WN *Columns*

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WN *Here I am*

Back on the grind…



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Brussels, Belgium. Greetings from the fifth-smallest country in the European Union! I write to you during exciting times. School – the last year of my master's in public health programme – has come back to full speed.

I've been spending the last weeks running around Brussels piecing together a thesis proposal, planning my programme internship to study *Onchocerciasis* (river blindness) treatment and prevention in Cameroon, and enjoying my location in the fabulous 'centre of Europe'. All this is in between regular visits to my 'other family' in the Belgian Ardennes, where I enjoy home-cooked meals and gaze on openly-grazed livestock in endless hilly pastures.

This column contains my ideas on why urban agriculture is the answer to all our problems; how democracy is turning over a new leaf in its history in 2015; and how to stop the current chaotic volatility of global food prices. These musings constitute some of my greatest passions and most recent thoughts, which are constantly in flux and development. Please read, enjoy, and get ready for debate. I am eager for your feedback – send all comments to wn.letters@gmail.com… Let's start these important conversations, which can lead to shared decisions and actions!

Urban agriculture

The answer to everything...



Here, a rotating crop bed in Singapore maximises use of its rooftop 'fields'. Requiring just 60 watts of energy a day, the carousels carry plants up to receive sunlight and then back down to be watered.

The search for community in Brussels

On coming back to Brussels in September, I was horrified to discover that I would only have actual classes for about ten hours a week – such is a year that is filled with mandatory internships, theses and other non-class activities. Too much spare time usually gives me too much time to wonder why I'm not spending more time being productive. So in between researching and writing my column here, I began looking for ways to fill my schedule. I have got a job at an artisan beer café in the city centre, and am continuing to check out volunteer opportunities.

Having already spent six full-time unpaid months working in EU-level chronic disease patient advocacy, I decided that involvement in the local community would be a more rewarding way to spend my free time than re-joining the ranks of students looking to buff up their CVs as they search for paid jobs in Europe. So I googled '*agriculture urbaine Bruxelles*'. The search results were incredible.

Brussels is booming with small urban agriculture initiatives, contributing to a vibrant, resilient and sustainable future. Established is the Garden of Colours, which aims to teach children and adolescents gardening skills while building awareness of sustainable food production and the environment with inter-generational gardening projects. The Quail's Song Farm is located on the southern border of the city and is in its early stages. It features a 'pick your own' sharecropping field and a community garden run by 70 volunteers. I also found the 'Creativity Call for Brussels – Brussels Urban Food 2025', a contest for plans to bring urban farming to the city.

Why urban agriculture?

What I love most about urban agriculture is the benefits it brings to communities. Community gardening initiatives promote overall health and well-being by offering nutritional, physical, emotional, spiritual and social benefits. When maintaining nourishing green space becomes collective, community ties are strengthened. Citizens work together to feed one another, which highlights the often-lost conviviality of food, and revives the essence of community. In resource-poorer communities, these collectives can become the source of otherwise difficult-to-access nutrition, physical activity and social interaction.

In places like Brussels and my native greater New York area, these initiatives are more the result of privileged conscious consumerism, and remain a bit of a luxury. But there is coming a time when urban agriculture will be a 'must' to survive.

World population is increasing rapidly. Every day 350,000 people are born who must be fed. As hundreds of millions of people move toward cities, fossil fuels become less available, and the effects of climate disruption worsen, viable alternatives to the current dominant system of industrial agriculture are needed.

Singapore: a model for the future

In some parts of the world, urban agriculture has already been adopted on a wide scale as a matter of necessity. The mega-urban micro-country of Singapore has only 715 square kilometres inside its borders. It is an inspiring example of what the future of food production may look like. After its urban expansion in the 1990s, along with the associated influx of migrants needing housing, less than 1 per cent of its land was designated for feeding its 5.4 million citizens. As a result, the country imports 90 per cent of its food from 35 nations.

Singapore's food supply is thus highly vulnerable to fuel prices, natural disasters, political climates, and the economic policies of other countries. To promote a more stable supply of food and create jobs for citizens, 'sky farms' have been popping up on skyscrapers across Singapore. These industrial-scale rooftop gardens use advanced space- and energy-saving agriculture methods that provide locally-grown produce, reduce the country's carbon footprint, and increase food sovereignty.

Illustrative of this innovative food production is the Sky Greens Company which uses a rotating carousel of crop beds to maximise the use of its rooftop 'fields'. See the picture above. Requiring only 60 watts of energy a day to function, the carousels carry plants up to receive sunlight, and back down to be watered, over an 8-hour cycle.

Luxury or necessity?

Thus far, Singapore is an exception. Today, non-conventional methods of food production largely remain an environmentally-friendly luxury to promote the well-being of the well-to-do. However, faced with the ever-rising environmental and

population stakes of this century, urban agriculture may be a truly sustainable future for food. With enough goodwill, brainpower and collaboration, the benefits to health, well-being and employment of communal food production initiatives in places like Brussels can be increased to Singapore size, and bigger, to feed urban populations, protect the environment, and strengthen communities. As I say, only half in jest, this is the answer to everything!

Democracy
History is cyclical

There are bad times and good times. There are times of despair and times of hope. History is cyclical. I feel this where I am now in Europe, in daily contact with people from many different countries. This enables me to see current events, which are tomorrow's history, unfold through the eyes of people from many cultural, educational and ideological backgrounds. No matter what differences growing up in diverse geographic locations may create among people, today's social, economic, political and environmental conditions are sparking a common discourse, a shared general perception.

The people I meet and hear from are especially upset about the evident inability or unwillingness of their governments to remain independent from the forces of corporate profit and corporate power. Wars, bad policies, inadequate adaptation to modern realities like economic globalisation and climate disruption, and general 'bad times' for almost all citizens, are the result of national and global policies that primarily serve the elite. Corporations often have more power than elected politicians, and the people seem to be neglected, in part because of corrupted governments and partisan politics.

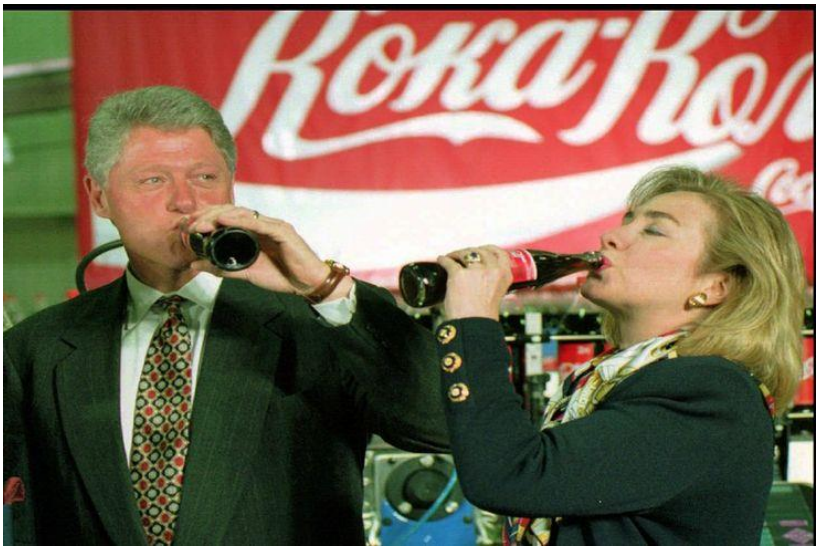
But history tells that the people will only tolerate so much before fighting back. Examples from history that come immediately to mind include the Protestant Reformation, the French Revolution, and the American Revolution. I believe that such a point in history has now come again.

Today throughout the world, citizens are collectively acting to be *truly* heard once more. Seeing such remarkable democratic victories gives me hope that this is now becoming a new cultural period where people act not just as individuals, but as parents, friends, neighbours, teachers and community members, to demand legislation and corporate practices that promote wealth, health and well-being for everybody. Although there is still much to be done, sure foundations are now being laid for more conscious societies that are becoming prepared to fight to be heard.

During this exciting yet challenging time in history, a whole new generation of young intelligent and trained people are becoming professionals. In my own field, my

colleagues and I who are engaging with public health and nutrition are faced with the destructive nature of unregulated capitalism and the disproportionate power of corporations, individuals and organisations with vast amounts of money. This is a bleak prospect. But we have privileges and opportunities. We are equipped with resources, passion and awareness, because of growing up in these times now. Coming of age in a period of incessant economic crises, injustice and corruption has bred in us a drive to work and fight for good population health and adequate nourishment not in isolation, but in the context of a larger fight for equity and justice and the restoration of public health and public goods. History is on the upswing.

People power
Feeling the Bern



1995. US politics classic-style. Bill Clinton when US president and first lady Hillary Rodham Clinton, product placements for Coca-Cola in Moscow. This is how US political dynasties get fed

When I was in the US this last summer, the upcoming presidential election left me feeling hopeless. US news media were flooded with stories of the latest Kardashian family baby name, gender-bending or drug-fuelled mishap. Nobody seemed to be thinking about implications of the possibility that the 2016 presidential election would be a face-off between immediate family members of three former presidents. I mean Jeb Bush, son of George Bush and brother of George W. Bush, and Hillary Clinton, wife of Bill Clinton. If the prospect of a Jeb-Hillary showdown in 2016 isn't convincing evidence of an elitist problem in the US, I don't know what is.

Later though, my fear faded. Jeb Bush looks to have fizzled out, despite being the most well-funded candidate ($US 120 million raised). Less fortunate however, is that the possibility of a viable Republican candidate has been eclipsed by the Donald Trump Show™. If a man being able to propel himself to Republican stardom almost

exclusively with his own wealth isn't convincing evidence of an elitist problem in the US, I *really* don't know what is. Donald Trump is only the 17th most well-funded candidate, with $US 1.9 million raised from donations, and yet as I write is still the Republican front-runner.

Mrs Clinton is usually seen as unbeatable on the Democratic side. While probably the politician in the US most qualified to steer a global superpower, her potential downfall is that she is the centre of 'political business as usual'. This is indicated by the picture above of her and Bill Clinton, then US president, in Moscow, chugging Coke for the cameras, to the delight of friendly and supportive Coca-Cola executives. Corporations are funding Hillary's campaign, with $US 68.7 million at the time of writing. Her elite status seems to let her float free above the law. She is notorious for her lack of cooperation in a series of government investigations of her behaviour and dealings. This apparent immunity is buttressed by the Clintons' extensive network of corporate friends, including mass electronic, broadcast and print media.

So I was very disappointed in the 'political theatre' playing out on television during the summer. The highly-biased Hillary proponents in the media, and Trump's increasingly insulting uninformed comments, kept these two dominating airtime. I began believing that the US political system was contaminated beyond rescue. It seemed impossible for an 'uncorrupted' candidate to compete with the frontrunners.

To my surprise and pleasure, I also found that many more people in the US than I had thought were ready to move past the national political charade. Enter Bernie Sanders. Around mid-June, my Facebook feed began to fill up with shared posts from some socialist guy's Facebook page... This maverick senator from the northern New England state of Vermont was apparently running for the Democratic presidential nomination. At first, messages came from a small group of very liberal



2015. US politics crowd-funded style. Bernie Sanders is a gust of fresh air. He has been drawing people to rallies in numbers Barack Obama saw only late in his first campaign for the presidency

Facebook friends who *would* post about affordable college tuition, increasing the minimum wage, universal healthcare, gender equality and improving US infrastructure. However, within a few weeks Bernie Sanders had risen to social media fame, had become the second most well-funded Democratic candidate with $US 15.2 million raised exclusively by small, non-corporate donations, and was drawing people to his rallies in numbers Barack Obama hadn't seen until very late in his famous first hope-change presidential campaign. Then, polls in Iowa and New Hampshire showed Bernie Sanders as the democratic front-runner and so a true threat to Mrs Clinton. Support for the changes the US needs was gaining viable momentum.

To me, the most inspiring part of the Bernie Sanders story is that his success came about with almost zero mainstream media coverage. Despite the political and corporate powers trying to put out the Bernie fire (#feeltheBern, my friends) and keep the conventional candidates afloat, a big proportion of people in the US seem to have finally had enough of the nation's oligarchy. In early September, the New York Times was driven to publish multiple pieces in response to reader accusations that its low coverage of Bernie Sanders was unfair.

No, I am not sure that Bernie Sanders will be the next US president. But what his campaign's success continues to say about the power of citizens in a democracy is huge. Even when a society seems irreparably corrupted, misguided or dysfunctional, the people can still catalyse change by effectively fight-back against a dominant system that no longer serves their needs.

Food prices
Price spikes cause riots, and worse



Mozambique, 2010. Street fighting that ignited riots, uprisings and civil war in Africa began with mass protests against food insecurity, including sharp rises in bread prices. Revolutions start this way

Food price spikes and fights

Beginning in 2007 and 2008, food prices made headlines with protests and riots occurring in over 30 countries. Spikes in prices, notably of bread in countries where price controls were abandoned by governments and left to 'market forces', as in the picture above, have been by far the worst in decades. Food prices on the international market have not regained stability.

The 2007-2008 food price crises came about after a steady decrease in prices starting in the 1950s. This was mainly due to the agriculture revolution after the Second World War. Massive use of machinery, fertilisers, biocides and then genetic engineering, enabled production to skyrocket while prices plummeted.

However, the cheap food phenomenon ended in 2007. From the beginning of 2007 to the middle of 2008, the international price of wheat, maize and soya roughly doubled, while that of rice tripled in a few months. This price peak was one of many in the coming years. In the summer of 2010, the cost of wheat increased by two-thirds. The price of maize doubled in one year, followed by equal price jumps of sugar, coffee and cocoa. In 2012 a heatwave destroyed US and Eastern European crop fields, resulting in wheat and soya prices reaching their highest ever.

What is causing the recent volatility in food prices, and what are the nutrition-related consequences globally?

Multiple causes

There are multiple causes. Rising oil prices affect the cost of fertilisers, food transportation, and fuel-intensive industrial agriculture methods. These costs are added to the final selling price of food and food products. Oil prices reached their all-time high of $US 144.78 a barrel in July of 2008 during the peak of the food price crisis. Smaller spikes in food prices in the summer of 2010 were a function of smaller peaks in oil prices, up to $US 89.12 a barrel.

The excessive use of fossil fuels in food production adds to price volatility and further contributes to global warming. Climate disruption exacerbates natural enemies of crop production, like floods and droughts, and this in turn causes food to cost even more.

Continued increases in the frequency of extreme weather events throw off the balance of global supplies. In 2010, the Indus river basin in Pakistan had its worst flooding in history, severely damaging wheat and rice production. In 2010 an extreme heatwave in Russia reduced grain harvests by 40%. In February 2011, cyclone Yasi destroyed sugar fields in Australia, cutting the country's exports by one-third. In the summer of 2011 in the USA, Texas experienced its hottest and driest summer in 100 years, resulting in $US 5.2 billion in agricultural losses. The next summer, the US declared a natural disaster in 36 states during the hottest summer in recorded history, which cut US maize production by one-sixth and soya production by one-eighth.

The strength of dominant currencies affect prices globally. Around 2008, the depreciating value of the US dollar (roughly a one-third fall) caused a subsequent inflation in quote prices, as much international commerce is conducted in US dollars. This translated to higher food prices for consumers in their local currencies.

Animal food and biofuel

As money-poor countries develop their economies, their food supplies and thus dietary patterns begin to resemble those of high-income countries in the global North. For example, they become increasingly high in energy- and resource-intensive animal products. In China in 1958, average consumption of meat was 20 kilograms per person per year. By 2007 consumption had shot up to 53 kilograms per person per year. Big increases in meat production and consumption have occurred in many other Asian countries, such as Malaysia, the Philippines and Indonesia.

Higher production of animal products translates to a higher demand for grain, the main feed in industrial animal-rearing. In 2000, 70% of the grain produced in the US was sold as animal feed. Global misuse of crops for animal feed increases demand and limits supply, causing food prices to climb out of reach for many poorer families.

There is also the issue of biofuels. Converting crops to ethanol is mostly the result of attempts at reducing dependence on foreign oil for energy. It is also a round-about way of re-channelling decreasing subsidies into farmers' salaries and taking food out of the mouths of populations worldwide. It is often said that biofuel usage is better for the environment than conventional fossil fuel usage. But because of the energy-intensive methods of crop production, using ethanol in place of petroleum makes very little difference in terms of greenhouse gas emissions.

In 2012, the US pumped 40% of its maize into gas tanks as ethanol. Brazil produced 27 billion gallons of sugar-derived ethanol in 2010. In 2007 the EU converted rapeseed, soya, sunflower and palm oils into 6 billion litres of biofuel. That is a lot of potential food not available on the market. When supplies go down, prices go up.

Sharp rises in the price of staples like bread are also, as mentioned above, caused by governments abandoning price controls that protect impoverished families and communities and letting traders charge whatever they like. Spikes in food prices are also caused by speculators betting on future prices as if food is a commodity like rubber or nickel. All this has serious consequences for those who are not financially able to adapt. In impoverished countries, families may spend up to or even more than 75% or more of their income on food. When food prices go up, such families cannot cope. As a result, children are taken out of school to work, and less is eaten.

The sacrifices made in response to rising food prices have a lifetime of negative consequences for people and their families and for societies and nations. When children stop school, they are less educated as adults. If pregnant women and young children do not eat enough food or enough healthy food, cognitive and physical development may be damaged. This in turn may stop children from reaching their

potential as adults, and can lead to lifelong poverty and associated increase in illnesses and diseases. On a large enough scale, high prices of foods can compromise an entire generation of adults in a given society.

Stability is essential

In higher-income countries, a lesser proportion of income is spent on food, and much is purchased already processed (bread or pasta, for example, as opposed to unprocessed grain). A doubling in raw grain prices may mean only a 10% increase in retail prices. For people with adequate incomes in such countries, rising and fluctuating food prices are more of a superficial burden than a question of eating or not. Privileged people should be aware of the different situation of communities and populations already close to destitution.

It is imperative that the prices of staple foods are affordable and stable. This is a fundamental responsibility of governments, which protects and promotes population nutrition, well-being and ultimately progress. For a start, strict restriction of speculation on future food prices is essential.

Food, like health, is not a commodity. It is an essential public good, and should be treated as such. This lays a duty on governments to protect, promote, develop and strengthen the work of all organisations and movements committed to food sovereignty and self-sufficiency. This implies discouraging resource-intensive industrial agriculture, and encouraging traditional low-input people-intensive systems of agriculture and animal rearing. These will protect the environment from further damage by excessive fossil fuel use, and humans from fluctuations in global market prices. Sustainable human development requires stability in the price of staple foods.

Status

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