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Royal Roads University

## **CRC Research Dialogues - Limits**

January 19, 2006  
Moderated by Ann Dale

### **Participants**

**Dr Ann Dale**, Trudeau Fellow, Professor, School of Environment and Sustainability, Royal Roads University, Canada Research Chair on Sustainable Community Development

**Dr Lenore Newman**, Professor, School of Environment and Sustainability, Royal Roads University

**Dr. Rob VanWynsberghe**, Professor, School of Environment and Sustainability, Royal Roads University

**Dr Levi Waldron**, Post-doctoral fellow, CRC researcher

**Yuill Herbert**, CRC board member

### **Dialogue**

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#### **Ann Dale**

Welcome, panelists and audience to our first dialogue on critical public policy issues for sustainable community development, the idea of limits. Are there limits to community development, to the size of cities? The research team will dialogue between themselves for the first hour and depending on interest, will then respond questions from the e-audience.

As a research team, joined by one of our Board Members for the project, Yuill Herbert, we have differing views on the nature of limits for human endeavors. I wonder if a good way to begin our exploration of these complex and dynamically connected issues of limits, place, scale and diversity is to break the first issue down, are there different types of limits--ecologically, socially and economically?

#### **Lenore Newman**

Test. Just checking to be sure I am logged in correctly.

#### **Ann Dale**

You are indeed logged in correctly. We have just come from a lecture at Ottawa University in the New Thinkers in Health and the Environment, in partnership with the

Delphi Group. Interesting some of the emerging patterns between climate change and health impacts. It reminds of another statistic I heard recently quoting that 1 out of 5 children have asthma when the rate 20 years ago used to be 2% of the population.

Lenore Newman wrote:

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### **Rob VanWynsberghe**

Hi Lenore and Ann. This is Rob VW and I got your message Lenore.

### **Ann Dale**

Hi, Rob, what is the weather like there, it is so up and down in the East, -20 followed by +5?

Rob VanWynsberghe wrote:

Hi Lenore and Ann. This is Rob VW and I got your message Lenore.

### **Rob VanWynsberghe**

Dear all: This is Rob VanWynsberghe of Royal Roads writing. I don't want to brag, but I did just off my bike and I was wearing a sweater. However, this came after approximately 3 weeks where there was a downpour. Today feels good.

### **Ann Dale**

I always wonder what to do when one is waiting for laggards in a meeting, does one go ahead or give them some more time? Rob, you sound like an obnoxious Vancouverite, you neglected to say you have webbed feet from what 26 days of continuous rain.

### **Yuill Herbert**

Hi everyone,

sorry about that- I was struggling with innumerable passwords and usernames.... and personal memory limitations ....

## **Rob VanWynsberghe**

It was so dark here that I could not even walk in the sun when it finally returned. I felt like a Troglodyte (sp?). I do prefer the snow.

## **Levi Waldron**

Ann Dale wrote:

I wonder if a good way to begin our exploration of these complex and dynamically connected issues of limits, place, scale and diversity is to break the first issue down, are there different types of limits--ecologically, socially and economically?

Hi everyone, Levi here. I'll just dive in with a first comment on Ann's question. The Brundland

I believe the Brundland report on sustainable development suggested that environmental limits were a function of the earth, as well as the state of social organization and technology - in other words, all three of what you mentioned. I think there's a lot of truth to that. It's not simple.

## **Ann Dale**

Yuill, you aren't the only one, and you having personal memory issues at your age:)

Yuill Herbert wrote:

Hi everyone,

sorry about that- I was struggling with innumerable passwords and usernames.... and personal memory limitations ....

## **Ann Dale**

Shall we rock and roll, and let's try and tease out the nature of limits--ecologically, socially and economically? Are there ecological limits and are they absolute and finite or plastic?

## **Yuill Herbert**

On your question of different types of limits. I definitely believe there are ecological limits- that's why a tree can't grow as high as the Empire State Building. Social limits are trickier- I think they are more rooted in time and place- for example right now it is tricky

for a social group to self-organize in anarchist collectives and be recognized by the other 'nation' states and the UN. On economic limits, because this 'discipline' is purely artificial I think it is only limited by the imagination, which is dangerous because the ivy league imaginations have disastrous real world impacts....

### **Ann Dale**

No, it is not simple, especially if they are dynamically interconnected, Lenore, any thoughts?

[quote="Levi Waldron"]

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I believe the Brundland report on sustainable development suggested that environmental limits were a function of the earth, as well as the state of social organization and technology - in other words, all three of what you mentioned. I think there's a lot of truth to that. It's not simple.

### **Lenore Newman**

We, as Levi has jumped in, I will come in with my heretical view. There are no meaningful absolute limits that are always reliable limits 100% of the time. The whole concept of limits thus leads greens into an artful trap in which they argue what people "have to" do instead of what would be "good" to do. They then work to surpass the limits we give them rather than see the benefits of doing things in a different way.

### **Ann Dale**

Yuill, don't economic systems have ecological limits to production?

Yuill Herbert wrote:

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## **Levi Waldron**

Oops, pardon my typo. The exact quote is: "The concept of sustainable development does imply limits - not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and the ability of the biosphere to absorb the effects of human activities."

I guess I like this because I think we will (and already have!) run into severe problems well before any really hard-and-fast limits, the kind imposed by physics and availability of earth's resources, stop us.

## **Lenore Newman**

To put it a different way, the green movement spends far too much time playing Cassandra and far too little time saying "look, life isn't very nice for a lot of people plants and animals. Let's do something about that"

## **Rob VanWynsberghe**

Rob here, it seems like economic limits are very elastic as replacements seem to be found. I do think that social limits are much more important than economic ones as the economy is a social institution and therefore governed by its relationship to other ones.

## **Lenore Newman**

Levi has a good point here. The problem isn't limits themselves, but the cost of managing the system limits and the risk of failing to address them

Levi Waldron wrote:

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## **Ann Dale**

Let me also be heretical, I often wonder about the reaction to the Club of Rome's seminal book, Limits to Growth, what is there in the human psyche that rejects any notion of limits, and are there generational differences?

Lenore Newman wrote:

We, as Levi has jumped in, I will come in with my heretical view. There are no meaningful absolute limits that are always reliable limits 100% of the time. The whole concept of limits thus leads greens into an artful trap in which they argue what people "have to" do instead of what would be "good" to do. They then work to surpass the limits we give them rather than see the benefits of doing things in a different way.

## **Yuill Herbert**

[quote="Ann Dale"]Yuill, don't economic systems have ecological limits to production?

I guess there is an important distinction here between imaginary ecological systems and real world production of goods and services- because of the discipline's utter detachment, it is almost tempting to call the latter something other than economics. Though the theorists who do recognize limits seem to be content with the title ecological economics. The same limits that act on that tree must also restrict the number of Empire State Buildings that society can build. There is, however, no limit on our creativity- there are an infinite number of ways in which we can build our share of Empire State Buildings. And this brings up another important question: what is our share? and what share belongs to other creatures or plants? Are the shares mutually exclusive?

## **Ann Dale**

Rob, can you tease out what some of these social limits might be?

Rob VanWynsberghe wrote:

Rob here, it seems like economic limits are very elastic as replacements seem to be found. I do think that social limits are much more important than economic ones as the economy is a social institution and therefore governed by its relationship to other ones.

## **Rob VanWynsberghe**

Lenore's point suggests that limits themselves change and become more constraining as managing limits becomes more of an issue. This raises the point that choices are a luxury and we need to choose how to deal with limits before we reach them. If we wait then the choices are narrower.

## **Lenore Newman**

Rob raises a good point as well. The economy is profoundly social. For every dollar in the economy representing real goods sitting on a dock somewhere, there are fifty "speculation dollars" that only have value because we believe they do. The market is thus based on what people believe to be true, not what is true.

## **Yuill Herbert**

On Lenore's comment that life isn't very good for animals (and plants)

I don't think that we can have any sort of meaningful sense of this- it is beyond our intellectual capacity.

Life seems to include both suffering and joy in different measures for different creatures (humans included) in different places at different times...

## **Levi Waldron**

There are different kinds of limits that we might be talking about. Limits to oppression which a people can endure before they revolt, limits in resources availability, limits to biospheric carrying capacity, limits to what technology alone can accomplish. For some of these, it may be more clear to speak about "thresholds" or "equality."

## **Rob VanWynsberghe**

Lenore and Levi's interpretation of my point suggests that dangerous social limits might be connected to what we used to call the social contract - folks willingness to believe in the economy and money, which are ultimately constructions designed to foster smooth running of society.

## **Ann Dale**

Perhaps the most important limits are psychological and intellectual?

Levi Waldron wrote:

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## **Lenore Newman**

Yuill has a good point here on a few things- one, we need to make a choice about how much "wild" we want. Such a choice is often called a "non-marketable" good as a free market will not allocate anything for certain goods such as lighthouses, urban parkland, etc. We have to decide how many of such things we want, because we do have the power to at least disrupt every ecosystem on Earth.

## **Yuill Herbert**

I think the arguments behind Club of Rome are good, but perhaps it didn't get the number right- but who could? I think it is virtually impossible to know what the limits are- this creates an interesting situation for policy-makers and is exactly the situation that people working on climate change are facing now. Except the social and economic limits are no match for the ecological limits and so as Rob says our options are decreasing.

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That's a pretty broad, sweeping statement Yuill! Do you really think we are incapable of making any estimation of whether a particular animal is suffering or not, for example?

As for your second point, I would suggest that some (many) animal's lives do not contain a mix of suffering and joy. I'd be glad to provide examples...

## **Lenore Newman**

Some of the limits are intellectual ones Ann, which adds a deeply complex variable to the system, as one can predict when a "genius" will develop something that shifts the entire dialogue.

## **Ann Dale**

Rob, aren't there important considerations of a society optimizing development, it seems to me that many communities in Canada suffer from over-development, uneven development and under-development?

Rob VanWynsberghe wrote:

Lenore and Levi's interpretation of my point suggests that dangerous social limits might be connected to what we used to call the social contract - folks willingness to believe in the economy and money, which are ultimately constructions designed to foster smooth running of society.

## **Rob VanWynsberghe**

Could we test the limits in a systematic way to determine them?

## **Ann Dale**

Ah, the tipping point, what to explain, unexpected dynamic evolving . . .

Lenore Newman wrote:

Some of the limits are intellectual ones Ann, which adds a deeply complex variable to the system, as one can predict when a "genius" will develop something that shifts the entire dialogue.

## **Lenore Newman**

I don't think so, Rob, but then again I don't believe they are there to find. One of the tenets of complex systems theory is that the only way to absolutely know what will happen in a complex system is to run it, but as we only get one "run" we are kind of stuck

## **Ann Dale**

Do we test them, or do we model them in order to avoid suffering?

Rob VanWynsberghe wrote:

Could we test the limits in a systematic way to determine them?

## **Ann Dale**

Is not climate change real evidence of limits?

## **Yuill Herbert**

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I think we can identify both joy and suffering in other species... but we cannot know the quality of life of other species relative to that of our own... It is difficult even within our own sometimes.... For example, is a shorter life always worse than a longer one... The logical extension of this- because a mosquito lives for only a day, is this life any less filled with joy or suffering than that of your average Canadian? A difficult question I think. Is it worse, as a seal, to be eaten by a Killer Whale (which looks gross and horrible to us) then to die in an old age home hooked up to a bunch of tubes? I don't know

## **Rob VanWynsberghe**

Please let me know if handled this quote thing properly. I believe the upside of understanding that the economy is a construction lies in understanding that there is no limit to money. I believe that more and more people are not buying budgets either in their lives or in governments. This means that an important constraint/limit will be removed from the equation and we will being to experiment with different forms of development, backed by our system. To me this is what we need - pilots, demonstrations and cases with which to explore limits and possibilities.

Rob VanWynsberghe wrote:

Could we test the limits in a systematic way to determine them?

### **Ann Dale**

Lenore, if we are kind of stuck, what does this mean for decision-makers, in terms of the precautionary principle, regardless of whether or not limits exist?

Lenore Newman wrote:

I don't think so, Rob, but then again I don't believe they are there to find. One of the tenets of complex systems theory is that the only way to absolutely know what will happen in a complex system is to run it, but as we only get one "run" we are kind of stuck

### **Lenore Newman**

Ann Dale wrote:

Is not climate change real evidence of limits?

No, climate change is real evidence of impact. It suggests we are changing the environment around of. What we do about it will depend on whether we think the changes will be damaging.

### **Levi Waldron**

Ann Dale wrote:

Do we test them, or do we model them in order to avoid suffering?

Rob VanWynsberghe wrote:

Could we test the limits in a systematic way to determine them?

What kind of limits do you mean? Generally, I don't think we can test them or model the most important limits, in any useful way. That is, a way that makes reliable predictions and where the answers don't come too late. But there are other good reasons to act.

### **Ann Dale**

Rob, I don't understand, the economy is a social construction, and thus there is no limit to money. But the economy removed from the constraints of the biosphere will simply result in the decline of all of the limiting factors of production not priced properly at this moment--air, water, soil?

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### **Lenore Newman**

I think a weak precautionary principle is critical. For example, Ontario will pay a lot of money to make nuclear energy and produce waste that will be deadly for thousands of years. A bad outcome in this case is almost certain. However sometimes the potential problem can't be seen, so the precautionary principle fails.

### **Yuill Herbert**

Ann Dale wrote:

Is not climate change real evidence of limits?

I think climate change is an indicator of limits- a limit to how much CO2 we can put in the atmosphere and maintain snow covered ski hills, amongst a host of other, probably much more important things.

The social limit is our ability to adjust to these changes in a peaceful way which is a feedback on our ability to adjust our economic systems to ensure that everyone has access to what they need in rapidly changing conditions.

So in terms of the ecosystem the limit is the atmosphere's ability to absorb CO2

In terms of society, the limit is the ability of society to evolve its farming systems, forestry systems, fisheries etc to meet the changing conditions

### **Rob VanWynsberghe**

I am suggesting that we need to use the current economy, which is not linked to ecological limits to experiment with lives within limits.

Ann Dale wrote:

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### **Lenore Newman**

Rob is right to a degree, there is no limit to money and that creates some interesting distortions of the way that innovation advances. I paid for my doctorate by day trading, and I quickly learned what a weird thing the market is. One buys a company that is likely a fraud and tries to quickly sell it to someone who wants it a little worse than you do, like an endless musical chairs. The weird part is that almost incidentally innovation gets funded, and new ideas are pushed forward.

### **Ann Dale**

Why is it only evidence of impacts, I agree with Yuill, to me it is a fundamental indicator that we have exceeded the planet's carrying capacity or ecological footprint?

Lenore Newman wrote:

Ann Dale wrote:

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No, climate change is real evidence of impact. It suggests we are changing the environment around of. What we do about it will depend on whether we think the changes will be damaging.

### **Rob VanWynsberghe**

Exactly.

Lenore Newman wrote:

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### **Levi Waldron**

I would say there are limits to money: more precisely, limits to how much the quantity of money in the economy can outstrip tangible items of real value. But again, it's a complex mixture of social, economic, physical, and time factors. I'm hesitant to go on too much about this because I'm not at all expert in economy, but I think that past stock market crashes are a demonstration of this, although with temporary limits that were later exceeded due to changing conditions.

### **Yuill Herbert**

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No, climate change is real evidence of impact. It suggests we are changing the environment around of. What we do about it will depend on whether we think the changes will be damaging.

Many of the economists who are sitting on the fence between ecological and neoliberal economics argue that it is possible to create an economy that it is nearly or even entirely independent of natural resources. I don't believe that can be, as the fundamental purpose of an economy is to produce and distribute the very basic needs such as food, shelter, clothing, etc. So I don't think you can have an economy separate from the ecological system.

### **Lenore Newman**

Ann, my point is everything we do creates changes. If we were to all drop dead tomorrow, the atmosphere would be its old self again in a century or so, a drop in the bucket of geologic time. Now I do believe that global warming is a huge problem, but not because it transgresses some physical law- only because it is likely to cause us a lot of grief, and damage Earth's ecosystems, which I happen to value. There are ways to right what we have done- what is concerning to me is that people aren't too interested in actually doing those things.

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## **Ann Dale**

Yuill raises an interesting point, the separation of the economy from natural systems. What about the separation of money from production, coupled with the separation of labour and companies from place-based communities?

Yuill Herbert wrote:

Ann Dale wrote:

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### **Lenore Newman**

That is quite true, Yuill. "Etherialization" as it is called can make things better, but at some level there is a need to produce raw goods to keep people fed.

Many of the economists who are sitting on the fence between ecological and neoliberal economics argue that it is possible to create an economy that it is nearly or even entirely independent of natural resources. I don't believe that can be, as the fundamental purpose of an economy is to produce and distribute the very basic needs such as food, shelter, clothing, etc. So I don't think you can have an economy separate from the ecological system.[/quote]

### **Levi Waldron**

Ann Dale wrote:

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I suppose because we could only know it was a surpassed \*limit\* once we knew for certain that our economy, or population, or something, were permanently diminished and would never recover. And who wants to wait until we know that? Not me.

### **Lenore Newman**

True Levi, but we could never know that there wasn't a solution that we didn't think of. However I think you hit the critical point- do we WANT to live in a world where we are constantly having to rescue ourselves from oncoming disaster? Where we could well fail? I don't really want to, I would rather have a bit of a buffer built in.

Levi Waldron wrote:

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Sounds like we need to apply the precautionary approach to the economy

## **Rob VanWynsberghe**

Food is a good example of something that is heading away from natural limits. Nanotechnology is making it possible to produce food in the lab. Social institutions prime directives are to remain vital, the economy will do everything it can to remain powerful and it is in competition with all other social institutions.

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[/quote]

## **Levi Waldron**

Lenore Newman wrote:

That is quite true, Yuill. "Etherialization" as it is called can make things better, but at some level there is a need to produce raw goods to keep people fed.

I must say I can't imagine what an "etherialized" economy would look like. At the very least, it would look nothing like what we have today. A world where non-tangible items are ever increasingly more valued than anything requiring resource consumption. Hmm, sounds like a non-consumer society...

### **Ann Dale**

Shouldn't all communities adopt the precautionary principle for their future sustainability?

Yuill Herbert wrote:

Sounds like we need to apply the precautionary approach to the economy

### **Yuill Herbert**

So we are left with a tricky situation:

we have ecological limits: these are not recognized by the people in control

in theory there are no social limits but in practice, the limitation seems to be the speed at which society can meaningfully anticipate change and accordingly adjust itself (prior to being in crisis mode)

and the economists are out to lunch... (except for a few)

### **Ann Dale**

How many of us believe in natural limits?

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### **Yuill Herbert**

Ann Dale wrote:

Shouldn't all communities adopt the precautionary principle for their future sustainability?

Yuill Herbert wrote:

Sounds like we need to apply the precautionary approach to the economy

But the people in control don't like that...

### **Ann Dale**

Many quote human ingenuity and innovation as one means to make limits more plastic, however, Yuill raises an important point, the lack of recognition. Why have we failed to communicate the science of climate change to political parties, and I won't ask anyone to predict the outcome of the our election:)

Yuill Herbert wrote:

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### **Lenore Newman**

I don't believe there are any ecological social or economic limits that we cannot in theory transcend. Note this is different from saying we should transcend those limits, at least not without discussion. It is also different than saying we will transcend those limits.

Ann Dale wrote:

How many of us believe in natural limits?

Rob VanWynsberghe wrote:

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[/quote]

### **Rob VanWynsberghe**

I think that we have imposed limits on thinking in our being socialized into consumers. We need to destroy those limits in order to address other limits. Consumption is about a limited range of choice and we need to blow our minds in order to expand this ingrained form of thinking. E-dialogues blow my mind, for example.

Yuill Herbert wrote:

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and the economists are out to lunch... (except for a few)

### **Yuill Herbert**

Ann Dale wrote:

Many quote human ingenuity and innovation as one means to make limits more plastic, however, Yuill raises an important point, the lack of recognition. Why have we failed to communicate the science of climate change to political parties, and I won't ask anyone to predict the outcome of the our election:)

Yuill Herbert wrote:

So we are left with a tricky situation:

we have ecological limits: these are not recognized by the people in control

in theory there are no social limits but in practice, the limitation seems to be the speed at which society can meaningfully anticipate change and accordingly adjust itself (prior to being in crisis mode)

and the economists are out to lunch... (except for a few)

I am just beginning to understand one of the great new examples of human ingenuity- namely Nanotechnology. The sharpest double edged sword going. On one hand it will provide unlimited solar power for the world while on the other it could completely 'artificially' nature, with unknown consequences. The EPA recently released its white paper in which it called for voluntary recognition of possible problems because the EPA 'didn't have the capacity to understand the environmental implications'. Nor does anyone else, I would posit...

## **Yuill Herbert**

Rob VanWynsberghe wrote:

I think that we have imposed limits on thinking in our being socialized into consumers. We need to destroy those limits in order to address other limits. Consumption is about a limited range of choice and we need to blow our minds in order to expand this ingrained form of thinking. E-dialogues blow my mind, for example.

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Some sort of revolution? (not Marxist-Leninist)- how about the 'cooperative' revolution?

## **Levi Waldron**

[quote="Ann Dale"]How many of us believe in natural limits?</quote>

From my background in physics, I think "of course there are natural limits." The speed of light is an absolute natural limit, the earth is a finite size, we have a finite time before being engulfed by the sun. I just think that these absolute, natural limits, will not keep us from making the atmosphere inhospitable, from devastating biodiversity, or terribly oppressing people and (non-human) animals. And such problems are where my concerns and majority of communications about the environment lie, rather than when we will run out of resources.

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### **Lenore Newman**

Yuill has referred several times to the "people in control". I used to look for the people in control, but as I did my dissertation, I began to come to the conclusion that their really aren't "people in control" in a conventional sense that could be cleaned up with a nice short coup d'etat. In reality, no one is driving the bus, which poses a terrifying problem. Cutting the head off of the hydra is difficult if you can't even find the head. Or if there is no head. Rather like Hobbe's Leviathan, a critical read, I feel.

### **Yuill Herbert**

What about spirituality- I think this is the one realm in which we are truly and utterly free... and it is the one realm that 'modern' society seems to have turned its back on...

### **Ann Dale**

As you know, I have often used the example we were taught in child psyche about putting young children on a roof top with no fence, and their space is more constrained without a fence than a fence that then defines the limits. I can understand your position that in theory there may be no social or economic limits we cannot transcend, but not ecological limits, the biosphere is finite, with a limited capacity and I don't agree that

climate change is only evidence of impacts and not limits. How the hell could we ever tease the parameters of that out?

Lenore Newman wrote:

I don't believe there are any ecological social or economic limits that we cannot in theory transcend. Note this is different from saying we should transcend those limits, at least not without discussion. It is also different than saying we will transcend those limits.

### **Yuill Herbert**

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### **Ann Dale**

Levi and Yuill, who raised spirituality, perhaps the only things there are not limits on, are hope, spirituality and love, all of the things that are not currently as valued as the economic system? Rob, any thoughts?

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### **Rob VanWynsberghe**

Yes, I believe that conceptualizing such possibilities is really important as it expands the limits of possibilities.

Yuill Herbert wrote:

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Some sort of revolution? (not Marxist-Leninist)- how about the 'cooperative' revolution?

### **Lenore Newman**

Ok, Ann, let's do a thought experiment. Imagine a group of mad scientists build a space colony, and then burn the Earth to a cinder. I would say with today's technology, they might have a one in a hundred chance of survival. With every year those odds get better. But I don't want any part in such a world. Now here is the scary part- this is exactly what we are doing, just very slowly and a little less completely. I am not an environmentalist because I think they will fail, it is because I think it is because they just might succeed, and I don't like their future.

### **Ann Dale**

Rob, would you say that the worst kinds of limits may be psychological?

### **Yuill Herbert**

Yuill Herbert wrote:

Lenore Newman wrote:

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I guess I wouldn't say that they are so much in control... I think I am more of a 'structuralist'.... they are probably as much controlled by the system as anyone... but I remember a neat quote by David Orr, an educator in the US, in which he attributes most of the problems in the world to people with MBA, MSC, BAs, PhDs, LLBs (have I missed any?), etc. But they are part of the system too...

## **Levi Waldron**

Yuill Herbert wrote:

What about spirituality- I think this is the one realm in which we are truly and utterly free... and it is the one realm that 'modern' society seems to have turned its back on...

Given the history of the adaptability of spirituality, I don't hold high hopes for it to save the world. Some people souls, perhaps. I hold out hope for a revolution in thinking and power, from the bottom up.

Lenore, interesting comment that "no one is driving the bus." It's a complex network of control that probably no one fully understands.

## **Rob VanWynsberghe**

I will try to respond to Ann as this is tricky ground. The reason is that I don't know what role that love etc. plays in a sustainability social movement. I have read that emotions are critical to social movements, but these are primarily psychological entities, especially today. I am not confident that we know how to integrate the psychological into social movements. This is the great "black box" for me. [quote="Ann Dale"]Levi and Yuill, who raised spirituality, perhaps the only things there are not limits on, are hope, spirituality and love, all of the things that are not currently as valued as the economic system? Rob, any thoughts?

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## **Ann Dale**

Lenore, I agree, and I believe we have lost the ability to 'see' the aggregate impacts of our collective decisions and we are heading towards a future none of us wish. Which is why I am so deeply committed to enhancing public literacy and dialogue, in whatever ways appropriate to engage communities in discussing their future meaning.

Lenore Newman wrote:

Ok, Ann, let's do a thought experiment. Imagine a group of mad scientists build a space colony, and then burn the Earth to a cinder. I would say with today's technology, they might have a one in a hundred chance of survival. With every year those odds get better. But I don't want any part in such a world. Now here is the scary part- this is exactly what we are doing, just very slowly and a little less completely. I am not an environmentalist because I think they will fail, it is because I think it is because they just might succeed, and I don't like their future.

## **Ann Dale**

Rob, and team, love is always tricky ground, and that gets me to something that our team has found critical to sustainable community development, openness to each other in this team, but openness to diversity, but that is the subject of another discussion:)

Rob VanWynsberghe wrote:

I will try to respond to Ann as this is tricky ground.

## **Rob VanWynsberghe**

Interesting. The first limit that came to mind for me today was tolerance. I imagined it as being critical, especially as we as a country "glom" together in cities.

## **Lenore Newman**

Spirituality is a tempting solution, but I agree with Levi- it lacks the ability to change rapidly. I am a member of a pagan religion, and come from about twenty generations of pagans. I often think, "if only everyone were a member of my little belief system" and I then wonder what if we wrote a book, and everyone believed in it. And they fought each other over the meaning of certain sentences... The problem, it seems, is that the Bible and the Koran can't be edited, so there are perfectly sane people out of there in this country who would kill me for being a lesbian because of a few lines in a book. And I don't know that I could do better.

## **Ann Dale**

I sense some convergence that perhaps limits are biophysical but not metaphysical, that they are dynamic and constantly evolving, thus, difficult to predict, thus, communities may wish to adopt the precautionary principle, and we didn't even touch on our capacity to learn and adapt, a complex issue, but nevertheless, something we should continue to discuss as a team. What are the limits to change, perhaps may be a more important determinant to our evolution as a species. Before we close, any concluding thoughts, and any predictions for the election?

## **Levi Waldron**

I do think emotion and love critical to sustainable development. As much as we try to make rational arguments for equality and not wrecking the planet, on an individual and collective level it comes down to emotional conclusions of what is the right thing to do.

## **Lenore Newman**

Election prediction: Harper will win. Martin and Layton will both be turfed as leaders. A million people will vote green and not elect a single member. The tipping point is unpredictable, so I can't call minority or majority. If a strong Harper majority Bosclair will win in Quebec and they will separate late in Harper's mandate. I must work on my French.

Ann Dale wrote:

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## **Rob VanWynsberghe**

It would be fun to discuss our essence as a species and then to build up from there. So much of what we stated today goes back to our worldviews on humans.

I really enjoyed myself. Thanks

## **Ann Dale**

Lenore, who is getting married tomorrow, the team wishes you great joy and happiness throughout your life, and may your love and relationship with Shannon have no limits.

Thank you, dear colleagues, for your support and commitment to exploring.

## **Lenore Newman**

Thanks from both of us, Ann

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Humans are so good at living in the present..... I guess if you like partying that works out well. Its a bit hard on our neighbours such as caribou and frogs though. If only they could vote...

Ann Dale wrote:

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## **Rob VanWynsberghe**

Congratulations Lenore and Shannon. Wonderful.

## **Yuill Herbert**

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Thanks from both of us, Ann

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Congratulations!

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Thanks everyone, I feel honoured to be in such thoughtful company. My parting thoughts are to keep striving for equality and happiness and not lose hope for change when we least expect it.

Congratulations, Lenore! I know you two will do wonderfully together.