Environmental Attitudes and Neo-Liberal Beliefs:

An Analysis of Data from the New Zealand Study of Values and the World Values Survey for New Zealand, Australia, Japan and Eight Wealthy Nations

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Abstract

Despite the reputation and image of New Zealand as an environmentally progressive, "clean and green" land, it is a country that radically transformed itself from a social democratic welfare state to a society largely guided by neoliberal economic ideology. This paper examines the relationships between a set of environmental attitudes and a set of attitudes and beliefs reflecting neoliberalism. It draws on data from two New Zealand Study of Values Surveys, 1998 and 2004 (postal), as well as data from Australia, Japan and a selection of other countries from the mid 1990's round of the World Values Survey.

Two general hypotheses are examined. The first involves an expectation that a substantial negative association should be evident between support for environmental values and neoliberal beliefs; a conventional expectation that progressive views in one sphere tend to be associated with progressive views in another. A second hypothesis suggests that there is likely to be little or no association (negative or positive) between progressive environmental views and support for the basic tenets of neoliberalism. A possible explanation is that neoliberal views have thoroughly permeated society, and are now largely taken as social 'givens'. The data examined indicates support for the second hypothesis.

Introduction-The Environment

New Zealand (Aotearoa) has a carefully cultivated international image. It presents itself as a "clean and green" land in a remote corner of the South Pacific, far removed from the polluted in-

^{1.} This paper constitutes a substantial revision and expansion of work presented at the XV World Congress of Sociology, Brisbane Australia, July 8, 2002 in RC 24, Session 1, Environmental attitudes and behaviour, "Market Fundamentalism and Environmental Values in Aotearoa (New Zealand)".

^{2.} I wish to acknowledge Associate Professor Alan Webster, the primary founder of the New Zealand Study of Values, back in 1985, and my current partners in this enterprise: Associate Professor Philippa Howden-Chapman of the University of Otago, and Professor Sally Casswell of the SHORE Centre, Massey University.

dustrial North. This image is used to market its agricultural products throughout the world, and to attract what is now a very substantial number of overseas tourists to its shores (McSweeney, 2005, p. 2). It is an image highly valued by exporters, tourist operators, and indeed many ordinary Kiwis (New Zealanders) who like to think they are lucky to live in New Zealand.

Among New Zealanders, in general, the clean green image represents something of a contradiction. On one hand it certainly seems widely subscribed to. Some 77 percent say they prefer a future for agriculture that is clean and green, G.E. free and organic (Perry, 2005). And around ninety percent of the respondents in a relatively recent national survey said that they *value very much* the clean, clear air, the clean water in lakes and rivers, and the unpolluted water in the beaches and harbours of the New Zealand environment (Gendall, 2001).

On the other hand, most residents don't have to look very hard to see the cracks in the facade. Gendall (2001) found about two-thirds of the nation thought the environment was *seriously endangered* by pollution of the air, rivers, lakes and streams. When asked directly about the nation's clean green image, 42 percent agreed that it is a myth, and 67 percent agreed that New Zealand is cleaner than other countries only because of its smaller population. Data from the 2004 New Zealand Study of Values postal survey shows virtually same thing, with 44 percent agreeing on the myth, and 66 percent thinking New Zealand is cleaner because of its small size (Perry, 2005).

Introduction-Neoliberalism

New Zealand is also a society that radically transformed itself from a social democratic welfare state to a land overwhelmingly guided by the ideology of market fundamentalism and neoliberalism. The transformation started in earnest in 1984, and since then Governments of varying political parties, and apparently different political philosophies, have all adhered to a clear neoliberal economic agenda. The neoliberal reforms began with the election of the Labour Party in 1984, which in itself may appear to be a contradiction. The reforms were continued and expanded by the right-of-centre National Party that held power from 1990 through to 1999. By the end of this period New Zealand was a very different place. Despite some progressive initiatives, such as its loudly proclaimed anti-nuclear policy (retained for over 20 years by both right-of-centre and left-of-centre governments), its economy was among the most open and market driven in the world (Chatterjee, 1999, p. 128). New Zealand regularly sits at or near the top of international rankings for such qualities. In 1997 (Heritage Foundation, 2005) and 1998 (Gwartney and Lawson, 1998) it ranked number 3 in the world on two different economic freedom scales. The World Bank (2005) recently ranked it number 1 in ease of doing business.

In November of 1999 the Labour Party was returned to power after an absence of nine years. To many this appeared to signal, at last, a clear change of direction for New Zealand, as the new

Fifth Labour Government was a strong proponent of the "Third Way" (Kelsey, 2002, pp. 60–65). Many commentators have seen the Third Way as something new, steering a course between socialism and capitalism (Giddens, 2001, pp. 2–3; Loyal, 2003, p. 151) in a very changed world. The Third Way was to be a response to the limitations of neoliberal policies (Strathdee, 2005, p. 58), from which some people thought it could be clearly distinguished (Merkel, 2001, p. 52).

The new Labour Government did address a variety of social and environmental issues in an arguably progressive fashion. It renationalised Accident Compensation, raised the minimum wage, ended the logging of native beech timber on crown land on the West Coast, put more money in the arts, decommissioned the combat wing of the Air Force, recreated a government owned bank, and reassumed about 80 percent of the ownership of Air New Zealand (when faced with the likely collapse of the privatised carrier). Nonetheless Labour left the neoliberal economic fundamentals of the preceding decade and a half largely unchanged, with economic management mainly in the invisible hand of the marketplace (Kelsey, 2002, pp. 65–74).

The Fifth Labour Government and its style of Third Way policies, thus seems to represent a kind of disassociation between economic issues and other left of centre (or progressive) concerns. While many social and environmental issues are treated in a left-of-centre, progressive fashion, the economics remain fundamentally right-of-centre. Such a disassociation, perhaps, makes the distinction between left and right less relevant, with observers in other places with Third Way governments (e.g. the United Kingdom) noting similar disassociations, like a delinking of social class and voting behaviour (Loyal, 2003, p. 151).

Neoliberal transformations have been relatively common in the world over the last two decades. In Britain it began with Thatcherism, in the USA it was Reaganomics, and in New Zealand the label was Rogernomics. The latter name came from the Minster of Finance in the 1984 Labour Government, Roger Douglas, who quickly and decisively transformed the economy of New Zealand along neoliberal lines; economic controls were shed, subsidies eliminated, the public service reformed, welfare entitlements and income tax reduced, a Goods and Services Tax (GST) introduced, many government departments turned into state-owned enterprises, and in some instances eventually privatised (Dalziel, 2001, p. 87). The reforms ripped the heart out of the rural sector, but they happened so fast it was hard to go back (King, 2003, pp. 488–493).

What New Zealand did in the 1980's is hardly unique in the world, and such reforms continue to be seen around the world to this day. However, what is possibly unique in the New Zealand case is that the neoliberal changes came faster and went further than in most, if not all, of the OECD (Kelsey, 1995, pp. 1–5).

The neoliberal reforms were so extensive, and have now been in place for so long, that large proportions of the population today really have no collective memory of any other paradigm or way of organising society (Kelsey, 2002, p. 53). Certain elements of such a neoliberal world-view

seem now to be taken as 'givens' that rarely, if ever, are seriously questioned by a wide spectrum of people, even when other aspects of social life come under considerable scrutiny. People may see a problem in a particular area, like low salaries for teachers, or inadequate funding in the health sector, but they do not necessarily connect the problem to the broad principles of neoliberal economics.

Central to the research in this paper is the question of just what the Third Way tends to be in practice. The intention in principle seems clear enough: to be something different from both the old left and the neoliberal of the 1980's and 90's (Giddens, 2001). The assumption made in this research is that it has not necessarily worked out that way, at least in the particular realm of broad economic direction and policy (see Strathdee, 2005, p. 61). Harris and Eichbaum (1999, p. 223) talked about the Third Way as a concept that "can be anything or nothing"; that "it can 'concede' on the economy and tinker around the edges of social policy and artistic expression"; in short a disconnection between the economic realm, relative to being progressive in other areas of life. The research here can not really demonstrate whether or not this is the way that the Labour Government that began in 1999 has actually worked. What it does do is examine the issue of whether or not such a disconnection is evident in the thinking of the New Zealand population, and elsewhere.

The Research Problem

This research is framed by the setting described above. New Zealand is land where the environment isn't just an abstract concept, but a reality that is usually hard to ignore, *right there, in your face,* so to speak (or more likely banging on your roof or flooding your section). A good part of the prosperity of New Zealand (agricultural exports and tourism) is closely tied to the state of the environment, or at least the perception that people hold of it. Of course, the state of the environment is logically dependent, at least in part, on the state of the economy and the economic philosophies that guide it.

Although there is a lively debate in the world about the relationship between economic principles and the state of the environment (e.g. Daly, 1996), the research here hinges on the idea that some observers may see an inherent contradiction between an environmentally progressive ethos (clean and green) and neoliberalism in the economic sphere. In this paper a variety of environmental attitudes, values and behaviours are examined in relation to a variety of measures that tap into different aspects of support, or otherwise, for a neoliberal ideology. The empirical question is whether there is a relationship of note evident between the two domains.

One hypothesis being examined suggests that there should be a conceptually 'negative' association; where strong environmental positions would occur together with anti-neoliberal viewpoints.

This hypothesis reflects a rather conventional expectation where one set of left-of-centre (or

progressive) views — strong environmentalism — tend to correlate with another set of progressive views (not supporting beliefs indicative of neoliberalism). Such an expectation is certainly consistent with a substantial body of literature on the correlation of environmental attitudes and beliefs with a variety of social measures. A number of studies (e.g. see: Dunlap, 1975; Van Liere and Dunlap, 1980; Van Liere and Dunlap, 1981; Jones and Dunlap, 1992; Dunlap, et.al., 2000; Olli, et. al., 2001) have examined the correlation of environmental views and political liberalism (in the American, left-of-centre sense of the word), usually measured in terms of a scale running from very liberal to very conservative. While such a measure of political liberalism is a bit different than neoliberalism, conceptually, it is perhaps close enough to be of interest. In general these studies find consistent and moderately substantial correlations with a variety of environmental indicators and in a variety of populations studied. Another set of studies (e.g. see: Buttel, 1979; Cotgrove and Duff, 1980; Dunlap and Van Liere, 1984; Dake, 1991; Olli et.al., 2001) examined the correlates of environmental belief with more complex measures of the political spectrum, usually in terms of composite indices where at least some of the component items more closely resemble the indicators of neoliberalism used here. Once again, moderate to substantial correlations were generally found between the political indicators and the environmental measures.

A second hypothesis takes the opposite tack, and is perhaps the more interesting of the two. It suggests that there will be little or no association between the two realms of environmental attitudes and neoliberal beliefs.

Such an outcome could have a variety of possible explanations. One interpretation would be that elements of the neoliberal perspective have so thoroughly permeated society, after several decades driving government economic policy, that it is largely a social 'given'. Like gravity or the sun rising in the east, it is something that has come, perhaps, to be seen as part of the natural order of things, something not normally questioned, and not commonly seen as alterable. A person may or may not be strongly concerned about the environment, but such views are not necessarily tied to support (or lack of support) for a neo-liberal economic system, or at least some of the fundamental assumptions about the nature of society that underlie it. If this pattern prevailed it could be seen as a kind of reflection in the populace of what Third Way politics and governance seems to be about. That is, one can be progressive on issues like the environment, while adhering to right-of-centre economic policy and philosophy.

While not examined in this paper, note that the same logic and kinds of hypotheses could be applied to the relationship between neoliberal views and other potentially progressive issues like inequality and social justice or women's rights.

This paper very much represents research in progress, rather than providing definitive answers. Many aspects of the issue remain undeveloped here. This research does draw on several very rich sources of data: (1) the 1998 New Zealand Study of Values Survey, (2) the 2004 New Zealand

Study of Values Postal Survey and (3) the mid-1990's wave of the World Values Survey. Approximately 70 percent of the items in the New Zealand Surveys are identical, or virtually so, with the World Values Survey items.

The analysis that follows begins by looking at the patterns of response in New Zealand to a variety of environmental attitudes, values and behaviours at two points in time. A comparison on essentially the same environmental items is then made with Australia, Japan, a set of eight affluent urban-industrial nations, and with the full World Values data set. This analysis allows us to see if New Zealand's environmental views have changed over time, and it gives a sense of how unique they are relative to other developed nations, and the wider world. A similar comparison is then undertaken for a set of neoliberal attitudes and beliefs; first the New Zealand comparisons, then how NZ compares with the other developed nations, and then much of the world.

The question of how environmental views and neoliberal views relate to each other is first considered via sets of correlation coefficients. This is followed by a series of factor analyses. The factor analyses first identify distinct dimensions within the environmental and neoliberal realms, separately. Then factor analyses of the environmental and neoliberal items together are considered. This is another way of examining the interface of the two realms, by seeing the extent to which variables from both areas load together on particular factors.

Data Sources

New Zealand Data

The New Zealand data used in this paper is from the 1998 New Zealand Study of Values Survey (Perry & Webster, 1999) and the 2004 New Zealand Study of Values Postal Survey. The 1998 survey is a representative probability sample of adult New Zealanders, 18–90 years of age, drawn from the NZ Electoral Roll. The postal survey was carried out in September-October 1998, resulting in 1201 valid questionnaires, representing a response rate of 65 percent.

The 1998 questionnaire comprised some 126 numbered items, representing about 380 variables and was derived from the core questionnaire of the mid-1990's wave of the World Values Survey (Inglehart, 1999). About 70 percent of the NZ items were from this core questionnaire, with additional NZ items coming from financial sponsors or being replications from the earlier NZ Study of Values surveys of 1985 (Webster and Perry, 1989) and 1989 (Gold and Webster, 1990).

As a participant in the World Values Survey, the 1998 New Zealand Study of Values replicated virtually all of the core World Survey questions and altered the wording of only a few items where it was essential in order to fit New Zealand culture and circumstances. The net result was a data set highly comparable with the items in the World Values Survey.

The questions in the full 1998 NZ survey covered many realms beyond the environmental and

neoliberal beliefs and attitudes examined in this paper. Also included were items on community involvement, trust, health, families, gender roles, work, politics and government, gaming, religion and morality and many background characteristics.

The 2004 New Zealand Study of Values Postal Survey is also a representative probability sample of New Zealanders, 18–90 years of age, drawn from the NZ Electoral Roll. It was carried out in November-December of 2004, resulting in 954 valid questionnaires, with a response rate of about 52%. Most of the items of the 1998 survey were replicated in the 2004 survey, along with items from the current round of the World Values Survey.

It is important to note that two different data sets were collected with the New Zealand Study of Values in 2004, a postal survey, and a telephone CATI based survey. The CATI survey (Rose, et. al., 2005) was carried out in two parts, and of necessity involved a smaller number of variables. This dual procedure is something of an experiment, but the analysis comparing the results of the two surveys has not yet been undertaken. It is the unweighted postal survey data that is used in this paper.

World Data

In addition to the two New Zealand data sets (1998 and 2004), four data sets (or samples) are examined, all derived from the mid-1990's wave of the World Values Survey. The World Values Survey data set does not include New Zealand.

The World Values data set (see Inglehart, 1999) comprises nearly 75,000 cases in total, from 54 countries, spanning all major regions of the world. European countries and countries of the former USSR are over represented in the data set, but about one-third of the cases are from developing countries. The various national surveys were carried out between 1995 and 1998. The sample sizes generally range from several hundred to nearly 3000, with an average sample size of 1386. Unfortunately, not all items (or nearly all items) from the core questionnaire are present for each of the 54 countries.

The analyses in this paper make comparisons between the two New Zealand data sets, Australia (1995), Japan (1995), the full World Values Survey data set (minus New Zealand), and a subset which has been labelled in the tables as "8 'Richer' Nations". The eight nations are: West Germany (two separate German data sets are maintained for the sake of over time comparisons, preunification), Spain, USA, Japan, Australia, Norway, Sweden and Finland. These particular eight nations were selected because they are at the high end of affluence amongst nations and, most importantly, have relatively complete sets of items in the environmental and neoliberal areas. The wording of the items are virtually identical to the wording of the NZ items. This allows New Zealand to be directly compared with other relatively affluent, urban-industrial societies.

Environmental Variables

Table 1 presents the frequency distribution for 12 environmental variables from the New Zealand Study of Values surveys, for 1998 and for 2004. Don't know and missing data categories have been excluded from the percentaging, and from subsequent correlational and factor analyses. Ten of the variables are compared with identical items in the World Values data for Australia (1995), Japan (1995) and for both the 'richer 8' group (mid-90's) and the entire World Values Survey set (some 54 nations in the mid-90's).

The environmental items cover a fairly wide variety of issues. Some are very broad and general questions (should humans master or coexist with nature; is protection of the environment an urgent and immediate problem), some are about specific behaviours like recycling or buying products, some are about higher government spending, or paying higher taxes or prices, and some are about direct involvement in environmental organisations. The items are presented in a rough order which reflects the degree to which environmentalism is evident in the New Zealand samples. For example, the highest level of environmental support is Q 1, where 94% (1998) agree that humans should coexist with nature, rather than master it. The least environmental support is Q 12, where 81% (1998) do not belong to an environmental organisation.

For the New Zealand data, alone, the first four items show substantial majorities supporting an environmentally positive position. Two of these (Q 1 and Q 4) are very broad, non-specific environmental concerns (coexisting with nature, and the environment as an urgent and immediate problem), while two (Q 2 and Q 3) cover household behaviour (recycling and product choice). Item 5 leans in an environmental direction, but with a smaller majority (55%–1998, 58%–2004) of environmental support, favouring increased government spending on the environment. Questions 6 and 7 show an approximately even split between pro and anti environmental positions. One relates to higher taxes, while the other concerns confidence in the green movement.

The results in New Zealand for 1998 and 2004 for Questions 1–8 are broadly similar, with most variables being within a few percentage points of each other over the six years. There is one very notable difference over time, and that concerns Question 8. Q 8 asks whether the environment or economic growth should be given priority. An even split was evident in 1998, but in 2004 a clear majority (65%) favour protecting the environment even if it slows economic growth.

The final four items (Q 9–Q 12) have clear majorities <u>not</u> supporting an environmental position. These four all involve direct involvement or action, ranging from (67% in 1998, but up a fair amount to 77% in 2004) who have <u>not</u> attended a meeting or signed a letter/petition, to 81%(1998)/79%(2004) who do <u>not</u> belong to an environmental organisation. Again the results for the two years are broadly similar, with some suggestion (see Q 9) of diminished direct involvement by

Table 1 Frequency Distributions for 12 Environmental Variables

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Variable	NZ 1998	NZ 2004	Australia 1995	Japan 1995	World Values Surveys for 8 'Richer' Nations Mid-1990's*	Full World Values Surveys Data Set Mid-1990 s
1. Human beings should:						
a. master nature	6.5%	8.0%	6.7%	1.9%	6.7%	15.3%
b. coexist with nature	93.5%	92.0%	93.3%	98.1%	93.3%	84.7%
(n=100%)	(1106)	(859)	(2012)	(1014)	(9995)	(64104)
2. In last 12 months, out of concern for environment have you reused or recycled something, rather than throwing away? a. Have done	83.9%	90.2%	91.2%	69.2%	81.4%	48.5%
b. Have not done	16.1%	9.8%	8.8%	30.8%	18.6%	51.5%
(n=100%)	(1126)	(895)	(2037)	(1008)	(9845)	(57159)
3. In last 12 months, out of concern for environment have you chosen household products that are better for the environment?						
a. Have done	78.0%	74.5%	80.5%	59.5%	72.9%	47.0%
b. Have not done	22.0%	25.5%	19.5%	40.5%	27.1%	53.0%
(n=100%)	(1088)	(830)	(2005)	(919)	(9630)	(57848)
In general is protection of the environment: Urgent and immediate problem	75.4%	74.4%				
b. A problem for the future	19.7%	21.8%	Not in	Not in	Not in	Not in
c. Not really a problem at all	4.9%	3.8%	World	World	World	World
(n=100%)	(1132)	(870)	Survey	Survey	Survey	Survey
5. With respect to the protecting the environment do you choose increasing government spending(means higher taxes), or cutting govt. spending(reducing taxes)? a. Greatly increase spending b. Some increased spending c. Keep spending the same d. Cut spending e. Greatly cut spending (n=100%)	14.5% 40.0% 40.3% 3.9% 1.2% (1129)	16.4% 41.9% 37.0% 3.9% 0.8% (907)	Not in World Survey	Not in World Survey	Not in World Survey	Not in World Survey
6. I would agree to an increase in taxes if the extra money were used to prevent en- vironmental damage						
a. Strongly agree	9.9%	8.8%	12.9%	8.9%	16.5%	18.7%
b. Agree	45.0%	41.3%	55.8%	57.8%	51.2%	45.9%
c. Disagree	36.1%	38.9%	25.5%	27.7%	23.5%	26.4%
d. Strongly disagree	9.1% (1081)	10.9% (859)	5.8%	5.6% (909)	8.8% (9608)	9.1% (66242)
(n=100%)	(1001)	(039)	(2013)	(505)	(9000)	(00242)
7. Degree of confidence in Green/Ecology						
movement.	6.4%	4.9%	9.0%	5.8%	8.8%	17 10
a. A great deal	41.9%	4.9%	9.0% 46.6%	59.1%	8.8% 51.5%	17.1% 45.5%
b. Quite a lot c. Not very much	38.9%	40.8%	33.3%	39.1%	31.5% 32.5%	45.5% 26.4%
d. None at all	12.8%	7.8%	11.1%	4.1%	32.3% 7.2%	11.1%
(n=100%)	(1037)	(797)	(1971)	(921)	(9257)	(62438)
10070)	(1031)	(171)	(17/1)	(121)	(2231)	(02 130)

Variable	NZ 1998	NZ 2004	Australia 1995	Japan 1995	World Values Surveys for 8 'Richer' Nations Mid-1990's*	Full World Values Surveys Data Set Mid-1990 s
8. Which comes closer to your own view? a. Protecting the environment should be given priority, even if it causes slower						
economic growth and some loss of jobs b. Economic growth and creating jobs should be the top priority, even if the en-	50.4%	65.0%	61.2%	46.1%	55.0%	50.7%
vironment suffers to some extent	49.6%	35.0%	35.5%	40.1%	38.5%	42.0%
c. Other(Non-NZ only)	n.a.	n.a.	3.2%	13.7%	6.6%	7.4%
(n=100%)	(981)	(715)	(1979)	(713)	(9141)	(62860)
9. In last 12 months, out of concern for the environment, have you attended a meeting or signed a letter or petition aimed at protecting the environment?						
a. Have done	32.9%	23.4%	31.2%	13.3%	20.6%	13.2%
b. Have not done (n=100%)	67.1% (1108)	76.6% (867)	68.8% (2014)	86.7% (1003)	79.4% (9801)	86.8% (65513)
10. I would buy things at 20% higher than usual prices if it would help protect the environment. a. Strongly agree b. Agree c. Disagree d. Strongly Disagree (n=100%)	4.6% 26.8% 53.8% 14.8% (1047)	5.0% 26.1% 54.2% 14.7% (838)	6.5% 43.2% 45.0% 5.4% (2014)	3.6% 30.7% 54.7% 11.0% (863)	8.9% 40.5% 38.0% 12.6% (9539)	11.8% 38.4% 37.8% 11.9% (65659)
11. In last 12 months, out of concern for the environ., have you contributed to an environ. organ.?						
a. Have done	22.8%	21.3%	29.9%	7.7%	21.6%	14.1%
b. Have not done (n=100%)	77.2% (1088)	78.7% (869)	70.1% (2016)	92.3% (1005)	78.4% (9788)	85.9% (66853)
12. Membership in an environmental organ.	()	()	(=)	()	(/	()
a. Active member	5.2%	7.1%	6.7%	1.4%	4.0%	3.5%
b. Inactive member	13.6%	13.5%	10.6%	1.7%	8.9%	11.0%
c. Don't belong	81.2%	79.4%	82.7%	96.9%	87.2%	85.5%
(n=100%)	(1055)	(830)	(2045)	(1036)	(9922)	(72430)

^{*}The 8 nations are West Germany, Spain, USA, Japan, Australia, Norway, Sweden and Finland

2004.

Overall, it is clear that the degree of being environmental really depends on the question being asked. Broad non-specific queries produce extremely high levels of environmentalism. Questions about substantial direct involvement or action produce relatively low levels of environmentalism. Some items seem to split the population in half. This pattern of splitting the population down the middle is also evident among some of the neo-liberal indicators.

Is New Zealand generally greener than other affluent, urban-industrial societies? In general the answer is no. A comparison with Australia, Japan, eight richer nations together and the entire World Values Survey data set is presented in Table 1. In general New Zealand is broadly similar to

Australia and the eight richer countries, while on some items Japan is notably different, as is the entire World Values Survey data set.

In comparison to New Zealand, Australia (in 1995) is substantially more supportive of higher taxes to protect the environment (Q 6) and more willing to pay higher prices for the environment (Q 10). Australians are more likely to have contributed to an environmental organisation (Q 11), and in the 1990's at least, are much more supportive of the environment over the economy (Q 8).

Japan (in 1995) has some notable differences with Australia and New Zealand. In some ways Japan is more environmental, and in some ways less. Question 1 shows stronger support in Japan for coexisting with nature, more support for higher taxes (Q 6) to prevent environmental damage than in New Zealand, and more confidence in the green movement (Q 7).

On the other hand, the Japanese are less likely to recycle (Q 2) or choose environmental products (Q 3). There is also substantially less involvement in meetings, letters or petitions (Q 9), contributing to environmental organisations (Q 11), and much less membership in environmental organisations (Q 12). In the latter two variables Japan is also quite different from the World data set, or the grouped set of eight richer nations.

The full World Values Survey data set (from 54 countries), encompassing both urban industrial and developing nations, is somewhat at variance from the other nations on some of the environmental items in Table 1. Overall, this data set seems somewhat less environmental, although it depends on the item. In the World set there is a notably higher percentage feeling that humans should master nature (Q 1). There are also substantially lower levels of recycling (Q 2), use of environmental products (Q 3), and somewhat lower levels of contributing to environmental organisations.

Neoliberal Variables

Table 2 presents the frequency distributions for nine variables that arguably might represent some aspect of a neoliberal viewpoint or ideology. Once again, don't know and missing data categories have been excluded from the percentaging. Distributions are shown for New Zealand at two points in time (1998 and 2004), Australia (1995), Japan (1995), the "Richer Eight Nations" (mid-90's) and the full World Values Survey data set (54 nations in the mid-90's). Eight of the nine variables in the NZ survey are the same as in the World Survey data.

The neoliberal items span a variety of issues. There are broad matters of principle (like competition being good or harmful -Q 1; private v. government ownership -Q 2), who should appoint the managers of business (Q 3), collective v. individual responsibility (Q 4), questions on equality (making incomes more equal-Q 6; why people live in need-Q 7), questions on government regulation of business (Q 8), and on free trade (Q 9). As in the first table, the variables are listed in a

rough order (for the NZ sample in 1998) from items where support in the sample is strongly on the neoliberal side, to items where the majority is clearly with the anti neo-liberal position.

The New Zealand data over time shows an interesting trend between 1998 and 2004; one quite consistent with this paper's second hypothesis. For every one of the nine neoliberal indicators it is evident that there has been an increase in the proportion of respondents supporting the neoliberal side over the past six years. In some instances the over time increases are substantial.

The first item (for the NZ data) has the greatest degree of support for a neoliberal position, where 84% (1998) and 88% (2004) are on the side of the scale where competition is seen as good, rather than harmful. The next four items (Q 2 to Q 5) also show clear majorities supporting the neoliberal position, ranging from 74% (1998)/76% (2004) on the increasing private ownership side (Q 2) to 60%(1998)/62% (2004) on the "wealth can grow so that there is wealth for everyone" side (Q 5). There is a substantial gain on Q 3 over time, with the support for owners appointing managers jumping from 64% to 73%. On top of that, New Zealand sees more support here for the owners, than in any of the other sample data sets. Note that the pro-neoliberal items are generally broad questions of principle about competition, private ownership and individual responsibility. It could be argued that these items are the ones that are most substantially being taken as a 'given'; that is, positions that go largely unquestioned by substantial parts of the New Zealand population.

Items 6 and 7 in Table 2 are about inequality in the society (making income more equal and the reasons for poverty). The distributions indicate a virtually 50–50 split in the New Zealand population in 1998 for both items. However, Q 7 shows a dramatic jump over time, where the percentage blaming poverty on the individual, rather than society, goes from 50% in 1998 to 73% in 2004. Where New Zealand was once a very divided society on the issue of the causes of poverty, the neoliberal perspective now holds sway.

The last two items (Q 8 and Q 9) involve government regulation. Q 8 on tighter government regulation of big business retains majority support (57%–1998, 53%–2004) for what can be seen as the opposite of a neo-liberal stand. Q 9, however, has substantially shifted, from nearly two-thirds seeking stricter limits on imports in 1998, to a 50–50 split in 2004.

As with the environmental variables, the degree to which the New Zealand population appears sympathetic to a neoliberal position really depends on the nature of the question. General principles about competition, private ownership, and individual rather than collective responsibility tend to attract a greater degree of support for the neoliberal side. Such conclusions, however, must be seen in light of the increase in support for all of the neoliberal positions between 1998 and 2004, including three that are quite substantial increases (Q 3, Q 7, Q 9).

Australia in 1995 is broadly similar to New Zealand in 1998 on the neoliberal variables, with the following exceptions. Australia is somewhat higher in support for private ownership (Q 2), yet Q 3 shows a notably lower degree of support in Australia for only owners appointing business

Table 2 Frequency Distributions for 9 Neo-Liberal Variables

Variable	NZ 1998	NZ 2004	Australia 1995	Japan 1995	World Values Surveys for 8 'Richer' Nations Mid-1990's*	Full World Values Surveys Data Set Mid-1990's
1. 10 point scale						
a. 1=Competition is good.						
Stimulates people to work hard & develop						
new ideas	25.4%	23.3%	27.1%	9.2%	20.0%	30.1%
b. 2	11.9%	16.9%	17.0%	6.1%	13.8%	12.0%
c. 3	19.1%	21.5%	19.8%	15.4%	20.1%	14.4%
d. 4	15.1%	14.6%	11.9%	14.1%	14.3%	10.5%
e. 5	12.6%	11.7%	12.1%	29.9%	15.4%	14.6%
f. 6	5.6%	4.6%	4.1%	9.3%	5.9%	5.3%
g. 7	3.2%	2.7%	3.1%	3.9%	3.8%	3.4%
h. 8	3.5%	1.5%	2.0%	2.5%	3.0%	3.5%
i. 9	0.7%	0.3%	0.8%	0.8%	1.3%	2.0%
j. 10=Competition is harmful.	2.007	2 (01	2.00	0.00	0.407	4.207
It brings out the worst in people	2.9%	2.6%	2.0%	8.9%	2.4%	4.3%
(n=100%)	(1141)	(910)	(2028)	(958)	(9738)	(67427)
2. 10 point scale						
a. 1=Private ownership of business and						
industry should be increased	14.7%	13.8%	21.7%	6.8%	15.3%	14.6%
b. 2	6.8%	8.9%	10.0%	3.3%	9.2%	7.1%
c. 3	15.3%	17.9%	17.7%	13.2%	16.5%	10.4%
d. 4	15.2%	15.4%	12.1%	10.4%	13.8%	8.9%
e. 5	21.7%	20.4%	20.2%	38.3%	22.8%	19.0%
f. 6	10.0%	11.1%	5.7%	16.6%	8.7%	8.4%
g. 7	6.5%	5.2%	5.0%	4.5%	5.3%	6.5%
h. 8	5.3%	3.5%	3.4%	3.5%	4.4%	7.9%
i. 9	1.0%	0.7%	1.6%	0.8%	1.7%	4.9%
j. 10=Government ownership of business						
and industry should be increased	3.4%	3.0%	2.6%	2.5%	2.5%	12.4%
(n=100%)	(1096)	(881)	(2030)	(733)	(9312)	(67200)
3. How should business and industry be						
managed?						
a. Owners should run business or appoint						
managers	64.1%	73.2%	50.3%	39.6%	41.6%	33.9%
b. Owners and employees should partici-	07.170	13.270	30.370	37.070	41.070	33.770
pate in selection of managers	29.5%	22.4%	40.5%	53.7%	50.5%	40.0%
c. Government should be the owner and	29.370	22.470	40.570	33.170	30.3 //	40.070
appoint the managers	0.1%	0.7%	1.7%	1.2%	1.6%	10.0%
d. Employees should own the business and	0.1 /0	0.770	1.770	1.270	1.070	10.070
appoint the managers	6.4%	3.6%	7.5%	5.5%	6.3%	16.1%
(n=100%)	(1096)	(856)	(2048)	(819)	(9418)	(65012)
(ii 100 /b)	(1070)	(050)	(2040)	(017)	(7410)	(03012)
4. 10 point scale						
a. $1 = $ The government should take respon-						
sibility to ensure that everyone is provided						
siering to ensure that everyone is provided						
for	10.3%	6.5%	7.7%	23.7%	9.3%	24.1%
	10.3% 3.2%	6.5% 3.5%	7.7% 4.7%	23.7% 5.4%	9.3% 4.6%	24.1% 8.5%
for	3.2% 6.1%	3.5% 7.4%	4.7% 7.6%	5.4% 15.9%		
for b. 2 c. 3 d. 4	3.2% 6.1% 7.9%	3.5% 7.4% 6.0%	4.7% 7.6% 6.8%	5.4% 15.9% 9.6%	4.6% 9.0% 8.4%	8.5%
for b. 2 c. 3 d. 4 e. 5	3.2% 6.1% 7.9% 14.8%	3.5% 7.4% 6.0% 16.0%	4.7% 7.6%	5.4% 15.9% 9.6% 20.4%	4.6% 9.0%	8.5% 10.3% 8.0% 13.6%
for b. 2 c. 3 d. 4	3.2% 6.1% 7.9%	3.5% 7.4% 6.0%	4.7% 7.6% 6.8%	5.4% 15.9% 9.6%	4.6% 9.0% 8.4%	8.5% 10.3% 8.0%
for b. 2 c. 3 d. 4 e. 5 f. 6 g. 7	3.2% 6.1% 7.9% 14.8% 12.7% 11.9%	3.5% 7.4% 6.0% 16.0% 9.4% 14.3%	4.7% 7.6% 6.8% 16.8%	5.4% 15.9% 9.6% 20.4% 10.5% 4.5%	4.6% 9.0% 8.4% 14.6% 10.5% 12.2%	8.5% 10.3% 8.0% 13.6% 7.2% 6.6%
for b. 2 c. 3 d. 4 e. 5 f. 6 g. 7 h. 8	3.2% 6.1% 7.9% 14.8% 12.7%	3.5% 7.4% 6.0% 16.0% 9.4%	4.7% 7.6% 6.8% 16.8% 10.6%	5.4% 15.9% 9.6% 20.4% 10.5%	4.6% 9.0% 8.4% 14.6% 10.5%	8.5% 10.3% 8.0% 13.6% 7.2% 6.6% 7.7%
for b. 2 c. 3 d. 4 e. 5 f. 6 g. 7 h. 8 i. 9	3.2% 6.1% 7.9% 14.8% 12.7% 11.9%	3.5% 7.4% 6.0% 16.0% 9.4% 14.3%	4.7% 7.6% 6.8% 16.8% 10.6% 14.8%	5.4% 15.9% 9.6% 20.4% 10.5% 4.5%	4.6% 9.0% 8.4% 14.6% 10.5% 12.2%	8.5% 10.3% 8.0% 13.6% 7.2% 6.6%
for b. 2 c. 3 d. 4 e. 5 f. 6 g. 7 h. 8 i. 9 j. 10=People should take more responsi-	3.2% 6.1% 7.9% 14.8% 12.7% 11.9% 15.5% 5.0%	3.5% 7.4% 6.0% 16.0% 9.4% 14.3% 15.6%	4.7% 7.6% 6.8% 16.8% 10.6% 14.8% 15.0% 4.9%	5.4% 15.9% 9.6% 20.4% 10.5% 4.5% 4.6%	4.6% 9.0% 8.4% 14.6% 10.5% 12.2% 14.0%	8.5% 10.3% 8.0% 13.6% 7.2% 6.6% 7.7% 4.5%
for b. 2 c. 3 d. 4 e. 5 f. 6 g. 7 h. 8 i. 9	3.2% 6.1% 7.9% 14.8% 12.7% 11.9% 15.5%	3.5% 7.4% 6.0% 16.0% 9.4% 14.3% 15.6%	4.7% 7.6% 6.8% 16.8% 10.6% 14.8% 15.0%	5.4% 15.9% 9.6% 20.4% 10.5% 4.5% 4.6%	4.6% 9.0% 8.4% 14.6% 10.5% 12.2% 14.0%	8.5% 10.3% 8.0% 13.6% 7.2% 6.6% 7.7%

Variable	NZ 1998	NZ 2004	Australia 1995	Japan 1995	World Values Surveys for 8 'Richer' Nations Mid-1990's*	Full World Values Surveys Data Set Mid-1990's
5. 10 point scale						
a. 1=People can only get rich at the ex-						
pense of others	4.9%	4.3%	4.6%	2.2%	4.2%	8.2%
b. 2	2.8%	1.9%	3.5%	1.3%	3.2%	4.1%
c. 3	6.7%	5.7%	8.9%	4.6%	6.3%	5.6%
d. 4	9.8%	7.1%	7.2%	5.8%	7.3%	5.8%
e. 5	15.5%	19.1%	17.4%	18.4%	16.6%	13.5%
f. 6	12.8%	12.1%	12.9%	30.1%	14.0%	9.0%
g. 7	15.2%	16.3%	15.1%	15.4%	15.6%	10.5%
h. 8	15.0%	17.7%	15.1%	10.6%	16.7%	14.2%
i. 9	5.2%	6.2%	5.1%	3.5%	6.6%	8.6%
j. 10=Wealth can grow so that there is	12.00	0.50	10.20	0.20	0.60	20.69
wealth for everyone	12.0%	9.5%	10.2%	8.3%	9.6%	20.6%
(n=100%)	(1090)	(881)	(2013)	(833)	(9458)	(66747)
6. 10 point scale						
a. 1=Incomes should be made more equal	14.2%	11.8%	9.3%	8.4%	9.6%	13.6%
b. 2	3.2%	5.4%	4.3%	1.5%	4.6%	5.1%
c. 3	8.6%	9.1%	9.6%	7.9%	10.8%	7.9%
d. 4	8.1%	8.3%	9.1%	7.9%	10.3%	7.1%
e. 5	16.2%	13.1%	15.5%	21.4%	16.2%	13.2%
f. 6	13.2%	11.5%	10.9%	25.0%	12.3%	8.6%
g. 7	13.4%	16.3%	16.5%	13.2%	14.1%	10.1%
h. 8	14.1%	14.6%	13.4%	8.5%	12.5%	12.5%
i. 9	1.8%	3.4%	3.3%	1.6%	3.7%	6.2%
j. 10=We need larger income differences						
as incentives for individual effort.	7.2%	6.4%	8.1%	4.7%	5.9%	15.7%
(n=100%)	(1125)	(900)	(2025)	(953)	(9756)	(69239)
7. Why are there people in this country who live in need? a. They are poor because of laziness and leak of will prover.	50 407	72.60	40.20	50 601	27.00	20.00/
lack of will power	50.4%	72.6%	49.3%	58.6%	37.9%	29.0%
b. They are poor because society treats them unfairly	49.6%	27.4%	50.7%	41.4%	62.1%	71.0%
(n=100%)	(835)	(653)	(1738)	(933)	(7951)	(58879)
8. Do you favour or oppose tighter government regulation of big companies and multinationals?	(033)	(033)	(1730)	(333)	(7531)	(30077)
a. Strongly favour	22.3%	20.4%	Not in	Not in	Not in	Not in
b. More or less favour	34.3%	32.6%	World	World	World	World
c. Neither favour nor against	28.4%	28.0%	Survey	Survey	Survey	Survey
d. More or less against	11.2%	14.3%	,	,	,	,
e. Strongly against	3.7%	4.6%				
(n=100%)	(1094)	(861)				
9. Do you think it is better if: a. Goods made in other countries can be imported and sold here if people want to buy them?	35.6%	50.6%	23.7%	71.7%	39.2%	36.0%
b. There should be stricter limits on selling foreign goods here, to protect the jobs of people in this country. $(n=100\%)$	64.4% (1116)	49.4% (856)	76.3% (2048)	28.3% (1054)	60.8% (9499)	64.0% (64406)

^{*}The eight nations from the World Values Surveys data set are West Germany, Spain, USA, Japan, Australia, Norway, Sweden and Finland.

managers, and a higher level of support for owners <u>and</u> employees selecting managers. Q 9 shows much more support for greater restrictions on imported goods (76%) than in any of the other sample data sets, an interesting position for a nation heavily dependent on international trade.

Japan presents a picture that is broadly similar to Australasia, but with a different mixture of variations on some neoliberal items. The Japanese are a bit lower in their support for competition being good (Q 1), and substantially lower than Australia or New Zealand in supporting the right of owners to be the sole decision makers over managerial appointments (Q 3). Japan is much higher (Q 4) in supporting government (over the individual) taking responsibility to provide for everyone. These items might tend to suggest that Japan is somewhat less neoliberal than the other groups. In contrast to this conclusion is Q 9, where we see Japan having a much lower level of support for limits on imported goods.

Overall, New Zealand is similar to the "Richer 8" on the neoliberal variables. Again, this suggests a broad similarity between New Zealand and other affluent, urban-industrial countries, with two notable differences. For Q 3 the "Richer 8" have less support for the position of owners running businesses or appointing managers. The second difference comes in Q 7, where New Zealanders are much more willing to attribute poverty to the individual traits of laziness and lack of willpower, rather than to society.

Comparisons with the full World Values data set tend to put New Zealand even further on the neo-liberal side. For Q's 1, 5, 6, and 9 New Zealand and the World set are similar. For the other four items (Q's 2, 3, 4, and 7) there are some fairly pronounced differences. Compared to New Zealand, the full World data set sees less support for private ownership (Q 2), much less support for owners alone choosing managers (Q 3), less support for people taking responsibility for themselves (Q 4), and less support for blaming the individual for poverty (Q 7).

Trying to rank order the different national data sets in Table 2 in terms of the degree of neoliberalism is complex. However, it does not seem unreasonable to conclude that New Zealanders tend to be more supportive of a variety of neo-liberal positions reflected in these variables. This conclusion must be coupled with the fact that New Zealand support for neoliberal positions has increased over time.

Association between the Variables

While crosstabulation usually provides a clearer picture of how two variables are associated, the large number of variables in this paper makes the use of crosstabulation difficult. To answer the fundamental question of how the environmental and neoliberal indicators are associated, this paper simply examines the intercorrelations. Tables 3 to 6 (see the Appendix) each present a matrix of statistical associations for the environmental and neoliberal variables. All of the associations are

measured as Gammas. Since the variables in Tables 1 and 2 arguably represent at least an ordinal level of measurement, the use of Gamma (an ordinal measure of association) seems reasonable (see Levin and Fox, 1994, p. 361). Statistical significance at the three traditional levels is also indicated. The boxed area within each matrix highlights the correlations between the environmental and neoliberal variables.

The purpose in examining these correlation matrices is simple; to see the general extent to which the environmental indicators are correlated with the neoliberal indicators. A high level of correlation overall between the environmental and neoliberal realms would lend support for the first hypothesis. A low level of correlation between the two sets realms lends support for the second hypothesis.

Even a very cursory examination of the three panels of the 1998 New Zealand matrix (Table 3) and the 2004 New Zealand matrix (Table 4) will quickly reveal that the correlations amongst the environmental variables themselves are quite substantial and usually significant; amongst the neoliberal variables the correlations are moderately substantial and mostly significant; however, the correlations between the environmental and neoliberal variables are relatively low and often non-significant.

The NZ environmental intercorrelations range as high .86(1998)/ .83(2004), 91%(98)/86%(04) are at least as high as .20, and 89%(98)/83%(04) are statistically significant. Overwhelmingly the environmental items are closely associated with each other. The one environmental variable that correlates least with the others is the first one, asking whether humans should master or coexist with nature.

Amongst the neoliberal variables the correlations are generally less, but still reasonably substantial. The correlations range as high as .43(98)/ .41(04), with 42%(98)/47%(04) at .20 or better, 86%(98)/81%(04) at .10 or better, and most being statistically significant. These indicators are not as tightly associated as the environmental measures, but clearly they do tend to hang together. The neoliberal measure with the highest average correlation with the others is no. 7, which asks why people are poor. The measure with the lowest average correlation is no. 5, which contrasts people getting rich at the expense of others or wealth growing for everyone.

The correlations *between* the neoliberal and environment measures lie at the heart of this analysis, and clearly (with a few exceptions) the correlations are low. Over 55%(98)/48%(04) of the correlations are less than .10, and only 15% (both years) are .20 or better. Less than 40% are significant at any of the three levels.

The overall picture for New Zealand, for 1998 or 2004, is one where there is not a great deal of association between the environmental indicators and the neoliberal attitudes. This does *not* support the first hypothesis, and the logical expectation of a conceptually "negative" association between one progressive position (being environmental) and another progressive position (anti-

neoliberal), but it does support hypothesis two.

The 1995 Australian data set (Table 5) and the 1995 Japan data set (Table 6) lead to much the same kind of conclusions as for New Zealand. The environmental variables are strongly correlated with each other (93%-Austalia/80%-Japan are .20 or more), the correlations amongst the neoliberal variables are more moderate (66%-Australia/54%-Japan are .10 or more), while few of the correlations between the neoliberal and environmental variables are substantial or statistically significant.

Factor Analysis

Factor analysis takes the examination of the neoliberal – environmental interface a stage further. The simple intercorrelations that we have just looked at suggest very little association between the two realms. If we factor analyse the environmental and neo-liberal variables together, will neo-liberal variables and environmental variables tend to load together on the same factors, or will they load highly on different factors? The former would support the first hypothesis, the latter would support the second.

Tables 7 to 12 (see the Appendix) each present the results of three factor analyses: an analysis of the environmental variables alone, an analysis of just the neo-liberal variables, and a factor analysis of both the environmental and neoliberal variables together. The third factor analysis goes to the central concern of the paper: when the environmental and neoliberal measures are analysed together do both types of variables tend to load together on particular factors, or do they tend to stay separate?

Each table covers a different data set (NZ 98, NZ 04, Australia, Japan, the Richer 8, and the World Set). All of the factor analyses involve principal components extraction with varimax rotation, and the retention of factors with an eigenvalue of one or better. Rotated factor loadings of .30 or higher are highlighted in bold type, indicating the important variables within a factor.

Environmental Variables

New Zealand results are covered in Tables 7 (1998) and 8 (2004). The upper panel is the separate analysis of the environmental variables. The first two factors in both years are essentially the same. The first factor is what might be called an economic factor (E 6, E 10, E 7, E 8), involving trading off costs for the sake of the environment. The second factor clearly reflects involvement with environmental organisations and action (E 11, E 12, E 9). The third factors in both years are similar, largely concerning choosing products or recycling (E 3, E 2), but in 2004 a fourth factor appears, involving E 1, the issue of mastering or coexisting with nature.

The environmental factors for Australia (Table 9) and Japan (Table 10) are very much the same as the New Zealand factors. This is also the case for the 8 Richer nations (Table 11) and the

full World Values survey data set (Table 12).

Overall, there is a remarkable degree of consistency among the environmental factors, across place and time. We see a factor about economic costs, a factor about involvement and a factor about products and recycling.

Neoliberal Variables

The middle panels of Tables 7 through 12 (see the Appendix) display the results from factor analysing the neoliberal variables. In every analysis a three factor solution emerged.

In the two New Zealand data sets the first two neoliberal factors are essentially the same. The first factor involves the issue of government versus individual responsibility, and matters of inequality (NL 4, NL 5, NL 6, NL 7). Factor two is solidly about competition and government v. private ownership (NL 1, NL 2). The picture between the two NZ data sets is less clear on the third factor. In both cases the variable about free trade (NL 9) is important, as is the issue of inequality (NL 5), beyond that, however, the factors differ.

For Australia (Table 9), Japan (Table 10), and the Richer 8 nations (Table 11), the first two neoliberal factors are broadly similar to each other, and to the first two New Zealand factors. Factor 3 varies a bit more, but in all three samples the question on free trade (NL 9) has a high loading.

The neoliberal factors for the full World Values Survey set reveal significant commonality with the New Zealand results, but not to the same degree as the results from the environmental variables. Factors 1 and 2 are broadly similar to New Zealand, but factor 3 is somewhat different.

Compared to the factor analysis results for the environmental variables, there is somewhat more divergence in the neoliberal results across time in New Zealand and across place. Nevertheless there is still much consistency in the emergent neoliberal factors. There is a factor about individual responsibility and inequality, a factor about competition and private v. government ownership, and a third factor that at least in some instances has something to do with free trade.

Environmental and Neoliberal Variables

The above factor analyses are interesting in themselves, establishing the inherent dimensions in each of the two conceptual domains. It is also interesting to discover that there is considerable consistency in factors across the different times and populations.

However, it is the factor analyses in the lower panels of Tables 7 to 12 that address the fundamental purpose of this research. These are the results that analyse the environmental *and* neoliberal variables together. The issue is how these two conceptual domains relate to each other. If individual factors emerge which encompass both high loading environmental and neoliberal variables then there is evidence of a relationship (that one might logically expect to be negative) or connection

between them. On the other hand, if the two domains remain largely separate, with factors that are clearly neoliberal or environmental, but not both, then that is evidence that there is little that joins the two together, other than a logical expectation that is not empirically supported.

What emerges in the lower panel of Tables 7 to 12 are factors that are clearly either environmental or neoliberal rather than a combination of the two. Variables with a loading of .30 or better that cross between domains in a given factor are few in number and usually with little more than a .30 loading. Furthermore, the character of the factors that do emerge closely parallel the factors from the separate analyses of the environmental variables, and the neoliberal items.

All six of the factor analyses for the combined neoliberal and environmental variables produced either six or seven factor solutions. For New Zealand 1998 and 2004, for Australia, and for Japan, all but one of the six or seven factors have high loading variables in only one conceptual domain. For the Rich 8 and the full World data sets, the picture is even clearer. Factors are either environmental or neoliberal, but not both.

Conclusion

Both the analysis of correlation matrices (Tables 3 to 6) and a series of factor analyses (Tables 7 to 12) clearly show that there is little that joins neoliberal attitudes with environmental values. The substantial negative associations that might logically be expected, mostly are not there. The two domains appear to be largely independent of each other. This fits not just New Zealand at two points in time, but Australia, Japan, a sample of 8 affluent nations, and a much larger sample of nations from the mid-1990s.

Thus the conventional expectation expressed in the first hypothesis, of a conceptually negative association between support for a neoliberal perspective and support for the environment, is not supported. Rather, the second hypothesis, that there will be little or no association between the two realms, appears to hold sway.

This lack of association does not just hold for New Zealand, but for a variety of other affluent countries as well. Thus the relatively unique position of New Zealand of moving faster and farther into the neoliberal realm does not seem to have made much difference. There are variations in the distributions on particular variables between countries, but the overall structure of little association between neoliberal and environmental views appears to apply across a wide spectrum of nations.

What lies behind this lack of association has not been established in this paper one way or the other. It was suggested that many neoliberal assumptions about the world may have become social 'givens', with the dominance of neoliberal economic thinking and policy over several decades. This is consistent with the data, but can not be adequately examined without much better data from the past, and over time. If one could show that prior to the neoliberal revolutions of the 1980's there

were the hypothesized negative correlations, and that these diminished over time, then a much stronger basis of support for this explanation would be at hand. The discovery that support for neoliberal views in New Zealand has generally increased between 1998 and 2004 lends some support for this idea, but it is far from sufficient.

Most interesting of all, perhaps, are the implications of this lack of an association between two seemingly progressive positions: support for the environment and being anti-neoliberal. For progressives concerned about the long term effects of neoliberal economic beliefs and policy on things like the environment, there is at least the implication that believing competition is good, or that one should have free trade, etc., does not preclude concern for the environment, or indeed, actions in support of it. For example, despite the increase (sometimes substantial) over time in those supporting neoliberal views in NZ, there was also a substantial increase in those who believe that protecting the environment should be given priority over economic growth (QE 8). It would seem the beliefs and practices of many people are very much like the manner in which the Third Way has sometimes manifest itself. Not being progressive with regard to the economy does not preclude being progressive in other realms. A logical contradiction does not preclude such a disjuncture in reality. Perhaps, it is as outgoing German Chancellor Gerhard Schroeder recently put it: "People do not want the state in their faces, but they want it by their side" (Agence France Presse, 2005).

Further Analysis

Of course the observed lack of an association between environmental and neoliberal measures may be due to factors not yet examined in this research. Among the things that need to be explored are how other variables enter into the picture. One factor that might be particularly interesting to add to the equation (in line with the idea of many people no longer having a collective memory of paradigms other than neoliberalism) would be age or generation. The analysis could be separated into several generations to see if the lack of association holds more for the younger, and less so, perhaps, for the older generations. Similar approaches might be taken for other background characteristics like gender, socio-economic status, etc.

It would also be important to examine data over time for other populations. Will the increase in support for neoliberal beliefs found in New Zealand over time be evident elsewhere? There is also a need for a more thorough literature search, from the past. The previous correlational studies of environmental attitudes and beliefs, located thus far, tend to use measures that are more political or 'left-right' in character, than neoliberal.

There is also much room for refining how neoliberalism is measured. The variables used here simply *appear* to be logically related to the underlying domain. One way of furthering the analysis might be to look more carefully at the factors that emerged from the factor analysis of the neoliberal items by themselves. One of these factors might, indeed, better serve as a conceptual repre-

sentation of neoliberalism. Indeed, there would probably be merit in treating the factors that emerged from the separate environmental and neoliberal analyses as distinct conceptual variables that are carried into further analysis as composite measures reflecting complex concepts.

Finally, there is the matter of whether there would be a lack of a negative association between neoliberalism and other arguably progressive issues. The logic of the arguement presented in this paper would support such an expectation, but the empirical situation needs examination.

APPENDIX

Table 3 Matrix of Associations Measured as Gamma Between 12 Environmental and 9 Neo-Liberal Variables from the 1998 New Zealand Study of Values Survey

Variables	E 1	E 2	E 3	E 4	E 5	E 6	E 7	E 8	E 9	E 10	E 11	E 12	NL 1	NL 2	NL 3	NL 4	NL 5	NL 6	NL 7	NL 8	NL 9
Convir 1 (Master or coexist)	1.0																				
Envir 2 (Reused or recycled for environment)	28	1.0																			
Envir 3 (Chosen product for environment)	34ª	.74°	1.0																		
Envir 4 (Protect. of envir urgent/future/not prob)	62°	.51°	.56°	1.0																	
Envir 5 (Increase/Cut govt spending on environ)	14	.46°	.35°	.64c	1.0																
Envir 6 (Increase Taxes to prevent envir damage)	16	.40°	.32°	.57°	.56°	1.0															
envir 7 (Confidence in green/ecology movement)	32^{b}	.44c	.37°	.58°	.57°	.47c	1.0														
Envir 8 (Environment or economic growth)	38^{b}	.42°	.49°	.81°	.63°	.50°	.59°	1.0													
envir 9 (Meeting/letter/petition for environment)	19	.34°	.50°	.53°	.39c	.42°	.41°	.47°	1.0												
Envir 10 (Buy at 20% higher prices for envir)	07	.38c	.38c	.52°	.44c	.74°	.43c	.45°	.25°	1.0											
Envir 11 (Contributed to Environ Organisation)	18	.54°	.44c	.48c	.50°	.48c	.48c	.47.°	.65°	.44c	1.0										
Envir 12 (Membership in Environ Organisation)	13	.55°	.57°	.36°	.39c	.44c	.44c	.56°	.61°	.48c	.86c	1.0									
Neo-Lib 1 (Competition good/harmful)	06	.03	.02	.01	.01	05	02	16 ^c	10a	03	12ª	12ª	1.0								
Neo-Lib 2 (Private/government ownership)	.03	01	06	09	06	14 ^c	09a	11 ^b	14 ^b	11 ^b	19a	12ª	.39°	1.0							
Neo-Lib 3 (How business managed)	.17	22^{b}	16a	21 ^b	21°	21°	20°	25°	38°	10	27°	28°	.19c	.18c	1.0						
Neo-Lib 4 (Government/people responsibility)	.12	12ª	06	05	.05	.07	.05	02	.06	03	07	04	11 ^c	08 ^b	15°	1.0					
Neo-Lib 5 (Rich at expense/wealth can grow)	09	08	08	02	02	05	12 ^c	01	01	10 ^b	11a	12 ^c	15°	10°	04	.25°	1.0				
Neo-Lib 6 (Incomes more equal/larger diff.)	03	05	.05	02	.06	.03	.07	.01	.14c	03	.00	00	01	01	25°	.27°	.14 ^c	1.0			
Neo-Lib 7 (Poor because lazy/society unfair)	04	.08	.02	20 ^b	18 ^b	18 ^b	11	06	20b	09	30°	22ª	.30°	.29°	.29°	40°	18c	32°	1.0		
Weo-Lib 8 (Favour/oppose tighter reg. of big co.)	.01	.08	.22°	.07	.12 ^b	.14c	.12 ^b	04	.22c	.09a	.15 ^b	.11	13c	25°	22°	.16c	.13c	.20°	40°	1.0	
Jeo-Lib 9 (Imports free/stricter limits)	.06	.07	09	.10	.03	01	.07	.30°	16a	12a	04	12	.14c	.15°	.19 ^b	10a	.09a	25°	.34°	43°	1.0

a P<.05

^b P<.01

c P<.001

Table 4 Matrix of Associations Measured as Gamma Between 12 Environmental and 9 Neo-Liberal Variables from the 2004 New Zealand Study of Values Postal Survey

Variables	E 1	E 2	E 3	E 4	E 5	E 6	E 7	E 8	E 9	E 10	E 11	E 12	NL 1	NL 2	NL 3	NL 4	NL 5	NL 6	NL 7	NL 8	NL 9
Envir 1 (Master or coexist)	1.0																				
Envir 2 (Reused or recycled for environment)	31ª	1.0																			
Envir 3 (Chosen product for environment)	16	.79°	1.0																		
Envir 4 (Protect. of envir urgent/future/not prob)	28	.40°	.46°	1.0																	
Envir 5 (Increase/Cut govt spending on environ)	.03	.17	.30°	.45°	1.0																
Envir 6 (Increase Taxes to prevent envir damage)	01	.25ª	.26°	.31°	.46c	1.0															
Envir 7 (Confidence in green/ecology movement)	.19	.28b	.30°	.34c	.43c	.35°	1.0														
Envir 8 (Environment or economic growth)	39 ^b	.45°	.41°	.70°	.56°	.41°	.37°	1.0													
Envir 9 (Meeting/letter/petition for environment)	05	.59°	.37°	.41°	.40°	.35°	.28c	.35°	1.0												
Envir 10 (Buy at 20% higher prices for envir)	.02	.41°	.35°	.35°	.40°	.70°	.34°	.51°	.32°	1.0											
Envir 11 (Contributed to Environ Organisation)	.08	.65°	.49°	.26b	.28c	.28c	.35°	.48.c	.64c	.36°	1.0										
Envir 12 (Membership in Environ Organisation)	.25	.83°	.49°	.15	.27°	.34c	.26°	.32°	.69°	.39°.	79°	1.0									
Neo-Lib 1 (Competition good/harmful)	03	.02	06	01	08a	07	04	19°	08	12 ^b	17 ^b	14ª	1.0								
Neo-Lib 2 (Private/government ownership)	16	01	04	08	08a	17 ^c	09^{a}	19 ^c	11	16 ^c	08	16 ^b	.40°	1.0							
Neo-Lib 3 (How business managed)	.04	24	.02	10	19 ^b	27°	10	19^{a}	28 ^b	23°	24 ^b	23ª	25°	.28°	1.0						
Neo-Lib 4 (Government/people responsibility)	.10	.02	02	05	.09a	.07	.03	00	.12a	.04	.04	.10	19 ^c	23°	20°	1.0					
Neo-Lib 5 (Rich at expense/wealth can grow)	10	05	09	.08	.00	01	08^{a}	01	03	10a	01	02	15°	09a	11ª	.19c	1.0				
Neo-Lib 6 (Incomes more equal/larger diff.)	10	01	.07	.11a	.15c	.07	.07	02	.13a	.03	.10	.01	03	00	16 ^c	.21c	.16c	1.0			
Neo-Lib 7 (Poor because lazy/society unfair)	.12	.17	11	15	24 ^c	24°	03	16	24ª	29°	23ª	23ª	.31°	.29°	.37°	41°	20°	31°	1.0		
Neo-Lib 8 (Favour/oppose tighter reg. of big co.)	.10	.08	.06	.22°	.24°	.16 ^c	.09	.19 ^b	.19 ^b	.08	.17 ^b	.23°	13°	30°	31°	.19c	.16c	.22°	18 ^b	1.0	
Neo-Lib 9 (Imports free/stricter limits)	33 ^b	13	08	02	17 ^b	10	10	.05	18a	16 ^b	13	.01	.11ª	.09	.17ª	03	06	20°	.08	38c	1.0

a P<.05

^b P<.01

[°] P<.001

Table 5 Matrix of Associations Measured as Gamma Between 10 Environmental and 8 Neo-Liberal Variables from the **1995 Australian Data Set** of the World Values Survey

Variables	E 1	E 2	E 3	E 6	E 7	E 8	E 9	E 10	E 11	E 12	NL 1	NL 2	NL 3	NL 4	NL 5	NL 6	NL 7	NL 9
Envir 1 (Master or coexist)	1.0																	
Envir 2 (Reused or recycled for environment)	48°	1.0																
Envir 3 (Chosen product for environment)	33^{b}	.76°	1.0															
Envir 6 (Increase Taxes to prevent envir damage)	22^{b}	.29°	.28c	1.0														
Envir 7 (Confidence in green/ecology movement)	35°	.43°	.33°	.42°	1.0													
Envir 8 (Environment or economic growth)	19^{a}	.42°	.47°	.32°	.46°	1.0												
Envir 9 (Meeting/letter/petition for environment)	30^{b}	.56°	.50°	.26°	.42°	.42°	1.0											
Envir 10 (Buy at 20% higher prices for envir)	07	.30°	.27°	.66°	.32°	.33c	.25°	1.0										
Envir 11 (Contributed to Environ Organisation)	40^{c}	.60°	.55°	.33°	.47°	.33c	.70°	.31°	1.0									
Envir 12 (Membership in Environ Organisation)	.09	.51°	.49°	.34°	.41°	.28c	.66c	.45°	.72°	1.0								
Neo-Lib 1 (Competition good/harmful)	19 ^b	03	.03	03	00	09 ^b	08ª	03	05	03	1.0							
Neo-Lib 2 (Private/government ownership)	07	07	.02	11c	10 ^c	13°	08^a	07^{a}	06^{a}	11 ^b	.35°	1.0						
Neo-Lib 3 (How business managed)	10	.02	08	11^{b}	17 ^c	13^{b}	14 ^c	14 ^c	14^{b}	17 ^c	.15°	.19 ^c	1.0					
Neo-Lib 4 (Government/people responsibility)	.20b	00	02	.02	.11c	.06	.00	.02	01	.05	15 ^c	16 ^c	16 ^c	1.0				
Neo-Lib 5 (Rich at expense/wealth can grow)	12	02	01	04	.02	.04	$.09^{b}$	06^{a}	.03	.01	16c	11°	06^{a}	.14 ^c	1.0			
Neo-Lib 6 (Incomes more equal/larger diff.)	00	.00	.05	.09	.06ª	.06	.02	$.07^{\rm b}$.02	.04	12 ^c	11°	15°	.29°	.09°	1.0		
Neo-Lib 7 (Poor because lazy/society unfair)	.06	12	15 ^b	19 ^c	25°	20°	20^{c}	13 ^c	20^{c}	25°	.15°	.16c	.18c	32°	13°	27°	1.0	
Neo-Lib 9 (Imports free/stricter limits)	06	08	13ª	09	04	.12a	.07	07	.07	11	.05	.01	.04	.02	.03	05	.05	1.0

a P<.05

^b P<.01

c P<.001

Table 6 Matrix of Associations Measured as Gamma Between 10 Environmental and 8 Neo-Liberal Variables from the 1995 Japan Data Set of the World Values Survey

Variables	E 1	E 2	E 3	E 6	E 7	E 8	E 9	E 10	E 11	E 12	NL 1	NL 2	NL 3	NL 4	NL 5	NL 6	NL 7	NL 9
Envir 1 (Master or coexist)	1.0																	
Envir 2 (Reused or recycled for environment)	36	1.0																
Envir 3 (Chosen product for environment)	.52ª	.65°	1.0															
Envir 6 (Increase Taxes to prevent envir damage)	08	.26°	.23°	1.0														
Envir 7 (Confidence in green/ecology movement)	.03	.21 ^b	.18 ^b	.14ª	1.0													
Envir 8 (Environment or economic growth)	17	.32°	.35°	.48°	.32°	1.0												
Envir 9 (Meeting/letter/petition for environment)	01	.70°	.62°	.26b	.31°	.29a	1.0											
Envir 10 (Buy at 20% higher prices for envir)	.03	.32°	.35°	.78°	.25°	.50°	.23°	1.0										
Envir 11 (Contributed to Environ Organisation)	.65	.55°	.55°	.32 ^b	.27ª	.14	.74°	.39c	1.0									
Envir 12 (Membership in Environ Organisation)	1.0*	.52 ^b	.66°	.11	.39a	19	.70 ^b	.38a	.68a	1.0								
Neo-Lib 1 (Competition good/harmful)	.08	.03	03	.07	.04	03	.09	.02	.16	.10	1.0							
Neo-Lib 2 (Private/government ownership)	.07	.07	00	.02	.02	03	.02	.02	08	35ª	.26°	1.0						
Neo-Lib 3 (How business managed)	48	.15a	01	.06	04	.00	.01	09	.10	11	.16c	.15 ^b	1.0					
Neo-Lib 4 (Government/people responsibility)	21	.02	.04	12	.12 ^b	05	.08	17°	.11	.12	.09b	03	06	1.0				
Neo-Lib 5 (Rich at expense/wealth can grow)	.41	07	.05	.01	12	04	.06	.02	09	.01	00	.06	.01	05	1.0			
Neo-Lib 6 (Incomes more equal/larger diff.)	19	02	.04	13 ^b	.00	07	.05	09	.03	.07	12 ^c	15°	14°	.24°	01	1.0		
Neo-Lib 7 (Poor because lazy/society unfair)	.12	.00	13	.10	01	07	.03	.01	07	.08	.18c	.02	.18a	27°	02	29 ^c	1.0	
Neo-Lib 9 (Imports free/stricter limits)	02	.09	05	12	22^{b}	.19a	17	06	23	35	.07	.16a	07	06	.17 ^b	.14 ^b	.13	1.0

^a P<05

^b P<.01

c P<.001

^{*}A statistical artifact due to several empty cells in the table

Table 7 Results from Three Separate Principal Components Factor Analyses with Varimax Rotation from
the 1998 New Zealand Study of Values Survey for 10 Environmental Variables, 8 Neo-Liberal
Variables and all 18 Variables Together

			Fac	ctors		
	1	2	3	4	5	6
New Zealand 1998 Environmental Variables						
Envir 1 (Master or coexist)	.00	.00	41			
Envir 2 (Reused or recycled for environment)	.13	.00	.73			
Envir 3 (Chosen product for environment)	.11	.16	.75			
Envir 6 (Increase Taxes to prevent envir damage)	.83	.13	.00			
Envir 7 (Confidence in green/ecology movement)	.55	.26	.25			
Envir 8 (Environment or economic growth)	.50	.22	.27			
Envir 9 (Meeting/letter/petition for environment)	.13	.63	.15			
Envir 10 (Buy at 20% higher prices for envir)	.83	.00	.00			
Envir 11 (Contributed to Environ Organisation)	.17	.80	.00			
Envir 12 (Membership in Environ Organisation)	.16	.79	.00			
Percentage of Variance	20.4	18.3	14.1			
New Zealand 1998 Neo-Liberal Variables						
Neo-Lib 1 (Competition good/harmful)	.00	.80	.00			
Neo-Lib 2 (Private/government ownership)	.00	.79	.13			
Neo-Lib 3 (How business managed)	.00	.14	.65			
Neo-Lib 4 (Government/people responsibility)	.76	.00	19			
Neo-Lib 5 (Rich at expense/wealth can grow)	.75	15	.19			
Neo-Lib 6 (Incomes more equal/larger diff.)	.45	.25	59			
Neo-Lib 7 (Poor because lazy/society unfair)	41	.31	.41			
Neo-Lib 9 (Imports free/stricter limits)	.00	.10	.60			
Percentage of Variance	19.0	18.6	17.5			
New Zealand 1998 Environmental and Neo-						
Liberal Variables						
Envir 1 (Master or coexist)	.00	.00	.00	.00	43	19
Envir 2 (Reused or recycled for environment)	.00	.16	11	.00	.71	.00
Envir 3 (Chosen product for environment)	.13	.15	.00	.00	.74	12
Envir 6 (Increase Taxes to prevent envir damage)	.15	.82	.00	.00	.00	.00
Envir 7 (Confidence in green/ecology movement)	.31	.50	.00	.00	.23	.26
Envir 8 (Environment or economic growth)	.25	.38	.00	11	.27	.53
Envir 9 (Meeting/letter/petition for environment)	.63	.00	.14	.00	.18	.00
Envir 10 (Buy at 20% higher prices for envir)	.00	.85	.00	.00	.00	.00
Envir 11 (Contributed to Environ Organisation)	.77	.16	.00	.00	.00	.00
Envir 12 (Membership in Environ Organisation)	.77	.15	.00	.00	.00	.00
Neo-Lib 1 (Competition good/harmful)	.00	.00	.00	.81	.00	.00
Neo-Lib 2 (Private/government ownership)	.00	11	.00	.78	.00	.00
Neo-Lib 3 (How business managed)	32	.00	35	.15	17	.00
Neo-Lib 4 (Government/people responsibility)	.00	.00	.75	.00	13	.00
Neo-Lib 5 (Rich at expense/wealth can grow)	18	17	.53	22	.00	.18
Neo-Lib 6 (Incomes more equal/larger diff.)	.10	.00	.69	.21	.00	23
Neo-Lib 7 (Poor because lazy/society unfair)	14	13	52	.31	.12	.18
Neo-Lib 9 (Imports free/stricter limits)	.00	.00	18	.12	.00	.80
Percentage of Variance	11.0	10.9	10.0	8.5	8.1	6.5

Table 8 Results from Three Separate Principal Components Factor Analyses with Varimax Rotation from the **2004 New Zealand** Study of Values Postal Survey for 10 Environmental Variables, 8 Neo-Liberal Variables and all 18 Variables Together

Liberal variables and all 18 variables 10g						
	1	2	Fa 3	ctors 4	5	6
	1	2	3	4	5	6
New Zealand 2004 Environmental Variables						
Envir 1 (Master or coexist)	.07	.03	03	.93		
Envir 2 (Reused or recycled for environment)	.04	.09	.81	06		
Envir 3 (Chosen product for environment)	.15	.10	.78	01		
Envir 6 (Increase Taxes to prevent envir damage)	.82	.11	02	03		
Envir 7 (Confidence in green/ecology movement)	.53	.10	.17	.20		
Envir 8 (Environment or economic growth)	.50	.12	.18	40		
Envir 9 (Meeting/letter/petition for environment)	.13	.69	.04	09		
Envir 10 (Buy at 20% higher prices for envir)	.81	.13	.05	03		
Envir 11 (Contributed to Environ Organisation)	.10	.76	.10	.00		
Envir 12 (Membership in Environ Organisation)	.11	.79	.08	.09		
Percentage of Variance	19.1	17.5	13.5	10.8		
New Zealand 2004 Neo-Liberal Variables						
Neo-Lib 1 (Competition good/harmful)	04	.78	.06			
Neo-Lib 2 (Private/government ownership)	07	.79	02			
Neo-Lib 3 (How business managed)	28	.40	.18			
Neo-Lib 4 (Government/people responsibility)	.66	23	.12			
Neo-Lib 5 (Rich at expense/wealth can grow)	.54	01	06			
Neo-Lib 6 (Incomes more equal/larger diff.)	.66	.23	40			
Neo-Lib 7 (Poor because lazy/society unfair)	61	.29	09			
Neo-Lib 9 (Imports free/stricter limits)	.03	.15	.92			
Percentage of Variance	20.2	20.1	13.4			
New Zealand 2004 Environmental and						
Neo-Liberal Variables						
Envir 1 (Master or coexist)	00	.13	19	19	24	
Envir 2 (Reused or recycled for environment)	.04	.11	03	03	.78	67
Envir 3 (Chosen product for environment)	.15	.13	03	02	.73	.01
Envir 6 (Increase Taxes to prevent envir damage)	.80	.11	.11	04	01	00
Envir 7 (Confidence in green/ecology movement)	.52	.13	06	.01	.13	.02
Envir 8 (Environment or economic growth)	.46	.09	05	19	.27	20
Envir 9 (Meeting/letter/petition for environment)	.14	.65	.15	.05	.10	.36
Envir 10 (Buy at 20% higher prices for envir)	.80	.12	.03	09	.06	02
Envir 11 (Contributed to Environ Organisation)	.11	.75	.02	05	.12	.00
Envir 12 (Membership in Environ Organisation)	.10	.81	01	08	.04	01
Neo-Lib 1 (Competition good/harmful)	.01	04	13	.77	06	.01
Neo-Lib 2 (Private/government ownership)	12	01	14	.76	.01	.07
Neo-Lib 3 (How business managed)	17	06	37	.30	.02	.06
Neo-Lib 4 (Government/people responsibility)	00	.06	.60	21	07	.04
Neo-Lib 5 (Rich at expense/wealth can grow)	23	.01	.55	06	.04	03
Neo-Lib 6 (Incomes more equal/larger diff.)	.09	01	.68	.32	.10	.05
Neo-Lib 7 (Poor because lazy/society unfair)	18	09	58	.21	.12	23
Neo-Lib 9 (Imports free/stricter limits)	11	.07	18	.03	21	14
Percentage of Variance	11.0	9.8	9.7	8.7	7.7	.69

Table 9 Results from Three Separate Principal Components Factor Analyses with Varimax Rotation from the 1995 Australia Data Set of the World Values Survey, for 10 Environmental Variables, 8 Neo-Liberal Variables and all 18 Variables Together

			Fa	ctors		
	1	2	3	4	5	6
Australia 1995 Environmental Variables						
Envir 1 (Master or coexist)	01	.06	49			
Envir 2 (Reused or recycled for environment)	.05	.08	.71			
Envir 3 (Chosen product for environment)	.10	.18	.66			
Envir 6 (Increase Taxes to prevent envir damage)	.83	.06	.03			
Envir 7 (Confidence in green/ecology movement)	.48	.27	.30			
Envir 8 (Environment or economic growth)	.37	.13	.37			
Envir 9 (Meeting/letter/petition for environment)	.06	.72	.16			
Envir 10 (Buy at 20% higher prices for envir)	.81	.11	03			
Envir 11 (Contributed to Environ Organisation)	.11	.75	.13			
Envir 12 (Membership in Environ Organisation)	.18	.73	10			
Percentage of Variance	17.7	17.7	14.6			
Australia 1995 Neo-Liberal Variables						
Neo-Lib 1 (Competition good/harmful)	01	.77	04			
Neo-Lib 2 (Private/government ownership)	05	.74	12			
Neo-Lib 3 (How business managed)	18	.40	.15			
Neo-Lib 4 (Government/people responsibility)	.72	13	.14			
Neo-Lib 5 (Rich at expense/wealth can grow)	.21	24	.48			
Neo-Lib 6 (Incomes more equal/larger diff.)	.73	04	05			
Neo-Lib 7 (Poor because lazy/society unfair)	62	.07	02			
Neo-Lib 9 (Imports free/stricter limits)	09	.16	.87			
Percentage of Variance	19.2	17.7	12.9			
Australia 1995 Environmental and Neo-Liberal						
Variables						
Envir 1 (Master or coexist)	06	.13	.04	35	16	42
Envir 2 (Reused or recycled for environment)	.05	.07	02	.74	02	02
Envir 3 (Chosen product for environment)	.09	.17	.04	.71	.06	07
Envir 6 (Increase Taxes to prevent envir damage)	.81	.07	.05	05	03	02
Envir 7 (Confidence in green/ecology movement)	.47	.27	.18	.24	00	.22
Envir 8 (Environment or economic growth)	.38	.10	.04	.29	15	.35
Envir 9 (Meeting/letter/petition for environment)	.05	.72	.02	.14	05	.14
Envir 10 (Buy at 20% higher prices for envir)	.80	.13	.01	.01	05	10
Envir 11 (Contributed to Environ Organisation)	.11	.75	.00	.12	01	.08
Envir 12 (Membership in Environ Organisation)	.16	.73	.04	03	03	19
Neo-Lib 1 (Competition good/harmful)	.04	.01	03	01	.78	.05
Neo-Lib 2 (Private/government ownership)	08	00	06	01	.74	06
Neo-Lib 3 (How business managed)	10	09	19	.11	.34	.10
Neo-Lib 4 (Government/people responsibility)	03	03	.74	07	14	.02
Neo-Lib 5 (Rich at expense/wealth can grow)	25	.06	.26	.06	27	.36
Neo-Lib 6 (Incomes more equal/larger diff.)	.06	05	.72	.02	03	08
Neo-Lib 7 (Poor because lazy/society unfair)	09	03 11	60	07	.06	06 06
Neo-Lib 9 (Imports free/stricter limits)	02	.05	06	07 27	.07	00 .73
Percentage of Variance	9.9	9.9	8.8	8.0	8.0	6.

Table 10 Results from Three Separate Principal Components Factor Analyses with Varimax Rotation from the **1995 Japan** Data Set of the World Values Survey, for 10 Environmental Variables, 8 Neo-Liberal Variables and all 18 Variables Together

				Factors			
	1	2	3	4	5	6	7
Japan 1995 Environmental Variables							
Envir 1 (Master or coexist)	03	.00	.00	.94			
Envir 2 (Reused or recycled for environment)	.11	.78	.07	12			
Envir 3 (Chosen product for environment)	.13	.76	.12	.14			
Envir 6 (Increase Taxes to prevent envir damage)	.83	03	.05	.05			
Envir 7 (Confidence in green/ecology movement)	.32	.15	.17	10			
Envir 8 (Environment or economic growth)	.56	.29	11	06			
Envir 9 (Meeting/letter/petition for environment)	.05	.33	.60	01			
Envir 10 (Buy at 20% higher prices for envir)	.84	.04	.10	.05			
Envir 11 (Contributed to Environ Organisation)	.08	.08	.66	.29			
Envir 12 (Membership in Environ Organisation)	.03	08	.73	18			
Percentage of Variance	18.6	14.2	14.0	10.5			
Japan 1995 Neo-Liberal Variables							
Neo-Lib 1 (Competition good/harmful)	.04	.74	.10				
Neo-Lib 2 (Private/government ownership)	14	.57	.30				
Neo-Lib 3 (How business managed)	16	.55	37				
Neo-Lib 4 (Government/people responsibility)	.76	.15	06				
Neo-Lib 5 (Rich at expense/wealth can grow)	.02	.13	.58				
Neo-Lib 6 (Incomes more equal/larger diff.)	.69	18	11				
Neo-Lib 7 (Poor because lazy/society unfair)	61	.12	08				
Neo-Lib 9 (Imports free/stricter limits)	10	01	.74				
Percentage of Variance	18.4	15.8	14.4				
Japan 1995 Environmental and Neo-Liberal							
Variables							
Envir 1 (Master or coexist)	.10	.23	.03	22	.05	.55	.28
Envir 2 (Reused or recycled for environment)	.10	.15	00	.73	.02	12	10
Envir 3 (Chosen product for environment)	.18	.25	.12	.64	06	.13	01
Envir 6 (Increase Taxes to prevent envir damage)	.82	.04	09	.04	.02	.02	13
Envir 7 (Confidence in green/ecology movement)	.32	.23	.14	01	.22	45	.22
Envir 8 (Environment or economic growth)	.51	11	.01	.35	.00	17	.25
Envir 9 (Meeting/letter/petition for environment)	.04	.58	.02	.33	.03	.04	01
Envir 10 (Buy at 20% higher prices for envir)	.83	.09	08	.10	03	.03	.02
Envir 11 (Contributed to Environ Organisation)	.09	.65	.06	.08	.06	.10	02
Envir 12 (Membership in Environ Organisation)	05	.62	11	.03	09	12	.03
Neo-Lib 1 (Competition good/harmful)	.02	.14	03	13	.76	.00	06
Neo-Lib 2 (Private/government ownership)	01	16	13	.11	.64	.11	06
Neo-Lib 3 (How business managed)	03	07	10	.14	.21	.00	76
Neo-Lib 4 (Government/people responsibility)	16	.08	.69	.03	.20	22	.11
Neo-Lib 5 (Rich at expense/wealth can grow)	02	04	.02	.08	.14	.72	03
Neo-Lib 6 (Incomes more equal/larger diff.)	10	.05	.67	03	21	.02	01
Neo-Lib 7 (Poor because lazy/society unfair)	07	.15	67	09	.10	14	.02
Neo-Lib 9 (Imports free/stricter limits)	18	31	22	.37	.22	.14	.51
Percentage of Variance	10.3	8.5	8.4	8.0	7.0	6.7	6.0

Table 11 Results from Three Separate Principal Components Factor Analyses with Varimax Rotation from the **Mid-1990's** World Values Surveys for **8 'Richer' Nations,** for 10 Environmental Variables, 8 Neo-Liberal Variables and all 18 Variables Together

	Factors								
	1	2	3	4	5	6			
World Values Data Mid-1990's 8 'Richer'									
Nations-Environmental Variables									
Envir 1 (Master or coexist)	17	.19	36						
Envir 2 (Reused or recycled for environment)	.00	.15	.80						
Envir 3 (Chosen product for environment)	.12	.18	.77						
Envir 6 (Increase Taxes to prevent envir damage)	.79	.00	.00						
Envir 7 (Confidence in green/ecology movement)	.57	.15	.00						
Envir 8 (Environment or economic growth)	.46	.00	.00						
Envir 9 (Meeting/letter/petition for environment)	.14	.66	.12						
Envir 10 (Buy at 20% higher prices for envir)	.75	.00	.00						
Envir 11 (Contributed to Environ Organisation)	.12	.73	.00						
Envir 12 (Membership in Environ Organisation)	.00	.73	.00						
Percentage of Variance	18.2	16.2	14.0						
World Values-8 'Richer' Nations-Neo-Liberal									
Variables Neo-Lib 1 (Competition good/harmful)	.00	.76	11						
Neo-Lib 2 (Private/government ownership)	.00	.78	.00						
Neo-Lib 3 (How business managed)	21	.41	.27						
Neo-Lib 4 (Government/people responsibility)	.65	21	.11						
Neo-Lib 5 (Rich at expense/wealth can grow)	.30	.00	.63						
Neo-Lib 6 (Incomes more equal/larger diff.)	.74	.00	14						
Neo-Lib 7 (Poor because lazy/society unfair)	59	.13	.00						
Neo-Lib 9 (Imports free/stricter limits)	17	.00	.72						
Percentage of Variance	18.5	17.8	12.9						
World Values-8 'Richer' Nations Environmenta	l								
and Neo-Liberal Variables									
Envir 1 (Master or coexist)	23	.14	22	32	16	30			
Envir 2 (Reused or recycled for environment)	.00	.00	.00	.00	.82	.0			
Envir 3 (Chosen product for environment)	.16	.13	.00	.00	.79	.00			
Envir 6 (Increase Taxes to prevent envir damage)	.78	.00	.00	.00	.00	.00			
Envir 7 (Confidence in green/ecology movement)	.58	.16	.15	.00	.00	.00			
Envir 8 (Environment or economic growth)	.45	.00	.00	.00	.00	.00			
Envir 9 (Meeting/letter/petition for environment)	.14	.66	.00	.00	.13	.1:			
Envir 10 (Buy at 20% higher prices for envir)	.74	.00	.00	.00	.00	.00			
Envir 11 (Contributed to Environ Organisation)	.13	.73	.00	.00	.00	.00			
Envir 12 (Membership in Environ Organisation)	.00	.73	.00	.00	.00	13			
Neo-Lib 1 (Competition good/harmful)	.00	.00	.00	.77	.00	12			
Neo-Lib 2 (Private/government ownership)	11	.00	15	.74	.00	.00			
Neo-Lib 3 (How business managed)	16	.00	28	.30	.00	.1:			
Neo-Lib 4 (Government/people responsibility)	.00	.00	.65	17	13	.12			
Neo-Lib 5 (Rich at expense/wealth can grow)	13	.00	.18	.00	.00	.5			
Neo-Lib 6 (Incomes more equal/larger diff.)	11	.00	.71	.00	.00	1:			
Neo-Lib 7 (Poor because lazy/society unfair) Neo-Lib 9 (Imports free/stricter limits)	15 .00	.00 .00	59 17	.00 .00	.00 .00	−.1 • 7 0			
veo-Lio 7 (miports free/stricter mints)	.00	.00	17	.00	.00	./(
Percentage of Variance	10.6	8.9	8.5	7.7	7.7	5.9			

Table 12 Results from Three Separate Principal Components Factor Analyses with Varimax Rotation from the **Mid-1990's Full World Values Surveys** Data Set for 10 Environmental Variables, 8 Neo-Liberal Variables and all 18 Variables Together

	Factors								
	1	2	3	4	5	6	7		
World Values Data Mid-1990's									
All Nations In Set-Environmental Variables									
Envir 1 (Master or coexist)	.00	.32	47						
Envir 2 (Reused or recycled for environment)	.00	.17	.78						
Envir 3 (Chosen product for environment)	.00	.19	.77						
Envir 6 (Increase Taxes to prevent envir damage)	.83	.00	.00						
Envir 7 (Confidence in green/ecology movement)	.37	.00	.20						
Envir 8 (Environment or economic growth)	.46	.00	.00						
Envir 9 (Meeting/letter/petition for environment)	.00	.63	.26						
Envir 10 (Buy at 20% higher prices for envir)	.83	.00	.00						
Envir 11 (Contributed to Environ Organisation)	.00	.73	.13						
Envir 12 (Membership in Environ Organisation)	.00	.69	11						
Percentage of Variance	17.5	15.9	15.6						
World Values Data-All Nations-Neo-Liberal									
Variables	00	70	10						
Neo-Lib 1 (Competition good/harmful)	.00	.79	18						
Neo-Lib 2 (Private/government ownership)	.39	.62	.26						
Neo-Lib 3 (How business managed)	.51	.35	.20						
Neo-Lib 4 (Government/people responsibility)	72	.15	.18						
Neo-Lib 5 (Rich at expense/wealth can grow)	.00	.00	.75						
Neo-Lib 6 (Incomes more equal/larger diff.)	24	.00	.66						
Neo-Lib 7 (Poor because lazy/society unfair) Neo-Lib 9 (Imports free/stricter limits)	.62 .00	.00 .25	11 .00						
Percentage of Variance	17.3	15.3	14.8						
	17.10	10.0	1						
World Values Data-All Nations Environmental and Neo-Liberal Variables									
Envir 1 (Master or coexist)	.00	.30	51	.00	.10	.00	.00		
Envir 2 (Reused or recycled for environment)	.00	.19	.75	.00	.12	.00	.00		
Envir 3 (Chosen product for environment)	.00	.21	.74	.00	.00	.00	.00		
Envir 6 (Increase Taxes to prevent envir damage)	.84	.00	.00	.00	.00	.00	.00		
Envir 7 (Confidence in green/ecology movement)	.31	.00	.24	10	.00	22	10		
Envir 8 (Environment or economic growth)	.46	.00	.00	.00	.00	.00	.00		
Envir 9 (Meeting/letter/petition for environment)	.00	.64	.26	.00	.00	.00	.00		
Envir 10 (Buy at 20% higher prices for envir)	.83	.00	.00	.00	.00	.00	.00		
Envir 11 (Contributed to Environ Organisation)	.00	.73	.12	.00	.00	.00	.00		
Envir 12 (Membership in Environ Organisation)	.00	.68	11	.00	.00	.00	.00		
Neo-Lib 1 (Competition good/harmful)	.00	.00	.00	.74	22	33	.00		
Neo-Lib 2 (Private/government ownership)	.00	.00	.14	.71	.18	.15	.00		
Neo-Lib 3 (How business managed)	.00	.00	.00	.48	.39	.14	.00		
Neo-Lib 4 (Government/people responsibility)	.00	.00	11	.00	72	.12	.00		
Neo-Lib 5 (Rich at expense/wealth can grow)	.00	.00	.00	.00	.00	.75	.00		
Neo-Lib 6 (Incomes more equal/larger diff.)	.00	.00	.00	.00	28	.63	14		
Neo-Lib 7 (Poor because lazy/society unfair)	.00	.00	.00	.00	28 .64	.00	.00		
Neo-Lib 9 (Imports free/stricter limits)	.00	.00	.00	.00	.00	.00	.97		
Percentage of Variance	9.6	8.9	8.8	7.4	7.2	6.6	5.6		

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