediate usage or other savings outweigh estimated future income.²³

Strong sustainability, by contrast, focuses on maintaining stocks of resources: natural and human produced. This does not mean that no non-renewable natural resources can ever be used, but rather that total capital should be kept intact. Any reduction in one form of capital (eg. natural capital) must be offset by accumulation of another type of (produced) capital.²⁴ This strong sustainability might begin to approach a notion of ecological sustainability, but only on the assumption that human produced capital can be substituted for natural capital. This substitution may be possible in terms of income flows, but not necessarily in terms of ecological use and preservation.

In both weak and strong sustainability definitions, the focus on natural capital/resource depletion ignores environmental factors like biodiversity, wilderness, endangered species and maintenance of eco-systems - the values of which never directly enter the market. This *economic* focus is then still really about measuring the point at which the environmental limits impact upon economic growth. It is not about how economic growth impacts upon the

²⁰ This Hicksian income (after the British economist John Hicks) is by definition sustainable and a similar concept is employed in the United Nations' landmark Brundtland Report, which famously defined sustainable development as that which "meets the needs of the present without compromising the ability of future generations to meet their own needs". John Cobb and Herman Daly (1994) *For the Common Good: Redirecting the Economy Toward Community, the Environment, and a Sustainable Future*, Boston: Beacon Press. pp 69 - 76.

²¹ "National income" is officially derived by deducting the consumption of fixed capital (and net income paid overseas) from GDP. ABS, *op.cit.*, p 12.

²² Similar arguments could also be made about human capital and social capital, but El Serafy argues that for national accounting purposes the sustainability of environmental capital "far outweighs in importance" the other forms of capital. Salah El Serafy (1997) "Green Accounting and Economic Policy" *Ecological Economics*, Vol 21, pp 217 - 229.

²³ J Martinez-Alier (1995) "The Environment as a Luxury Good, or "Too Poor to be Green"?" *Ecological Economics*, Vol 13, p 8.

²⁴ El Serafy, *op.cit.*, p 220.

environment. Martinez-Alier argues that this means that the economic paradigm's blindness to the environmental cost of mass production remains.²⁵ In this sense, both weak and strong sustainability are about extending existing economic measures and reforming rather than changing economic systems.

Measurements

Nonetheless, the desire to incorporate some measure of sustainability into the economic framework has led to a whole literature concerned with the valuing of resources and all manner of environmental costs and effects. As with non-market production, there is considerable debate among those attempting the measurement exercise as to how best to value environmental phenomena in the absence of observable market prices. Broadly speaking, environmental phenomena are 'valued' in one of the following ways:

- *Actual market values* based on actual loss of output of industry or actual costs borne by consumers resulting from environmental changes;
- *Maintenance cost* based on the hypothetical cost of keeping environmental standards intact;
- *Contingent valuation* based on what people say they are willing to pay to conserve or repair the environment; and
- *Hedonic pricing* which is the value of the impact of environmental change on existing market prices (usually on property values, or risk factors in wage rates).

Even future costs and losses can be valued by "discounting", that is, positing a present value for a future cost/loss based on the amount of money needed to be invested today at current interest rates in order to grow to equal that future cost/loss. This procedure is particularly useful in valuing resource depletion, but it is fairly controversial among economists and environmentalists.²⁷

The technical debates over the merits and shortcomings of the various methods are not my concern here, except in as much as they reflect different theoretical assumptions. In this

²⁵ Martinez-Alier, *op.cit.*, p 9.

²⁶ Summary from J P Barde and D Pearce (1991) *Valuing the Environment*, London: Earthscan. p 5; and Peter Bartelmus (1995) "Toward a System of Integrated Environmental and Economic Accounts" in J. Walter Milon and Jason F. Shogren (ed), *Integrating Economic and Ecological Indicators*, Westport: Praeger. pp 145 - 148.

²⁷ Cobb and Daly, *op.cit.*, p 155.

context, another parallel to debates around non-market production can be drawn. Just as each of the schools of economic thought attempted to assimilate non-market production into their existing framework and value that production according to their specific assumptions and interests, so too with the environment. The above valuation methods all attempt to use the tools and assumptions of neoclassical economics to place dollar values on ‘environmental externalities’, although it should be noted that not all neoclassical approaches assume that the environment can or should be incorporated into accounting measures.²⁸ And again, there are parallel attempts to incorporate the environment into an extended Marxian political economy.²⁹

Most of the mainstream work on environmental valuation is concerned with microeconomic analysis and is beyond the scope of this short interlude (and indeed this thesis), but there is also a macroeconomic dimension with a range of attempts to directly expand or revise national accounting systems. El Serafy notes that these ‘greening’ attempts fall into two categories: those concerned with accounting for change or depletion of environmental assets; and those concerned with the effect of environmental change on welfare.³⁰

The most obvious of the first type of ‘greening’ attempt is the System of integrated Economic and Environmental Accounting (SEEA), associated with the 1993 revision of the official SNA. This was the first major revision of the SNA since 1968 and it recognised (in principle) many of the environmental problems with GDP. As with non-market production, the revised SNA recommended that a structure of “satellite accounts” be established to measure non-market production and environmental factors. These satellite accounts are designed in various modules or “building blocks” capable of being phased in when statistical resources become available. Thus SEEA Version II ‘simply’ requires the segregation of all environment related flows and stocks in traditional accounts, Version III establishes physical resource (stock)

²⁸ Jacobs provides an interesting taxonomy here beyond the simple market approach versus state regulation dichotomy. Market economic tools like tradeable pollution rights can be seen as tools within an overall state regulated framework, and they have no direct relation to cost-benefit analyses which apply market values as the regulatory framework. Michael Jacobs (1995) “Sustainability and ‘the Market’: A Typology of Environmental Economics” in Robyn Eckersley (ed), *Markets, the State and the Environment: Towards Integration*, Melbourne: Macmillan.

²⁹ See for instance, James O’Connor (1991) “On the Two Contradictions of Capitalism” *Capitalism, Nature, Socialism*, Vol 2, No. 3; James O’Connor (1988) “Capitalism, Nature, Socialism: A Theoretical Introduction” *Capitalism, Nature, Socialism*, Vol 1; Teresa Brennan (1997) “Economy for the Earth: The Labour Theory of Value without the Subject/Object Distinction” *Ecological Economics*, Vol 20, No. 2.

accounts, while SEEA Version IV incorporates money valuations (using three different methods) with the ultimate possibility of an Eco-Domestic Product - an environmentally adjusted GDP.³¹ However, El Serafy notes that the proposed measures remain fundamentally *economic* accounts, and they are not well adapted to measuring ecological changes. The two concepts (economy and environment) remain analytically distinct, and he argues that,

the ostensible *integration* of the environment in the national accounts is actually never effected, and the so-called economic accounts remain unadjusted and, however flawed, continue to be used for the purposes of economic analysis.³²

This echoes the concerns noted with regard to the measurement of non-market production: the concerns have been adopted, but marginalised - relegated to “satellite” accounts which by definition are peripheral. It should also be noted in this context that there is no attempt in the SNA revisions to integrate non-market production into the revised ‘green’ national accounts. The proposals for satellite accounts are parallel but not combined, they are seen as separate satellites relating to the core accounts, but with little or no necessary relation to each other.

In Australia, the Australian Bureau of Statistics is undertaking work toward accounts which will show changes over time in physical rather than monetary units. There is no timetable for the implementation of the monetised “satellite accounts” recommended in the SEEA.³³ However, prior to the SNA recommendations, Michael Young of the CSIRO produced a “green GDP” for Australia taking into account resource depletion in agriculture, fishing, forestry and mining. These adjustments had only minimal impact on GDP. Total production was reduced by less than 1% in each year of the survey (1980 - 1989), although it was a very narrow measure of sustainability.³⁴ It did not include all non-renewable resources, nor other environmental losses and defensive expenditures. These may well have changed the outcome considerably.

The other category of attempts to green the national accounts are the economic welfare indicators. Unlike the national accounts, these welfare indicators do not assume that

³⁰ El Serafy, *op.cit.*

³¹ Bartelmus, *op.cit.*, pp 142 - 143; Asbjorn Aaheim and Karine Nyborg (1995) “On the Interpretation and Applicability of a “Green National Product”” *Review of Income and Wealth*, Vol 41, No. 1, pp 57 - 58.

³² El Serafy, *op.cit.*, footnote, p 218.

³³ Paul McCarthy (1994) *Prospects for Environmental Satellite Accounts*, Australian Bureau of Statistics. Discussion Paper, p 5.

³⁴ Young, *op.cit.*, p 171.

production equals welfare, or that economic growth is necessarily welfare enhancing. And unlike the SEEA type greening attempts noted above, they focus on the impact of environmental changes on economic welfare, rather than on economic stocks and/or flows. Importantly, these welfare indicators also incorporate estimates of non-market production as well as accounting for defensive expenditures and issues of sustainability.

As these measures form the basis of Chapter 7, I shall not elaborate further here, except to note that, possibly because of the far-reaching implications of their results in challenging the benefits of economic growth, these economic welfare measures have not enjoyed the same level of official support as the SNA legitimised accounts. However, private researchers and institutions have now produced measures of economic welfare for some nine countries. These are of particular interest as they represent perhaps the most developed attempt to synthesise concerns about non-market production and the environment into a revised system of national accounting.

Again, these issues and measures will be discussed further in Chapter 7, but in terms of this “Interlude”, it is simply important to note that, whatever the promise of these alternative definitions and measures, they remain measures based in market economics and expressed in dollar values, and as such, are open to criticism.

Critiques of Valuation

Just as we saw that there were serious feminist objections to incorporating non-market production into extended national accounts, so too there are important green critiques of the project of attempting to apply market values and market economics to the environment. There are green critiques both of the (neoclassical) assumptions inherent in valuation and of the results gained. For instance, there is concern about whether the requisite knowledge of natural processes exists to estimate possible outcomes/costs, and there is a particular concern about the process of discounting because it tends to “benefit modest but immediate gains more highly than the cost of ecological catastrophe in a few hundred years”.³⁵ Similarly, there are concerns that the values/results gained do not reflect the extent of the environmental

³⁵ Swaney, *op.cit.*, p 6.

problems, nor do they furnish the policy directions desired by environmentalists.³⁶

On a broader scale, there is concern with the whole project of (dollar) valuing the environment. Again, Waring regards the project as necessary, but conservatively reformist: still bounded by the myopic (male) economic view. She cites Schumacher approvingly:

To press non-economic values into the framework of economic calculus ... is a procedure by which ... the priceless is given a price.... All it can do is lead to self-deception or to the deception of others; for to undertake to measure the immeasurable is absurd ... what is worse and destructive of civilization is the pretence that everything has a price or, in other words, that money is the highest of all values.³⁷

Yet even this remains an anthropocentric approach, with its concern for what is best for human society - "civilisation". "Deep ecologists" have argued that such anthropocentrism is itself the problem, and they argue that an ecocentric approach is required to put ecological not human need at the centre of analysis.³⁸ Clearly an approach which applies market measures to the environment is based on anthropocentric assumptions: what counts is what is of use/value to human society. Yet both deep ecology and human scale "real life economics" have often proven to be gender blind, at best, if not a haven for masculine assumptions and experiences.³⁹ For ecofeminists like Mellor and Salleh, the issue is phallocentricity rather than anthropocentricity. Hence:

If feminists seek justice through a revision of the UN System of National Accounts, they give in to the masculinist logic of accumulation. Meanwhile the separation of production and consumption fragments and mystifies women's awareness of the consequential loops between labour, resources, time, and so-called ecological waste.⁴⁰

Again, the act of measurement requires the epistemological separation of man from the environment. According to the ecofeminist critique, it is that separation which is the core of the problem - allowing not just measurement but the use and domination of nature and/or women.

Of course, as with arguments over valuing non-market production, such critiques do not go unchallenged. Barde and Pearce have argued that, like it or not, the environment does have a

³⁶ Aaheim, *op.cit.*; Young, *op.cit.*, p 170.

³⁷ Cited by Waring, *op. cit.*, p 298.

³⁸ Various deep ecology positions are summarised critically by Barry, *op.cit.*

³⁹ Mary Mellor (1997) "Women, Nature and the Social Construction of 'Economic man'" *Ecological Economics*, Vol 20, p 134.

⁴⁰ Salleh, *op.cit.*, p 124.

dollar value - every time a decision is made. They cite the example of the destruction of environmental values to construct a key section of the M3 motorway in Britain. It would have cost 92 million pounds to avoid the damage. That the government chose not to spend this money *implies* that the destroyed area was not worth 92 million pounds.⁴¹ The authors of an American economic welfare measure go further, arguing that unless environmental factors are included in national accounting, the implied value given is zero. In this context, even estimates based on fairly arbitrary assumptions are a better reflection of reality than the GDP figures.⁴²

Clearly then, there are parallels with the arguments over 'valuing' non-market production. The critique of the official definitions and measures leads to a call to extend those measures. It also leads to objections to the whole project of extending market accounting and to a demand that the environment/non-market production be considered on its own terms - or be incorporated at a foundational level of a new paradigm, that is, not tacked on or squeezed into existing paradigms.

Conclusion

Underlying these debates is a fundamental problem for both feminist and green movements. The national accounts indicators (and GDP in particular) continue to be regarded as "objective" measures of economic performance, and as de facto measures of welfare. Public policy is made (and/or legitimised) on the basis of the national accounts, and its success is ultimately measured by economic growth recorded as an increase in GDP. Feminists and greens can then simply accept that GDP will continue to be "the crucial statistic" and try reform it to include their environmental concerns - to measure total, environmentally sustainable production: or alternatively, they can adopt the more radical approach and argue that policy be formed, not just on the basis of such narrow economic outcomes, but in equal consideration of social and environmental factors. Such a change in the way society makes decisions would be a direct challenge to those whose economic base is the market and the public domain, implying a fundamental shift in the power structure of society.

Again then, what is at issue here is a strategic political problem with echoes of 'reform'

⁴¹ Barde, *op.cit.*, p 1.

versus ‘revolution’ debates. It is for this reason that I have taken up Waring’s characterisation of the reformist position and categorised the debate in terms of radical and reformist positions. However, the issues are never as simple as market measures being equated with reformist strategies within the system, while the rejection of market measures constitutes a revolutionary strategy aimed at changing the system. The reform/revolution dichotomy was never straightforward within socialism,⁴³ and Barry has criticised the ‘revolutionary’ deep ecology’s lack of structural analysis. He argues that greens could take on board useful insights from market economics, “seeing this as an *immanent* critique of orthodox economics [rather] than the first step on the slippery slope of revisionism.”⁴⁴ Thus, the so-called ‘reformist’ tool of market measurement takes on transformative meaning - an approach I will return to in the second half of the thesis.

In any case, even if the reform/revolution dichotomy was straightforwardly applicable, I have already noted that the arguments are unresolvable in any final way. Again, a full consideration of the question is beyond the scope of this thesis. Rather than attempting to come to any political conclusions here, the purpose of this “interlude” has been simply to introduce the environmental arguments, and to draw parallels between the feminist and green debates around the definition and measure of the economy. And as I have argued above, there *are* clear parallels, despite the different content of the debates. Both debates proceed from the problem of the narrowness of the official definition and national accounts measures. Yet in both cases, there is concern about extending these orthodox definitions and measures, either because of the specific neoclassical assumptions used, or because of the politics or epistemology of the whole project.

These parallels are important because, where the same sorts of problems are seen in different areas, the green and feminist critiques reinforce each other. Thus drawing parallels broadens

⁴² Cobb, Halstead and Rowe, *op.cit.*, p 45.

⁴³ Marcel Liebman (1986) “Reformism Yesterday and Social Democracy Today” in R. Miliband, J. Saville, M. Liebman, and L. Panitch (ed), *Socialist Register 1985/86*, London: Merlin Press. Ralph Miliband (1977) *Marxism and Politics*, Oxford: Oxford University Press. ch 6. It should also be noted that, at least before the fall of the Eastern European communism, some socialists argued for “revolutionary reforms” - reforms possible within the system, but whose logic can not be contained within the system and which build pressure for further change, a proposition I read as being similar to Barry’s arguments above. Connell approvingly cites Stuart Hall and Andre Gorz in reference to ‘revolutionary reforms’. Bob Connell (1982) “Socialism and Labor: An Australian Strategy” *Fabian Newsletter*, July - August, p 12.

⁴⁴ Barry, *op.cit.*, p 373.

the critique of national accounting definition and measures, but as I have argued, it also begins to focus on the problems which arise from the individualist neoclassical starting point of the official definitions. By suggesting the need for a more collectivist/structural approach which focuses on the different types and economic outcomes at a community or national level, the green and feminist parallels do begin to suggest important themes in developing alternative approaches to defining and measuring the economy. Yet, in considering the politics of these critiques (the radical v reform debates), the difficulties of developing alternative definitions and measures are also highlighted.

However, having introduced these environmental issues and drawn these parallels, I will leave the environmental critiques for now. For reasons of manageability, in the next section of the thesis I will focus only on feminist concerns about women's work. This narrower focus will allow for a more coherent analysis of the problems of the neoclassical definitions and the problems and possibilities of economic measurement. The environmental concerns will then be reintegrated into the thesis in the discussion of alternative strategies.