American Thought Leaders

Interview with Jan Jekielek (*The Epoch Times*)

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The failures of our COVID response and the "gender-affirming" care model have made a lot of people question science and medicine in the West.
Mihai Nadin argues that science and medicine went awry a long time ago—in foundational ways.
He's a scholar and researcher with broad insights spanning electrical engineering, computer science, aesthetics, human-computer interaction, and post-industrial society, and he's the author of "Disrupt Science: The Future Matters."

Jan Jekielek: Dr. Mihai Nadin, such a pleasure to have you on American Thought Leaders.

Dr. Mihai Nadin: Thank you for having the courage to have me on American Thought Leaders.

Mr. Jekielek: I've been reading your book, "Disrupt Science: The Future Matters." It is a very original view on the current state of the world. How could I not have you on?

Dr. Nadin: I use the word courage, because I do not know of too many outlets at this moment in the United States who would go as far as to accept that there is a need to disrupt science.

Mr. Jekielek: It's very clear that there is something profoundly wrong with the current system as it stands, including the system of knowledge generation, be it scientific or otherwise. You need to look at things in terms of a cost-benefit analysis. In terms of medical interventions around the time of the HIV crisis, you say that the costs started to surpass the benefits of the whole system. That's a big claim. Please explain that for us.

Dr. Nadin: The living survives on by using as much energy and resources as necessary to make it from the present to the future, so the return is the maintenance of life. In that sense, the HIV crisis maintains life, but maintains life at a cost that is not individually or socially justified. It maintains life in a state of dependence that no longer reintegrates those affected by the condition. It gives them a chance to continue to exist, but in a state of dependence.

The replacement of a knee, the replacement of a shoulder, the replacement of a hip, which are extreme surgical interventions, are sometimes justified. But most of the time they are not justified because in the long run, they are increasing the number of those who are going to be in wheelchairs and will need help for the rest of their lives. In this case, the disruption would mean giving up this false understanding of the human being as a machine, which was promoted for a very long time, and understand that the human being, like any other being in this universe, is subject to processes called self-healing and self-repair. We don't have the patience for that. If you go for a replacement, it's going to take a day in the hospital and maybe another couple of hours before they release you. If you go on the biological path, it might take months or even years to get healed, but that healing is going to be organic and not mechanical. That's what I mean by that.

But people will say, "Now, I'm not going to miss my job for three months. Now, I'm not going to miss the football game or tennis, as mediocre as that tennis is after you have something replaced. I want it to happen now. If I go to the doctor with a headache, I want a pill. I want to leave their office without a headache."

In some cases, the headache might be a condition affecting the entire human, of such a nature that you might need two or three years to heal. It takes exactly the number of years that led to the headache to get rid of the headache.

Are we prepared to give up the instantaneous rewards of this wrong science that is applied to us? Are we prepared to understand that in the long run we will pay a huge price for accepting it? More critically, are we willing to take the path of returning to the natural biological cycles instead of the artificial cycles of machines?

Mr. Jekielek: You are talking about this instantaneous gratification that is expected. Once I needed to get the central ligament in my knee repaired. I had surgery and then spent about a year in physiotherapy. Over time, that ligament degrades and down the line most people need to get it fixed again. But that year in therapy didn't feel like instantaneous gratification.

Dr. Nadin: The money that the medical establishment invests in repairing the body is actually the solution favored by the public. It is called replacement—take my natural piece of this and replace it with an artificial piece of that. The example that you just mentioned only documents what I am arguing.

We do not put an honest effort into developing the biological processes that will help us fix a situation such as you described for the long term. What you were subjected to is the beginning of the right path. That path has to be improved, but we don't put

money into that. We continue to put money into the mechanical alternative instead of the biological alternative.

Mr. Jekielek: I would like our audience to understand your background and how you came to write this remarkable book. You originally came from communist Romania and there are many steps along the way. Please tell us your story.

Dr. Nadin: I'm deeply grounded in that story because it shaped the perspective on life that I have today. I grew up under a totalitarian regime. That meant that in addition to mathematics, which was excellent, and physics, which was still excellent, we had to go through social studies. Those were not actually social studies. It was called dialectical materialism, and it was based on what Marx and Engels and Lenin had described as the law of nature.

They picked the very convenient path of determinism. Why? Because the entire society was deterministic in nature. They controlled the causes in order to control society and they forced the people to accept it. If you failed your exam in math or physics, you had a chance to retake it. If you failed dialectical materialism, you were out of the university. Why? Because this nonsensical view of reality was the one that they wanted you to accept. You had to accept it and be aligned with it.

As my life had very interesting turns of all kinds, I realized that there was no freedom if this was the accepted perspective, because you simply don't see the whole reality. You can only see what is given to you by this perspective. If you went outside of it, guess what? They knew what canceling meant. Most of my teachers were canceled at some point in their lives.

I will never forget the big political meeting in which one of the most important professors of physics in Romania was canceled in one day, because he was not aligned with this ideology. I'm now here in the country of maximum freedom, and what do we have here? We are rediscovering wokeness and canceling. Not only that, in Canada, they would take a person whose views I may or may not accept, which is absolutely irrelevant, and send him for re-education.

Do you remember what the Chinese were doing? They were re-educating China. Is this what we call freedom? No. I do not claim that I was a dissident in Romania. I'm not going to claim I'm a dissident in the United States. But I am going to claim that I tried to live as a free person in Romania, as I try to live as a free person in the United States, despite the scientific position that I'm promoting and researching. I never made it into the big competition to get the big money from the government. I made it a point in my

life to not even try. I don't like tainted money, no matter whether it's tainted red, blue, or any other color.

Mr. Jekielek: Essentially, most funding sources that are available to scientists right now are tainted in various ways.

Dr. Nadin: Yes. My problem is not with the fact that in order to be active in science, you need the appropriate means. You need money, among other things. But you also need talent. The tainting goes so far as to make impossible alternative solutions to problems that are exceptionally important. There is an official position. Academia became an echo chamber for those who were in the position to control academia. From the level of the university, to the level of the endowments, to the level of the major funding agencies, either you are aligned with them, or you are basically not included, so you cannot succeed. Scientific journals have gatekeepers that will not even allow your paper to be peer reviewed. We are no longer producing science. We are producing justification of the official viewpoint.
That is a major investment, and they are publishing millions of papers of zero value. *Publish or Perish* is a game that has nothing to do with ideas, and has nothing to do with science. It has to do with the stupidity of a system that became bureaucratic and was turned into a machine.
That machine says, "Give me academic papers. Give me the number of students who studied with you. Give me the number of PhDs. Give me the amount of the money you brought in." Think about the science produced by Einstein or Newton and try to put them in the position of applying to the NSF [National Science Foundation] for a grant. I can tell you the outcome.

Mr. Jekielek: You're saying that you would expect this woke-ification of science to happen, based on how science has existed for the last several centuries. Most people would just say that the existing science is a perversion or a Lysenko-ism of what went before, instead of real science.

Dr. Nadin: You are describing two different levels. One is the level of the discourse about science, and one is the level of the science. One is an object level, and one is a mental level. Regarding the mental level, scientists were always suspected of doing things that were contrary to what those in powers were pursuing. That's nothing new, and authentic science will always have this quality. It will not align with those in

power. Rather, it will be a form of resistance, a form of challenging, and a form of engaging those in power and others in addressing what is important.

The mental level is where things are really significant, but where things are really most significant is the object level. We carry with us this wonderful heritage of the Cartesian Revolution when René Descartes was able to come up with rational explanations to phenomena that at that time were on the minds of many people. He ascertained that there are universal laws, which are the laws of physics, the laws of what makes matter. He rejects the distinction between the living and the non-living.

For him, they are subject to causality, and if you have a cause and effect, that's all you need. Moreover, you need a method, and the method that he develops is the reductionist method. You take something that you don't understand, cut it into pieces, try to understand each piece, and as a result, you get the understanding of the whole. But that's the major shortcoming of the view, because that was never proven to be the case.

With this inheritance, today we are in the most advanced possible technological stage in the history of humankind, without any doubt. As a result, we reached levels of prosperity that nobody would ever question. We are able to do things that were the subject of science fiction only fifty or a hundred years ago. It's absolutely sensational that we can explore outer space. It is totally fascinating that we are creating machines of all kinds that can do a variety of things. But, at what cost?

That question is never asked within the view of cause and effect. *Cause and effect* mean if my arm would like to move something and the arm is not strong enough, I can extend the arm by building a hammer. Now, I have a hammer and with the help of the hammer, I can do way more than I can do only with my arm. I also use this arm to throw stones at somebody, so the hammer can be imagined as the beginning of the gun. But along the line of cause and effect, there is no place for the question of morality. There is no asking, "What does it mean that I'm going to shoot somebody? What does it mean that I'm going to launch a rocket into space?" Those are moral questions. What does it mean that since the beginning of the industrial revolution, culminating with agriculture turning into an industrial activity, the body waistline of humankind has changed?

What does it mean that in 1930, people did not have the problem of being overweight? In 2024, not only do people have a problem with being overweight, but half of the nation is also on a continuous diet. Fifty percent of the dogs are overweight. On the one hand, we take advantage of what we can produce industrially with processed food and refrigeration, but we also create disease that affects even our pets. Is this rational behavior?

That's not a very good situation because it has a moral and emotional cost for society. This is a high-cost consequence of our choices. Can we live with that cost? The numbers show us that there is a relation between this kind of exclusive causality to the detriment of understanding the consequences of our actions. The consequences of our actions are the expression of awareness, which is how anticipation is expressed. It means that our future, how we age, for example, has to be informed by the choices we make today. Our future is informed by the actions that we perform today, by our choices.

Mr. Jekielek: In essence, you're saying we don't really think about these questions.

Dr. Nadin: If we would only think about these questions, it would be easy, but not enough. Let's wake up and start thinking about them. Let them guide our understanding of reality. The world in which we live is informing us that we should give up the simplistic notion that we can understand change in the living by understanding change in the non-living. We should stop expecting from the science of biology the results that we expect from physics. Physics is not the science of the living. In physics, we can build experiments which should be replicated, and if they are valid, they will be replicated. In biology, you cannot perform experiments because biological processes are open-ended. An experiment is a closed situation. In a physics experiment, we can show how what gravity manifests itself. But the experiment is no substitute for the reality of physical interactions. In biology, we cannot prove why there are no two cells in the body that are identical. The awareness of the non-repetitive nature of life is not of philosophical nature, but of practical consequences. If we don't have that awareness, we will produce a synthetic vaccine under the assumption that all cells are the same. No, all cells are not the same. All cells in a human being are different. There are no two identical cells. Accordingly, in some human beings, we had some effects of synthetic vaccines that we can predict. In other human beings, we still don't know what *long Covid* is because we don't have the biology for it. The physics and chemistry that we used to make the vaccine are not sufficient to explain it.
You need awareness before you do something. You need to think about the consequences. As opposed to just physics and chemistry, those biological consequences are of long duration.

Mr. Jekielek: This brings us back to machine theology, as you describe it. This is a whole foundational, societal assumption. You're suggesting that we need to transcend that. Is that correct?

Dr. Nadin: Not so much to transcend, but to realize what we are doing. Let me explain it as simply as possible. We made the machines, and then we fell on our knees in front of the machines. Then we started to claim that our reality is the outcome of computation. We made a machine called the computer, and now we irrationally claim that we are the outcome of that machine.

If I made a machine, but I'm also the outcome of the machine, something in this hypothesis does not really add up. Not only are we becoming the servants of the machines, but we are also treating the machines as the new gods. These new gods, according to the peddlers of AI can do everything for us. They can do animation, they can create ChatGPT where they can tell you who you are going to get married to and how long you are going to live.

Every machine, from the simplest to the most complicated, is the representation of cause and effect. Alan Turing, in his genius, tried to answer a scientific question that came from the fascinating mathematician David Hilbert. He tried to solve the so-called *Entscheidungsproblem*, which is the answer to the question, "How do I know if mathematical proof is right or wrong? Is there a machine that can do that?" Turing proved that there is no such machine.

But there is a machine where if you give it a recipe, it will produce based on that recipe whatever can be described by the recipe. Tomato soup or potato soup, a melody, a web design. Whatever the recipe, it can make it. But that doesn't mean that the machine understands anything. It became a universal imitator. There is no understanding, there is only a syntactic sequence, a repetition, an imitation. Turing even came up with a test for this kind of "intelligence": if the imitation is good, you would not know if he machines made it or a human being.

Intelligence actually means to understand. This understanding applies from the simplest form of living, which is the one-cell-organism, or the mould, to the human being. Actions that are not based on understanding are not intelligent and do not represent intelligence. Unfortunately, at this moment in time, humankind is not demonstrating that it has a better understanding of what reality is and what we need to do for the future. Humankind used to have, in previous times when it was more dependent on its own efforts, a better understanding.

Mr. Jekielek: What are the implications of that?

Dr. Nadin: The implications of the reality I am describing are relatively simple. There are a number of activities that would need to be rethought. Medicine is one and education is one. An education that is not anticipatory ends up like the education that was practiced under Mao, in which you were simply trained to repeat slogans. That's not education. It is regurgitation. Let me add another idea: In my opinion, politics is anticipatory, or better yet it should be anticipatory.

Before I wrote the book, "Disrupt Science, The Future Matters," I wrote the book, "Are You Stupid? A Second Revolution Might Save America from Herself." I made the claim that the Constitution of this country was an anticipatory document at its time. In the present, this splendid declaration of intentions is a dead document. The country needs to define an anticipatory path for its future.

The best proof for this need: considers the level of the political discourse at this moment in the country. Look at how painfully democracy is failing in this country. One should understand that without reclaiming the anticipatory dimension, the country does not have a future. The Soviet Union imploded because it lost the anticipatory path and became a deterministic machine. As a deterministic machine, it was doomed to fail. We are on the path of repeating the story of the Soviet Union.

Mr. Jekielek: You're saying that with this Cartesian view of the world, this mechanistic view of the world, we exclude the anticipatory element that life brings in, and that's the problem. How is a living system beyond the Cartesian, mechanistic worldview?

Dr. Nadin: The reductionist-deterministic view of reality ascertains that everything in the world is made of matter and that change can be described through cause and effect. There is no reason to question that. But there is a need to acknowledge that we have to distinguish between lifeless matter and living matter. Living matter has a different dynamic, which means it changes in a different way than not living matter. Living matter is subject to all the requirements of survival. Living matter is such that it cannot subsist by using more energy than the energy it needs in order to survive. If that were so, we would have a great deal of nature already disappearing. Instead, nature is increasingly taking over the world.

In order to understand living matter, we have to give up the reduction to physics and chemistry. Properties of life are not reducible to the properties of the molecules that make up the body. The molecules from which our bones and skin are made are not even reducible to the molecules of chemistry. Not only is life not reducible to its components, but each time we perform the reduction we cause trouble to ourselves. Using chemistry to treat pathologies and disease is affecting life.

What does this chemistry do? It is creating new problems and new diseases. In other words, the side effects of the medicines you buy today are causing new diseases that will have to be addressed by new medicines. This is an endless cycle. Why is this so? Because we are not considering the dynamics of the living matter. We are trying to reduce it to the dynamics of the dead matter. Not only that, in order to analyze the living, we kill it. You don't analyze the characteristics of something that is alive by killing it. All the genetic sequencing is nothing else but taking the living cell and killing it. Then you look at what it is made out of. No, that is not how life functions.

In terms of your fundamental question, with the living, we almost never deal with simple causality. We deal with multi-causality. In the living, we almost never deal with what Descartes ascertains, which is the deterministic view—one cause, one effect. In the living, one cause creates many possible effects. The processes are non-deterministic. They are not reducible to calculations, and they are not reducible to models.

More recently, i.e., with the advent of computation, instead of trying to understand the living by looking at how life is expressed, we take the living and we model it in silico, i.e., digital devices. The assumption is that the model is as good as the real thing. From the model we derive data supposed to describe the dynamics of life. And thus, new rules from the computational model on how we should treat a certain disease become the blue print for new medicine. Eighty percent of the papers published about cancer in various high-end publications cannot be replicated. That's no surprise—life does not behave as our digital models do. The reduction of the living to the non-living is simply misleading.

Mr. Jekielek: During the Covid pandemic numerous doctors did things differently and suffered for doing that. They were observing symptoms in patients and seeing that certain protocols were harmful to their patients. They came up with new protocols like repurposed drugs. These doctors actually became quite successful at treating Covid when the orthodox approach failed at many levels.

Dr. Nadin: We had the Lysenko experiment in the United States under Covid in the sense that the government told us that they know better, and these are the means you should use. It turns out that even the Nobel Prize given in respect to the Covid is the wrong Nobel Prize. I don't dispute the performance of Katalin Kariko and Drew Weissman, superb and dedicated scientists, but they got a prize in medicine or physiology when in reality their work was, in reality, in chemistry (are most bio-chemistry). All they discovered was the substance that has to be used with the RNA, so

that the body will not "throw it out," will not reject it. That's chemistry. But the mRNA vaccine that integrates their discovery never prevented one Covid infection. Keep in mind: a vaccine is supposed to prevent infection. Period. We can go around this definition forever. The Moderna and Pfizer vaccines never prevented the Covid infection.

Moreover, it turns out, and I again bring up something that I discussed with some of my colleagues, the process triggered by the mRNA vaccines is related to the variants of the virus. As though it was not enough to have one virus, now we are going to multiply them by applying a vaccine that is not a vaccine. Various other consequences are by now discussed by the scientific community. That is a strange situation: the official vaccine proved to be insufficiently researched. That is a Lysenko situation. Never mind that this possible vaccine existed before Covid, but did not promise to generate the profits eventually made on account of Covid.

Even under communism, you could not do better than what those in power were doing. I don't care whether they are Republicans, Democrats, in Europe (France, or Germany), they all played the game. They all aligned to this misunderstanding.

If you look at the numbers of the people vaccinated and who died, you are going to ask the question, "Was this a justified campaign?" It was not scientific, and it should never have happened at this scale. But it happened because political expediency took over, heavy amounts of money were given, and immunity was given to the companies. That's unheard of. Immunity from what?

Mr. Jekielek: Envisioning everything in this reductionist way is a natural consequence of this machine theology. The consequence of that is a loss of individual autonomy. Every system of governance that we experience will treat every person as a cog in that machine.

Dr. Nadin: In terms of social impact, this loss of individual autonomy is one of the direct consequences. For the last 50 years, America experienced not only the euphoria of science, but also the progressive loss of individual sovereignty. The individual today, compared to the individual 50 years ago, has less freedom than ever, and the tendency is to lose even the little that is still left.

It is not only that privacy is gone forever, but there is also no way that anyone will ever recover this dimension called privacy. That is gone for good. On the one hand, we lost privacy. On the other hand, we are not willing to look at what that means and the price of that. I say, "Okay, you robbed me of something. What is the return for me?"

The return cannot be only the fact that whatever I type in when I am looking for aspirin or whatever, 15 companies will immediately, within 30 seconds, tell me what I find, and they will even send to my door the next person to deliver the aspirin. The answer has to be the change in the social structure. The change in the social structure has to be that we can no longer live with this illusion of a democracy where my vote ends up being zero and has absolutely no impact.

Is this what you call democracy? No. Socially, we are entitled to be part of a process. At this time, Americans are left out of the process. How do we get to be part of the process again? Here are the things that people should start being aware of. It will start by changing the notion of education. We have to give up education as a machine operation.

If we do that, and if we celebrate the fact that we are infinitely different, we will realize that there are no two human beings that are the same in this world. The consequence if this is relatively clear: the obsession with DEI and the obsession with the woke—actually false wokeism-- will go away. It will go away because there is no room for it. Yes, the implications of a different perspective of reality are not only relevant to science and technology, but they are also relevant to our daily life and to the way in which we can unfold our talents and remain creative.

Mr. Jekielek: You argue that every totalitarian system is actually fundamentally reductionistic. Many people think that we are in the midst of a totalitarian moment. You say that it's a result of this reductionist, Cartesian viewpoint being taken to its logical conclusion, but the current education system is used to instill this viewpoint. How do we move past that?

Dr. Nadin: I'm not a catastrophist and I do not predict doom. I do not predict that we are at the end. On the contrary, it seems to me that we are still living through the most interesting times ever in the history of humankind. There is no doubt about that. It is a time of opportunity, and it is a time of danger.

At this juncture, we mainly see the dangers. They are mainly dangerous because they are totally new to us. The opportunities are a little more difficult to see. Society needs the challenge in order to discover the opportunity. Can we avoid living on the expense of the future?

I'm really in favor of a science that is challenging the public, and also engaging the public in the interaction that leads to scientific discovery, instead of just producing answers for the public. During the pandemic, the public was not only left out, it was

pushed away. The system said, “We will tell you what’s right, and we will tell you what’s wrong.”

Realistically speaking, at this moment, we have everything that it takes to integrate the public into the process. The integration of the public into the process is pretty similar to the traditional town meeting as a forum for interaction and as a validation procedure. In New England, the town meets annually and discusses its priorities. Is it a school? Is it a traffic light? We need to get away from the globalist obsession to a more scaled down interaction among people who feel responsible for a certain part of their existence.

Again, science needs to change. Progress in science means progress in understanding what is important to society and what is the price of our decisions. I’m sure every scientist would like to make progress. I don’t think that there is any scientist who would want to destroy science. If you want to make progress you have to get rid of the preconceived ideas that have been formed. You have to start thinking outside of the box, but still being a part of the group, you are interacting with. That is your community, where you are sharing ideas and questions.

We have to end the obsession with academic tenure—a form of stagnation not a form of liberty. it is of a non-scientific nature, as a form of guaranteeing the freedom of the scientist. Freedom is not a matter of tenure. Freedom is a matter of your own thinking. You don’t need tenure in order to think freely.

Our society is prosperous enough to maintain huge amounts of people involved in science, the majority of which produce no good. It is time to go back and say, “Science has to answer the needs and expectations of a certain community, that has specific goals and specific targets. The skimo’s in Alaska are in need of a different science than the farmers of Iowa or the nerds of Silicon Valley. How do we work on the specific tasks of interest to a community together? The scientist is only one part of it.”

I’m not arguing for the return back to anything. When I say globalism is not the answer, it does not mean to throw away globalization and we’re going to be all local, and we’re just going to go to the local market and we'll eat only fresh food. It’s not rational to expect to return to a past that was by no means as glorious as some would love to remember it. The return to the past will not happen.

What is rational is the understanding that communities of people are formed based on the challenges that those communities are facing. These are cells of self-organization that cannot be dictated hierarchically, from some centralized authority. They are the outcome for acknowledged needs. The idea is to engage people so that they can unfold their talents. Am I a utopian? If you say it to my face, I will never feel offended. I

would probably not go for utopian but would rather go for idealistic. Yes, I believe in the human capacity to reinvent itself.
I spell out quite often an example of anticipation, that has two parts to it: the butterflies landing here where I live now, in Pacific Grove—the journey is over many obstacles, thousands of miles. But this example of successful migration with the purpose of survival cannot go without the example of the exhausted sardines that once upon a time were feeding the community here, and were made available all ove the world. Monterey, with its magnificent bay, hosted a canned sardines factory. No longer. They were fished away, without any consideration for the environment.

Don't forget, not only are we made of cells that are totally different in our body, but the majority of them are in a continuous process of being remade. We are in a creative cycle. The cells are being renewed, some of them faster, and some of them slower. This renewal, that corresponds to the characteristic of the living matter, is in my view the model of a sustainable social activity, and of a sustainable society. That is the answer. The fishing of sardines was not sustainable. Do I know of concrete ways to do it? No. Is it too late to start tomorrow? No, it's not. I will do my part. If you do your part and if other people do their part, I'm convinced something will happen.

Mr. Jekielek: You mentioned the butterflies in Pacific Grove and the lack of sardines in the bay where you live. Please explain those two scenarios for us.

Dr. Nadin: One is the scenario of successful anticipation in which the butterflies, in order to succeed will not stay over the winter in New England. They start a very long journey from New England to a place where the conditions for their survival are better. Those butterflies that start in New England will die some place along the way and will be replaced by their offspring and even those will die again or will be replaced by offspring until the third generation makes it to Pacific Grove. That's anticipation. The butterflies remain alive. Eventually, they start the journey back. Those who start in Pacific Grove will not make it to New England, but their offspring will. That's anticipation at work in the most direct way.
Many years ago, the area of Monterey Bay was an area very rich in sardines, among other things. They produced sardines here day and night. People lived on them; catching them, cooking them, putting them in cans, up until the time when that resource was exhausted. This is the place where our machine, industrial model killed the anticipation from nature. As an alternative, we built a spectacular aquarium there.

For me, that aquarium is the metaphor of one of the dangers through we are facing: thinking that we are going to understand nature if we put it in a bottle. Because an aquarium is a bigger bottle, and nothing else. At certain moments in the day, the aquarium workers go into the huge bottle and feed the fish. Visitors pay to see the shark eating whatever the experts decided that is good for them. But that's not nature. Neither are the zoos nature. This brings to mind an image that recently broke my heart: A brown bear was freed from a zoo in Romania. The superb animal was then filmed in the new habitat where it was placed. Do you know what the bear has been doing, day in and day out, for years now? It's going in a circle, like it used to go in a circle when it was in the zoo. That's what we are at this moment as a society: let us save nature by conditioning it.

We are really in a condition in which we are on a leash, and it's time to break that leash. Now, going back to your question and the sardines and the butterflies. The successful anticipation of the sardines was undermined. Unfortunately, we are doing it to ourselves more and more. It's wonderful to have sardines from Morocco. They taste wonderful. But you realize that if we continue on the same path, we are not going to succeed much better than the loss of the sardines of Monterey Bay.

Mr. Jekielek: We have an epilogue; doctors should lead, not the medical establishment. But going back 100 years, it was very much doctors leading and looking at patients according to the Hippocratic Oath. They figured out how to best help them through observing and through learning from the community of doctors. Whereas today, we're in a situation where many doctors just follow the so-called guidelines. According to your thesis, how did that happen?

Dr. Nadin: That's a very tough question. We institutionalized medicine. Once we turned medicine into an institution subject to laws and regulations, we created a framework where the art of healing is practically eliminated in favor of a technology of fixing. We don't have healing at the moment. We have repair.

Obsession with the health of people is very common in history. You find it in the Old Testament. You find it in China. There is a huge tradition of interest in healing which unfortunately we're not fully aware of. We keep talking about it but we are not fully aware of it. Even great religious leaders such as Maimonides, the Rambam, was a splendid physician. He was not even the only one, there are others as well.

They integrated the observations based on the science of the day with the art of healing. Their purpose was the art of healing, not repairing. Today, the machine model is about repairing. We created a context in which the rules for repairing are given. In

some countries, the rules are not very pleasant. They say, “This is the amount of medicine we are going to give to older people, or this is the amount of medicine we are going to give to this certain group.”
But we have reached a time where the repair starts being a form of engineering. The whole obsession with transgender is part of this engineering. A child might say, “I want to be a boy,” or “I want to be a girl.” There is no transgender person who was told as a kid, “Let’s consider what you are doing. Are you aware that you are going to be on a leash for the rest of your life and you are going to have to swallow medicine after medicine after medicine? Are you aware of the consequences?”
In other words, even if you are young, you are not going to make those decisions just like that. But even at the ages of 15 through 18, are you aware of the long-term consequences? I don’t think that there are many people who are going to subject themselves to this form of engineering that will be a handicap for the rest of their lives. To your question of why these things are changing, there is yet another factor that I will not ignore. Do you remember the times when churches were beautiful architectural monuments? Do you remember the next wave of buildings after churches that were beautiful? It was the banks. But neither churches nor banks are in the position anymore to afford owning luxury buildings.
Money is now made on hospitals. This is when medicine is no longer dedicated to human health but is a business. The highest profit is made in hospitals. The number of people in the administration of medicine has increased by 3000 percent. With doctors, the numbers have pretty much stayed the same. What is this hospital administration actually doing?
If they get a patient into the hospital, it means $1200 a night, $2000 a night, or they are captive there until the end of their life. Hospitals and their marketing experts are really waiting, like lawyers waiting for accidents on the roads, for victims (of course, called patients). You could be there for one month if you are in the last part of your life, and somebody is able to make money on your last days. This is the main explanation for why the corruption of medicine took place. It was transformed into a business.

Mr. Jekielek: You could say the same thing about higher education.

Dr. Nadin: Correct. With my previous university, I was totally impressed by how it developed over time, and I was part of that—from 8,000 students to almost 35,000. My slogan at the university was simple: none of us is better than the university we are serving. I believe in that. If I say something negative about my university, I say

something negative about myself. It expanded in more brick and mortar, ecologically insane, monuments. Continuously putting up buildings is not the future. The future is to create an education of human interaction, not of buildings upon more buildings. But there is money to be made with these buildings—keeps the economy moving. Employment.

Mr. Jekielek: You are talking about the industrialization and commodification of every endeavor of our lives.

Dr. Nadin: Correct, that is a good summary of my viewpoint.

Mr. Jekielek: You worked on both engineering and aesthetics. We have been talking about reaching the logical conclusion of this Cartesian deterministic model. For the last several hundred years, the notion of beauty in art has been under assault. At one point, art was essentially a celebration of the divine and was genuinely beautiful. But according to our thesis here, the commodification and industrialization of everything, including art, resulted in what we have today. What are your thoughts on this?

Dr. Nadin: For me this is a major subject and it always was. We are witnessing a dramatic decadence. When I say decadence, it does not mean it is more glorious than ever. On the contrary, this decadence is the abandonment of the conditions of art. For me, art has always been an interrogation.

Science interrogates about the laws of nature. Art interrogates about the meaning of life. Science has never anything to do with meaning. Art always has to do with meaning. There is a lesson in this because we transformed art into a commodity.

As a commodity, who cares what art is hanging in your doctor's office? It is an expense that the doctor will incur because it is a good tax deduction, not because he cares about that work of art. The lower and lower aesthetic threshold means that we produce not only more mediocre works of so-called art, but also more mediocre artists, people who never had even the faintest desire to question anything.

They are very good, like a machine, in reproducing what some other people did, but what does it actually mean? When ChatGPT came out, on a daily basis I received questions from all kinds of people who said, "Look at what I did. Isn't it wonderful art?" The moment I said, "It's junk, forget it," the conversation was over.

Machines do not make art. Artists make art. You can use a machine for making art. You can use a machine for anything, like sharpening your pencil, doing what is called

3D printing, you name it. You can use it. But art is essentially an expression of creativity. Art is something that results in something that didn't exist before.
The uniqueness of art is not something that we decided over time. It's part of its condition. As we speak now, there is no machine in the world that can actually formulate a question. Art formulates questions and engages those who are willing to give their answers, whatever they are. Sometimes they are silly, sometimes not. But that's the life of a piece of art.
We go to a Shakespeare performance not because we have anything to do with what Shakespeare described. The questions implicit in what Shakespeare put in that play are questions that are also of interest to us today, but in a different way than in his time. My questions today are definitely not going to be the questions that people formulated at his time when they were sitting in the theater and drinking beer and applauding at several theatrical lines.
Some of these qualities are lost and the result is we created a very high level that is not accessible to the large public at all. Instead, we created junk that we feed the people on a continuous basis. Not only does it further destroy their aesthetic perception, but it makes the aesthetic less significant for society. This is the part where I am a bit emotional. Because art, by its nature, is anticipatory. If we lose that, art becomes an object like any other object.

Mr. Jekielek: Is there anything else you would like to cover today?

Dr. Nadin: The fundamental issue in changing the perspective of science is the understanding that living matter and matter are not the same. Matter can be described and to use the logical system of Gödel, logical matter is decidable. We can produce complete and consistent descriptions. This is what allows us to predict the time of the next eclipse in this and that part of the world. We can predict it to milliseconds or microseconds, with a precision that is absolutely amazing. We can do the same thing when we send an object in space with good, decidable processes.
The living is an undecidable entity. Living matter is undecidable and cannot ever be completely and consistently described. This difference between the two was not acceptable to science until very recently. One of the most intriguing scientists, Walter Elsasser, emigrated to the United States. Elsasser was rejected and taken off the list of possible Nobel Prize winners because he was considered a vitalist. In other words, he was one of those people who believed that the living is different from the non-living. When people are not allowed to do the science that they believe in or consider justified, it's not a new thing. But the suppression has become more and more radical.

Elsasser was canceled, if you will. He is an example of being canceled. The Nobel Prize committee is canceling everyone who is not in the deterministic mode. They do not understand that the living is not reducible to physics and chemistry, and ultimately, that will prevent us from finally understanding it.
The survival of the living is at stake. Based on the models that we have today, when this universe began there was no living around. Based on the models it was a universe of just matter. What is the dominant presence in our universe today? The living. Can you see the difference between the living and the non-living? There is more living than non-living. The living created itself, survived, and keeps recreating itself. That's a very important observation to understand.

Mr. Jekielek: What do you mean by there's more living than non-living? Because it seems like there's a lot of non-living things.

Dr. Nadin: Add up every form of non-living matter in the world, which means mountains, rivers, and every other form of non-living. Then add up all the forms of living that you are aware of. Add up the animals, all the variety, and all the quantity of living matter, compared to the beginning when there was no living matter. It was zero living matter. There were only the elements as we know them from the Mendeleev inventory. There was no living matter.
Today, living matter is predominant in our world. Even John von Neumann said, "I'm looking at how to create machines that replicate themselves. It seems that nature knows how to replicate itself better than any machine that I can conceive." That's an observation that he made.

Mr. Jekielek: In your mind, if there's one thing one of our viewers can do to think outside of the box, what would that be?

Dr. Nadin: I articulate in the books what I impertinently would call the *Nadin Law*, which says that the reaction to breakdowns is by many orders of magnitude more expensive than prevention. It is not sustainable. We should focus on prevention. If we gain this understanding that focusing on prevention is our contribution to a more sustainable world, boy, I would consider myself a very happy person.

Mr. Jekielek: There is a huge societal problem of safetyism. It is an inordinate focus on avoiding risk at any cost, which has many societal consequences. How does that fit in with the idea of prevention?

Dr. Nadin: Prevention does not mean avoiding risk. Prevention means the awareness of the risk that is attached to every of our choices. If the return on the risk we take justifies it, then that is the model that I'm going for, not zero risk. On the contrary, awareness of risks is associated with the awareness of choices.
This is the second part which is the most important part. In order to be anticipatory, there has to be an awareness of choices. The choice I make is the one that returns the value that I expect at the lowest possible risk, or the risk that I can bear. Sometimes the lowest risk cannot be achieved. But risk is something that we can adapt to, which is good enough.

Mr. Jekielek: Right. The perfect model for that would be in medicine where preventative medicine has seemingly gone by the wayside, as we've been discussing.

Dr. Nadin: One would definitely be medicine. The other is warfare, because we are currently going through some pretty dramatic events. None of the wars that are taking place today should have taken place. They were preventable, but we decided not to prevent them. We decided for a reactive course. We pay a huge price that affects not only those that we want to help, but also affects the whole world.
We could have definitely prevented the disaster of the Ukrainian-Russian war. Even the disaster in the Middle East could have been prevented if anticipation could have been at work. Both wars are a failure of anticipation. They are absolutely tragic failures. If we have the means to prevent the killing of human beings, then every human being killed is one too many.

Mr. Jekielek: Dr. Mihai Nadin, it's such a pleasure to have you on the show.

Dr. Nadin: I hope you mean it.
Mr. Jekielek: I do. Thank you all for joining Dr. Mihai Nadin and me on this episode of American Thought Leaders. I'm your host, Jan Jekielek.

This interview was edited for clarity and brevity.