

Paleo Solution - 283

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Robb Wolf:

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Hi folks. Robb Wolf here, another edition of the PaleoSolution podcast. Very excited today for our guest Chris Martenson. Chris has a PhD in Neurotoxicology and has stepped out of that specific scientific discipline and started looking many years ago at the intersecting concepts of energy, the economy, the environment and from my earliest days in this kind of Paleo evolutionary medicine scene, I had some inklings that we would need to address these issues as our planet grows, as we, as a culture developed and in the past maybe 4 or 5 years, Chris' Peak Prosperity website has been an incredible resource for myself and my family, really helping me to understand how these interrelated concepts go together and has given me really a profound sense of calm amidst the changes that we're all facing. So Chris, thank you and welcome for coming on the show.

Chris Martenson:

Robb, it's a real pleasure to be here.

Robb Wolf: Well Chris, that was a poultry introduction really giving your bonafides. Could you give folks more of your background and mix into that, I've got to ask this question because I'm often thrown this question. What does a scientist from a neuroscience background, what possible insight could you have on energy, the economy and the environment? So maybe weaving that into the story as well with a little bit of your extended bio.

Chris Martenson: Sure, be happy to. I did start my life as a scientist. Got a lot of training and did a PhD and postdoc both at Duke University and there is no department of Neurotoxicology so that's a subspecialty. So my degree is actually through the Department of Pathology. So I had to do all the usual pathology things and which – just to connect it all the way through, what I'm doing right now really is just what scientists do when you look at the world. You develop a hypothesis. You gather a bunch of data, but what a pathologist can add to this is the concept of doing a post-mortem and I'm really examining the clues for what's going on in the world.

So my science side of my life was all about gathering data and really being wedded to what the data was telling me and being very careful to allow myself to reject the hypothesis no matter how much I loved it or favored it if the data didn't support it. So that was a good training and then a little bit later, I took a hard turn to the right, went and got an MBA and went and worked a number of years about 10 years in corporate America and finished up this vice president of SAIC, a very large company that does private and government contracting. I was on the private side, but on that side, I was doing a lot of strategy consulting, getting a lot of familiarity with numbers and building and understanding the importance of stories.

Business is really a bunch of stories. Even the CFO has to tell a story. So I really got good at figuring out how to problem solve and using my science background for data and then this ability to begin to put complex pieces together to tell stories. I discovered – I'm actually a pretty good translator and one thing led to another and starting about 2001 and 2002, I became very concerned about the way the world was going and of course, my portfolio, personal portfolio was getting shredded in the rundown of the stock market after the 2000 peak, getting very incomplete, inconclusive and unsatisfying answers, my broker is to what to do.

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I started looking into the economy. I got scared right away, just simple things, unfunded entitlements. The unsustainability of the economy is right there to find easily for somebody who is curious and that was frightening enough. But when I started to look at what the economy

really is and how it's funded by energy and that in fact, the economy is a subset of the natural world, not the other way around and weaving the environment and it tool, I don't know maybe 4 or 5 years for this story that became the crash course to come together and I was telling it to audiences in the basement of churches and at local community colleges, just very locally.

Once because I just want to find other people who shared my point of view because I thought there were things we needed to do to get ready. Eventually, I ran into somebody who said, hey this really needs to be on the internet and so one thing led to another and the crash course became a video series online and much to my surprise Robb, it was successful because it's a total disaster. I mean, come on, it's some guy-

Robb Wolf: It's a buzzkill, of epic proportions.

Chris Martenson: It's a buzz kill and some disembodied voice speaking over charge for 3 and a half hours. It's a complete disaster, right, but it caught people because it was truth and it had both explanatory and a little bit of predictive power and they got translated into a bunch of languages and people resonated with it and that's where I first discovered that people are hungry for high quality information that's true.

Robb Wolf: Chris, so I got into this kind of evolutionary medicine stuff from a personal health crisis, started tinkering and fiddling in this idea of an ancestral diet, Paleo diet, sleep food, exercise, gut biome, socialization, being quite different today versus the period of time that for most of our species history that there might be some discordance there and that might be a place to look for problems.

So for me, looking at health and fitness and now kind of heading into medical risk assessment, I've used the fundamental of Ecology and Evolutionary Biology to kind of orient my questions. Those things really don't give specific answers, but it really is a great spot to start an orientation with questions. How did you – it's kind of a leading question. I think I kind of know the answer here, but where were you at with this idea of fundamentals when you are looking at things to start from a big picture heuristic that people can wrap their arms around and have some sort of an idea and then all agree and then start to asking specific questions that are maybe testable or at least we can look at previous data sets and what not to be able to find some answers.

Chris Martenson: A great question. There are two pieces to that for me. The first is that the more I learn about how the world actually works, I mean, what we're

learning about DNA at this point in time and how it actually is not as static as I thought because I was raised – when I went to college and learned Molecular Biology, DNA was like reading a book. There is some base pairs and you got your codes and you got your codons and you just string them out and makes a protein and we can fiddle with its heart content. Now we know that actually the DNA is in communication with the world around it to a very high degree and so what I get from that first of all is this idea of humility, which is that as much as we think we know, it's important to hold open the idea that we still don't know very much yet and where that comes around is for me is in this idea.

Second of all, looking at how we have to really trust the data that we do have, how can we really interpret it. So epidemiologically, let's just buy the numbers. Let's look where we are today in America. Let's say we're from, I don't know, where some alien species, we're going to come down and America has an existential crisis and says, look, we have an opportunity to either build this culture exactly as it's already built or we can do something different. We would rebuild it and the aliens hopefully would go by the numbers and say, well I'm looking at your levels of obesity and I'm looking at the numbers of sleep disorders and autoimmune conditions and I'm looking at the levels of violence that exist and the number of children that are on psychoactive drugs and on and on and on and you could go across all of these markers of epidemiological markers of health and say, this isn't really healthy.

Our advice would be you wouldn't probably want to rebuild it exactly like you got it. Something is off here, right, just off and then it takes a lot of work as you know to begin to start to unravel that and say why it is off. How is it off this badly? So to me the idea of returning to zero and saying look, let's pretend this last 200 years have been a little nutty. Let's go back to this idea that human DNA is actually billions of years old, but in our current species format, it's a couple hundred thousand years old, but still there's a lot of evolutionary pressures and selection in intelligence built into our DNA blue print as it exist. If something's off in this story, it's probably we're trying to cram our DNA blue print into the wrong operating models. We're giving it instructions that it wasn't really designed to handle and so you get these crazy things on the output side.

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Robb Wolf:

Chris, given some of the – let's take that story and let's assume it's true. Some folks will argue with that kind of evolutionary biology story, but let's assume that that's true. A lot of what I take from that is that living in small hunter-gather groups, opportunistic omnivores, we had lot of latitude with where we could go, what we could do. If we depleted resources in one area, we could move to another. We tended to deal

with problems on a pretty short term basis. How do we take the wiring that has made us so successful in that scene, but seems to be not working so well with tackling issues that maybe 50 or 100 years down the road and not occur on a global level where the numbers are incomprehensible to our minds?

How do we kind of educate ourselves, educate the people around us about that stuff and then also, how do we make that the least, but sexier interesting? Like I keep having this quote sustainability should be more interesting than getting abs, but it's not, like—if you just do a dummy Twitter account and put a good looking gal or guy with virtually no clothes on and they're pretty, pretty lean and jacked, just a dummy account will probably end up getting 10 or 15,000 followers in pretty short order. It's just reasonably impressive, but if you try to see something substantive becomes pretty contentious, not much interest. I mean how have you been able to navigate sharing these complex stories and get some traction in this world?

Chris Martenson: That's a very good question and it turns – for me, the turning point was understanding that I'm not in the business of sharing information. If I was, it would be as simple as sharing the information and then people would change. I'm a scientist and a business guys of information has that capability of my life and I have this horrible problem where I think people are built like me. So I put all this information out and it didn't work, right.

Robb Wolf: Right.

Chris Martenson: And so that was my first learning and then I started to understand that when people were actually beginning to digest what I was really telling them, they weren't going through a mental reorientation process. They were going through an emotional reorientation process and that's where I first understood that oh it's not the information that what really is happening here is belief challenging material. When people's beliefs are challenged, it has a very predictable process. First, there is tremendous resistance to having the beliefs challenged at all and I be evolutionarily, that makes total sense, right. Like it takes a lot of time to develop a new framework or schema so you have a lot invested in it just to keep running it. That probably made sense, right.

So (a) you resist, but then (b) once those resistance is finally get broken down, somebody has a heart attack or their bank account gets wiped out and finally, they go, I have to rethink this, right. That's how intensely emotional process and they go through the usual pieces of coming out of that denial and into the anger and depression and they bargain and all of

these usual stages. So understanding that this was—that what I was doing was really in a process of trying to give people belief orienting and challenging and maybe even reforming information. I had to be very cognizant the fact that what I was actually asking him to do which is a big deal.

It's a big deal to ask somebody to enter into emotionally turbulent territory and so once I understood that, one of the first things I had to do was strip out all of by belief oriented material that I could identify and I'm sure there's more in there. But taking my own beliefs out of it as much as possible so there was little bit of a blank slate characteristic to this information. To me, that was a critical moment of inside, a critical moment of understanding how to go about talking to people about this. Because if people knew that I was a democrat or republican or libertarian, automatically, the people aren't those things would go, oh, he's got the wrong – I can just tune this guy out right away. Oh, thank you for the exit door right near me. I can't just leave him behind right now, but all – there's a lot of other beliefs that exist out there. I'm not talking religious beliefs although that's a big piece that we left out, but there's beliefs around things like faith and authority, faith and technology, belief in the American dream.

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There's a lot of things that I had to understand the mental emotional minefield that I was navigating. It stripped all that stuff out and then that really enabled me to have more effect because I'm approaching people less from a proselytizing energized. You have to listen to me, the world is coming to an end point. But I can say, look, here's some data that I would like to share with you. It's very important. I understand it's difficult and wherever you are with it, it's totally fine including if you want to be nowhere with it. So that relaxing and allowing it being not just intellectually, but I mean fully emotionally comfortable with wherever somebody is exactly where they need to be and so not trying to push them off of whatever stance they're in into some new stance, that maybe a lot more effective than in the old days when I would try and grab them by the lapels and say, no, I don't think you understand.

Robb Wolf:

Right. It's funny I had a very similar process for myself and I guess maybe this whether personalities or mental types kind of head into science or maybe it's the processes of going through science, usually, once you had the data, then the implications were pretty straightforward and you just learn to divorce emotionality from that whole process and most of the rest of the world probably thankful he doesn't operate that way. So the technicians I guess like us need to learn a different way of approaching that. I'm curious, one thing or there's this kind of piece of the story that I

still waffle back and forth on it and I think you could probably argue with it.

Both you and I probably orient things a little bit from an Austrian economics kind of perspective and markets being is really fantastic signaling mechanisms and what not and a lot of the people that come out of that genre might be kind of the Matt Ridley rational optimist kind of camp that technology is going to pull our fannies out of the flame. Life has gotten better and easier for everybody and I don't think that we can really argue with that. But I think if there's an inflection point to that and I think that that's some of the things that you've talked about it and this kind of goes back to the fundamentals again, energy, the economy and the environment.

All of that story I think arguably is pretty true, but will it always be true given resource allocations and what not. What do you think about that because I've got to be honest. I feel schizophrenic on that topic like I will read a Matt Ridley or to listen to some of his podcast, listen to some of his talks and I'm kind of like, okay, well maybe thorium will pull this all together. Maybe there is some energetic medium that's going to come in and set the ship right. Technology has been improving things for us for the last 2 or 300 years. Is there an inflection point with that? Are we just two chicken littles screaming into the ether and we're going to end up being proven wrong on all of those stuff? What are your thoughts on all that?

Chris Martenson:

Great question. That answer is nobody knows and so to me, the most rational stance you can take is to note the trends of things and just guess that if the trends don't change, we'll probably keep going in the same direction. It's kind of like if you look at somebody and they said, well, I was 180 pounds in college and within 5 years, I was 250 and now I'm 350. You sort of extrapolate that and say, well, it's always possible you'll have a miraculous recovery, but otherwise, I'm kind of going to guess where you're headed with this story. So there is a lot that technology is doing for us, but often left out of that is the other side which is what is it not doing for us and technology is two edged sword and we have to recognize that, right. People usually don't, but I think it's important, right.

So we see this now with – we have actually in America one of the most raging heroin epidemics that we've had in the long time. I mean, somehow thankfully the Taliban were convinced to continue growing poppies again and so the world is flooded with cheap heroin and the reason we have a heroin epidemic I'm convinced is because people are so

disconnected from each other. That it's really been proven that the reason people have addictions is because they are disconnected from self, they're disconnected from nature and they're disconnected from other and so yes, I love my smart phone and it allows me to feel hyperconnected, but the truth is it doesn't actually connect me human to human. So if I'm not careful about that and if I don't balance my use of technology, knowingly and consciously saying it does all these wonderful things for me, but it's a lie to say that my phone makes me more connected than anybody's ever been connected before. It's not true.

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What connects me is when I have real experiences with real people involving touch, eye contact, speech communication and we do real things together. My phone can help settle that up because we can together more easily and all that, but it would be a mistake to think that technology alone has made us more connected because in fact, the data says, it probably hasn't when we look at things like addictions, mental illnesses, other things that are really signs of that disconnection and in truth, the most vile form of torture that humans have ever discovered is prolonged solitary confinement

Robb Wolf:

Right.

Chris Martenson:

And so in some ways, we've created little solitary cells for ourselves through our so called connecting technologies and so I am on one hand, I'm schizophrenic. I'm hopeful that we will develop some technologies, but if we do not develop the necessary cultural stories and narratives to use those technologies, well, we'll destroy ourselves with them. So I am in Maine at the moment and I've been coming up here for 30 years and the oceans are absolutely sterile compared to what they used to be 30 years ago. There are no urchins because they started harvesting them all because Asian people like to eat them and next thing you know, they overharvested the urchins which used to be so common. You have to watch where you're walking you would step on them. Now, you can't even find them. The flatfish were all gone. There is no herring runs here anymore. The crabs pretty well got wiped out. Lobsters are doing okay, but most because they farm them here meaning they throw them all back and catch bait fish.

The gulf shrimp just collapsed this year. They had to close the harvest down for the first time and a lot of that Robb comes because we have this marvelous thing called GPS. It's a simple technology like how could GPS be harmful. Well, it's harmful because the trawlers who leave from Bedford, they go out and they literally drop their nets 6 inches away from where they stopped last week, 30 miles out in the ocean and there is

nowhere for the fish to hide anymore because we're just so good. So, if we had GPS plus the cultural narrative and framework for how you would use that technology and not destroy the oceans at the same time, I think it could be a good thing, but all the evidence so far says technology alone without the cultural understanding, without the awareness of the pros and the cons, without really integrating that into a larger fabric has more often than that, turned out to be a mistake, not an enhancement.

Robb Wolf:

I couldn't agree more. I forget where the concept of the Nash equilibrium kind of got onto my radar a couple of years ago and John Nash, the famous mathematician, the basic take away from the Nash equilibrium is in a game theory scenario. If everybody in the game is kind of following certain rules, everybody will maximally benefit and correct me if I'm wrong, but I think what you're saying is if we properly applied like this GPS technology, let's say we could minimize the amount of energy expenditure that we go out to harvest fish or crabs or whatever the thing is that we're going after. But if we use a little bit of forethought about, okay, well we need to leave this much of the population there and maybe not fish this area for 3 years just preemptively so that we can have a bloom on these fisheries, then there might be some sort of enhanced return both in minimizing energy input, but then maximizing the output. But instead of doing that, humans because we're so good at technological advancement and because we've always come from a place of plenty in general particularly as technology is advanced, we're not really thinking about that end point that if we overplay our hand in this game, we may end up very short shrift in the future.

Chris Martenson:

Absolutely. When it comes to the fisheries that I was just talking about for instance, but this can apply anywhere, we think we know we're doing because we have biologist and they go out and they do their measurement on that and they discover how many gulf shrimps there are and so they look at the total tons are just available. They look at the harvest schedules. They set quotas and people go out and take stuff. That sounds managed, but what's missing from that, it's not just about the gulf shrimp. They're in a dynamic equilibrium as Nash was talking about that whole idea of a suboptimal equilibrium that he got the Nobel Prize for it. That's an idea that everything is in flux and then there becomes an equilibrium point amongst all the actors.

So just measuring the shrimp, you got a good measure of how many shrimps there are, but you're failing to notice what's happening with the number of ground fish that are happening at the same time, the migratory patterns and there's this other spike that happens with the cod and oh by the way, there's algal blooms in different sequences which

then influence the zooplankton which is all very complex. So what we would have I think if we were more intelligent at this point, more sophisticated is an understanding that we don't know everything yet and so instead of saying, we could take this many shrimp, we might go, this many minus a big buffer because we still don't quite know what the heck is going on out there.

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There are interactions that we don't get yet and that humility of saying we don't quite know this yet, I think would be very important to have. I mean, I'm just noticing recently and I'm sure you know tons more about this than I do, but just the explosion of understanding around the fact that the hundred trillion cells that are not ours, they're in and on our bodies are actually really important to how they function, that somehow our gut bacteria actually have an important role to play and just seeing how this sort of daunting is an of course moment, but I bet you that it's going to be decades before we really appreciate what's going in there and even then, we might want to have a little humility that there's more happening here that we haven't quite understood yet.

Robb Wolf:

Absolutely. You know this idea of intestinal permeability being a legit pathological condition. If you were to look at this back around 2003, 2004 in Pubmed, you may find 3 or 400 citations, most of them saying this idea of intestinal permeability or gut dysbiosis was quackery. Today, if you put intestinal permeability in the Pubmed, I think it's almost 14,000 citations. It's just one of the hottest areas of immunological research and it is absolutely in its infancy, like I thought I knew something 10 years ago and now I feel like I yet dumber everyday so that point is really well taken.

Something that I guess makes me a little nervous on this and again, this maybe a little bit of a leading question, but is any degree of attempted management going to fail about the way that we're seeing attempts of managing the economy and fractional reserve thinking and all those shenanigans?. I mean because these systems are so incredibly complex. I mean, is that just the way that we need to do it, just provide as massive a buffer, is this tolerable and then let those systems operative to their best efficiency?

Chris Martenson:

Yes. The answer is yes because complex systems by their nature are inherently unpredictable. Even things we study like intensely, like a single fault, like how hard could it be to understand a fault. We can measure plate slippage. We can measure the degree to which the pressures are building. We know that stochastically like how often this thing is supposed to release and with what intensity. With all of that, we

have no clue when the next earthquake is going to come or how big it's going to be and that's because even something seemingly as a study of always a fault which is just two locked plates of rock. They are trying to get pass each other and do it in a jerky way. It's a complex system and it's almost impossible to predict.

So what we can do though is we can have that humility again to say, like where the federal reserves saying, oh, we'll just run interest rates to zero and what's going to happen is the economy is going to take off, the banking system will get healthy and people will get jobs, not understanding that there's this complex dynamic between... An interest rate is a fairly dry sort of a concept, but what's really live and dynamic concept is how people interact with interest rates and that's something that the Fed has nobody on staff, nobody anywhere was any clue about sociology about this, sorts of history. They only look at their little monetary equations. They think they can drive the monetary ship by tweaking their equations a little bit and doing certain things without an understanding that it has a very, very large impact and it goes well beyond just simple economics Robb.

So the amount of shale oil that people decided to just try and rip out of the ground in all the shale place principally in the Bakken Play in North Dakota and the Eagle Ford down in Texas was actually a function of the fact that when money goes to zero and they could barrow really cheaply, then the dynamic of oil investigation and taking out of the ground change radically. All of a sudden, people were doing things that a few years ago, they never would have done and so you see there somebody decided to set interest rates to zero to help banking and get on employment, but all of a sudden, it led to this massive bursts of capital that ended up creating a malinvestments, a lot of environmental destruction and ended up upsetting the world oil markets and by the time they try and figure out how they're going to manage that, there will be a new crisis somewhere else and instead what we need to understand, this is everything that my work centers around, is that the economy itself is a subset of the natural world. Energy is a subset of even that.

You could have all the money in the world Robb, but if you wreck your soils, they all get degraded and or leached out to the Gulf of Mexico and when you've taken all your high grade energy and burn that and now you're down to the lower grades, but you pretend it doesn't matter because you've made money so cheap that the price of oil seems cheap. Without understanding that we're humans, we're organism, we are no different than any other animal out there. We will grow into the availability of the resources that exist around us and that's always been

true and I don't see anything in that trajectory no matter what technology comes along. Technology does a lot of things, but it will never and has not yet created energy. It transforms it. It helps us find it, use it more efficiently, but it doesn't create it.

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So as I look into the world of energy, I can look at my youngest daughter is 15 and she is born in the year 2000. So she lives in the same age as my grandfather, she dies in the year 2096. So what happens by 2096? Well, let's be clear about this. We're way past the peak of oil. We're way past the peak of coal, natural gas, soil, probably phosphorus, all these things that are just critical to maintaining a large vibrant robust economy and so that's where people can look at and go, oh, it's kind of dire forecast. The opportunity in this is to look around you. Everybody listen to this right now. We live in one of the most extraordinary times in human history. We are surrounded by so much energy. You can live like a god, right. A king, no, more than that, a god.

Robb Wolf: Right.

Chris Martenson: Because a king 200 years ago couldn't pick up the phone and decide to be in Australia tomorrow. I can do that, right. That's more god like than king like and we have all this energy slaves and so the opportunity in that is that people can use this time in the ease of living now to become anything they want to be, do anything they want to do and that's what I love seeing that people who decided to really create, to really pick up their lives, to really enter the dialogue and not just be a participant in it, but a driver in where this whole thing is going. That to me is the exciting part.

Robb Wolf: It is definitely exciting and you know I've reoriented my life along many of the principles that you've been sharing for years on your website. We had a choice between staying in a very nice home that I bought at the bottom of the last real estate bubble and so I got a scream and deal on it and could have probably been there one more year and have the thing paid off or had an opportunity to get a nice piece of land with water and the opportunity to grow probably most of my own food and actually have a business around producing food for other folks and even though I've got other fingers into like medical risk assessment and what not, I felt pretty compelled to make this lifestyle change and it was good not only for looking down the road, but my family is outside more.

My kids play with chickens and goats and sheep and so that your microbiome, like my kids are earlobe to toenail covered in dirt and chicken poop. You know I mean, they can have very healthy immune

system so I've really made a move in that direction. Interestingly, what it's built beyond I think some initial financial resiliency is both human capital and the capital of the soil and the resources around you which I think is a really common theme that you talked about.

Chris Martenson: Absolutely. This is one of the great disturbances that Wall Street has done us, convince people that capital means money and money is managed by Wall Street, but in fact, there's a lot of forms of capital that matter a lot and this is what Adam and my next book is about entitled Prosper with an exclamation point and it's about taking a set of ideas that we've seen other people use and modifying them slightly to around this idea that there were multiple forms of capital out there and you can exchange within and across them.

So if I have financial capital, that's great, but I choose to exchange that for living capital, right. So I can buy compost, I can install fruit trees, I can build a garden. I'm building my soils up. I'm planting pollinators species loving plants all around and so that's building up my living capital, but the thing I love about that Robb is that not only am I surrounded by more beautiful things, by the flowers that grows all times of the year and well prune trees all this, it's very enjoyable, beautiful place to live, but I get to eat better. I'm connected back to that cycle of things growing and my relationship to plants and the things that I eat and my relationship to the meat because we raise meat birds every year and harvest them ourselves as a family. So that reconnection part, it feels really good.

The deal is though if the future totally goes a different direction I think and it is techno-utopia forever. I still win because this is a great way to live and it's very grounding. We have good immune systems and all that, but if it goes pear-shaped, the future goes a little weird, having this installed forms of capital around make me much more resilient than the person who doesn't have them and so to me, I don't see how I lose by becoming more fit, by eating better, by surrounding myself of living capital as one example by deepening my social capital is another example. Those things all—when I do those, they feel good in the moment and they make me and my family much more resilient for whatever might be coming next.

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Robb Wolf: Right. I remember on your website, you mentioned last year that because of the big freeze that you folks experienced, you had no water for 10 weeks. We talked a little bit about dealing with that and then relate your story about when you had a guy from LA come out and see your austere living situation.

Chris Martenson: Yeah. So what happened was our well pump died.

Robb Wolf: Okay.

Chris Martenson: And it was January and this was the year of the vortex, the so called polar vortex in New England which was not this winter but the one prior and so it was in January and the well goes out and so we have a well company come out and we sort of point vaguely where our plot map for our properties as the well should be. It was buried. So they had to get to it so they had to bring equipment in, but the ground was so hard. It was so bullet proof. It had been like zero degrees or below for 20 days straight. It was just phenomenally like an exceptionally called period and the guy said, yeah, I can't dig because where your well is is too close to where the underground utilities are and when it's this frozen, we put the tip of the machine and when we start to pull up, we might pull up a big slab and actually wreck your utility so we can't do that. I said, no, no, you don't understand. We don't have water. He said, yeah, I'm very sympathetic to that, but I can't dig right now. I said hold on, I have money, right. He was like, no I can't do anything and so like, what? I can't get my well fixed. He was like no not until this thaws. Hey no worries right, but this was the year of the polar vortex. It turned out it didn't thaw enough for 10 weeks.

Robb Wolf: Wow.

Chris Martenson: So what did we do? Well we had a bunch of 5 gallons high density polypropylene water containers that I had stored up and we started putting them to use and we run over to our neighbors house and filled up 5 gallons and discovered that we could have a family of 5 live for about 15 gallons a day.

Robb Wolf: Wow.

Chris Martenson: It's what we were living on and that included showers and doing the dishes and so this gentleman comes over and a good friend of mine and he spends a lot of time in LA, film editor and he comes in one day and there is my daughter and a friend of hers. They're just in the kitchen and they got 2 tubs and they've heated water on the stove and they've poured hot water and soapy hot water into tub A and tub B is the rinse water and they're just happily just doing their chores which is the dishes. You just took one look and it's like, what are they doing? I said well they're doing the dishes. He goes, but you have a dishwasher.

Like well, it doesn't work because we don't have water. He was, what do you mean, no water, total emergencies like wow, shouldn't you be like at a hotel somewhere, like nope totally dealing with this. We had sun showers hang up in the showers and my kids knew how to do dishes because we've been for 30 years, we've gone to a place in Maine where we spent a couple of weeks every summer where there is no running water. It's just a cabin. There is no electricity and they're used to it. So for them, it was just like taking their summer experience and running it at home and it wasn't a big deal and it wasn't a big deal because we have the training and we've had the situational knowledge of living without running water is part of our routine daily life.

So what I take from that is that if you have the right mental orientation and you practice things, then handling something that for somebody else would be a complete crisis wasn't even a blip on her radar screen. I mean we love getting our water back, but this wasn't a huge crisis. This was more of a minor inconvenience for us and so that's really part of our message to pick prosperity is you know if you think the time to really begin to understand how to grow stuff or make better friendships or work on your health is when the crisis gets serious. We'll tell you that we think that's too late. It's suboptimal. What you really want to do is begin gathering the skills and that embodied knowledge because having knowing stuff that you've read is one part of the story, but having the embodied experience of putting that in practice is the rest of the story and so that's what we counsel people. It's like, yeah, get out there and just start getting your fingers dirty and practice these things because you never quite know when or what's going to happen, but when something does happen, is the water experience taught my family. If you've had the prior training, it's really not a big deal. It's just something you deal with.

Robb Wolf: So how do the kids overall take all of the stuff like are they just – they're like, oh man, dad, this is so crazy. I can't wait to get out of the house and live a normal existence around normal people or how are they dealing with growing up in this little bit of an alternative track?

Chris Martenson: Well, we'll see, how it all turns out. Once that the youngest is 15 and the next oldest is 17, so a little question mark, we'll see where they go with this. The 21-year-old just absolutely bought into this whole thing and has decided that her experience with her personal friend sets that she developed in the area and her experience with our family, that for her, it's really important to be around people who are genuine and passionate about something and so she really skinny down her friend list from people she used to know because what she cares about now is having authentic experiences that are real and she does emotional processing

and interpersonal work with people that blows me away, stuff that I still don't understand.

(00:40:44)

I've learned a lot and I've made a lot of progress, but somehow, she's just grown up differently and so we get this question be like, wow, doesn't this sort of existential crisis you just talked of didn't turn your kids into complete zombies and unhappy individuals. The answer is no, no, no, no. They're really engaged, really bright, really shiny, very resilient and I think really capable for what's coming next, but that's how we raised them. You now, Robb, we knew this world was going to be changing. We knew that the Prussian model of educating children in the public school system was not ideal because how many factors are there that stuff people into and so we would actually teaching towards the number of different adjectives and I think public schools normally do.

We wanted our kids to be curious, engaged, fearless, creative, those are the sort of things we wanted and of those, the most important one, the most important if I could counsel anybody, this is like the Hippocratic oath of education. First, do not destroy a child's curiosity because guess what, I have a phone. I can take any course I want. MIT has other courses online. I have to be curious enough to want to do that, right. So if you just don't wreck somebody's curiosity, you win.

Robb Wolf:

Right, right. The deal is pretty much done, yeah, yeah. Chris, how did you get curious about it? Both you and Adam I guess really allocated some significant time and effort into your own personal wellness capital the last couple of years. Talk to folks a little bit about that.

Chris Martenson:

Yeah. Adam and I slightly different stories, but both of us really wanted to become healthier. For me, there was a little crisis involved in it. I'd always been reasonably healthy and then starting about 2 years ago, I started to notice a number of things which I just attributed to I'm just getting old, right. This is just a part of my story. It was like I guess I'm getting old, but what was happening for me was I got a bursitis in my left shoulder and really cut down on my exercise routine and then that became patellar tendon – so I started doing a lot of hiking up and down a mountain and also I couldn't go down anymore. My patellar tendons were just screaming at me and then I couldn't do pushups anymore because my elbows were screaming at me and my energy was low and so I'm a little bit stubborn around this stuff. I just kept trying to push through it all and it wasn't working.

So finally, I went to a great functional medicine specialist. Dr. Aviva Wertkin and she is a naturopath and much to my scientist delight, first

thing was well, we're drawn 20 million vials of blood. We're going to start with a bunch of data and so we got of bunch of blood work and just got some data and the data said that I had leaky gut syndrome and that my adrenals were a little shot and I was kind of low on some things, testosterone being one of the final things in that cascade. My B12 was so low. She said how did you drive here? You should be asleep right now and there was an IgG immunoglobulin test for food sensitivities and I just got this finger print of different food categories and specific foods that showed that my body was mounting a low level war against the variety of foods, many of which were my favorites.

So we did was started my modifying my diet or my eating regime I guess I should say to just eliminate those things that I was fighting and for me, my finger print, eggs were the worse. Almonds were not good. Scallops weren't good. A variety of things that even if I gone into a Paleo cook book, I would have been encountering. So for me, it was important information to know what I was specifically fighting. So I could exclude those and I did that and took some supplements and a variety of things to boost my things that sort of missing from my blood work that said they shouldn't be there, like B12 and took about 3 months and I started to feel a big turnaround in this and by 6 months into the story, I was able to – all the joint pains went away, and I'm about a year into that, a little pass a year in my eating regime story and pretty much everything has been fixed at this point. So all these things I thought, oh, I'm just getting old was actually because I had leaky gut and I was fighting the foods I was eating and it was just killing me slowly.

(00:45:13)

Robb Wolf:

Well, that's kind of our meat and potatoes around here talking about systemic inflammation and this is one of the anecdotal pieces but compelling pieces for me about this kind of evolutionary medicine Paleo diet story that nonwesternized cultures tend to age very, very differently than we do if they get past their 20s or 30s. They tend to live into advanced stage and relatively free of western degenerative diseases and it seems to be that the sleep, the food, the exercise, the photo period, the gut microbiomes and then also, the socialization that these folks all play really powerful vectors into whether or not the aging is graceful or a plane into a mountain side, like most of us in a westernized societies experienced so that's really phenomenal. Say the name of your doc again?

Chris Martenson:

Aviva Wertkin. She is at Brattleboro, Vermont and just phenomenal.

Robb Wolf:

Fantastic, fantastic. Well Chris, you are bringing down property values by sharing a stage with me here pretty soon in Sebastopol, California.

Chris Martenson: I'm looking forward to it.

Robb Wolf: I am at happy feet, jazzed, like can't keep my feet on the ground, excited for this. Do you want to tell folks a little bit about that?

Chris Martenson: Yeah, I can't wait. September 2nd. This is in Sebastopol and it has two components. I think first there is a meet up for hour de vours, hour de vours and cocktails that's downtown Sebastopol and I think that's from 5 to 6:30 if I remember the time is right and then at 7:00, from 7 to 9 at the grange. The grange in Sebastopol is the main event and so for both of those people can buy tickets and come and engage, I think that hour de vours and cocktails a little more meet and greet, a little more informal and then you and Adam and I will be having – we're doing a joint talk at the grange there from 7 to 9. So 15 bucks for that and I think if you want to do the cocktails and hour de vours, it's \$40 for that and love – I can't wait to meet you and Robb Wolf shows up.

Robb Wolf: Yeah. I'm very excited for that. I think sometimes the folks that follow the podcast, their burgeoning interest in all the stuff, but I've got to say, I had talk so much about protein carbs fat fitness, all that type of stuff when I started weaving in the story about like hey, you know ,regardless of how you want to eat whether it's Paleo or vegan or what have you, this sustainability story is really important and the immediate extension from that sustainability story was energy, the economy and the environment and so when I was turned on to your work from actually Chris Kresser, it was just an incredible life of moment for me and I've been just a huge fan, huge follower and it's going to be a fantastic honor hanging out with you guys. I will have links to all the information on the events. Folks can go to peakprosperity.com to purchase those tickets and yeah, I'm very excited for this.

Chris Martenson: Absolutely and people can purchase tickets at the door if it's not sold out and so they can take that chance or just come to the site, but yeah, it's going to be a great event and I really think these two areas just really belong together because I really think to what Adam and I do is just provide a little more context for why people should really do this, sort of like a, well, I want to be in shape, like maybe you need to be in shape. So there's a little of both of those pieces can come together and provide another angle of saying, oh, this is important. Let me get serious now.

Robb Wolf: And you know the cool thing too is that you guys have created a phenomenal community where you get that other piece. So we can learn about all the stuff, think about it, get to take some action in our day to

day lives, but then, we're starting to meet people within these communities where we get that human capital part of the story as well which is really the only glue that I think will cement it all together and make the stuff stick and make it work over the long hole.

Chris Martenson: I agree. I agree. So yeah, we'll keep applying some of that glue to the cement.

Robb Wolf: Awesome. Well Chris, when is the prospective date for prosperity? When do you think we might see that?

Chris Martenson: Prosperity?

Robb Wolf: Is that the name of the new book coming out?

Chris Martenson: Oh Prosper, oh yeah.

Robb Wolf: Sorry, sorry.

Chris Martenson: I was like yeah, when are we going to see Prosperity? Well, I'm kind of living and surrounded by it. I don't know about everybody else, but it's here, but Prosper, the book, the manuscripts at the publishes and we're looking for a mid-October launch for that so we're going to hit the holiday cycles on this and that's when it's all going to come out and it's going to be in Spanish. It's going to be in English. We're going to do a book on taped audio book. It's part of this so we're really hitting this one much differently than the last one.

Robb Wolf: Great. Well, let's get you back on the show when that is in its release queue and let's try to get a New York Times best seller out of this and get this out to a lot of folks.

Chris Martenson: Fantastic. Looking forward to it.

Robb Wolf: Awesome Chris. Well, again, huge honor. I don't want to be overly gushing here, but you've been a huge influence in both my life and the life of my family, huge positive benefit and very much looking forward to the talk in Sebastopol coming up on September 2nd.

Chris Martenson: Well, thank you for all of that. Thank you for the work you do and likewise, huge fan of what you're doing. So yeah, I can't wait to finally meet you in person.

Robb Wolf: Looking forward to it. Enjoy your time in Maine and I'll talk to you soon.

Chris Martenson: Fantastic. Thank you.

Robb Wolf: Alright Chris. Take care.

(00:50:57) End of Audio