



CLIMATE ACTION AND ARCHITECTURE

EPISODE 1 | TRANSCRIPT

0:00 MONA LEMOINE: We acknowledge that Indigenous peoples are the traditional guardians of this land we call Canada in which we gather here today. We acknowledge the historical oppression of lands, cultures and the original Peoples of this country and know we have a role to play in the path to decolonization that we share together.

0:20 MONA: We recognize our duty to fight for Indigenous rights to be restored and commit ourselves to the journey of healing. We thank the 630 First Nations, their people, and ancestors who have taken care of these lands that we share.

0:35 MONA: Let us take a short pause so everyone can reflect on their own acknowledgement and relationship to the land and be grateful for the diverse Indigenous Peoples whose ancestors have taken care of the land for centuries.

Theme music

1:00 MONA: This is the RAIC Podcast on Architecture and I'm this season's host, Mona Lemoine. This season is part of a series of activities and events leading into the 2021 Congress on Architecture and the development of a Climate Action Plan.

1:15 MONA: The RAIC 2021 Congress on Architecture will be held On October 4, 2021 –World Architecture Day 2021 – and will address Climate Action and Architecture in Canada. In this episode RAIC Congress on Architecture Steering Committee member Louis Conway talks with Seth Klein about mobilizing Canada for the climate emergency”.

1:40 MONA: Louis is an architect licensed with the Architectural Institute of British Columbia, a certified project management professional and a member of the Royal Architectural Institute of Canada. Between 2014 and 2019, Louis was a member of the Architectural Institute of British Columbia's Post-Disaster Response Advisory Group and supported the Post-Disaster Building Assessment training for architects and related external stakeholder engagement. Louis is also a member of the American Society of Adaptation Professionals and member of its Climate Migration and Managed Retreat Interest Group.

2:17 LOUIS CONWAY: My name is Louis Conway and I have the pleasure of welcoming Seth Klein to the first episode of the RAIC Podcast on Architecture. Seth Klein is a public policy researcher and writer based in Vancouver, BC. Between 1196 and 2018, Seth served for 22 years as the founding British Columbia Director of the Canadian Centre for Policy Alternatives, a public policy research institute committed to social, economic and environmental justice.

2:50 LOUIS: Seth is the author of “A Good War: Mobilizing Canada for the Climate Emergency.” In this book Seth explores how we can align our politics and economy with what science says we must do to address the climate crisis. Welcome Seth and thank you so much for joining us today.

3:08 SETH: Hi Louis, nice to be with you.

3:11 LOUIS: I'd like to start off, Seth, with one of your key takeaways: changing our mindset. If you could describe what we're moving from and what we're moving towards. What does it involve to change our mindset?

3:21 SETH: Well, the opening premise of my book is that the climate crisis is just that – it's an emergency. And I

start off with a premise which is that what we have been doing so far on climate is simply not working. If you look at Canada's greenhouse gas emissions (GHG) going back the last 20 years, what you basically see is a flatline. We have plateaued at a historic high, but we have not, to put this in the parlance, we've all come to know in the pandemic, we have failed to bend the curve. Unlike many other jurisdictions that have.

4:00 SETH: And so we're not doing what we have to do. What I'm arguing is that we need a new approach, we should approach this emergency like we have approached other emergencies. With a wartime footing, if you will. And so, the book is structured around lessons from the Second World War. And part of that is an emergency mindset. We've all had a flavor of that this year right, that we now have a sense that if the public and our governments are to approach a crisis, as they are. Emergencies need to look and sound and feel like emergencies. And that's not what the climate response has been thus far, but it needs to be.

4:41 LOUIS: Yeah, you referenced that emissions and buildings are a big contributor to those emissions. Globally buildings contribute 40% of emissions so that statistic to that number will apply to buildings in Canada as well as major contributors to GHG emissions.

4:57 SETH: Yeah buildings are a big piece. In Canada, they're not that high - in part they are not that high because the extraction and export of fossil fuels in Canada is 25% of our admissions and so everything else is relatively smaller than the global average. But buildings in Canada are about 10% of our emissions, and that's only kind of operating emissions. It's not capturing the cement and concrete, for example, that would be counted under industrial emissions, there is no path to zero without figuring out how we get rid of the GHG emissions in our buildings.

5:34 LOUIS: In your book you mentioned CD Howe, as you know, a prime mover during the Second World War, of mobilizing Canada in the war effort. And I think he serves from your comments in the book as a role model for some of the approaches we can take today. Maybe you could talk a little bit about CD Howe and what makes him so special, as a model then mobilizing for the climate emergency.

6:02 SETH: So, as I said earlier, the book is all structured around lessons from the Second World War and in particular, this remarkable transformation of the domestic economy during the war in order to ramp up military production from a base of almost nothing, Canada produces about 700 ships, 16,000 military aircrafts, 800,000 military vehicles - more than Germany, Italy and Japan combined.

6:30 SETH: So this was an incredible undertaking, and it was led by this guy CD, who many believed to be the most powerful member of Mackenzie King's cabinet, and the guy, as Minister of munitions and supply who oversaw this extraordinary ramp up in Canadian military production during the war. If the book has a hero, it's this guy from the second world war story, and I became quite fascinated by him.

6:58 SETH: He was an American by birth, had come to Canada as a professor of engineering at Dalhousie, and then stayed. He ended up going into the private sector; made a lot of money in the private sector before going into politics building grain elevators all across western Canada in the 20s. So, he was a builder. His dad had been a builder, his grandfather had been a builder and he was the only engineer in McKenzie King's cabinet.

7:33 SETH: He was no lefty, but he became seized with the task of what we had to do in the war and I described him as an engineer in a hurry. He was happy to give contracts to the private sector but if the private sector couldn't quickly do what needed to be done, he created another Crown corporation to get the job done. In the course of the war, he created 28 Crown corporations in order to expedite the military production, that was necessary.

8:00 SETH: He also recruited over 100 leading business people to serve as dollar a year men during the war to head up those Crown corporations, to serve as controllers coordinating all of the necessary supply chains in order to prioritize military production. So, yeah, he was a central figure in that economic transformation that occurred in the war.

8:29 LOUIS: Yeah, I think he can serve as, you know, as the leadership model for, for some of the things architects can do as well. I think you refer to him at one point as, as the Minister of everything.

8:44 SETH: Well, that's what he was known as at the time, that wasn't me calling him that. An indication of how powerful he was - that's what he was known as.

8:50 LOUIS: Yeah. As Minister of everything then, he would be crossing boundaries in terms of different departments within government. He'd be crossing boundaries in terms of the different kinds of projects he was on. So, he was managing a very complex interdisciplinary team to accomplish this. And that's something architects do daily and their work is cross-boundary in that sense.

9:16 SETH: Well not only was he doing that but he, as I say, he was in a hurry so he was forever frustrated with the pace of the public sector of the civil service. And so what is he doing? He basically created a parallel public service. He recruits all of these business buddies to serve as dollar a year men.

9:35 SETH: And he also, you know, he was always frustrated by the lawyers in the Department of Justice for slowing things down, you know, and any of your members who work with lawyers and government know that those lawyers tend to be the ones who tell you what you're not allowed to do.

9:48 SETH: He had no patience for this, so he creates his own legal department in the Department of Munitions and Supply with three shifts of lawyers including a night shift of lawyers, and they're venting as many as 140 bids a day at the peak of their production - just to give you a flavor of what he's doing to drive speed and scale - which is of course exactly what we need to do now, in the face of the climate crisis.

10:13 LOUIS: One term I think that's important is that in a sense of supply chain, architects are closely involved in supply chain in terms of needing information about where their product is coming from, the embodied carbon in that product, how long it's going to take that product to come to market in order to write specifications for buildings. To coordinate building projects, they need to have their pulse on that kind of information all the time so I think CD Howe is an invaluable role model for many different reasons.

10:49 SETH: So what he does is, first of all, he begins the exercise by taking an inventory of all of the conversion needs, right, both for Britain and for Canada. And then he looks at what's the existing capacity, and how do we fill the gap. And then as you say he's carefully coordinating the supply chains. So machine tools, steel rubber, timber, coal, fuel, every one of those is being carefully coordinated in order to prioritize or time production, and to ensure that rather than competing. All of the producers are getting what they need.

11:25 SETH: And this is a key lesson about emergency, like there was a huge role for the private sector in the Second World War, but what they didn't get to do, what we didn't leave to the market, was how to allocate scarce resources. Because in an emergency, you don't leave that to the market, you prioritize what has to happen.

11:46 LOUIS: Architects, you know, work across many sectors, you know the public sector. They'll be working in the private sector. So they're bouncing off a long line of, sometimes competing interests, perhaps on the client side, perhaps demands from the public side in terms of, you know, permitting processes.

12:08 LOUIS: So it sounds like CD Howe was kind of playing a similar role in the sense; bouncing off a lot of potentially competing interests, reconciling those interests, for the higher good in his efforts to mobilize quickly and not delay.

12:30 SETH: And bringing in the talent that he needed like I mentioned before, Canada built about 700 ships during the war. We didn't have the naval architects to do that, so he imports naval architects from the US and Britain who know how to build these victory ships and so on. But then they have to quickly set up a system to recruit and train local talent to get the job done.

12:51 LOUIS: Yeah, I think that's a key to the effectiveness of the mobilization under CD Howe was capacity development. And I think there's a direct parallel between capacity development under CD Howe, then, and our need now for capacity development at, say, the post-secondary level within our professional organizations like the RAIC and within our, you know, provincial architectural associations.

13:22 SETH: Well, when you think about the development of the skills of the workforce that was necessary, there are two huge roles during the War of the post-secondary sector to train up that capacity and the secondary sector.

13:32 SETH: So again, just to give a flavor of emergency in the war, every tech high school in the country during the war was basically running three shifts, including an overnight shift to train up the people that were needed to get this job done. Anyway, the point of all of this, I hope for your listeners, is to give people a flavor of the contrast of what we

experienced during the war. That was treating an emergency like an emergency.

14:02 SETH: Similarly, in COVID, we've actually had a taste of what it looks like to treat an emergency like an emergency. And all of this makes for an incredibly stark contrast with the lackadaisical approach we have taken on climate.

14:13 LOUIS: Well, the same could be said I guess in some ways, about our response globally, to the pandemic. Some countries have been models, others haven't, but what lessons can we draw from the pandemic experience to bring to our need to mobilize for the climate emergency - can we draw parallels, are they two distinct rounds or do they intersect?

14:35 SETH: Oh there's parallels there too, you know. I wrote my whole book before the pandemic and then quickly wrote an epilogue about the pandemic because there are many overlaps there. And maybe, let me answer your question this way, because I've now had a lot of time to ponder the war experience the pandemic experience and thinking about what's needed on climate.

14:57 SETH: And my takeaway is, I have these four markers of when you know that a government is in emergency mode. And here's what they are. First of all, it spends what it takes to win. Number two, it creates new economic institutions to get the job done. Number three, it moves from voluntary and incentive-based policies to mandatory measures, meaning using the regulatory power of government to drive change. And number four, it tells the truth, tells the truth about the severity of the crisis and what we have to do.

15:32 SETH: Now, Canada did all of those four things in spades during the war as I've started to give you a flavor. But additionally, I would say you know, we can quibble about the timing and the degree, but I would say the federal government hits all of those markers with respect to the pandemic, right.

15:50 SETH: We're spending an extraordinary amount, you know, the Bank of Canada has been buying up the federal government securities this year to the tune of \$5 billion a week in order to finance the emergency response. Are they creating new economic institutions? Yes - look at the speed at which they created the CERB and the wage subsidy. I mean, I wouldn't have thought they had it in them but they did.

16:12 SETH: Are they moving to mandatory measures well yes, I mean we argue about whether or not it's been sufficient and the timing. Interestingly, I would say the public has been ahead of our politics calling for mandatory measures.

16:24 SETH: But they communicate it and tell the truth, they have certainly communicated emergency, right. All of us watched our Prime Minister every morning for those first months, communicating that this was different, that our lives were going to change, right.

16:40 SETH: But with respect to the climate crisis, neither our federal government nor any provincial government in the land, hits any of those four markers. They're not just missing some of them, Louis, they haven't hit a single one.

16:54 LOUIS: If we were to hit some of your markers, with respect to the climate emergency, what would be a good starting point? Which marker would you like to start with, would it overlap in some way with the work that architects are doing?

17:07 SETH: Oh, it absolutely overlaps with architects. Well let me answer your question at large and then let's talk about architects. So, when I apply those four markers to the country as a whole, we need to spend what it takes to win. Trudeau is currently spending about \$5 billion a year on the climate emergency. That's off by about a tenfold order of magnitude, we should be spending at least \$50 billion a year.

17:30 SETH: Are we creating new economic institutions, the way CD Howe did? No, we are not. Trudeau has created two new Crown corporations since coming to office, the Canada Infrastructure Bank, which is basically a vehicle for privatizing infrastructure. And the other, I hate to tell you, is the trans mountain pipeline corporation, it's the one that makes us all the proud owners of a six-year-old pipeline from Alberta to my province in BC.

18:00 SETH: We're not creating new economic institutions and we need to. So, what I say in the book is, I look at all

these Crowns that Howe created, and Howe was no lefty, right. But he did it when he had to, and then you apply the same logic on to the present, and you know I have a three-page list of what those contemporary Crown enterprises could be to drive change.

18:22 SETH: And you tell the truth - are our governments telling the truth, in particular that we actually have to wind down the oil and gas sector over the next 20 to 30 years? No, they're not. They're sending confusing and contradictory messages, right. Among other things, we should be banning the advertising of fossil fuel vehicles and gas stations, right, like we did with tobacco - it's confusing. So that's what at large, what those four markers could and should look like.

18:52 SETH: With respect to architects. This is what I like about my four markers, if you will, Louis, is that you can apply them sector by sector. So, we need to be spending a huge amount more than we are on the retrofit of buildings, to spend what it takes to win.

19:11 SETH: Secondly, are we creating new economic institutions? So, you know, for example let's take heat pumps. Now I've been through the process of fuel swapping my home, canceling my account with Florida's Gas, the company here in BC, and switching to an electric heat pump. It was expensive, it was complicated. And I came out of the exercise thinking my goodness, if we're counting on people voluntarily doing this for the climate emergency, we're fried.

19:43 SETH: So, we should have a Crown corporation that's mass producing HFC free heat pumps, get the profit margin out, get the economies of scale, an army of installers who come to your home and make it really easy and simple for you. So that's just one kind of a Crown entity or public entity, public energy, utilities, right. These are all kind of new, new public entities that would drive change for buildings.

20:17 SETH: Moving from voluntary to the mandatory, let's talk about that with respective buildings. So, the key thing, a key regulatory change we need across the land is a decision that says no new buildings, should be able to tie into gas lines or use fossil fuels for space from water heating, as of next year. That would communicate emergency. The city of Vancouver where you and I reside has done that. But no provincial or federal government has done anything close to that.

20:57 SETH: And so that's what it looks like look like there, that would drive a huge amount of GHG emission reductions. And we need to tell the truth. So, that means, until such time as our government brings in these regulations for, for all of you architect folks, that means talking honestly about the climate emergency with your clients.

21:18 LOUIS: So there's the role there then for architects as advocates.

21:23 SETH: Yes.

21: 24 LOUIS: But, training and development is needed in order to support some of the measures you've been talking about.

21:30 SETH: Absolutely, absolutely.

21:33 LOUIS: And I think how, for instance, building code to be an area, but that would also have to be transformed in order to support the measures you're talking about as well so the climate emergency plans would need to be backed up by building code regulation.

21:50 SETH: Yeah. So ultimately to hit the speed and scale that we need to hit, it has to be state led, so the building codes themselves have to change, and this can't be voluntary. It has to be mandatory that no new buildings can do this. Until such time as that happens, that's where your members have an advocacy role to play.

22:10 SETH: And that advocacy role is dual right. One, it's an advocacy role by the RAIC to government saying, we want the emergency agenda for our sector and this is what it looks like – change the building code. But it's also about advocacy to your clients, and maybe it means your own individual member firms. Taking a bold stand, until such time as the regulations change, where you say we're not going to take on projects that continue to tie into gas lines, because the hour is too late for that.

22:51 LOUIS: There is a global movement now, it's called Architects Declare. This organization has basically declared a climate emergency. And I think the big challenge for architecture as a profession is to make the transformation from, you know, education, learning and capacity development, to action. And I guess I think part of the point of the Congress in architecture 2021 will be, you know, input from members on what forms that that action needs to take.

23:24 SETH: And you know, here's the exciting news I think, for your members. The transformation before us is going to involve a huge amount of buildings. Whether in the form of retrofits or new buildings, or, in high-speed rail or in neighborhood design and landscape architecture and this is a grand time to be an architect passionate about the climate emergency.

23:57 SETH: And as we emerge from the pandemic, there's going to be a huge role. I mean, this is the key. We talked earlier about the similarities with the pandemic but here's an important difference, okay. People talk about COVID fatigue and that's really real. And some people have responded to my thesis by saying, well, you know, look how, how we've all tired of emergency in one year.

24:20 SETH: And now here I am saying we got to spend the next few years in emergency mode. But here's the distinction. The things we have been called upon to do in the pandemic are anathema to all of our social instinct to stay home isolate. That's hard.

24:41 SETH: The good news for the climate emergency is the things that we're called upon to do now are precisely the opposite; to go out and do something grand together, and an awful lot of that is building.

24:56 LOUIS: While building is a collective activity, it's not accomplished by any one person and architects have a huge amount of experience in managing a collective response. So, I think I have a lot of skills to draw upon and bringing to mobilizing for the climate emergency.

25:15 SETH: Yeah, exactly.

25:16 LOUIS: I wanted to bring up one additional point. One particular area where I think architects can respond, is in the health and wellness area. So one specific response is bringing carbon down. But as we see, the effects of climate change in terms of floods, wildfire, drought, air quality, there are a lot of impacts coming at us from climate change.

25:40 LOUIS: So, architects can contribute in terms of health and wellness, in addition to the zero-carbon agenda, and that they're definitely overlapping. And I was very interested to hear what you've been doing with your house and your heat pump and I think, you know, we go to our jobs, we work on zero-carbon and health and wellness impacts but when we get home, we also have to, you know, walk the talk, there as well.

26:03 LOUIS: Where we act as role models within our families within our community, so there's a multi-level response in terms of how we how we all respond to the climate emergency.

26:14 SETH: Well, there's definitely a connection with health. It is true, as you say, as a parent, I'm happy to have these gas pipes out of my house. And I think there's an increasing case on the health front for canceling your gas accounts and retrofitting your home.

26:35 SETH: And the coal benefits on taking climate action in terms of air quality generally and the connections with asthma and things like that, and just air quality generally. That is a key difference between the sacrifice story of the war, and this climate mobilization. What emerges when we do what we have to do in the face of the climate emergency, what comes out of it, is a better quality of life and healthier life.

27:06 LOUIS: Yeah. One difference between the war experience and our current experiences is that the war experience occurred within a very compressed period of time. The climate emergency is the multi-decadal response. How do we maintain our momentum over a very long time period?

27:26 SETH: Well, yes and no. So, you know, the war was six years long-time. I actually think that the bulk of what we need to reset, in the face of the climate emergency, will be an undertaking over the next 10 years. So is it longer than the war? It is, but it's not dramatically longer than the war.

27:46 SETH: And then we have this period of kind of winding down the rest of it over the next two to three decades. So it is a longer period, but it's also not nearly as challenging or demanding. Remember, in the war, we had to remake the economy twice. Once to ramp up military production, and then again to re-convert to peacetime. Now we only have to do it once.

28:12 SETH: And you know in in the war, the level of public spending in order to meet that challenge, government spending increased tenfold. The GDP of Canada doubled in the war. I'm not saying that - I think we need to spend about 4% of GDP for the next 10 years, and we will accomplish a huge amount.

28:39 Theme Music

28:47 MONA: Thank you for joining us. That was an RAIC Podcast on Architecture episode featuring Seth Klein and our RAIC Congress on Architecture Steering committee member Louis Conway.

28:58 MONA: In this episode Seth Klein states that buildings are accountable for 10% of greenhouse gas emissions in Canada. Canada's Fourth Biennial Report on Climate Change, published in 2019, reports that in 2017, buildings were accountable for 12% of greenhouse gas emissions in Canada.

29:17: The Canada Green Building Council report on Making the Case for Building to Net-Zero Carbon, published in 2019, states that in Canada, buildings are responsible for 17% of greenhouse gas emissions from residential, commercial, and institutional buildings. This report cites the Pan Canadian Framework on Clean Growth published in 2016.

29:49: Seth also reports that buildings are accountable for a global average of 40% of emissions. The 2019 Global Status Report for Buildings and Construction prepared by the International Energy Agency and coordinated by the United Nations Environment Program states "Building construction and operations accounted for the largest share of both global final energy use of 36% and energy-related CO2 emissions of 39% in 2018".

30:18 MONA: The difference in numbers can be attributed to the fact that Canadian reports tend to look more narrowly at operational emissions. When viewed from a full Life Cycle Analysis perspective to include embodied emissions in materials, the greenhouse gas intensity of the built environment goes up significantly.

30:34 MONA: The second episode of the RAIC Podcast on Architecture will launch on May 20. It will feature RAIC Congress on Architecture Steering Committee member Bianca Dohlman in conversation with Pratt Institute School of Architecture Dean Dr. Harriet Harriss.

30:55: You can access the RAIC podcast on architecture on-the-go through your favorite podcast app. For more information on the RAIC Congress on architecture, and for future episodes, visit www.raic.orgforward/Congress2021