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Interview with Joe Brewer
Co-founder of Earth Regenerators
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David Bollier: My guest today is Joe Brewer, an American whose move to Barichara, Colombia, set him on an ambitious path to restore a degraded landscape in the Northern Andes. He became the founder of Earth Regenerators, a project that is reviving the town's food forest and attempting to purchase and restore land critical to the region's aquifers. He has also become a leading practitioner of ecosystem restoration and an international organizer of bioregional activists.

Brewer has spent many years studying complex biophysical and social systems, which taught him a great deal about physics, atmospheric science, culture design, and philosophy. He also has studied political discourse with George Lakoff, the noted cognitive linguist.

Brewer has described himself as 'a change strategist working on behalf of humanity,' a phrase that applies to his recent book, *The Design Pathway for Regenerating Earth.* The short but powerful book synthesizes a vast scientific literature to warn of the colossal ecological dangers now facing humanity. It also explains the many commons-based, prosocial practices and norms that can help restore the earth's living systems.

Joe, welcome to *Frontiers of Commoning*!

Joe Brewer: David, it's such a pleasure to be here with you. I've been a fan and a collaborator and spreading the good news of your work…nearly 15 years, so it's just so nice to be here with you now.

Bollier: Well, thank you. I mean, it's a thrill to be able to showcase your work. Maybe we should start with you explaining this rather ambitious, unexpected venture that you've launched in Colombia and why you think it's important to the future of civilization, if I can put it that bluntly.

Brewer: I would go beyond that and say, civilizations are a temporary experiment in human organization in the last 1% of human history, the previous 99% being hunter gatherer societies.

Bollier: Well, you are thinking on really big terms then.

Brewer: Yes, I am. And I'd say what we're doing in Barichara is a living laboratory for the integration of indigenous lifeways with the best knowledge we have from our civilizations as we move into the model that I believe is necessary that comes after civilizations.

Bollier: Well, set the scene for how you an American working in conventional western, northern environments came to go to Colombia and launch this project.

Brewer: Well, one thing that happened for me was in January of 2017, my daughter was born. And this was a pivotal moment in my life, not just because I became a father, but because I understand the planetary predicament that we're in. And it was a good 10 years of thinking and feeling into whether I should bring a child into this dangerous world that we live in, knowing what the risks are in the next half a century. So, when we made the decision to have children, we were really clear that we would be catapulted into a whole new level of transformation in our own lives.

To be able to look into our own baby's eyes, our daughter's eyes, when she was a newborn, and with all honesty and say, "We're going to do the best we can, knowing what we know is coming." And so, our journey to Colombia took us from where we were living when my daughter was born in Seattle, to living in Eugene, Oregon for about a year because it was less expensive. And we lived in Eugene before, and so we already had connections and community there. And it was part of our journey of de-financialization, which turned out to be a very powerful strategy for becoming a commons, which is something I want to talk about today. I became like a planetary commons, and I want to talk about how that can happen.

So de-financializing, or reducing the cost of our living, we got rid of our car around 2010, and then in 2017 we cut our expenses down to 25% of what they were just by moving from Seattle to Eugene. And this continued us on a further journey about a year later when we went to Costa Rica, and the purpose of our journey to Costa Rica was that there was an attempt at the time in late 2018 to create living laboratories of regeneration at the scale of entire territories or bioregions.

So I was very drawn to that and became actively engaged in helping to try to stimulate the cooperation and the deep integration of projects that were being touted as possible in Costa Rica. So during the year of mostly late 2018 through near the end of 2019, my family was in Costa Rica in a biodiversity hotspot, learning a lot about how these bioregional scale projects could happen. And I ended up in the perfect position to learn this by being on the team, a two-person team, with another wonderful commoner named, Stuart Cowan, when we were the two-person team at the Capital Institute creating the Regenerative Communities Network. So our job was to create a planetary network of bioregional experiments and creating economies that regenerate landscapes and create well-being, healthy-oriented local economies.

So while we were doing that work, I was invited – actually, Stuart and I both were invited – to Colombia to help launch a group called Colombia Regenerativa, which is a network of regenerative practitioners across Colombia, organized by a local Ashoka fellow and regenerative leader named Luis Camargo. So my entry point to Colombia was helping organize an event that birthed a network of people.

When it became clear that the way that my family was trying to live and raise our daughter was not really something we could find in Costa Rica, that we didn't have the community that we needed, that we weren't in an environment where we could commit ourselves to a community based landscape scale regeneration project…We couldn't find one, and Costa Rica's very expensive to live in, so it was quite difficult. Most regenerative work in Costa Rica is a rich person's game, which is something that's not talked about nearly enough. You need a U.S. level of income just to live in Costa Rica, very expensive. Whereas a person can

live in Columbia for one-tenth of that amount of money and have a good life and then put themselves in service to other things.

So the way that we originally came to Barichara, Colombia was that I met a beautiful young man named Felipe, who was at the Colombia Regenerativa launch. So I met him at that event. He and his wife were living in Barichara. At the time they had three children, now they have four, and they were very passionate about raising their children with a blend of ecological education, nature-based education, and indigenous practices.

So we were really aligned in our parenting at a personal level, and they were working within a community reforestation project called Bioparque Móncora, which is a six-and-a-half-hectare community forest which is a learning center for everyone in the territory, publicly open and accessible to tourists, as well as everyone in the community and a site that they're regrowing the native forest.

We came to join that community project where a forest school was being set in motion for children. The primary attractor for us was a blend of what we wanted to raise our daughter, and the kind of life we wanted for her, and the opportunity to connect with a real community in a community project doing reforestation.

Bollier: So it started out rather modestly, but it sounds like it gained some momentum that you helped facilitate connecting a lot of different players in the region.

Brewer: Because I already had this bioregional perspective, which is basically to look at the scale of integrated functions across landscapes, like how a watershed organizes the ecology, the soil types, the movement of life through the food webs that exist within the ecosystems because water is always present.

Now, looking at this large scale was something that I was already accustomed to. And then also because I had studied earth system science and I had studied a lot of things related to global wealth inequality and the story of poverty creation, what I, at one point in my life, called ‘the global architecture of wealth extraction,’ the wealth hoarders who rob and cheat and steal the world’s wealth in the form of colonialism and neoliberal capitalism and other topics I'm sure your listeners are familiar with.

And so as I was really looking deeply at the social change processes that gave rise to all of these social harms and ecological damage, I was very aware that there were intermediate levels of society that could function as regenerative economies, and they would be organized at the scale of landscapes. They would be organized at the scale of watersheds, coastal estuaries, mountain ranges, islands, which would become *de facto* ecological commons. That was a key part of coming here, to see there was a landscape that was sufficiently degraded, and open to work with, that it could be treated as a commons.

Bollier: Now, you had had a remarkable diversity of exposure to different intellectual disciplines or sciences, from physics to ecosystems, to complexity science and philosophy even. But had you been an organizer to develop something on this scale, or were you just sort of jumping into the deep end and seeing if you could swim?

Brewer: Well, I was jumping into the deep end with something of this scale, although I had worked previously with an organization called The Rules, where we worked with social movements. Movements that are quite large, like La Via Campesina, which has more than a hundred million members across Latin America, and also with social movements in places like India and Kenya.

So I had been a participant, but my role was always analyzing discourse and helping develop strategies. Now while I have some skill at facilitating groups, I'd never done anything at this scale before. And one of the insights I gained from studying cognitive science and working with George Lakoff was that the mind is a dynamic pattern of the body.

Without the body, we don't have a mind. There's a lot of great research in cognitive science about how that works. So it was really natural to apply this insight to organizing, using landscapes. That there's a collective intelligence to the integration of functions and patterns for landscapes, and that dynamic pattern is very similar to the way that a mind emerges within a body.

Bollier: Let's unpack that a little bit. I mean, that's a fantastic conceptualization, but for somebody in the street who wants to understand the patterns of their ecosystem or how to engage with it as an individual, tell me how you began operationalizing that.

Brewer: One of the first things that was really critical is that just by luck when I was in graduate school, I studied the formation of clouds. I was in a research group that studied clouds using instruments, satellite instruments in particular to study clouds from space. So I had a lot of knowledge about how weather patterns give rise to cloud formation, and when I arrived in Barichara, just to give the listeners a visual sense:

If you imagine that you're standing on a plateau that is roughly circular in shape and about 20 miles from one end to another, so it's fairly large landscape scale, plateau. And on almost all sides are river valleys because there are three rivers: one river cuts across almost two, like one and a half of the sides of the plateau. And then there are two other rivers on the two other sides, which means it's almost entirely an elevated island.

With those rivers that are below the plateau, there are three mountain ranges. Three giant ridge lines to our west, running from the south to the north, and then to our east, from the southeast to the northwest, and then from the direct west it's going from the southwest to the northeast.

What that does is it carves a triangle of mountains. It's like you have a triangle with three sides. Inside of those is a circular plateau that's elevated above three river systems. Each of which has a deep canyon. I wanted to give that visual image to say that when I stood on this plateau in that community forest, I looked out to the west where there was the giant Rio Suarez, or as the indigenous called it Rio Saravita.

And I could see this large mountain range that runs from the south to the north, and it's so tall that all of the moisture is pushed up against it, rises up and makes rain, and then we're in what's called the rain shadow. And in those mountains, there's cloud forest. It rains there every day of the year.

So what I saw by standing in that place was I looked around me 360 degrees, I was on a plateau like standing on a table where there are river valleys on almost all sides, and I saw that it was blue sky overhead and that there were clouds in the distance in every direction. 360 degrees of clouds on the edge and completely blue skies in the center. Now, because of what I know about cloud formation and how it works, when I looked at maps on Google Maps and Google Earth, and I saw all of the exposed rock and clay where they had cut down all of the forest, it looked like that table was a concrete slab. And so there was an immediate connection for me that the deforestation had created something that meteorologists call the heat island effect. Normally it's applied to cities.

So for a city, you have all this concrete on the ground. Concrete absorbs and reflects sunlight, and it dries and heats the air, which pushes that hot dry air outward, and then the moist cool air can't get in. I saw the same thing happening in the landscape itself, which told me what the size of the territory was for the climate.

The climate system was the three mountain ranges, because there was only one place to the south of that mountain range on the western side, was the only place the moisture could enter, and it entered into a triangular bowl. The three mountain ranges close off as though it's a bowl with three straight sides, and they create a rotational flow of air, either clockwise or counter-clockwise.

Now because I'd studied this – this was the first week that I was here – I saw this pattern and started looking at the maps and immediately recognized that the deforestation that I was just starting to learn about, it's a unique ecosystem here and more than 90% of it has been cut down, that the exposure of the land surface was drying out the land, creating a desert, and that the characteristic size of the landscape was the three mountain ranges, the plateau, and the three river systems, which total about 500,000 hectares, or approximately one million acres. So I began thinking about organizing any of my thinking with this climate system and the movement of water, which comes in with the weather. So even though I'd never done work at this scale before, it was instantly visible to me that there was a holistic system that was well contained.

Bollier: So you discovered, you might say, the appropriate scale of the bioregion, but that immediately you would confront the commercial patterns, the agricultural patterns, the cultural distribution of things and practices at such a disaggregated affair, such a historical affair. How do you begin to start to grapple with something so complex?

Joe Brewer: In permaculture, there's a very simple insight. It is that you develop an ethic of care by arriving to an ecological context and merely observing what is there. And as you observe, you start to see the patterns and the cycles. And only after you've gone through at least one full cycle – you know, as a heuristic, they say one entire year.

But here in the tropics you can have a weather cycle or a growth cycle four or five times a year. Either way, it's an entire cycle of nature without doing anything, simply observing the patterns. So the starting point was observing that there was this holistic bioregional system and then beginning to observe the patterns.

But I was looking for specific things. So one thing that I knew for my time in Costa Rica was that there would probably be a lot of really good local projects that didn't talk to each other, that barely knew about each other's existence, if at all, and this is because when you have a project like a permaculture site or reforestation, whatever it is, it's so intensive just to do a good job that there's very little capacity to look at other projects or to actively collaborate with them.

And this is a problem I've seen all over the world. So I immediately, as an outsider who was neutral with respect to all the projects, just began traveling around the territory, getting to know the projects and becoming friends with people who were running them. And so within a year I had already discovered about thirty local projects that were really good projects, doing good things on the ground with leaders who had a track record of getting things done.

So the beginning of the process for me was really to go into the mode of the permaculture observer and then notice what was there with this understanding that we need to operate at the scale of territories or bio-regions, and that probably no one was, and that if I saw enough good projects and formed my own relationship with them, then I could help to weave them into a tapestry, which is actually what I was able to do.

Bollier: You arrived here as a white northerner, a gringo. How did you begin to become accepted, trusted, and be a catalyst without taking charge or being resented?

Brewer: Well, for one thing, taking charge would just get everyone to put up their walls and nothing would ever happen. People in South America have 500 years of experience with outsiders thinking that they know better than the locals, including by massively exterminating them.

And so there is a respectable amount of skepticism that local people have. And in the area I'm in, in particular, which is in the region of Colombia called Santander, my entry point was actually with the children. So there was a forest school during the summer break, summer break in in Colombia is in December and January, and so we arrived in late November of 2019 when the schools were letting out for two months for their summer break, and our daughter was enrolled or joined into a forest school led by our friend Felipe and his wife Alejandra.

So the beginning of forming relationships for us was finding the parents of the children who spoke some English, because our Spanish wasn't very good yet. And then we built relationships around the children and families, and that was just the natural thing. Any parent knows, you know, you move to a new town, you've got to find friends for your kids and you want to be friends with the adults and you're probably going to spend a lot of your time where your kids are. So your adult friend group is pretty much restricted to the parents of the other kids.

So that was where we began volunteering a little bit in this Bioparque Moncóra, but very little, and getting to know the parents of other kids while our kid was learning alongside them. But then what began to happen was we entered the Covid pandemic in March of 2020, which was an absolute blessing for what we were about to do because one thing that

happened was in November, we arrived in the middle of a really intense dry period. The landscape looked like a desert, and it didn't start raining until April.

So if you can imagine, the ground was already barren and exposed in November and then we had to wait almost half a year for the first raindrops to come. So in April, one month after that, the militarized lockdowns of all cities and towns in Colombia, we would sneak out of our house to go to the Bioparque, which is right on the edge of town, just to get our daughter outside. And when it started to rain, I bought a pickax and I started digging contour swales. For those who don't know, contour lines on a map are the lines of the same elevation. So a contour swale is when you dig a ditch that is at the same elevation on the downhill slope. And the effect of this is that it is the line is drawn perpendicular to the flow of water.

Water will flow downhill, it'll fill the contour swales and then spread out horizontally, slowing the water and helping it to sink into ground, which is a very well-known technique. And so I began going out into the rain with a pickax. And at night when it rained, I would take a flashlight and a pickax and I would let the water be my guide and dig contour swales.

The first project was one meter, like one meter or three feet in length. A tiny, tiny contour swale and eventually that changed to having 20 different water retention systems across four hectares of land, completely transforming the evolution of the landscape as water entered into it. All of this happened during about three months of the rainy season as I would go out during the rain and dig contour swales.

Bollier: Was this your land or just public land or…?

Brewer: This was the community land. So this was Bioparque Moncóra, and it's set up in this interesting way that in Colombia public, like public land, translates into local mafia corruption. So this is an important difference in words. Community land means something very different, and private land is pretty similar to the rest of the world.

So there's private land; there's community land, which is shared ownership of some kind; and then public land, which the local corrupt mayor's office can do whatever they want with because there's so much corruption. Latin America has, many places in Latin America have, weak institutions, and Colombia is one of them.

So this land is community-owned specifically there is a member based association with forty members. Its name is Asociación Aquileo Parra. Aquileo Parra is the name of an ex-president who's from Barichara, and so Asociación is an association, so it's a non-profit association that's member-based. For those who know what a cooperative is, they actually have cooperatives and associations in Colombia, and they're very similar, slightly different rules for how you define a member. So an association in a sense is effectively the same as a cooperative. And so there was a cooperative ownership structure with forty members, all of whom live in the community. And there are two women, Camille and Vicky, who are the land stewards who had been planting the trees and bringing the students and guiding the whole process.

Bollier: So this became an exploratory project. I assume you didn't have a massive blueprint, but you [were] sort of like, ‘What can we do?’ And you built out, you built out, but obviously

you would have the challenges of any new project or organization of ‘How do you fund it, how do you organize people, how do you govern it?’ Talk a little bit about how you got going as a coherent project.

Brewer: Well, there's something that happened in parallel, which was digital, was not place based in Colombia, and that is that in December of 2019, I started writing the first chapters of my book, and I wrote sixteen chapters in fourteen days. It was a book that was ready to spill out onto the page and I had a very strong sense that the book should not wait for the length of time it would take to find a publisher and publish the book. And that in many ways I had learned from others in such an expansive way, and I was assimilating the ideas of other people. But I felt like I really didn't own the book. In my mind, it was an information commons, aggregating within my mind, within my own learned self.

And also, as I've mentioned earlier, that I became a planetary commons, which is a story I want to tell. So I'll touch on it now to say that by December of 2019, I was already being funded on a platform called Patreon to a level of about $850 per month, which was almost enough money to support my entire family in Barichara.

We found that a thousand dollars a month was sort of the sweet spot that we could afford to live here and cover all of our expenses. And so I was already a commons in the sense that about 40 people were giving me monthly recurring donations to enable me to just do whatever I wanted to in service to the larger world, as long as those supporters liked what I was doing.

And so I functioned as a liberated commons. And this was really important because as I was writing the chapters of my book, I decided to just give it away. And the way that I did this was to go onto social media. And as you know, I have a fairly large social media following. It's not huge. As of right now, I have 11,000 Twitter followers and 7,500 Facebook contacts.

You know, so it's like substantial, but not famous, but large and diverse enough that when I said, ‘Who would like to join a study group to read chapters of my book?’ and I posted it on Facebook, Twitter, and LinkedIn, that in the first few days, several hundred people joined.

Bollier: Let's just clarify that your book's title, which you haven't mentioned, is *The Design Pathway for Regenerating Earth*. It’s two dozen short chapters, essentially outlining the scope of where you've been and where you're hoping to go, or perhaps you could describe a little bit more about what you hope to accomplish with the book.

Brewer: Well, I had a personal need to accomplish with this book, which is that after twenty years of trying to find a pathway to planetary sustainability and one after the other, knocking them down as not realistic or not possible, I was left with only one, and so I actually stumbled upon one that had been named by Dana Meadows back in 1983, but that's a story that we could tell later if we like. The important thing is that I had come to a place of knowing how to get to planetary sustainability, including accumulating insights into the tools and frameworks to do it in a practical sense.

And to my knowledge at the time, I didn't see anyone else who had that particular combination of knowledge, and I felt a need to address the problem of what happens if Joe

gets hit by a bus, which was basically how could I give this knowledge away to the world as quickly as possible, so I was no longer responsible to hold it because it felt so important.

Bollier: Rather audacious to say that it was *the* design pathway as opposed to a design pathway. Why were you convinced it was *the* pathway?

Brewer: Well, that's actually one of the chapters in my book where I offer three pathways and then attempt to discredit two of them. The first thing we have to recognize is that at least as long as fifty years, since the mid 1970s, we have been in a condition of ecological overshoot. And going back at least seven or 8,000 years, we have been in a process of planetary collapse.

So let me just explain what these things mean really quickly because this will start to show why there's only one as far as I can tell. So ecological overshoot is the context in which some ecosystem or some population of organisms have overshot the carrying capacity of their environment. And as they go beyond the carrying capacity of their environment, while they continue to exist at those larger numbers for a period of time, they undermine the basis of their survival until their population collapses.

And this is what happens in any kind of overshoot, whether it's an island with deer populations that grow too large, or something like what happened when the first cyanobacteria, which is phytoplankton, started producing oxygen and accumulating oxygen in the atmosphere, which caused a mass extinction of it.

[What] we can see right now is that we are in a mass extinction event, and we are ecological overshoot due to human activities. And so what this means is that there are supposed solutions to sustainability issues that are not based in a solid understanding of ecology and what it means to be planetary overshoot.

By the way, for anyone who wants to dive into this thoroughly, in an authoritative way, I recommend William Catton's book *Overshoot*, which came out in 1980, which as far as I can tell, after that book, there was no other book needed. It was absolutely phenomenal. And that informed the work of thinkers like William Rees, who went on to create the ecological footprint. And other ecologists, people like Michael Dowd, who celebrated [it] as the most important book he's ever read in his life, and I highly recommend it. It is a very sobering and highly legitimate book. But the important thing is that ecological overshoot is only corrected by the ecosystem itself. What that means is that we have to understand that we are operating within planetary limits and that we will only get to sustainability if we honor them in a legitimate, I would say, empirical way, meaning we have to honor reality as it really is.

The other thing that was really important when thinking about this was, What does it mean to have anthropocentric perspectives where we see the world as if humans are the only thing that matters? And this is a really big issue because others have documented the reason indigenous cultures become sustainable when they do, not all indigenous cultures have been sustainable, but all sustainable cultures are indigenous so far, is because they actually recognize that humans are part of a larger web of life; we're part of a larger family tree that includes other species, and that our survival is inextricably interwoven with the others.

And so when I look at what's happening in the world today, and I see the two most powerful scenarios for where the planet's going to go and how it might get to sustainability for humans, both of them hold a very high risk of causing humans to go extinct. One of those I call the Sociopath's Dream. This is Jeff Bezos, Elon Musk, and people like them who are happy to create tyrannical, surveillance-state, techno-capitalism, which is what Facebook is and what we live in today, so they can accumulate and hoard as much wealth as possible, blend themselves into a movement called transhumanism, which in this sense means they never die because they upload their minds to silicon. They project it out in a space and some satellite, and after all the humans have died off, they come back as some cyborg intelligence to repopulate the planet. I really wish I was making this up.

Bollier: The so-called "Singularity" people [a movement associated with tech leader Ray Kurzweil and Peter Diamandis], and of course all these expeditions to Mars and other planets to sustain people like them.

Brewer: Yes, and it's absolutely insane. And the assumption is that these people are so much smarter than the rest of us, and because they're sociopaths, they don't care if all of us are killed or if all non-human life is destroyed. They just don't care. All they care about is serving their own narcissistic egos. Anyone who looks at Elon Musk or Jeff Bezos will see what I'm talking about. And this is actually their survival strategy for the human race, is to upload ourselves into artificial intelligence and let humans go extinct.

Bollier: So other doomed pathways is that…

Brewer: The other one is what we call, it's actually taken from *The Limits to Growth* study, 'business as usual.' Business as usual says, 'Well, we'll just keep doing things without questioning any basic assumptions of our globalized economy and technology will fix it.' And there are other variations on mythical and delusional ideas that have no basis in reality.

But the important thing about 'business as usual' is that because it doesn't recognize what happens when we're in overshoot, it actually makes a problem worse because the longer we're in overshoot or the further we go into overshoot, the more degraded our planetary ecology becomes and the lower our carrying capacity is afterwards.

So while it is possible that when the human population collapses later this century, that the population doesn't get to zero, the longer we maintain this exponential growth trajectory, the more likely it is that we go extinct too. One thing I know as an earth system scientist, first of all, the planet is a complex system, and this is important because there are many interdependent relationships where thresholds actually change depending on other thresholds. So a threshold is not fixed, a threshold changes depending on how it's coupled or connected with other thresholds. I'll give you a couple of examples of things that are happening right now. Brace yourself because this is some sobering and scary stuff, but I think it's really important to just know where we are.

One thing that's happening right now is that there are about four meters of frozen tundra, what are basically ancient jungles in the Siberian permafrost. And as global warming is causing the arctic circle to warm faster than any other part of the planet, the Siberian permafrost is thawing and all of that vegetative material begins to decompose and release

huge amounts of methane. Sometimes this is called the Siberian methane bomb. And the important thing to know about it is that the amount of heat for methane is that one molecule of methane produces twenty times the heat of one molecule of carbon dioxide, but it lasts for a much shorter time in the atmosphere.

One atom of carbon dioxide tends to last on average about 100 years in the atmosphere, whereas methane tends to last for one to two years. But the important thing is that if all of it was released within a period of about ten years, the heating just for methane in Siberia would double the total planetary heating of all greenhouse gases emitted by humans during the industrial age.

So you can see that CO2 emissions by human causes is a threshold that is deeply connected to the Siberian permafrost melting. And so one threshold is changed by what happens to the other.

Similarly, we have another really big one, I just, there are two really big ones I want to name briefly that show how most so-called sustainable solutions don't work. One is called the Great Blue Ocean Event, which is when there's no longer ice in the Arctic Ocean during the summer, where we go from 90% of the energy of the sun being reflected to space, to 90% of the energy being absorbed by the dark ocean water, which would have an irreversible change to all of the wider patterns on Earth.

And a third that I want to name is that as we fragment and deforest the Amazon in South America, that there's this thing called the biotic pump, which is a hydrological cycle on the scale of the entire continent. And then as we fragment and deforest, eventually that biotic pump shuts down, and when it shuts down, a forest that has existed for forty million years almost instantaneously becomes grassland savannah. And all of that carbon dioxide is released. In 2017, the Amazon went from a net absorber of carbon dioxide to a net emitter because of this cause.

And so I just wanted to name these as examples of when people say if we just change from single occupancy cars with gas to single occupancy cars with fuel cells, which, by the way, you have to mine the ocean floor and destroy all the world's mountains to get the minerals for them they call that an environmental solution, but it's not. And so it's in this way that I was able to see the discrediting of many sustainability solutions.

Bollier: So basically, the techno-fixes, which are all sort of proxy vehicles for sustaining consumer society and growth, are themselves ridiculous as long-term solutions, which leads you to the design pathway.

Brewer: Yes. And the design pathway was named by Dana Meadows in 1983 when she wrote a little paper called “A Brief History of the Balaton Group.” (https://donellameadows.org/archives/history-of-the-ideas-underlying-the-balaton-group/) And this was because Lake Balaton is the largest lake in Europe. It's in Hungary. And after *The Limits to Growth* study came out, for the next ten years there was a group of researchers and a network of universities saying 'What would happen? How would we get to sustainability on a limited planet, on a finite planet?' And they called themselves the Balaton Group. And so what they found after ten years was that the only way to live within the finite

limits of the planet was to create a planetary network of local living economies, organized as bioregions, each of them having a bioregional learning center. This actually makes a lot of sense.

Bollier: The bioregionalism, of course, was much discussed as early as the 1970s, but of course with the onset of Reagan, Thatcher, and neoliberalism, it had sort of been banished from public consciousness and only recently been given some fresh interest in life. First of all, do you agree with that? But second of all, is that sort of a rediscovery of some of the early pioneers of bioregionalism as the design pathway?

Brewer: Absolutely. It's interesting that I was born in Springfield, Missouri in 1976. And in 1978, about thirty miles away was the first international Bioregional Congress. It took place in the Ozark Mountains in Missouri in the late 1970s.

And so I was born into a very strong bioregional identity, the Ozarks, without knowing that that was a bioregion. And then much later when I lived in Oregon and Washington, I was in Cascadia, which is another well-known bioregion, sometimes it also goes by the name of the Salish Sea. What's interesting is that bioregionalism lost its way by accident, I think for two reasons.

One is that Peter Berg, who was one of the strong advocates of bioregionalism…who was the founder of the Planet Drum Foundation in San Francisco; he was also the person that wrote the first pamphlet on Green Cities. And the Green Cities movement took off like wildfire and green cities and urban sustainability as a discourse largely replaced bioregionalism.

And another thing that happened was that the bioregional movement itself had many factions that couldn't get along. And many of their disagreements were about the role of cultural identity for defining what a bioregion is, or figuring out how to govern a bioregion because they didn't have Elinor Ostrom's work, which really showed how to govern a commons in a rigorous and clear way.

Bollier: And you might also say that the economic growth consensus was still pretty solid whereas now we're starting to sober up and realize that some rather large-scale changes need to be made. So there's a little external pressure for acknowledging and even embracing bioregionalism.

Brewer: And I would say the success of neoliberalism did a very good job of pushing bioregionalism into the margins. So there were a lot of factors. There's not a simple story there, but bioregionalism is the only way that humans have ever organized themselves sustainably.

Bollier: Situate your project in the larger context of the need for bioregionalism on a global scale and how you see the Barichara project addressing that, or perhaps prototyping behaviors.

Brewer: One thing that's really powerful about Barichara is that it's a relatively small town. Right now it has about 7,000 people. It's got a large tourism market and a lot of tourists from

within Colombia and less from outside it. It's one of the most popular tourist destinations of Colombians within their own country.

And what I see as being really powerful is because the town itself is designated as a national monument they have protections on the architectural style, which are 18th century Spanish construction. Which means every house in the town is passive house design of mud walls and wooden and clay roofs, sustainable construction materials with passive house design from 300 years ago.

And so they also because of the cultural heritage of the region the Ministry of Culture has set up a number of cultural preservation projects for local textiles, local stonework, local foods and arts and crafts, which of course are supported financially by the tourism industry. So this is a place that has a lot of local capacity to become a localistic or a bioregional economy.

It also has multi-thousand year old stone footpaths connecting all of the villages throughout the mountain range, which I like to describe as pre-Colombian and post-fossil fuels, that after the fossil fuel infrastructure collapses, people will be able to get around with regional trade using the stone paths that are an infrastructure that exists. We have this massive commons-based infrastructure from the indigenous people that is still here.

And so what's happening here that's so powerful is that this was a place that had the worst violence in Colombia fifty years ago, and the local people constructed their own peace process. And now it's one of the most peaceful and stable places in Colombia, and that means it's able to support a local tourism economy.

Bollier: So there's all the ingredients for it becoming a coherent, holistic economy with mindfulness of its bioregional necessities or imperatives.

Brewer: Exactly. And what I learned was that by starting to do the work here while telling the planetary story, this could become a place that is a prototype and a learning opportunity for anywhere else on earth.

Each place has their own context and things are different, but there's a lot that can be learned. So when we started raising money to buy the first piece of land, which we converted into a community commons, it was relatively easy in the social media global stage to mobilize resources about the inspiration of this place as people from the outside could begin to learn from it.

Bollier: I find that so interesting because so much of my work is about interpreting what's going on in the local scale, which is very particular, very local, but finding how it relates to a larger shared discourse of a larger narrative, a bigger picture.

Tell me to what extent and how the people you're working with have this larger understanding, or whether they're really more focused on instrumental, operational aspects of rebuilding their economy

Brewer: Here in Barichara, a lot of people are deeply spiritual and have a strong sense of conscience and have a very strong relationship to the unique ecosystem that is here.

There's no other ecosystem on earth like this one. This is an ecosystem called High Andes Tropical Dry Forest, and it's the only one on earth. And so the people here have a very distinctive cultural relationship to their landscape, which inclines us to be collaborative, even though there's a long history of violence and distrust.

And during the pandemic, there was a lot more openness to change. So, for example, during that six-month period, a solidarity exchange arose between fourteen local farms and thirty families in the village to create a solidarity food exchange for almost no money. And this lasted for five months. It ended when the tourism economy came back.

Bollier: So besides offering this larger vision or context into which people can do their work, tell me about some of the legal structures and funding and financial structures that you're incubating to try to make this go forward with greater power.

Brewer: One of the things we did in the early days…so in August of 2020, I was taken to visit an eroded piece of land and money was offered to me to begin trying to purchase it, and I began crowdfunding to raise the rest.

And so in the process we raised $50,000 and we needed $35,000 to buy the land. The surplus of $15,000 is what I used starting in March and April of 2021. So if you recall, I arrived in Barichara in November 2019. So by this point I've been here for almost a year and a half and built a lot of relationships. So when I had $15,000, which is a lot of money in Colombia, I was able to go to leaders of fifteen local projects that had really strong track records of success and I told all of them here is thirty million Colombian pesos, which for locals is a lot of money, It's about $8,000 of what we had, I would like you as a group to decide how best to use this in service to the territory. And they immediately began revealing their personal agendas, creating a shared purpose, going through a prosocial process to identify the criteria for how they would use the money and how they would set priorities for doing territorial scale work.

And so we used money to create a collaborative decision-making framework, and then we deployed the money. One of the things that came out immediately was that the group decided to give half of the money to the bioparque to create a demonstration food forest. The other half of the money, they decided to use a model inspired from Brazil of a women's fund that gives money directly to women, like micro donations and in the original case, we modified this for people who have little infrastructure, like they don't have a bank account and they wouldn't know to apply for funds, they don't have an organization, so you give them small amounts of money where they have a project that's ongoing and they've reached a bottleneck.

So we were able to support fifteen projects with the other half of the money by asking people to submit proposals where they had projects where they had reached a bottleneck. And we used this to begin weaving other projects in addition to the fifteen that we were already gathering. And this began a weaving process of people and projects.

As we were later introduced to the concept of territorial foundations and our local team declared that we would be founders of one as part of a community where there were six other territories in Colombia. So seven territories in total. Each one with its own founding team, creating a territorial foundation, and we went from prototyping with $15,000 with fifteen projects to supporting about thirty projects and beginning to design for a bioregional scale of governance and funding. And then I went and did more crowdfunding and raised other money to support local projects like creating a learning center in syntropic agriculture, or creating a community kitchen and a project that would transform local food systems, always led by local people.

Bollier: This is all happening outside of government or top-down institutions, it's really a horizontal or bottom-up approach of weaving different types of relationships. Is that correct?

Brewer: It's completely peer-to-peer at the level of local people and project.

Bollier: Maybe there's a profound lesson there in terms of human culture and relationships mimicking the symbiosis and interdependence of ecological systems. That strikes me as part of the design pathway, as I understand it.

Brewer: Yea, it's biomimicry at a deep scale. And one of the things about this that's very important is that we were applying the insights from a framework called prosocial and being very explicit about it. I just want to name that Prosocial World is the organization that trains people in prosocial, and there are three foundational domains of knowledge, one domain of knowledge is *Governing the Commons* and the work of Elinor Ostrom, which she collaborated with David Sloan Wilson, and he generalized her eight core design principles for all living systems and biology. They wrote a paper together just before she passed away. So this governing of the commons is one of the pillars of prosocial.

A second pillar is contextual behavioral science, which is the best blending of behavioral sciences and cognitive approaches to organizational management and behavioral change. And in particular, a framework called acceptance and commitment therapy, which is very powerful for helping people to manage their own emotions as a commons. So this helps members of a group learn how to be better prosocial members while the group governs itself as a commons.

And then the third domain of knowledge is everything in the research on the evolution of cooperation in living systems. Combine those three domains, you create the framework of prosocial, which is really a blend of knowledge and approaches more than a framework specifically.

Bollier: By coincidence, David Sloan Wilson was my podcast interviewee in the previous episode to yours. So people listening to this might want to turn back to that interview to learn more about the prosocial approach and philosophy.

Brewer: I was working with David Sloan Wilson when they were prototyping *Prosocial*. We were setting up the Cultural Evolution Society together with a group of academic researchers. This was back in 2015, 2016, and Prosocial came into being, and I was connected with all of

the founders at the time. So I was immediately taking what I could learn from them and applying it in my own practice. And it's been fundamental to my success.

So if someone were to say, 'Well, Joe's really smart and that's why this is working.' There are a lot of really smart people who don't know how to practice prosocial and they would not be able to do this. So the key, the secret to it all, is actually forming prosocial groups that can govern themselves and collaborate with other prosocial groups.

Bollier: The other day at the Bioregional Regeneration Summit, you had discussed some of the more innovative tactics you're developing, for example, for financing. Could you talk a little bit about using digital technologies in creative ways to develop new pools of money to support these kind of collective endeavors, without it being some pixie dust or hocus pocus, but how, in a very practical way, digital networking technologies might be a vehicle for consolidating money to serve these larger commons purposes?

Brewer: Let me start by naming something that many people have probably heard of, but may not know what it is. And this is a technology called blockchain.

So blockchain is the basic technology that's used for Bitcoin, and Bitcoin is probably better known. But blockchain in its simplest sense is a bookkeeping system. It's an accounting system that uses encryption to protect the information so that the information is completely secure, but then does it in a way that's completely decentralized.

The original architect of blockchain started working on it because they wanted to take down the Federal Reserve because they wanted to decentralize finance. They wanted people to be able to create financial systems that did not depend on nation-states. So that was the beginning of blockchain and a lot of people don't know that.

I wanted to name it in that way because blockchain and cryptocurrencies and things that go by the name of Web3, with a third generation of the internet. The thing that they all share in common is this idea about decentralization, about sharing power, about co-creation and co-ownership, partnership and collaboration. So a lot of people, when they hear the word crypto, if they've heard of it at all, they'll say, Oh, that's a Ponzi scheme about Bitcoin. And it uses a lot of energy and it's definitely not sustainable.

And if you're saying that about Bitcoin, you're right. And that's absolutely correct, but what it fails to see is that for every Bitcoin there are 10,000 or more other cryptocurrencies or other digital tools that are attempting to create common space governance and finance. So there's a huge world of these frameworks and tools.

So I'll give an example of something that is in the crypto world that is really powerful and that is that when we have some kind of a digital bookkeeping system, we need to validate that the information that's in the books is correct. So there's a thing called a "validator." And a validator is another technology tool that's just verifying 'Is the information correct? Has it been updated? Did anyone tamper with it? Do the public records correspond with the records that are actually in the books?' And these are called validators. And you can see how a validator serves a very important community function because if you're keeping your money

or anything else of value within this digital bookkeeping system, the validators are increasing the security of the system.

Every time that money changes hands in these digital systems. Just like with credit cards, we pay a little transaction fee that every time some transaction occurs where information is moved from one book to another, there's this thing called gas fees. Which work the same as transaction fees. Because every transaction has a gas fee, it's possible to take a small percentage of those gas fees and give it to the companies that provide validators. To say we'll invest a little bit of the circulation of money in maintaining the financial system.

Bollier: So it's sort of like a collective guarantor of the integrity of the system so that the system can function so that the infrastructure can be serving everyone. That's a perfectly understandable concept despite it being a digital software system.

Brewer: That's right. What's different is that the technology itself has different architectural features. So it's able to do things, like, you could have as many different people as you want, participating at the same system at the same time, and it maintains integrity because of the decentralized way the system is set up.

Or you can validate the information without there being a centralized certification. You can just look across the books that are replicated in different places and compare them with each other without there needing to be a central certification.

Bollier: So this is a nice vehicle for collectivizing money, pooling it. But tell me how this might also be a vehicle for collective management and expenditures of money of the sort that you need for your regeneration project.

Brewer: What gets interesting is when we take the idea of a validator, as I just described, and then we say, 'Well, what if the validator is actually a place where you can pool money, where multiple people could put their money together to support the validator, and then the validator shares their revenue with the people who pooled their money?'

The name for this is *staking*, where you stake the money. You say, 'I will let you use the money for a period of time, and it stays there and I can't retrieve it because we have some kind of a contract.' So if I request to retrieve my money, maybe I have to wait for two weeks, and then the validator can invest that money in building their capacities and then share their revenue returns.

And then there's a thing called the staking return, which is you've staked your money with their pool, and then you receive a part, a return for getting some of the revenue that's shared with the validator. If you just take that as a concept, you have a way of pooling money, sharing resources, and then making decisions with contracts or agreements about how to distribute the money.

Bollier: It's brilliant. I mean, what I like about it, I've done my own research – still underway – in what I call 'relationalized finance,' and the idea is to develop circuits of value creation that are outside that of capitalist markets and finance. The whole idea is to have what I call

trans-vestment from those capitalist circuits into these other circuits. And it sounds like the validators and the digital pooling of money is precisely that: they sort of step outside of the circuits controlled by Wall Street and the large banks and investors and allow some autonomy to commoners in how they control money.

Brewer: Yes, it does exactly that. And there's a really important piece, which is those contracts for how to distribute the revenue are where you can design.

So you might have a group of people that decide to organize, so they have autonomy to organize themselves in a decentralized way. And that's actually called DAO. Decentralized Autonomous Organization. All it means is that there's a group of people that have created a way of making agreements for how they share resources. And so the design of those agreements is where many of the beautiful financial flows occur.

And I'll give you an example of something really powerful we just used. There's a platform called Gitcoin. Gitcoin comes from a platform called GitHub. And GitHub is a place where a lot of open source software is developed.

Gitcoin is a place where a group of people pool their money and then they offer things called 'cause rounds' or rounds where you support a cause. And in early October there was a cause round for Climate Solutions where $350,000 US dollars equivalent and something called a stablecoin, which is cryptocurrency that links itself to stay the same value as the U.S. dollar. That those coins are kept [at] their $350,000 worth. And if you pass a review process for your grant proposal, you enter the cause round and then when people donate money to you, you receive some of that $350,000 based on an algorithm that distributes the money based on the amount of support you receive.

But not the amount of monetary support, the number of donors. For every donor you get, you increase the weighting of the percentage that you take from the shared pool. So this is a digital tool that governs the distribution of the $350,000 linked together with a human system of human beings donating money to each other's projects.

Now we came in number four with our project in Barichara, raising $21,000 in two weeks using this platform. What you can see that's intelligent about it is…one thing they did is they took away the human influence to bias – how that $350,000 is allocated. Instead, they used an algorithm. The algorithm is a contract. It just says you compute this algorithm for all the projects, the number that comes out is what we agree will be given. So no human group can decide the best way to spend that money. The algorithm does, but it does that based on how people interact with the different grants.

Bollier: The algorithm is not a black box; it's been mutually agreed upon as well. It's just that it is less subject to arbitrary political pressures and more sort of, you might say, a constitutional algorithm for how the money will be allocated.

Brewer: That's right. And what's interesting about this is it's a blend of human governance, technology governance, and the dynamics of how people interact.

So one thing that we did was we used Gitcoin to form alliances with other projects. So when we had a Gitcoin grant that was approved, we started asking people to fund our projects. We started training people that didn't know how to use crypto so they could set up crypto wallets and then fund our project.

But then we created a list of other projects that we were technically competing with and we asked people to donate money to them too because their projects, if their projects were successful, would help the larger purpose that our project is a part of. So we named a collective purpose and then we created alliances with other projects by sending people to support them and then talking to those projects afterwards.

Bollier: So you can quickly see how a subversive network with other priorities can self-organize and build this out, creating its own moral authority and integrity, perhaps even its own snowball effect that might inspire philanthropy or governments to follow suit because, of course, governments and philanthropy are not leading this where we need to go in the first place.

Brewer: What's interesting about this is that these digital tools are available to you as in a variety of ways. There are lots of experiments going on. So many experiments and it's changing so quickly, it's actually very confusing to try to follow what's going on. But once we get comfortable playing in the sandbox and actually playing, like just sort of experimenting, we quickly learn the power of these tools to organize directly with our peers.

And what is beautiful about this is that this opens up the way that our local project here in Barichara can help build relationships with other territories. We can raise funding from other territories or direct funding toward other territories. We may build a network of supporters who love our work, and then the trust they have in us can be transferred to another landscape that we can bring the work to.

And this is one of the great insights of the sovereignty of ownership as I know you explore a lot in your work. If the collective owns the means of production, just to be Marxist about it for a second, then whoever's producing the infrastructure of the financial system, and then its governance, could be the same people who are using the money. We can actually create a commons of a financial system, which is really powerful.

Bollier: It brings to mind this wonderful phrase by Václav Havel, the former Czech president who talked about building a "parallel polis" and the idea of, as a dissident facing these enormously powerful impersonal forces, how can one possibly prevail against them? Creating this parallel polis was a way to start to make the cracks open up by amassing your own functionality and moral authority that the prevailing system doesn't have.

Brewer: I have a beautiful example of this, and this might be a way to start bringing us toward a close, which is that here in Barichara, we have a river, it's called Barichara River, and it's got a drainage of about 30,000 hectares, so it's pretty big.

Fifteen tributaries going into the mainstream and it's a dead river. The waterfall running off the plateau has no water in it, and the children of the area have started wanting to restore it because the same Felipe that brought me here in the first place did water walks where he had

the children interview the owners of the land about what happened to the water as a way of building conscience in the adults, which the children still had. And by doing this, one thing that happened is that they started realizing that there was a pedagogical strategy, a way of envisioning the design of curricula for education for all of the elementary schools and alternative schools in the whole territory, which is ‘How can the children help restore the entire watershed?’

So this way of thinking can very easily translate into: ‘How do children organize themselves? How do teachers organize themselves? How is the curricula itself organized?’ And then if we wanted to monetize it to raise money or to just fund the projects on the ground, we would use the same infrastructure, which is the watershed itself.

We'd use the shape and the functions of the watershed to see how value flows in the landscape, and then create financial tools that track that real world value and connect it with the learning and with the actions of the local people to incentivize the behaviors we want. And this is something that people in these Web3 world, these digital tools, they're building these kinds of tools.

Bollier: Well, Joe, I want to thank you so much for giving me a very brief tour over this exciting, thrilling experiment. I really wish you the best in helping to build it out. It seems there's so much potential and so much to be learned in other bioregions.

Brewer: Well, what I feel is it's really important is that people need to experience the commons in their own bodies. And a great way to do that is to create open valuable exchanges and conversations within prosocial groups, in groups where we feel the emotional connection and the shared sense of identity and purpose. And from that place in our own bodies, we start to learn how to do this work on much larger scales. So all of these other things really become possible once we experience it for ourselves.

Bollier: Thank you again for your work and for sharing your insights with us.

Brewer: Thank you for having me here to share it with you. It's lovely to be here.