# Chapter 7: Breaking the Nexus II: Economic Welfare Definitions

I have argued in this thesis for the need to break the neoclassical nexus and separate what should be regarded as different concepts: work, production, market, economy, and welfare. In Chapters 4 and 5, I considered a view of work unencumbered by neoclassical definitions and the statistical imperatives of national accounting. In Chapter 6, I considered a different view of 'production', namely, a restricted concept of production, which I argued opened up the possibility of seeing different types of labour and economic activity. However, while the analysis of emotional labour tells us something about work, and the restricted definition of production tells us something about the quantum of production of new goods and services, these views exhaust neither the concepts tied up in the neoclassical nexus, nor the possible views of the economy as hologram. And, of necessity, these entry points must hide or ignore other aspects of the economy.

Thus for instance, the restricted definition and measure of production tells us nothing about the desirability or ecological sustainability of that production. Tanks, uranium, timber from old growth forests, and the 8 zillionth watt of coal powered electricity are all recorded as production and growth – precisely because the definition and measure is concerned with production, not with sustainability or economic welfare produced. This is not a fundamental problem with the production measure proposed, it is simply an outcome of seeing production and welfare as different concepts. Since I have argued that production and welfare *are* different concepts (and that it is a mistake to conflate the two), I now propose to consider what the economy might look like (what the view of the hologram is) when we take welfare as the epistemological entry point.

In separating welfare from production and the rest of the neoclassical equation, this chapter will consider the economic welfare definitions and measures which are drawn from green political economy. In one sense these green approaches take the opposite path to those discussed in the last chapter. While those "production" approaches attempted to restrict the definition to enable the 'other' (eg. emotional labour, social maintenance) to be seen beyond "production", the green approaches discussed in this chapter attempt to expand the definition

and measure of the "economic" in order to include the 'other' (the range of activities and effects of concern from an environmental perspective) *within* the definition and measure.

In doing this they offer an alternative way through the neoclassical nexus by disentangling and making primary the concept of economic welfare. They do not assume that labour, production, the market and welfare mean the same thing or have a uniform relation to each other. They are interested as much in the effect as the quantum of production.

As noted in the Environmental Interlude, the green economic welfare indicators I am concerned with here represent only one of a range of approaches to 'greening' the national accounts. However, in the context of this thesis which has been primarily concerned with feminist approaches to the economy, they are the most interesting because they include non-market production and go some way toward breaking the neoclassical nexus and recognising different types of labour and economic activity. I will also suggest that these measures have important potential for finding common ground between feminist, green and socialist politics.

## *Economic Welfare Indicators*

One of the earliest and best known of these measures is William Nordhaus and James Tobin's 1972 Measure of Economic Welfare (MEW). This measure attempted to expand the consideration of economic welfare beyond that which is provided through the market (and recorded in traditional national accounts). It included measures of government and household capital formation, non-market work and leisure, but deducted output regarded as "regrettables and intermediate", that is, defensive expenditures and costs incurred in producing welfare.[1] The results suggested to Nordhaus and Tobin that the secular trend of their MEW was so similar to that of GNP growth that a separate economic welfare measure was redundant.[2]

However, there were other measures, although the details of these have been well summarised

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1 Summarised in Robert Eisner (1988) "Extended Accounts for National Income and Product" *Journal of Economic Literature*, Vol 26, December, pp 1611 - 84.

2 Cobb and Daly actually dispute Nordhaus and Tobin's interpretation of the MEW results. Cobb and Daly claim that the trends in economic welfare were significantly different to GNP growth when the time period was considered in smaller spans rather than just over the whole MEW period. John Cobb and Herman Daly (1994) *For the Common Good: Redirecting the Economy Toward Community, the Environment, and a Sustainable Future*, Boston: Beacon Press. p 80.

in various places and I do not propose to discuss these older measures here.[3] Rather I want to focus on the indexes which, on the back of a new wave of environmental concern in the 1980s and 1990s, have sprung up since the publication of John Cobb and Herman Daly's Index of Sustainable Economic Welfare (ISEW) in 1989. Cobb and Daly's index for the United States has been adapted and ISEWs (or alternatively named, Genuine Progress Indicators) have been produced for England, Germany, Austria, Sweden, Chile, Italy, Australia and the Netherlands, as well as updated versions for the US.[4]

These indexes are explicitly not measures of production. They start with the personal consumption component of GNP on the (admittedly contentious) assumption that welfare is about consumption. This aggregate consumption figure is then adjusted for other factors relating to economic welfare, resulting in an alternative economic index and a summary figure analogous, but in opposition to, GDP.

The basic structure of all these indexes is similar. The GDP Consumption Figure is adjusted for the distributional in/equality of this aggregate personal consumption, giving a "Weighted Personal Consumption" figure. This is to overcome a fundamental problem of GDP as a welfare measure, that is, that GDP, and even GDP per capita may hide gross inequality and widespread poverty. Most indexes multiply their initial personal consumption figure by an index based on changes in the share of income of the poorest fifth of households, although the Austrian ISEW uses a different methodology and adjusts the whole ISEW for distributional inequality.[5]

To this Weighted Personal Consumption figure are added values for the consumption of services not included in GDP private consumption, most notably the value of unpaid household labour, the 'services' provided by consumer durables (household capital), and

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3 The main measures here are from: Zolotas (1971); Jorgenson et al - various measures; Kendrick (1984); Ruggles (1982); and Eisner (1978, 1982). For summaries from mainstream, green and Marxist perspectives, see respectively: Eisner, *op.cit.*; Cobb and Daly, *ibid.*; and Anwar Shaikh and E. Ahmet Tonak (1994) *Measuring the Wealth of Nations: The Political Economy of National Accounts*, New York: Cambridge University Press. pp 9 - 17.

4 See Friends of the Earth website, http://www.foe.co.uk/progress/international.html

5 Engelbert Stockhammer, Harald Hochreiter, Bernhard Obermayr, and Klaus Steiner (1997) "The Index of Sustainable Economic Welfare as an Alternative to GDP in Measuring Economic Welfare: The Results of the Austrian (revised) ISEW calculation 1955 - 1992" *Ecological Economics*, Vol 21, pp 19 - 34.

some public welfare enhancing services.[6] The bulk of government services are generally not included because they represent defensive expenditures, although the particular services included varies considerably between indexes. From this expanded value for consumption, deductions are then made for defensive expenditures which were included in GDP consumption; for environmental damage, depletion of natural capital, and in some indexes, for other social costs. Finally adjustments are made to measure the financial sustainability of consumption.

Table 7.1 below illustrates the basic structure and gives a listing of these deductions in Cobb and Daly's ISEW.

However, it should again be noted that the actual categories of deductions vary among the later indicators. For instance, the US GPI - a direct successor to Cobb and Daly's index - also incorporates deductions for loss of old growth forest, costs of crime, family breakdown, loss of leisure time, and underemployment, but it leaves out Cobb and Daly's accounting for expenditure on health and education.[7] The Austrian and German ISEWs make further deductions for costs of advertising - half of which is seen as a defensive expenditure against increased market competition.[8]

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6 The estimates of non-market production discussed in chapter 2 here are important. Cobb and Daly use Eisner's estimates based on the wages of domestic workers, while Hamilton uses Ironmonger's figures (somewhat revised) for his Australian estimates. Cobb and Daly, *op.cit.*; Clive Hamilton (1997) *The Genuine Progress Indicator: A New Index of Well-being in Australia*, Australia Institute. Discussion Paper 14. p 19.

7 Clifford Cobb, Ted Halstead, and Jonathon Rowe (1995) *The Genuine Progress Indicator: Summary of Data and Methodology*, Redefining Progress. Note: Cobb and Daly included one-half of the expenditure on post-secondary education and one-half of public spending on health as welfare enhancing - the rest was viewed as defensive expenditure against greater job competition and the impact of urban and industrial living. Cobb and Daly, *op.cit.*

8 Stockhammer et al, *op.cit.*; Hans Diefenbacher (1994) "The Index of Sustainable Economic Welfare: A Case Study of the Federal Republic of Germany" in Clifford Cobb and John Cobb (ed), *The Green National Product: A Proposed Index of Sustainable Welfare*, New York: University Press of America.

**Table 7.1: Structure of the Index of Sustainable Economic Welfare, 1990**

(Adapted from Cobb and Daly's original table)

| **CONSUMPTION** | | **ADDITIONAL CONSUMPTION OF SERVICES not included in [B]** | | **SUBTRACTIONS for Non-welfare Enhancing Consumption** | | **FINANCIAL SUSTAINABILITY** | |
|---|---|---|---|---|---|---|---|
| **Item** | **Value** | **Item** | **Value** | **Item** | **Value** | **Item** | **Value** |
| [B] Personal Consumption | 1265.6 | [E] Household Labour | 519.8 | [I] Expenditure on Consumer Durables* | 234.6 | [V] Net Capital Growth | 29.4 |
| [C] Distributional Inequality | 108.7 | [F] Consumer Durables | 224.9 | [J] Defensive Private Health & Education Expenditure | 63.2 | [W] Change in Net International Position | -34.0 |
| | | [G] Streets and Highways | 18.0 | [K] Cost of Commuting | 34.6 | | |
| | | [H] Health and Education Public Expenditures | 45.1 | [L] Cost of Personal Pollution Control | 5.0 | | |
| | | | | [M] Cost of Auto Accidents | 31.9 | | |
| | | | | [N] Water Pollution Cost | 15.3 | | |
| | | | | [O] Cost of Air Pollution | 18.9 | | |
| | | | | [P] Noise Pollution Cost | 4.8 | | |
| | | | | [Q] Loss of Wetlands | 21.3 | | |
| | | | | [R] Loss of Farmlands | 36.5 | | |
| | | | | [S] Depletion of Non-renewable Resources | 312.6 | | |
| | | | | [T] Long-term Environmental Damage | 285.3 | | |
| | | | | [U] Cost of Ozone Damage | 85.3 | | |
| **[D]Weighted Pers. Cons.** | **1164.4** | **+ Total** | **807.8** | **- Total** | **1149.3** | **+ Total** | **-4.6** |
| | | | | | | **ISEW Total** | **818.2** |
| | | | | | | **ISEW per capita** | **3253.1** |
| | | | | | | | |
| | | | | | | ***GNP*** | ***1950.8*** |
| | | | | | | ***GNP per capita*** | ***7755.9*** |

* This expenditure is deducted so as not to double count the welfare gained from these consumer durables, once as personal consumption [Column B] and again as an imputed flow of services [Column F]
(The letters in square brackets represent the columns set out in the original table. All figures are in billions of 1972 US dollars, except column A (year), column C (an index number with a base: 1951 = 100), and the per capita totals which are in dollars, not billions of dollars.

Despite its name, the Australian GPI (produced by Clive Hamilton at the Australia Institute) is as close to Cobb and Daly's original ISEW as it is to the US GPI. Gone is the US GPI's idiosyncratic deduction for the social cost of family breakdown,[9] and Hamilton has reinstated the ISEW's imputations for post-secondary education and public health spending. The bulk of the other categories of the ISEW/GPI adjustments are followed in the Australian estimate, although Hamilton's estimates of resource depletion are more conservatively priced than the US estimates.[10]

The other major difference in the Australian estimate is the accounting for time. Some early estimates of economic welfare included imputations for leisure time (as a utility produced by/consumed in the economy). However, the sheer size of the estimates often overwhelmed the accounts.[11] Cobb and Daly made no imputations for leisure, while the US GPI records only the change in leisure time relative to a base year. This makes the figure less overwhelming (and a negative), but still adjusts for an important shortcoming in traditional national accounts, where production figures can go up with no indication of whether this is due to increased productivity or just people working longer hours.

The Australian GPI takes a different approach again, by accounting not for leisure or its loss, but instead including an estimate of the cost of overwork. This is based on average wages for all hours worked by full-time workers beyond 39.9 hours per week (as this is the lowest average hours of full-time work per week in the period - in 1982). This cost is added to the costs of underemployment and unemployment in what Hamilton claims is "a more systematic approach to time use than [in] previous GPIs".[12]

The variations in all the indexes represent refinements of methodology as well as differences in data availability, but they also reflect differences in political assumptions. All the authors and institutions producing these indexes obviously have a commitment to some form of

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9 The deduction is "idiosyncratic" not so much because it is situated in a conservative discourse about the goodness and naturalness of the biological family (an approach which is of course highly problematic), but because one of the proxies for measuring family breakdown is time spent watching TV! Cobb, Halstead and Rowe, *op.cit.*, p 19.

10 Hamilton, *op.cit.*

11 See figures in the "Environmental Interlude" here from Shaikh and Tonak, *op.cit.*, p 14.

12 Hamilton, *op.cit.*, p 10.

sustainable development, but the economic/theoretical assumptions are by no means homogeneous. The US ISEW is the result of the collaboration between a theologian (Cobb) and a neoclassically trained economist (Daly). Redefining Progress - the organisation which produced the US GPI - sees itself as part of a new anti-market/anti-materialist politics encompassing ecologists, social conservatives and Christians.[13] By contrast the Austrian and Australian indexes reflect much more secular, social democratic values.

These differences have clear impacts on the indexes. For instance, the US GPI's deduction for the cost of family breakdown (and the discussion of this adjustment) clearly indicates their conservative Christian understanding of the (nuclear) family as a natural and fundamental part of society.[14] Even more indicative of the different political assumptions is the treatment of government expenditure. Most of the economic welfare measures add only specific items of public spending which increase welfare, but as Hamilton notes,

> The decision to assume that public services are 'guilty until proven innocent' seems to reflect a peculiarly American suspicion of government. The Australian GPI breaks with tradition by assuming that each component of public spending adds to welfare unless we argue otherwise and deduct it.[15]

The Australian GPI then includes 25% of government spending on defence, public order and safety, 50% of spending on general government services (including tax collection and policy advice), and all government expenditure on recreation and culture. Philosophically this approach sits much more comfortably with a social democratic approach to government than do the socially conservative and liberal approaches of the US figures.

As I will argue later, not only are these political assumptions reflected in the categories of the ISEW/GPI adjustments, they are also reflected in the method of calculating the adjustments. The methodology here is complex and varies considerably within and between the indexes, but there are also questions as to whether the various values included in the measures adequately or accurately represent the costs they purport to measure.[16] The authors of the

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13 Clifford Cobb, Ted Halstead, and Jonathon Rowe (1995) "If the GDP is Up, Why is America Down?" *The Atlantic Monthly*, October, p 72.

14 Cobb, Halstead & Rowe, *The GPI, op.cit.*, pp 19 - 21.

15 Hamilton, *op.cit.*

16 See for example, the critiques by Gavin Cameron (1998) "ISEW - an Economist's View," *Friends of the Earth Electronic Discussion list on ISEW/GPI*, Archived at http://www.foe.co.uk/progress/mailarchive/0007.html Message dated September 29; Eric Neumayer (1998) "More detail on the ISEW", *FOE Discussion list, ibid.*, Message dated 21 October.

measures all recognise the often 'heroic' assumptions they make, as well as a number of other problems with their various accounts. For instance, apart from the problems of non-beneficial consumption (eg. smoking), Cobb and Daly also recognise that their figures do not take account of hidden and illegal economic activity, or of changes in the conditions of work and/or the productivity of labour over time.[17] And again, the figures on the value of the depletion of natural resources are so controversial that Cobb and Daly give final ISEW figures both with and without these deductions, as does Hamilton for income distribution in Australia. However, such assumptions and data arguments are part of the terrain where market values are applied to non-market phenomenon. To some extent, they must simply be accepted as inevitable, but not fatal.

More of an issue is the criticism that welfare can not be measured in a single indicator or at a national level. Thomas Power argues that differing price structures and social and environmental conditions within countries means that the relationship between income/consumption and welfare is not comparable across different regions.[18] Similarly Nelson notes that using even a refined single measure as a yardstick for economic welfare "smacks of methodological reductionism" [19] - a criticism echoed in conservative responses.[20] The economic aggregations in the ISEW/GPI therefore hide as much as they reveal about the economic welfare of any given community.

These are serious problems which are recognised by the authors, but the evaluation here depends on one's standpoint. Compared to an embedded, locally based political economy/ecology, the ISEW/GPIs are clearly problematic. But compared to the official GDP measures which already define the terrain of measurement as a 'national economy', then the economic measures are not as problematic. Which is to say that the justification of the measures (and I argue below, their political project) is a pragmatic one. As Cobb and Daly put it, despite the problems and holes identified by their critics, their ISEW is preferable because

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17 Cobb and Daly, *op.cit.*, pp 447, 458 - 460.

18 Contribution in Clifford Cobb and John B Cobb (1994) *The Green National Product: A Proposed Index of Sustainable Economic Welfare*, Maryland: University Press of America. pp 147-168.

19 Julie A Nelson (1997) "Feminism, Ecology, and the Philosophy of Economics" *Ecological Economics*, Vol 20, No. 2, p 160.

20 See for example, Dennis Trewin (1998) "A Framework for the Presentation of Indicators of National Progress" in Richard Ekersley (ed), *Measuring Progress: Is Life Getting Better?*, Melbourne: CSIRO. p 111. Trewin was writing as the Deputy Australian Statistician, although from this source (as opposed to

it gets closer to 'the true health of the economy' than do traditional measures.[21] Similarly, the authors of the US GPI recognise that the nature of human well-being is too varied and subtle to be captured in any single measure, but claim that,

> the breakdown of families and communities, the depletion of natural resources and the like have significant economic consequences; to assign a reasonable figure to these is more accurate than asserting, as the GDP implicitly does, that their economic consequence is zero.[22]

Thus the same problem which creates the need for the alternative measures also justifies the new statistics, even with their inaccuracies and arbitrary assumptions. Unlike the official measures, the alternative indexes do provide *some* measure of factors vital to economic welfare. And, as I will argue below, in measuring such factors and producing an admittedly simplistic summary figure, these alternative economic indicators open up all sorts of possibilities for environmental (and other progressive) politics.

## Results and Implications

Cobb and Daly found that per capita ISEW was only 16.5% higher in 1990 than in 1951. By contrast, GNP more than doubled in that period. More importantly, the ISEW fell through the 1980s by an average of 0.43% per year (while GNP continued to rise).[23] That is to say, in contrast to the story told by the official statistics of continued post-war economic growth, with each generation apparently so much better off than the previous one, the ISEW shows that on average people at the beginning of the 1990s were not that much better off than they were 40 years ago. Moreover, people were worse off than they had been at the beginning of the 1980s.

This result is replicated in most of the ISEW/GPIs. With more social costs included, the US GPI indicates that Americans are now actually worse off than in the 1950s: per capita GPI was 28% lower in 1994 than in 1950. (Aggregate GPI did in fact rise over the period from $862billion to $1.06trillion, but this did not keep up with population growth).[24] However, for both the US ISEW and GPI the secular decline dates from the 1970s. Similarly the ISEW for

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Nelson) I find the criticism somewhat bizarre when he (and presumably the ABS) defend GDP as a measure of progress or well-being. p 110.

21 Cobb and Daly, *op.cit.*, p 505.

22 Cobb, Halstead & Rowe, *The GPI, op.cit.*, p 45.

23 Cobb and Daly, *op.cit.*, p 505.

24 Cobb, Halstead & Rowe, *The GPI, op.cit.*, p 42.

the UK peaked in the mid 1970s, but by 1990 had slid almost back to its 1950s level.[25] The ISEW/GPIs of all other countries except Chile 'outperformed' the US and British measures, with most (including the Australian GPI) approximately doubling from 1950 to 1996.[26] The Dutch index tripled and the German index quadrupled over similar periods. However, these quantitative comparisons are problematic due to different data and methodologies. More important are the changes over time within each country. Again almost all the indexes show growth in the 1950s and 1960s turning around in the late 1970s and early 1980s. In contrast to GDP growth in these countries, measured economic welfare in the 1980s and 1990s is, at best, flat.[27]

These results have important political implications because, as Cobb and Daly note,

> The purpose of an index that strives to measure economic well-being is not simply to show us how we are presently faring or are likely to fare. It should also reveal the kinds of policies that would enable a nation to improve its welfare.[28]

Cobb and Daly have argued that the general trend in economic welfare suggests that the whole direction of development and faith in economic growth is misplaced - hence the need for a 'steady-state' economy. Thus they argue for a mixture of Pigovian taxes to correct market failures and a state imposed cap on the size of the economy (and international trade). These specific conclusions are not necessarily endorsed by all the authors of the other indexes, but all would agree that the first step is to make visible the particular things which contribute most to the gains and losses in economic welfare. Such visibility is not likely to flow from GDP measures. For instance, Hamilton argues that economic welfare in Australia has suffered due to foreign debt, the growing costs of unemployment and overwork, environmental problems, costs of energy resource depletion, greenhouse gas emissions, and capital disinvestment.[29] Arguably only the first of these has made an impact on the economic policy agenda in Australia.

With new concerns fitted into the dominant economic models (ie. quantifiable dollar values), public policy might then address those specific components to promote the positives or to

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25 Cited in Michael Jacobs (1996) *The Politics of the Real World*, London: Earthscan. p 82.

26 The Chilean per capita ISEW was also marginally lower in 1995 than in 1950, but its trajectory was more eratic. The ISEW/GPI graphs can be compared at the Friends of the Earth Website, *op.cit.*

27 FOE, *ibid.*

28 Cobb and Daly, *op.cit.*, p 507.

29 Hamilton, *op.cit.*, p 47.

minimise the costs. For instance, the US ISEW makes clear, and relevant to economic analysis, that efforts to control air pollution have improved economic welfare, as have efforts to reduce car accidents which have decreased the costs of commuting.[30] By contrast, both the US ISEW and the US GPI show that the biggest factors contributing to the decline in economic welfare through the 1970s and 1980s were increased inequality and the unsustainable use of natural resources. In contradiction to the dominant neo-liberal economic policies of today which insist on the economic benefits of smaller government, Cobb and Daly argue that the social policies of the 1960s demonstrably improved economic welfare by reducing income inequality - an observation which the Australian figures would support.[31]

This is not to say that public policy can simply be read-off from such accounts. Trewin suggests that such composite indicators are "good at grabbing headlines" but difficult to interpret accurately,[32] while El Serafy argues that the policy implications of such indicators have rarely been fully worked out or used to revise policy.[33] Yet this criticism seems to reflect a technocratic yearning for an (environmental) accounting which would lend itself to econometric modelling and give reliable 'scientific' data upon which to base precise policy descriptions. El Serafy even argues that greening the national accounts need not "involve any value judgement as to the desirability or otherwise of preserving the environment".[34] Suffice to say that such technocratic modelling is neither the purpose nor the politics of the economic welfare measures discussed here.

However, there is another reason why economic policy might not simply be read-off from the ISEW/GPI results. Michael Jacobs has argued that an ecologically sustainable society may require new investments in public transport, education, energy efficient technologies, etc. - ie. new (public) consumption which would lead to economic growth, even if *private* consumption does not rise.[35] If Jacobs is correct, the concern about economic growth *per se* is misplaced. The real question is not growth, but the type and impact of growth. Being based on personal consumption, the ISEW/GPIs are not well structured to reflect such different growth

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30 Cobb and Daly, *op.cit.*, p 508.
31 Hamilton, *op.cit.*
32 Trewin, *op.cit.*, p 120.
33 Salah El Serafy (1997) "Green Accounting and Economic Policy" *Ecological Economics*, Vol 21, p 218.
34 *ibid.*
35 Jacobs, *op.cit.*, p 33.

paths, and, as I will argue later in relation to exchange expenditure, they do not pay enough attention to the content of consumption expenditure.

While this is a powerful argument, I suspect that until the creed of 'economic growth as ideal' (in both senses of 'ideal') is made problematic, the question of the types of changes Jacobs envisages will not arise, and it is here that the ISEW/GPIs are important. Their results clearly confront the dominant assumption of public policy that growth *per se* is good and the proper goal of public policy. The disjuncture between GDP growth and the economic welfare figures clearly shows that economic growth is not *necessarily* a common good, and it gives some quantitative indication of just how far apart those goals (economic growth and welfare) have become.

This quantification is particularly important because it speaks in the language of the hegemonic economic theory and political debates (ie. economic costs, dollar values). This not only provides an entry point into those debates, but may also be particularly important in terms of challenging and/or convincing those whose thoughts are bounded by the hegemonic market economic discourse. As Barry notes, borrowing from market economics can entail an "immanent critique" of orthodox economics:

> Showing how economic growth as a social ideal is flawed *by its own criteria and standards* is a stronger approach to take [than simply dismissing economic theory].[36]

The ISEW/GPI figures clearly raise questions as to both the goal and the content of economic growth, and it is this challenge to growth-centred political economy which their authors see as the major contribution of these measures. But in terms of this thesis, the green indexes have an additional function - that of providing a standpoint on the economy which includes non-market activity and opens a vision of economic difference.

The questioning of the content and effect of economic activity begins to challenge the assumed positiveness of production/economic growth (ie. production=welfare). But the ISEW/GPIs break the neoclassical nexus in other ways as well. They break the production = market nexus by the inclusion of household labour and capital services, and the production = economy = welfare nexus both by measuring consumption not production, and most

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[36] My emphasis. John Barry (1994) "The Limits of the Shallow and the Deep: Green Politics, Philosophy and Praxis" *Environmental Politics*, Vol 3, No. 3, p 373.

obviously by deducting for 'production' (ie. economic activity) which is neutral or counter to welfare. Put another way, the ISEW/GPIs recognise different types of labour and economic activity - some beneficial (ie. welfare enhancing), some defensive (ie. beneficial in the sense of repairing damage done by other activity, but not adding to welfare beyond that) and some activity which is not beneficial at all (the social costs). Such activities are the destructive consumption of capital (natural or human produced). Again this recognition of different types of labour and economic activity potentially opens the space to rethink "the economy" in a way which better reflects the feminist concerns discussed in the earlier parts of this thesis - although, as I will argue later, the ISEW has little gender analysis.

The extent to which the ISEW/GPIs really break the neoclassical nexus should also not be exaggerated. While Cobb and Daly present an alternative to the neoclassical/Keynesian measures, they have themselves been criticised for the adoption of a political framework which remains tied to a (revised) neoclassical understanding of how markets work. Such theories and measures, Tracey Mott argues, fail to appreciate key economic processes elucidated by other economic theories, in particular the processes of capital accumulation and the extent of social control over capital necessary to limit its unsustainable growth.[37] By contrast, Stockhammer *et al.* claim that beyond a general and explicit faith in the market, Cobb and Daly are "rather ambiguous" about their underlying theoretical assumptions. More importantly though, the authors of the Austrian ISEW go on to claim that

> the ISEW is not bound to a special economic paradigm: It can be founded in neoclassical economics as well as in Marxian or Neoricardian economics.[38]

However, such a claim must be suspect given the historical and epistemological arguments made in Chapter 1 here. As with all accounting systems, the authors' (neoclassical) assumptions are embodied in their accounting. There is the obvious point that these measures are based on market measures and therefore bring all values into a market/dollar framework - thus reinforcing the idea that the economy is about the market, and that the market is the source of value. The specifics of the neoclassical economic assumptions are also evident. The calculations of imputed returns on consumer durables (household capital) and the discounting for depletion of natural resources and long term environment damage are both based on neoclassical notions of opportunity cost and the rational decisions of economic man. More

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37 T Mott (1991) "Review of Cobb and Daly" *Journal of Economic Literature*, Vol 29, June, pp 593 - 595.

38 Stockhammer et al, *op.cit.*, p 25.

generally, like neoclassical theory, the starting point (and the standpoint) is the individual. These indexes begin with personal consumption and end with economic welfare per capita, and there is little analysis or recognition of social structures and processes like gender or (antagonistic) classes.

## *Critiques*

Given the discussion in this thesis and its conclusion as to the necessity of decentring the market and breaking with neoclassical paradigms, such accounting must then be suspect, despite the political and epistemological possibilities noted above. Indeed from the perspective of a feminist informed economics, there are a range of problems with these alternative economic indexes, not the least of which is the absence of any consideration of gender in the measures.

The inclusion of an imputation for the value for household labour does address the most basic feminist critique of the official definition and measure, but with it comes the range of problems identified in Chapter 3. Specifically, an imputation based on the average wage of domestic workers enshrines the market's undervaluation of women's work, while this and the imputed returns for services provided by consumer durables gives the (misleading) impression that this unpaid production is *like* market production, and again, driven by the calculations of Rational Economic Man. The issues and compromises here have already been discussed. But even if we accept that such compromises are necessary and/or inevitable in any accounting, there are a number of problems which *can* be dealt with within the framework of alternative indexes of economic welfare. Addressing these problems would not only improve the indexes themselves, but, I argue, would also provide some basis of common analysis between feminist, green (and ultimately, socialist) politics.

### Gendered Inequality

The problems begin in the first figures of the alternative indexes. The starting point of the accounts is personal consumption, but these figures, and the adjustments for distributional inequality in most of the indexes are based on inequality between households. As discussed in Chapter 3, this ignores inequality within households and assumes an altruism or commonality of household interest which has been much criticised by feminists. There are exceptions here however. Largely for reasons of data availability, the German ISEW uses the wages share of

GDP and the Australian GPI uses individual taxable income figures to determine distributional inequality. Yet both these measures are problematic in that, by excluding non-income earners and some welfare recipients, they tend to reinforce the notion that the only 'real' income is that which is earned in paid work.

Moreover, Hamilton's discussion of the "apparent" (ie. not real) poverty of the household "second income earners" clearly assumes a shared household budget and misses the point of the feminist deconstruction of the household unit.[39] Indeed, all these approaches ignore the fact that the lowest income earners in society are disproportionately women, and also disproportionately 'coloured'. Like the other GPI/ISEWs which measure inequality as between household units, they do not name the gender (and race) structures of poverty. The indexes present income quintiles as a one-dimensional stratification, when it is clear that women and non-whites are over-represented among the poor.

Perhaps the real exception is the Austrian ISEW. In the absence of national data on personal income distribution it focuses on three areas of structural inequality: the income inequality between workers and employees, between women and men, and between the employed and the unemployed. Subindexes for each of these lines of inequality are weighted by population share and combined to give a measure of changes in the distributional of welfare relative to the initial year.[40] The gendered inequality adjustment here is particularly important because it can be seen as a step away from the individualist, neoclassical assumptions which see inequality as between individuals [or unitary households]. It introduces the notion of *structural* inequality to the measures, although the Austrian authors are equivocal about this. At one level they explicitly reject "methodological individualism" regarding welfare as a social phenomenon (hence the concern with distribution), but they also argue that the actual gender (and class) basis of their inequality adjustment results from a lack of data on personal consumption. They regard the more usual mono-dimensional Gini coefficients as being "a more elegant approach".[41]

What I want to suggest here is that even if those household income figures were available, as they are for other countries, the structural focus of the Austrian figures provides a better

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39 Hamilton, *op.cit.*, p 15.
40 Stockhammer et al, *op.cit.*

foundation than do the gender-blind, mono-dimensional inequality adjustments of the other ISEW/GPIs. Mostly I argue this on the basis of my preceding argument about the need to break with the neoclassical paradigms. But there is also the obvious point that, even if there were no gender and race dimensions to such personal or household consumption (ie. even if the poorest quintile were as likely to be white and male as black and female), a feminist economics might still be interested in inequality between the sexes across all quintiles, not just the poverty of the poorest quintile. Indeed, given that the finding of the UNDP in its 1995 Human Development Report was that "no society treats its women as well as its men",[42] then some adjustment for gender inequality would appear to be necessary for any measure of economic welfare.

For the Australian GPI, Hamilton specifically rejects an adjustment for gender inequality, arguing that it "loads up the ISEW with more welfare significance that it can possibly bear" and takes the measure "way outside the terrain of consumption that the ISEW occupies".[43] Yet if we take a standpoint which sees gender as a primary category of economic analysis,[44] then a measure of gendered *income* inequality is clearly within the parameters of the ISEW/GPIs. Indeed, it seems unclear to me why a structural income inequality measure (like that contained in the Austrian ISEW) would overload the ISEW/GPI any more than the original distribution adjustments.

Beyond the ISEW/GPIs, there is also strong precedent to adjust welfare measures for gender inequality, most notably in the United Nations Development Program's 'Human Development Index' (HDI). Since 1995 the HDI has been supplemented with a Gender-related Development Index (GDI) which measures the same things (life expectancy, education and income) but adjusts for inequality between women and men. The greater the gender inequality the lower the country's GDI - ie. the HDI is adjusted downwards.[45] This index still does not reflect the distribution of income or consumption within the family, and it may underestimate gender disparity in market income because it deals only with income from labour (ie.

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41 *ibid*., p 30, 22.

42 UNDP (1995) *Human Development Report*, United Nations Development Program. p 75.

43 Clive Hamilton (1999) "Measuring Well-being: Responses to Some Criticisms of the Index of Sustainable Economic Welfare." Seminar to the Deaprtment of Geography and Environment, London School of Economics and Political Science, (Unpublished), p 13.

44 Again, see Nilüfer Çagatay, Diane Elson, and Caren Grown (1995) "Introduction" *World Development*, Vol 23, No. 11, pp 1827 - 1836.

discrepancies in wage rates) and not with income from land or capital - property which is mostly owned by men.[46] Nevertheless, even with these caveats, the GDI does represent some accounting for gendered inequality.

At a minimum then, a feminist informed economics might wish to adjust the Weighted Consumption figures so that the ISEW/GPIs reflect the gender inequality in the monetary earnings which support that consumption. However, the issue is wider than that.

### Wider Issues

While all the economic welfare measures discussed above adjust for the inequality of money income distribution, they do not adjust for the inequality of the household services which they add into their index. The indexes are then gender-blind both in the overt sense of not accounting for gender differences in income, but also in the sense that the inequality adjustments apply only to GDP consumption (the traditional public domain) and not to non-market (private) production/consumption.[47] Given that, as noted in Chapter 2, women not only earn less money than men, women also spend more time than men on household production, inequality of household production is obviously of importance to a feminist economics.

In terms of the ISEW/GPI, this may take us from the consumption focus to a notion of production, but as Delphy and Leonard point out, people consume more than just quantities of abstract primary materials, they also consume the time that goes into the preparation and transformation of those materials into the final product:

> Family members at home consume all the housework done by the 'mistress of the house'. ... This includes some highly personalized services, for example, knowing the exact hour to serve meals, or how hot and how sweet particular people like to have their cup of tea, or which clean shirt they are likely to want to wear for a meeting on Monday. Wives do such things for other people. They almost never have them done for

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45 UNDP, *op.cit.*, p 73.

46 *ibid*., p 73, 130.

47 An exception here (arguably) is the Austrian ISEW which accounts for gender inequalities in work effort as well as income. However, this distributional inequality indicates the distribution of work time between paid and unpaid work, rather than focussing on gendered inequality in unpaid work. Moreover, the Austrian authors note that the adjustment "hardly influences the ISEW" as the index only measures *changes* in distribution. In the Austrian case the distribution of paid and unpaid labour has remained fairly stable over the period of the ISEW, 1955 to 1992. Stockhammer et al, *op.cit.*, p 31.

them by others.[48]

This "personalised service" again raises the issue of the particular (and embodied) nature of women's household labour, but the more immediate point here is that, despite their individual starting point, the measures of economic welfare ignore differences/inequalities in consumption between members of the family. In this sense they continue the problem which Delphy and Leonard identify as seeing the household as "'a unit of consumption' rather than as one distribution point among others for individual consumption".[49] Delphy and Leonard contend that the "domestic mode of production" is *also* a regime of consumption where women forego consumption and men consume more than their share. Similarly Chris Kynaston, drawing on later dual systems theorists, points to a number of other empirical studies of women's and men's unequal access to food, money and leisure within the home.[50]

If one of the concerns of the measures of economic welfare is to overcome the shortcomings of GDP in ignoring the unequal distribution of income, and if we take seriously the view that household production adds to welfare, then surely the ISEW/GPIs should adjust for inequality in this sphere as they do for inequality in paid income. Indeed, a case could also be made for adjusting other categories of the ISEW/GPI for gender inequality. Categories like costs of underemployment and loss of leisure/cost of overwork may well have particularly gendered patterns.

But the analysis might also go deeper than this. If we take non-market production seriously, why should the "cost of commuting" in the ISEW/GPIs refer only to travel to and from paid work, not the cost of urban congestion associated with shopping or getting kids to school?[51] Similarly, if we measure the cost of industrial accidents, why not also the cost of accidents in household production? Added to this is a suspicion that some ISEW/GPIs (eg. Sweden, Australia and the UK) undervalue household production by excluding a proportion of time

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48 Christine Delphy and Diana Leonard (1992) *Familiar Exploitation: A New Analysis of Marriage in Contemporary Societies*, Cambridge: Polity Press. p 148.

49 *ibid*., p 146.

50 Chris Kynaston (1996) "The Everyday Exploitation of Women: Housework and the Patriarchal Mode of Production" *Women's Studies International Forum*, Vol 19, No. 3, pp 239 - 41.

51 The discussion of costs of commuting is specifically about paid work (See for instance, Cobb, Halstead & Rowe, *The GPI, op.cit*., p 24; and Hamilton (1997), *op.cit.*, p 24), although in a sense the Australian GPI does adjust for costs of other commuting because Hamilton includes as welfare enhancing only 50% of time spent on household travel. *op.cit.*, p 20. This again shows the necessary distinction

spent on garden and household maintenance, and on shopping and childcare, where the authors believe these activities do not necessarily contribute to economic welfare, or are not the equivalent of the market produced welfare.[52]

Clearly a thorough-going gender analysis would result in a significant overhaul of the ISEW/GPIs, but it would also be a major statistical undertaking - even if the relevant statistics were available. However, the most obvious revision, the adjustment of the inequality index to incorporate gender wage differences, is achievable without a major overhaul of the indexes. There is also a strong political argument for making adjustments for gender pay differentials. If we are going to make economic measures (with all the reservations and compromises that entails) then it is not hard to imagine that the public policy benefits of these indicators noted earlier could also be beneficial from a feminist activist perspective.

There are clearly benefits in any measure which includes non-market production, but a measure which also adjusts for gender inequality would have even greater potential. Policies which reduced gender inequality would show up as increases in economic welfare. Conversely, perpetuating gender inequality would register as being detrimental to the general economic welfare. For instance, given that in most industrialised countries the gender wage gap has decreased over the last thirty years (most significantly in the 1970s), then the incorporation of gender in the income inequality measurement would improve the overall 'performance' of the ISEW/GPIs. This revision to the GPI thus emphasises the need to decrease the gender wage gap *as a project benefiting the community* - a political framing of particular importance in an era of anti-feminist backlash.

The intersection of these green welfare accounts with a feminist economics thus holds out the possibility both of improving the economic welfare measures, and of providing a tool for a more unified green/feminist critique of dominant economic policies and directions. The gender blindness of the *existing* measures of economic welfare is not then a terminal flaw in this approach to economic measurement.

Of course gender is not the only structural line of inequality. The authors of the UNDP note in

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between production and welfare: as argued in the previous chapters, travel for shopping is clearly production, but more travelling time does not necessarily increase welfare.

relation to their GDI that alongside gender,

> A case could be made along other dividing lines - involving say, class, community, or location. ... The focus on gender inequality is only a beginning in this respect, but it is an important starting point, since widespread gender bias severely affects the social, economic and political situation of many countries.[53]

Similarly the Austrian ISEW adjusts for class differentials - between employers and employees and between the employed and unemployed. While I agree that adjustments to the inequality index for any or all of these structural inequalities might validly be argued, and that such adjustments might also be important for moving the ISEW/GPIs to a more structural analysis, the particular arguments and adjustments for inequalities of class, race, location, etc are beyond the scope of the present critique. However, even having opted, like the UNDP, to focus on gender as one (important) line of structural inequality, and recognising that other structural inequalities should in principle also be recognised in the ISEW/GPIs, there remain other problems with those indexes from the (feminist) perspectives discussed in this thesis.

### Recognising Different Labour - Exchange Labour

Again, I have argued in this thesis that what is ultimately necessary for a feminist informed definition and measure of the economy is to break the neoclassical nexus and to recognise different types of labour. I have also noted above that these measures of economic welfare do begin to recognise different types of labour and economic activity. However they do not go far enough in this direction.

In Chapter 6, I noted Shaikh and Tonak's Marxist categorisation of different types of labour as productive, exchange and social maintenance.[54] I argued the need to add emotional labour to their taxonomy and questioned the labour theory of value which underlies their accounting system, but their categorisation does at least go some way to recognising different types of labour and economic activity. This is particularly relevant for the measures of economic welfare considered here, because, perhaps surprisingly there is a degree of common ground between these green-inspired accounts and Marxian national accounts.

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52 Hamilton, *ibid*., pp 19 - 20.

53 UNDP, *op.cit.*, p 72.

54 I have substituted the term "exchange" for Shaikh and Tonak's term "distribution" so as to avoid confusion with the issue of income *distribution* in the ISEW/GPIs.

Much of what green economics considers as defensive expenditures - defence, police, social work/counselling, health - are similar to Shaikh and Tonak's "social maintenance" (and to some of what Wallis and North's argue are the transaction costs which provide the framework for transformative activities to take place). This is not surprising given that the definition of a defensive expenditure as that which maintains the status quo (rather than increases welfare) is similar to Shaikh and Tonak's notion of social maintenance as labour necessary to reproduce the political economic system.

However, while there is common ground on this issue, there is no notion in the green economic welfare measures of a different "exchange" labour. That is to say, included within the calculation of Weighted Consumption in all of the indexes of economic welfare is a value for goods and services which are about the exchange of ownership of existing goods and services. This is particularly important both because this absence of a distinction between production and exchange tends to limit the notion of different types of labour. But more than that, I also want to argue that exchange labours/activities *do not* increase welfare and *should not* be included as a positive contribution to consumption/ welfare in the indexes.

To use Shaikh and Tonak's example of warehousing: it is not necessarily the case that the final customers are any better off for having what becomes their final goods warehoused for twelve months, as opposed to going straight from the point of origin to point of sale. There may be arguments here about warehousing increasing availability of products (and therefore utility), or alternatively in the case of perishable fruit and vegetables, perhaps warehousing makes goods available out of season and thereby enhances consumer welfare as the perishables would not otherwise be available. Of course such preservation might be argued to be part of the production process and not simply warehousing, but in any case the argument does not apply to the warehousing of non-perishables.

Examples of financing make the point more forcefully. Shaikh and Tonak argue that, even in owner-operated enterprises, the labour of producing the particular goods and services is conceptually different to the labour of ringing up the purchase and taking the money. Clearly the customer in this case is made better off by consuming the goods and services, not by paying for them or by the banking of the money just paid. These latter functions may be a pre-requisite for the consumption, but I would again argue (as per Shaikh and Tonak) that this of itself does not make the two activities the same. Indeed, in the context of green accounting, a

system of law and order is a pre-requisite for (market) consumption, but the measures of economic welfare do not include these public order expenditures as positive contributions to welfare. By the green accounts' own definitions, simply being a pre-requisite of consumption is not enough to justify calling such activities "welfare enhancing".

With these arguments about 'necessity'/necessary labour put aside, I argue that the activity of exchange clearly does not enhance the welfare of the consumer. Indeed, in a trivial literal sense, consumers are made worse off by buying rather than otherwise (legally) appropriating the goods or services - perhaps as a gift. Similarly, outside of a system of finance which forms the prerequisite for such production and consumption, it is unclear how the consumption of banking services after the sale of the item enhances the economic welfare of consumers. Yet the cost of that activity is incorporated in the price of the good or service, and is therefore included as part of (welfare enhancing) consumption.

The same applies to many business services. In their classic polemical essay on American capitalism, Baran and Sweezy go further, saying that far from enhancing welfare, the enormous sums spent on advertising are detrimental to consumers. Corporate advertising, they argue, is not about informing potential customers of the availability of necessary goods and services, but rather it is about the creation of (unnecessary) wants, the fostering of brand loyalty (thus decreasing the elasticity of demand), and supporting (inefficient/undemocratic) non-price competition. Like finance, insurance and real estate activities, advertising and the sales effort are an outcome and a cost of a system of monopoly capital, not a contribution to collective economic welfare.[55]

These specific concerns about advertising are echoed in the discussions of the ISEW/GPI and in deductions in some of the indexes,[56] but I want to suggest more broadly that exchange activities generally should not be included as part of welfare enhancing consumption and as positive contributions in the green economic indexes. Given that these sorts of activities are currently included in the ISEW/GPI as a positive part of consumption, some deduction would then need to be made for the costs of finance, insurance, real estate, advertising, legal services and the like.

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55 Paul Baran and Paul Sweezy (1967) *Monopoly Capital: As Essay on the American Economic and Social Order*, New York: Monthly Review Press. ch 5.

These Marxian-inspired adjustments would not only enhance the ISEW/GPI as a measure of economic welfare, but as with the feminist critique, they are important at a theoretical level as well. Just as the feminist concern to adjust for gendered inequality undermined the notion of the (liberal) individual as the point of analysis, so too an inclusion of exchange costs begins to move the alternative indexes away from their individualist notion of economic welfare (private consumption) to a more collective and structural analysis of how the system constructs and constrains economic welfare. When we begin to see industries like finance, insurance, real estate and advertising - that is, products of a particular capitalist market system - as costs rather than as something which enhances welfare, we can better question the amount of resources that go into maintaining such a system. Or, put another way, we see the waste of resources which happens *because* we live in this particular capitalist market system - an analysis which coincides with (some) green critiques of the unsustainability of the economy and gives some common ground for a more unified red/green analysis.

## *Potential for Revised Measures*

Yet despite this common ground and the potential import of the feminist and socialist inspired revisions of the ISEW/GPIs which I have suggested in this chapter, these suggestions and the revised economic welfare measures remain an exercise in market accounting. They are not an organic synthesis of socialist, feminist and green traditions of the types envisaged by ecofeminists such as Salleh.[57] In significant ways the revised measures retain the flawed logic of the market as source and measure of value. Thus, for those whose political commitment is for a non-market political economy, even the revised ISEW/GPIs still operate on the terrain of the enemy. Nonetheless, precisely because they argue on that terrain, but also because the suggested revisions argue in a way which opens the possibility of a structural/systemic analysis, revised ISEW/GPI measures may both highlight the *need* to move to a different political economy and form a bridge between hegemonic market economics and a more transformative political economy.

It is at this level - as a transformative critique of economic growth - which I think the revised measures of economic welfare are most useful, but this is not to say that they have no policy

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56 Cobb and Cobb, *op.cit.* p 187, 223; Stockhammer et al, *op.cit*., p 28.

application within the current system. I noted that the measures highlighted particular policy problems and successes, but by definition all such policy is a result of grounded political processes and must be fought for politically. The adjustments I have suggested should not limit the ISEW/GPI's usefulness for public policy analysis and campaigning. It would still be possible, for instance, to use the revised index movements to raise issues about inequality and welfare policies, or about the impact of pollution or resource depletion.

In this context, the crucial thing about the adjusted indexes is that they not only open the space to question particular economic and policy outcomes, but *at the same time* they also begin to question the very nature of the political economic system itself. For those wishing to advance a radical/systemic analyses in political economic debates over particular policies, the revised indexes may then provide a less compromised tool than the original versions, and certainly a much better option than arguing on the terrain of mainstream economic statistics which reflect completely foreign assumptions and methodologies. The revised indexes could then provide not just a bridge between red and green, and feminist and green political concerns, they may also provide some common ground between those seeking to make changes within the system and those who see the system itself as the problem.

Of course, an economic welfare measure is a tool not a panacea, but the political potentials opened up by the revised ISEW/GPIs are important. However, given the argument of the rest of this thesis, they need to be used cautiously. The arbitrariness of the figures and the compromises of market measurement needs to be kept in mind. But more than that, the perspective and context must also be remembered. Because they include a range of factors traditionally regarded as non-economic, the economic welfare measures present something which looks like an all inclusive measure of everything, rather than simply one view of the economy. Unfortunately, like the "theory of everything" of Chapter 5, the problem is that these measures of economic welfare do not (and can not) include everything. Consider again (as usual) the issue of emotional labour.

The indexes contain little or no accounting for, or mention of, emotional labour. While the production measures discussed in the previous chapters did not deal with emotional labour, I argued that their approach left open the space and vision of such economic difference because

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

they explicitly measured only alienable goods and services. They did not pretend to deal with emotional labour or measure "the economy". But the ISEW/GPIs tend to foreclose on the space of the "other" because they are multi-dimensional rather than tightly focused. Since the measure of economic welfare is obtained by bringing the factors which GDP ignores or mistreats into the new index, then surely the labour and services which go into making people happy, secure or simply "feeling themselves" should be included.

Indeed, the US GPI implicitly suggests this in its recognition of the cost of family breakdown, although the sort of emotional labour which makes families function is rendered invisible by the authors' notion of the goodness and naturalness of families.[58] Nonetheless, if one was in the business of proxy measurements, it might be possible to measure emotional labour's contribution to economic welfare, in the household at least, by flipping the GPI's measure of the cost of family breakdown on its head. The US GPI measures the economic welfare *lost* in family breakdown, but if the break-up of X number of families had a (proxy) cost of $Y to economic welfare, then the value of family maintenance is on average $Y/X per family. The aggregate contribution of this emotional labour then is $Y/X multiplied by the number of family units.

Clearly we are in bizarre territory here and I have already argued *against* attempting to measure emotional labour, precisely because it is unmeasurable. But the point is that unmeasurability alone can not be a reason for excluding emotional labour from the ISEW/GPIs because those indexes already include estimates of other 'unmeasurable' quality of life factors, like the psychological cost of crime, and environmental damage and loss of habitat in old growth forests. Moreover, as some of the ISEW/GPI deductions for social costs are not deductions for particular activities, but rather for overall losses of welfare related to the general economy, there is already a recognition of costs embedded in other activities. In this context, emotional labour is just another activity embedded/embodied in other activities.

Given this, neither the inalienability or unmeasurability of emotional labour is sufficient reason for its exclusion from these measures of economic welfare. Yet (fortunately), the ISEW/GPIs do not include a measure of the services provided by emotional labour - and nor can they. I have consistently argued that any market based measure must, by definition,

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58 Cobb, Halstead & Rowe, *The GPI, op.cit.*, p 19.

ignore the particularity and inalienability of emotional labour. But the real issue here is more than simply leaving emotional labour out of the measure, it is that these alternative indexes tend to limit the possibility of *seeing* such different types of labour by presenting, not a hologram, but a unitary model of a quantified thing - the economy. Thus, while I stand by the arguments I have made here and elsewhere[59] about the political importance of the ISEW/GPIs, and the potential of the revised indexes for feminist, green and socialist political economy, the indexes need always to be kept in the framework of the economy as hologram.

While the ISEW/GPI indexes reveal much about the environmental impact of economic activity and the (un)sustainability of current economic systems, they remain just one approach to defining and measuring the economy and must be seen alongside other measures - as well as alongside non-quantitative approaches. Without the logic of the hologram, the ISEW/GPIs become a(nother) flawed attempt at a comprehensive definition and measure which repeats rather than critiques the failings of GDP and neoclassical accounting.

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59 I have put the political arguments made here and in the Environmental Interlude more strongly in Greg Ogle (2000) "Accounting for Economic Welfare: Politics, Problems and Potentials" *Environmental Politics*, (Forthcoming).