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This is Kosmos Live and I am your host Rhonda Fabian.

Brewer | *I would say that we are now in the time of consequences larger than anything our ancestors have ever known, so anyone who feels powerless or like their life doesn't have meaning is not getting the message. Right now we have the opportunity to be more in power and do things that are more meaningful than ever before in the history of humanity.*

Kosmos Live | **Those are the words of Joe Brewer. He is a change strategist working on behalf of humanity, and also a complexity researcher, cognitive scientist, and evangelist for the field of culture design. Joe is working to bridge the vast body of scientific knowledge about cultural change with the efforts of practitioners around the world to help guide humanity toward resilience and well-being. Hi, Joe. Welcome to Kosmos Live.**

Brewer | It's great to be here. Thanks for having me.

Kosmos Live | **Joe, you say that we're heading toward a future nobody wants and I have to agree that that is true, and yet we created this present reality. Why do we seem to be self-destructing on so many levels?**

Brewer | I think there are two basic ways we can start to answer that really big answer. One of them has to do with the blindness that human beings have to the larger systems that they're embedded in, so it's possible for us to have conscious and intentional actions at one level while being unaware of what's happening at another level.

But the other way to answer that question that is more interesting is the historical answer to the question: how did it come to be that the world is this way now? If I were to sketch that in really brief kind of broad strokes, we could separate humanity in our long evolutionary history into three stages. The first stage was the early period of human evolution when we became humans and were living in small, relatively simple society settings...usually less than 150 people that you were to interact with in your entire lifetime directly. In that kind of a world, everyone could know everyone or at least you could know by reputation everyone else in the community. That period of time really ended around 10,000 years ago when we started to have the emergence of permanent settlements in these city states that arose where there were hierarchies of different kinds of people, differentiation of roles between the people, kind of a division of labor that arose.

Then it became possible for there to be small groups of elites who could wield power against the much larger peasant masses and you would see the emergence of these centralized authoritarian systems. That gave rise to a period that's gone from roughly 10,000 years ago to the present of what I call the Age of Empires where different kinds of territorial conquests were organized around these centralized hierarchical social systems.

When in the past those civilizations would collapse by depleting their environment regionally, we've had the unfortunate, in a sense, ability to spread the successes of this territorial conquest model from one place to another through globalized trade networks where one country can accumulate wealth by depleting the natural resources of another area, being unaware of the

global consequences until only in the last maybe 50 years when we had things like satellites that could give us a full picture of the earth that we've begun to see the global consequences of this system that was invisible to us. To bring all of that back to your original question, how is possible that we can create a future that collectively no one wants? It partly comes from us being unable to see the larger systems we're embedded in and partly has to do with this developmental history of 10,000 years of war, conquest, and empire building that has only really reached saturation at the planetary scale within the last 50 to 100 years.

Kosmos Live | So through the ages, it's the elites in our society that have been pulling the strings, and the whole system has been predicated on a scheme to make the wealthy wealthier –to make themselves the greatest benefactors of the global economy. But I guess for those on the right side of the equation, life generally looks OK?

Brewer | Yes, and it's also really important to recognize that for the people within these societies, generally speaking, they have experienced something that they could legitimately call progress with improved quality of life, health, mortality, like the lifetimes of people, how long people live, so this idea of progress that is inherent within the story of Western industrialism is something that's generally experienced as true for people who are the beneficiaries. But the number of people who are excluded or exploited by this system has grown much larger than that, so this ability for people to be in the system and not see how harmful it is, is understandable considering how vast and complex the whole process is.

Kosmos Live | How much time would you say we have before the whole thing comes tumbling down?

Brewer | You know, there's a really important body of work in planetary ecology or earth system science where people have been trying to answer this question rigorously using mathematical models since the Limits to Growth report that was published in the early 1970s by the Club of Rome. What those efforts have been showing, including the Limits to Growth study, are that we are either just about to cross some critical thresholds that will rapidly move us into a dynamic of collapse, or we may have already passed some of those thresholds -

50% of all the top soils on Earth have been depleted, so we're gradually removing the ability to feed this huge human population that we've created since the Green Revolution of the 1950s. When we look at things like this, what we can see is that there is a growing fragility of the planet's, what's called the biosphere, the collection of ecosystems on Earth as we've been slowly hallowing them out and converting them for managed landscapes for human purposes, that make this whole planetary system more and more fragile. Add to that that we now have an accelerating process of global warming and climate change of others kinds, not just global warming, but changes in the salinity of the ocean and its acidity,

What that means is that the changes that we've seen so far have been slow and small compared to what's coming. Put those pieces together, and we can see a scenario of increasing fragility and likely planetary level systemic collapse between 10 to 15 years from now, up to maybe 50 years from now, so in the next generation is when we can anticipate this happening.

You're listening to Kosmos Live, a production of Kosmos Journal, dedicated to transformation of self, communities, institutions and planet – in harmony with all life. You can subscribe at www.kosmosjournal.org. I'm speaking cultural change evangelist, Joe Brewer.

Kosmos Live | Joe, I know that when we talk about collapse, it can sometimes just create in people a perceived sense of hopelessness or helplessness. How can we look at these things with clear eyes, and still find purpose and inspiration? What can we do prepare for the profound changes ahead?

Brewer | First of all, we need to recognize there's a central role through all of this for grieving. We do not give ourselves enough time to grief. We don't acknowledge that we're grieving. We don't admit that we've been traumatized, and this is extremely important because the two processes that are happening, if we wanted to humanize them so we can understand them, are that right now there is a process of hospicing that's happening. You know, hospice is giving care to someone who's dying to help them die comfortably. Hospicing is not a medical intervention to save a life. Hospicing is helping someone manage their own dying process. Right now there are things that are dying that we cannot avoid their dying, so in terms of grieving we have to get to a place of acceptance, and acceptance is fairly late in the grieving process, so to be able to give hospice to the things that are dying, we have to go through our own grieving process.

The other thing that's happening is a kind of midwifing where midwifing is this process of supporting a life-birthing process that is not our own. If I'm the midwife, I am not the one giving birth. I'm just there to support the one who's giving birth. This midwifing role is really important in that our job is not to be the life creator, but to be the supporter of the conditions of the process of life-creating.

Collapse is not like what's shown in Hollywood movies. Collapse doesn't happen in 10 to 15 minutes of violent outbreak in a movie scene. Collapse happens across decades to hundreds of years. The Roman Empire took about 300 years to collapse. This Western, industrial civilization is already in the process of collapsing. The United States as an empire is already past its peak and going into decline. If we recognize that collapse is longer timescales than we normally think about and that it's already underway, this allows us to let go of the feeling that we need to stop it from happening because we can't stop it from happening, but at the same time, collapse doesn't mean total annihilation of all things. Collapse means this system goes away and there's a silver lining to that.

So we need to recognize these two things: collapse is already happening and is inevitable, and there are elements of collapse that are necessary and good for the future even though there's a paradox because those collapse processes are going to create previously unprecedented scales of suffering and loss, which is why we have to embrace this grieving process, but those of us who want to be designers of change in this time have to develop the capacity to be in that paradox.

Kosmos Live | I have two follow-ons to that. You know, in the face of the global architecture of wealth extraction that you call at this present time late stage capitalism, what you're calling for, as I understand it, is for an intentional effort to redesign the very underpinnings of our culture. Is that a fair statement?

Brewer | Yes. Yes.

Kosmos Live | Let's start with that. I guess I would ask you, is it really possible to intentionally redesign our culture?

Brewer | It definitely is possible to redesign culture and there are plenty of historic examples of it. The thing that may not be possible is to avoid this planetary scale systemic collapse, and so I don't want to paint a picture of this panacea as if we have this utopian option where we can just change culture any way we like and avoid the consequences of environmental repercussions. I think that's a very important thing to say because part of the legacy of the Western philosophical tradition that's created the problem we have now is an illusion of separation between humans and nature, which is best articulated in the work of René Descartes with what he called mind-body dualism, although there's an earlier version in the work of Plato, to go back to the ancient Greek tradition, with the idea of the ideal world of the forms where there's a separation of ideas and reality.

I think this is very important because one of the major findings of the 20th century in biology, in the cognitive and behavioral sciences, in the study of complexity is that these dualisms and these separations don't actually exist. In the real world, everything is interconnected and interdependent, including culture, so culture is our physical systems, culture is our part of the natural world, and therefore they can't change in ways that violate the laws of nature, so we can't change culture in ways that violate physics, for example. We can't violate the laws of thermodynamics, and many of the phenomena we see with planetary scale environmental deterioration are thermodynamic in nature. I say that because if we are to try to intentionally change culture, we have to recognize that our efforts must be consistent with how the world actually works.

Now that said, I can have a couple of examples where intentional cultural change has been implemented, and probably the best documented and best known is the rise of marketing and public relations that's been attributed to the nephew of Sigmund Freud, a man named Edward Bernays, where in the 1930s and '40s there was an intentional effort to build up a set of business operations that would take advantage of findings in psychology and behavioral science, and apply it to improve consumer purchases for businesses, advertising and marketing, which have been, I would say, tremendously and catastrophically successful.

One hallmark of their success is the rise of mass consumer culture in the mid-20th century. Another large scale example of culture design, although it wasn't called this at the time, was the creation of the continental scale transportation system that we call interstate highways. Interstate highways in the United States were built from a system's analysis from the RAND Corporation in the 1940s and early 1950s where they were looking for ways to be resilient at moving military cargo if there was a nuclear war on US soil.

In conjunction with this, there were a set of powerful business interests who saw that they could make a lot of money by buying up and dismantling public transportation infrastructure. This was things like buses and railways and the rail car systems that operated in some of our major cities. Dismantle those and then get people to become dependent on automobiles. They architected the model of urban development in the United States of centralized urban centers, suburban development, and car-based infrastructure for everyone to get around.

This massive scale design of the architecture of urban environments was a kind of culture design that was catastrophically successful in making people dependent on automobiles. When we look at these things as practices of design and see that they had consequences on culture, we can see that culture design has been done on large scales to a great success in the past, but it was done in ways that were not fully systemic and looking at the embedding of those design practices within larger change processes.

Kosmos Live | Those are both really fascinating examples. I guess what you're talking about is something on that scale now, so systemic solutions that would work with natural evolutionary processes in some way to help us design cultural changes that are needed at this time, so what is the way or the method that you see going forward to do that?

Brewer | If I were to say it succinctly, even though the succinct explanation doesn't really get at it, I would use the words of the evolutionary biologist David Sloan Wilson when he says that we need to become wise managers of our own evolutionary process. A great deal is known about the competition and cooperation between different species and ecosystems. There's this huge body of knowledge about these things, but generally speaking, when humans get together to solve societal problems, we don't apply an evolutionary framework to dealing with things like public policy.

There's now a great deal that is known about how to cultivate healthy adult human beings through childhood development, a great deal that's known about the role of nurturance and healthy emotional attachments in the first two to three years of life, and what those implications are for parenting strategies and community supports. There's a lot that's known about pedagogy and school classroom management for helping kids to become capable of managing their emotions and having the psychological flexibility to navigate conflicts in small groups. There's a lot of research like this that exists, but it'll only be applied effectively if we recognize that the way that human beings work arise from our evolutionary past, including insights like humans are the most social animal in the history of the planet, which directly contradicts the ideological baggage of mainstream economic theories, which say that humans are rugged individuals trying to maximize self-interest.

That idea of human economic behavior is at odds with a huge body of scientific research on what it means to be human. If we look at what it really means to be human, we see that we're profoundly social, profoundly moral and ethical, and that the way that we learn to behave is through the social norms of our peers and our adult role models, so basically we acquire social norms in our cultural settings and that is part of human evolution. When we apply findings like this, then we learn how to raise children effectively, so similarly, we could think about larger scale societal policies and how important it is to base them on what we know about what it means to be human.

You're listening to Kosmos Live, made possible by Kosmos Community, dedicated members who support Kosmos in numerous ways. I'm speaking complexity researcher Joe Brewer. He is also a cognitive scientist – and recently, a dad.

Kosmos Live | I've been following you on social media, Joe, and I'm aware that you have a beautiful baby daughter and I believe she's your first child. How has the experience of parenthood intensified your feelings about these ideas and about our future?

Brewer | In an amazing way, when you have a child that you hold in your arms for the first time like my wife and I did six months ago, there's this thing that happens where instantly if you're an emotionally healthy human being you'll feel this burden of responsibility that from now on your life and your choices are not your own, because there's this vulnerable human being that absolutely depends upon you for their survival in the world. What's happened for me in becoming a father is that my investment in the future went from a generalized universal
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sentiment of feeling love for humanity and feeling love for life on Earth to this much more concrete and much more intense feeling of responsibility that my actions will shape the world that my child is going to grow up into.

There's an argument that a guy, Nassim Taleb has been making. He's an investment portfolio manager who applies complexity science to portfolio management and he makes the statement that the people that are going to be the best at managing economic futures are people who have skin in the game.

I think that argument applies in a profound way to parenthood. Anyone who has children that they're raising literally has skin in the game, the skin around their children's bodies that they are holding on to and wanting to keep safe and provide for in the future. What I find is that there's an acuteness to my sense of the urgency of what's happening, but also that if I'm going to claim to have hope about the future, the validation of my hope will be held by whether I think it actually will make the world better for my child and this is profound, the difference that that makes.

Kosmos Live | It is. I have children as well and I see that a lot of us are in denial about the kind of world and the structures we've put in place, and the profound effect that they're having on our children. This is the information wars, the sort of brainwashing that our kids undergo as soon as they begin watching television as young, young children, the effects of violence, extreme violence and sexual violence that they absorb daily.

It's really concerning to me that we're turning a blind eye to the effects on an entire generation, almost two generations now that have grown up with internet technologies and so on. I wonder if there's sort of a deprogramming that has to take place, an unlearning of the messages that our children have received, before we can implement the kinds of changes that you're describing.

Brewer | My wife and I talk about this in a very concrete way, which is we don't want our child to be indoctrinated into the mindset of empire. Sometimes it's little things like, we don't really want our child to learn the story of Christopher Columbus when she's really small. She can learn it later when she has a more nuanced view of history, but to give a false narrative of a privileged white male, quote/unquote, discovering the New World that an estimated 80 to 100 million people were already living on is such a gross injustice of the real history that to try to unlearn it is much harder than to just not learn it in the first place.

This relates to one of the areas of expertise that I bring to my work, which is frame semantics or cognitive linguistics, so it's the study of human thought patterns expressed through language. One of the things about frame semantics is that the way that we construct thoughts is through these frames. They are the structure of our thoughts, and as famously stated once by Mark Twain, "It's not what you don't know. It's what you know that just ain't so." What he means by that is that it's less about ignorance and it's more about false knowledge. If we have a mental frame of the world that is incorrect or inadequate, we cannot properly understand what's happening in the world and discern effectively to make good decisions until we remove that frame,

Kosmos Live | It's so true. I was driving home the other day and I was passing homes in our neighborhood, and mentally I was thinking, "Okay, that's a colonial home and that's a ranch." You know? It had never really occurred to me how these words, colonial and ranch house, carry the baggage of our colonial heritage, as well as this idea of manifest

destiny, the ranch and opening up the West. If you start unpacking these simple words that we live with every day, you see the truth of what you just said.

Brewer | Yeah,

the frame we have makes us unable to see a frame we don't have. I've just read a really good article yesterday by an earth scientist saying how it might have been a mistake to call the Earth "the Earth" because now everyone is talking about climate science focusing on atmosphere and land when the biggest driver of change is going to be the ocean, but we framed the ocean out of the conversation. We talk about greenhouse gases accumulating in the atmosphere or we talk about land use changes, but we are unaware conceptually that the biggest driver of systemic change on the planet will be the thermal reservoir of the ocean, which happens on timescales that are unfamiliar to us.

Just as an example of how profound this is, all of the extreme weather events we're experiencing now are due to heating of the atmosphere that is 40 years ahead of the heating of the ocean because it takes about 40 years for the heating of the atmosphere to get into the deep ocean, so even if we stop burning fossil fuels tomorrow, we would continue to have planetary warming for another 40 years because the ocean would continue to absorb it, and so this lag time in the ocean which is having profound slow motion consequences is invisible to us because we framed it out of the picture by focusing on greenhouse gases in the atmosphere.

No one did this on purpose. It's just part of the framing of global warming as it developed, as a policy discourse, The frame we have blinds us to the frame we don't have, and the absence of the frame we don't have keeps us from seeing that part of the system, so this is the other kind of occlusion that our mental processes create for us and why the cognitive sciences are so important to this work of culture design.

Kosmos Live | We, as humans can't face what is coming in isolation. You know, we need others around us to help us pass through the eye of the needle - this stage of humanity. You haven't mentioned community yet, but I know it's important to you. The other is Nature itself ... the natural laws and values we can turn to, to help guide us at this time. Central to your work has been this idea of culture design labs. Can you talk a little bit about that and how that relates to both community and nature?

Brewer | The basic insight is, as you just said, that the resilience that we will have during this time of change will come through communities. Some communities will try to be resilient and will fail to be so. If their food system collapses, then their community is not going to be able to be resilient, but other places will and regardless, the only places that will be resilient will be places that have strong communities, so communities are essential and communities have always been essential. Humans have become the kind of animal that we are because we operate in these so-this idea that we survive through community is not a new idea. It is one of the oldest ideas defining what it means to be human. Now applying that in the modern context to cultural design labs, as I said earlier quoting David Sloan Wilson, we need to become wise managers of our own evolutionary process.

One of the things that this means is that as communities, we need to be able to analyze, make visible, and monitor our evolutionary change processes for our communities. This is what I call culture design labs, so a culture design lab is a community that is doing applied social science research to gather data to monitor cultural mechanisms, cultural activities to see how cultural

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change is happening so that the people who are the managers of those change processes, which might be community leaders, they might be educators, policy makers, civil society leaders, religious leaders, sports and business leaders, that those people who are helping to guide change in their communities get holistic insights into their communities to see how they're functioning and whether they're healthy, and how they're changing and what's driving the change. The visibility of this is what enables them to become managers of the change process and if they become skilled, then they can become wise managers of the change process.

The other key thing about culture design labs is how the labs are plural, not singular; that they need to be set up in multiple places and a network needs to be built across them to share learnings and best practices, so that what's figured out in one place that has applicability to another can be translated to that other place. The reason for this is that the centralized, top down management protocols of industrialism that gave us, kind of built up to this time of late stage capitalism, those models of organization will not be adequate for the future that we're coming into. What we need instead is decentralized emergent intelligence, so to say this, it's like we need to be more like the mycelium in the soil that gives rise to mushrooms than to be an individual tree, so anyone who understands how mycology works ... my wife and I are mushroom foragers, so we know quite a bit about this. The way that mycology works is that there are these thread-like fibers running through the soil of a healthy ecosystem and these thread-like fibers are the organism.

They are decentralized and dispersed. They communicate by sending chemicals across their networks of fibers. They connect tree roots to each other, and just in the last 10 years, they've gathered research showing that when one tree becomes sick, it sends chemical signals to the mycelium in the soil, which then sends a different chemical signal to the other trees so that those trees no longer share nutrients across their roots with the sick tree to protect themselves. This kind of decentralized intelligence of the system operates in a networked fashion, and so this is biomimicry, to then take that insight and apply it to cultural resilience.

The way that ecosystems remain resilient is through biodiversity, so the way that we maintain cultural resilience is through cultural diversity.

We have ecological expressions of culture that are fit to local landscapes, and some will prove to be resilient and others won't, and we can't know ahead of time which ones they will be, but whichever ones are resilient will have embodied within them the natural intelligence of nature to be successful in the new environment, and if they are networked, they can spread that learning as intelligence to support the decisions of other communities, so these culture design labs are a network of communities that become self-aware of their change process so that as they become resilient or they don't, learning happens across the network, and if they're successful, the network survives. Or said another way, humans don't go extinct, that we manage to discover how to be resilient in the new environment.

[Kosmos Live | I think that some of these models that you're describing, whether mycology, or the way ecosystems work do hold the key for us to reframe and redesign our cultures. How do we get people, all of us, to stop, to become more aware of these processes, these big cycles that you're describing - and also the small cycles in our own backyards - to tune into the wisdom of nature and to begin to create cultural change? Why don't we have culture design labs right now?](#)

Brewer | One thing it's really important to say is that the goal cannot be to get everyone aware of this because that's an unrealizable goal in the timeframe that we have, meaning that those who want to be effective during this time need to cultivate this awareness, but there's going to be a substantial amount of violence and harm and loss of life. That's part of the grieving process, but another way of thinking about this of, "Why hasn't this come into being yet?" is, I would give two answers to that. One is that the sophistication of knowledge to be able to do this is only a few decades old. Like, complexity science really became formalized with the founding of the Santa Fe Institute in 1984. You know, that's only about 30 years ago. The field of ecology and the word ecosystem, those things are only 70 or 80 years old, and so this ability to think in this way systematically and rigorously is very new. In the grand scheme of things, these are adolescent learning processes.

Another thing that's happening to keep this from emerging is that there is a cancerous process of wealth extraction and hoarding that's keeping the people who would try to do this from having the resources to be able to do so. There's a huge sunk cost of resources in the extractive economy that's hindering those of us who are trying to do this from bringing our ideas to scale. We can see this all around the world with the fragmentation of efforts because people don't have the ability to slow down. One way this manifests that's really tangible is for people to have the financial need to make money, or else they will die. If I don't make money, I don't feed myself. If I don't feed myself, I die, so as I pursue money in an increasingly scarce financialized world, there's a necessary motivation there that pulls me away from doing this kind of work.

Currently the people building it are doing it at increasing personal economic risk by disengaging from the current system, but in a paradoxical way they're making themselves more resilient because they're also dematerializing and de-financializing their lives so that when the shocks go through that system, they're more resilient during those times of change, but they have to have the foresight that taking that risk is necessary and beneficial, whereas right now the experience is a loss in the current system.

Kosmos Live | Joe, for anyone who's listening that wants to put down their headphones, and go out and do one thing to advance a new planetary era, what are some possible actions or practices that you suggest?

Brewer | At the core of all of this, even though I didn't really talk about it so far today, is the cultivating of bodily capabilities to manage stress and change. I was lucky early in my life that I studied martial arts and dance, and only later realized how significant it was for my intellectual work, so one thing that people need to be doing is cultivating healthy bodies for themselves. This means not being sedentary. Be physically active. Take walks. Go for bike rides. Do things that help you build your body's health. Eat healthier foods. Take diets from information consumption. Take breaks from social media. Put down your smartphone. Give yourself the time to just be quiet and calm. Do these very basic things and there will be profound consequences almost immediately. Profound.

Like, people who have not been doing these things will go through an immediate life crisis as they wake up to how much they have been sleepwalking, and they will be frightened and disturbed by how much they've missed in their lives, like how quickly their children have grown up and they weren't there, like that kind of shock, by realizing that they just didn't take the time to focus on being present in the moment and trying to be healthy. This is basic advice that has been given a million times before, but it is the foundational thing for dealing with what's happening in the world right now.

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Kosmos Live | It's so important to have a personal practice and also communities of practice, as you described, to spend time in nature and to build resilient communities as we face what's coming. Is there any other message that you want to leave with our listeners today, Joe?

Brewer | I would say that we are now in the time of consequences larger than anything our ancestors have ever known, so anyone who feels powerless or like their life doesn't have meaning is not getting the message. Right now we have the opportunity to be more in power and do things that are more meaningful than ever before in the history of humanity. The challenge is in facing the fear and uncertainty to do what deep in our bodies we already know we need to do. If we sit with that and take it seriously, we will transform ourselves, we will transform our communities, and we will make it possible to go toward a future that we actually do want.

Kosmos Live | This is such an important conversation and I'm so delighted that we had this hour together, Joe. Thank you very much for sharing with us today, and I know that there are three words that you often use as your sign off and I would love for you to finish with those today.

Brewer | Yeah, that little phrase that people have attributed to me and then I realized how beautiful it was by watching the reaction, and it's so simple. Onward, fellow humans.

Kosmos Live | Onward, fellow humans. Thank you so much, Joe.

Brewer | Thank you, Rhonda. Thank you.

Kosmos Live | This is Kosmos Live.