From food regimes to food sheds - the case of Southern Ontario.

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Out of all of these food regimes there have been cycles - cycles of the rise and fall of great powers, cycles of commodities that have been dominant, cycles of places in the world that have become major export zones, cycles of which kinds of capital really have been the power in the system. There have also been cumulative changes. As people and commodities have moved around the world, even with retrenchment in between, we have reached the limits - or we may be reaching the limits - of the natural frontiers of settlement. By pushing indigenous people off the land in the areas of new settlement, much was opened up that created the commodities that were a basis of the first food regime. The second food regime intensified that but changed the use of the land by dividing it into animals and grains. Now there is an expansion into the Amazon for expanding each of these commodity complexes - the livestock complex, some grain but mostly now fruits and vegetables and acquaculture moving into the sea in the same ways that we reorganised industrial use of the land for farming. Now we may be reaching the end of the capacity of the Earth to absorb new areas of production, especially of industrial food production.

Labour and territory

At the same time labour, which was migrating over very long distances even in the 19th century – moving from Europe to the US, moving from India to the Caribbean – as part of the reorganisation of plantation agriculture, of settler agriculture, in those periods. But now labour is moving further and faster and it's moving into cities. Labour in the earlier period was moving into farming regions to grow food. Now it's moving into cities and it raises the question of what is going to be the basis, what kind of farming system, which people in what way, will be growing the food for these global cities.

Again we're talking about agriculture in an urban world but we are talking about it in a way that has become dislocated from territory. Food and agriculture have been separated from each other and both have been deterritorialised – separated from the place where perhaps they were first domesticated. That started happening 500 years ago, separated from the places they're consumed, separated in every kind of way from each other.

It's important to go back before I talk about [re-]territorialisation and say a little bit about the relation between farming and food since agricultural began along with everything we call civilization – cities, writing, division of labour in a more complex way, classes began about 10,000 years ago.

Farmers and peasant cuisines

So who are farmers? Food and farming were intimately connected and are arguably at the centre of what we mean by cultures historically, and certainly civilisations. So Mexican, what we now call Mexican, civilization consists of a particular way of growing corn, beans and squash, which is agronomically stable. The plants work together in terms of restoring nutrients to the soil, retaining water. They also work very well in terms of the cuisine of the people. So you eat tortillas that come from there – the good cuisine is tortillas, beans, squash, plus a lot of other things, chilli peppers and so on. What Sidney Mintz calls the basic structure of peasant cuisines in all parts of the world consists of a main starchy staple – in this case it would be maize – a legume (protein) which is mainly a plant protein, a legume, which works agronomically and for human health to create the proteins we need – plus "fringe." Fringe is all the flavours, all of the micronutrients we now say, all the flesh – the meats, the fish – little bits – but also all the many, many plants and animals that were eaten by, have always been eaten by, people because they grew in the fields, because they were the forests that were connected to the fields, in the waters that were connected to the fields. So the entire agro- ecosystem, which is embedded in a deeper ecosystem, is also providing a wide variety of plants and animals that provide the diversity of foods that people need for health. And people learned through their cultures how to grow them, how to prepare them, how to eat them, and they became what we define as the landscapes and the cuisines of those cultures - very crucial, fundamental and pervasive in those cultures.

So that's the example of beans, maize and squash is the typical for what was originally the Aztec complex. Rice, fish and soy beans in Asia. Lentils, wheat, olives in the Middle East and in the Mediterranean. There are a variety of complexes, of cultural complexes, that follow this pattern all over the world. They're integrated, they are deeply connected. So over this pattern of food regimes there was a separation, and with that separation as a species we lost something and we potentially can gain something.

Losses and gains

What we've lost is the ability to continue to work with what has been learned by experience, supports the society in the ecosystem and supports the health and the culture of human groups. How people eat together, how they grow together, what they grow, what they eat - all of those things evolved over long periods of time. So a child that is born in Thailand doesn't learn to eat food, he or she learns to eat rice and learns to enjoy all the tastes of that cuisine. And that has over time, mostly – there've been some disasters – but mostly, over time, that has supported the health of people and the sustainability of the ecosystems which they inhabit.

Now as physical beings we have evolved to like things that our ancestors as hunters and gatherers liked the most because it helped them to survive. And that was sweet things, which helped recognise berries and things that were good to eat, fat because it was very hard to get fat for most of human history, and we need some, and salt, because we also need that and that was hard to get. That was over tens of thousands of years. We were hunters and gatherers and

foragers for much longer than we, as a species, have been farmers. Over that time we did not develop any limits to our desire for these things.

What set limits to our desire and helped us keep healthy in the whole period since agriculture began were these cultural cuisines that taught us to like to eat the food of our cultures. Once that's broken we become vulnerable to the focus groups of the corporations. They bring people who have lost their roots to their culture into a room, feed them things, and they find out that we like things are salty, sweet and fat, and that's what they give us. And that is where our health crisis has come from. So we have to solve that and now we have to solve it consciously. Industrial farming has produced large quantities of certain products - of wheat, of livestock - at great ecological cost that is not counted, and in ways that now require us to consciously think and decide how were going to grow food in ecosystems. So one trajectory that is on offer now is to continue to industrialise and produce more specialised crops in certain regions very far from all the consumers because they'll be sent all over the world to whoever can afford to buy them. So the ecosystems and the diets of people become greatly separated and now we have to think about how to put them back together. So who are farmers, who are they now, how can we think about them now?

Reconnecting people, farmers and territories

The other trajectory is how to consciously reconnect food and agriculture in territories where people are now redistributed and redistributing themselves all over the world, and mostly to cities. We have to do this consciously and that involves revaluing farmers. The good news is that farmers are starting to revalue themselves - after many years of being, many centuries, even millennia of being at the bottom of most social systems. The food sovereignty movement is the largest social movement in the world. It overlaps with indigenous movements, which are also quite new, a reassertion and a reclaiming of pride in what is known about how to live in particular ecosystems, how to grow and manage ecosystems, at the same time as providing food and living well. This movement, which is led by an organisation called Via Campesina, reclaims the name of peasants or as campesino means, literally, people of the land. So people of the land is a name that's claimed as a political project to put food and farming at the centre of the renewal of societies. Food and farming as healthy and as connected to each other and as embedded in territories.

Now these territories are not inherited, they're changing, they're growing, we need to think about them in a very conscious, explicit and political way. So one of the words that is being used by geographers and others to describe the way the food system is emerging in many places, always in a unique way, but the same thing is happening all over the world, is territorialisation. Now we have to think about territories as lands in which we live. Now those lands are urban, so it's mainly urban regions we're talking about. And we have to ask how are those territories evolving and how can they be reorganized, restructured politically, socially, culturally to reconnect food and agriculture and to re-embed both in the land so that they serve sustainability, ecosystem management and health. Because people are on the move we're talking about really every region being

reconstructed very quickly around cities that are receiving people from many parts of the world, who bring many cultures with them, many cuisines with them and – this is the secret – knowledge of farming. Sometimes it's formal knowledge as agronomists. Very often it's knowledge that is brought from one part of the world to another, of how to farm in one part of the world, people moving into cities never occurring to them, unless we make it explicit, that they might be able to farm in this new part of the world. And that can only be made explicit if we make land available.

Southern Ontario

So I'm going to give the example of my region because all of this is completely context specific. Every place has a particular group of people moving to it, has particular urban form, has particular history of agriculture or the loss of farmland, has a particular set of ecosystem dynamics in relation to watersheds. in relation forests and so on. So I'm going to talk about my region, which is southern Ontario. Toronto is the biggest city. It is one of the largest centres of immigration in the world. People are coming from all over the world. For the last 20 years, or 25 years, it has become a huge centre of immigration in which the majority of the people, not only in Toronto but in many of the smaller cities of the region, do not speak English as a first language, for instance, as just one kind of indicator. They come from all over the world but they come mainly to cities large cities, small cities. The region is highly urbanised but it also has the best farmland in the country - not the export regions, which are in some ecological distress – but it has the best farmland in the region but, of course, we've been paving over with our cities. And many of the important products have been lost many of apples and our vegetables - and those that have been kept have become specialised to enter into global markets, so that the two main vegetables that are grown in the region are carrots and onions and they're exported. The supermarkets have developed their own supply chains so they bring in carrots and onions among other things.

So the irrationality of the system becomes clear when people start to look at it but from the point of the individual farmers in the way that markets are currently structured that is the logic. However, they're starting to realise that they're living in an territory where their potential consumers, who come from all parts of the world, who may want different kinds of crops from the way the ones that they have grown in the past, and they are entrepreneurial. So one of the changes that are coming is that certain farmers are starting to notice that local markets might be more stable, might be less vulnerable to changes in oil price fluctuations, might be more stable in terms of a direct relation with consumers, and they are starting to be interested in growing these crops and are starting to do it.

The present policies in southern Ontario region that goes around the Great Lakes – Lake Ontario and Lake Erie, (Niagara Falls is between them) – is growing in population enormously. The government mainly plans to have more people come and it seems to be hard to question whether that's a good idea or not.

What's happened is that there has become a crisis in farming, which is common in many parts of the world, where farmers are ageing. It's not clear who is going to farm when the present generation of farmers, who are in their late 50s and even 60s, stop farming. Many of them, because it's been a struggle for them, have encouraged their own children to go into other careers, rarely farmers. A few of them do want a farm and many of them would like to farm in a new way with new ways of using the land but have been inhibited by the regulatory mechanisms of the last food regime and the last period in history. One source of new farmers is some of the children of existing farmers, who would like to farm. Another is young farmers who have trained to be sustainable farmers but are having difficulties getting access to land.

And a third one is immigrants, or "New Canadians." Now, of course, in Canada it's hard to think about this but it makes perfect sense because our farmers have mostly always been from away. They've been immigrants and the crops they've grown have been transplants. So nothing in the so-called breadbaskets is indigenous, except sunflowers to North America. The wheat is from the old world, the cattle are from the old world. So it makes perfect sense to grow sweet potatoes, to grow coriander, to grow the kinds of carrots that Indians, South Asians, like to eat - red carrots. So these kinds of things become possible to think about. The problem is the growth of population, the loss of farmland and the cultural and demographic gap between the people who are farming now and the people who want to farm or could farm or might want to farm if they knew it was a possibility. So the term *diaspora* is useful in thinking about this. and the term global cities, which is a complex idea mainly from Saskia Sassen, which refers to the detachment of the cities in some ways from the economies that they're in. But from my point of view I'm talking about it [global city] as an intersection of diasporas - of people coming from all over the world and now because of global communications and transportation, marriage networks, are maintaining much tighter ties to family and communities and cultural groups in different parts of the world.

So food has been circulating, along with other commodities and relationships across the world without anyone thinking about it very much. This massive immigration of people from Asia, Latin America, Africa, the Caribbean, really started growing up in the last 20-30 years. It was also the period of what we call "globalization," meaning it felt natural to them and it was quite easy to import the food that they wanted. So the cultural gap grew up. The farmers, who were remaining in the area, started growing carrots and onions and a few crops for export, the people in the cities were importing the crops and even the prepared foods that they wanted. Some of the Indian prepared foods were brought in from England from other parts of the South Asian diaspora and not directly from the original country, if original makes sense.

So this cultural gap is the problem, is part of the problem – what crops are grown, who's growing them, on what land? But in order to reconnect farming with food, the cultural gap is part of the problem, and it's also the answer. Everybody can learn how to grow the kinds of foods that are needed and wanted in the city and the people in the city have already been adapting their cuisines to

a new place, to what foods are available, to what styles of life are possible. It's not possible to spend as much time cooking, for instance, as it was before and so new organisations are growing up in the city to help people adapt, to provide food, to provide little market niches or large ones to each other. The question is out of all this fermentation can we think about renewing the cultural and agricultural basis of a territory like Toronto or Southern Ontario with people from all over the world? And some answers are starting to come up out of some pretty creative politics.

Renewing a territory, changing farming, creating new businesses, new metaphors

If we start thinking about how the territory can evolve culturally and we consider agriculture to be fundamental to culture, and cuisines to be fundamental to culture, then we can think about incorporating, and we are, incorporating new Canadians into the still very small programmes to train farmers in ecological farming in our area. And to help them and support them to experiment with adapting and breeding the crops that are wanted by the cuisines that they're in. Then to connect them to the new businesses particularly, for instance, one of my favourite businesses is Arvinda's Indian cuisine. It's a new kind of family business. There was Arvinda Chauhan, a civil servant in the Ontario government, who decided she'd really much rather cook. So she started some cooking classes to teach South Asians in the region how to cook in our new setting with the new ingredients, more quickly. Then her daughter, Preena, who has a Masters in environmental studies from York University and started being an environment policy person, decided she really liked cooking too. And she really liked the food and she really cared and understood about embedding the food system in the ecosystem. So she started trying to work with farmers to help source local ingredients and with local artisans to produce some of the preparations they needed - starting with really simple things like chopped garlic, things like that. So provides a little network of businesses that are done in a way that comes from a very formal ecological training but is very grounded in relationships to the farmers, to the cooking and to the people who are doing the cooking and eating, both as businesses and for home.

The brother of the two has a business degree and helped them start a new product line which are spice mixes, tea mixes that are now being sold in a variety of shops. They do tours. One of the farmers in the region who was a large farmer who's converted to being a very enthusiastic and profitable agro-ecologist, selling beef, describes himself as having once been afraid to go to Toronto. Now we're doing tours of farmers into Little India to see who are these people, who are your customers, and if that kind of relationship can be mediated it can really support this connection. At the same time, Sri Sethuratnam, who is a trained agronomist from South India, who is working with a non-governmental organisation, called FarmStart to train new farmers, and he is very active in helping farmers, not only from South Asia but also from Ghana, from Trinidad, to develop the crops that can grow in our ecosystem and to figure out how to market them and generally make those connections.

Now there are many experiments like this, and many small businesses like this, that are growing up and several institutions that are key, like the Toronto Food Policy Council, Sustain Ontario, that are trying to help these connections be made and to advocate and develop policy proposals at every level of government, some of which are being implemented and some of which take the form of *strategies*, because these changes are too big to simply articulate into a *policy*. What they [strategies] involve is bringing people who are willing and can be convinced inside government, a slow process of discussion, of education, and of working together. People in civil society who are trying to make these changes, bring them together in a variety of ways to help develop a common conversation and a common set of practices to learn how to do things on a bigger scale, to learn how to understand the kind of embedded cultural food system that we can create in this area. One of the big breakthroughs, recently, has been to involve a partnership with a public agronomic research organisation, which is quite large, called the Vineland research centre with some small non-governmental organisations, like the one I just described, FarmStart and also Everdale environmental learning centre, been training new farmers into something called the World Crops Project. This is an analogy to world music. And what you have are some of leading agronomists in the world, and they recruit them from all over the world, working with people who are trying to develop new ways of farming and new crops and new connections inside our region. One of the key partners, and this is what is so important, it's been guiding a lot of these experiments for a long time, is the Toronto Food Policy Council. So what's important here is that we live in an urban region where we have to reconstruct our food. We have to close the demographic and the cultural gaps between food and agriculture. And so people who live in cities are central to this and municipal politics become central to redefining the scale of the region. They are also usually, at least in our experience, more accessible to democratic participation and to innovation. It doesn't mean it's easy. It's hard and we've been at this for more than 20 years in order to come up with these kinds of partnerships, in order to be able to form these kinds of alliances, to show certain kinds of experiments that work and could be the model for really important government policy.

So, what we have to do now is we have to consciously create what evolved over many centuries and often many millennia in all the civilisations of the world which is how to inhabit the earth in our particular places, that is how to sustainably grow food that supports the health – the social health as well as the physical health – of the people who live there. We now know that we are one species and one civilisation in a way, we are humanity and we live in the biosphere, which is now our habitat. But each place is particular and if we can start thinking of the world less on a machine analogy and more on biology or ecosystem analogy we might start to get to an understanding of how to have diversity and unity at the same time.

From watersheds to foodsheds

For instance, if we think about watersheds as defining the space of an area and defining the possibilities and the limits for how to farm in that area, and what

food can be grown in that area, and what people can live and eat in that area, what cuisines can evolve in that area, think about those watersheds, they're all connected. All the water of the Earth is connected and yet each watershed is distinct.

So the concept of food shed has been proposed as a way of thinking in watershed, or ecological terms, about the specificity of each place and also its links to other places in the world. So how do we get from one place to another? These examples I've given suggest some of the ways of working. These changes are so big that we can't really have a plan. We need to have more a vision of how to have food and agriculture, food and farming connected. How to have food be more of a centre of life and more integrated into the ecosystem, into a tighter or a more holistic relationship between the people who inhabit a place, the cultures and the way they live in that place, including the way they eat, and the way they grow the food, the agriculture. It's so big that we need to think more in terms of sailing then railroads. So maybe we're on a railroad heading toward a cliff and maybe it's a good idea if the train is heading toward a cliff to try to stop it and then figure out what to do next. But you're still going to be stuck on the tracks. So if we think about sailing, we think about having a vision about the other shore, where we'd like to get. That vision will become clearer as we get closer, but we will not be able to go straight there. The wind and the waves will be what determine how we change directions, to stay upright, to keep going in the doldrums when the winds stop, to deal with the storms.

So we need to be able to think about improvising and to create models but also to work at the policy level, to be able to show which experiments work, to be able to think about how these new experiments could, potentially, constellate into something that would be sustainable and healthy and enlivening for humans in all respects. So we're in a regime that is in an on-going crisis with two potential trajectories. One is a deepening of the industrialisation and attempt to take every problem that arises for health, for environment and turn it into a profit opportunity, fix it technically. There'll be more problems, keep going down that path. The other - these are stylised, of course - the other is an agroecological, embedded trajectory, which is what I've been describing we're trying to build here, by reconnecting food and agriculture and embedding both in ecosystems. All those changes, those little experiments I've been describing can be called niches. And sometimes when people call them niches they are dismissing them. They're too small to make a difference. And there is a way of thinking that says that niches grow up, all the time, most of them die, a few of them converge. That there are many, many possibilities of the way they could combine, turn into a new system and none of them may happen.

This is all true but that's what goes on at a lower level at a smaller scale level then the regime itself. If a regime is in crisis it's important to understand that it exists in a landscape and that landscape consists of a variety of elements that ensures stability of the regime - the financial landscape. We know we're in a time of financial crises that could come any time. Fossil fuel dependency, which has become much more tightly integrated through markets and financialisation within the food system; that changes in the price of oil can change all the

incentives throughout the food system and that can happen very quickly. All kinds of ecological crises that had to do with the pollution of various agricultural inputs, that have to do with loss of biodiversity from the way we've been farming and expanding into forests and waterways including the ocean. There are many, many landscape elements that could very quickly or very slowly, individually or together, change the conditions of stability of what we have now.

What will determine the outcome of what people mostly mean by crisis, like the money system doesn't work quite well enough to let the food system continue, or the energy is too expensive to allow things to be shipped around or grown in the way they are, or the waterways are too polluted or whatever might be happening. What will determine the outcome of that will be how these niches have developed and how they might constellate. And there is no guarantee here. It could all go very badly for the human species but if it's going to go well, if we could reach some kind of tipping point or constellation of some of these experiments that could lead to a really happy system, a really good system for people to live in, a sufficient system, a system in which human needs are defined in social relationships rather than by corporations. If all of that's going to happen it has to happen through consciousness. And it has to happen through an awareness that we have to both be developing models for new ways of doing things and working at every level of government to try to implement the pieces of change that need to happen. Because governments are changing and they need to change fundamentally. We are not in a position to know how. What we can do is work within and across the boundaries of government, and outside government. Create all of these models and all of the ideas about how to change pieces of it that will help us get a clearer vision of the distant shore to which we, hopefully, are sailing.