

Dr. Mayla Boguslav:

Thank you so much for being here, Nicoleta. I very much appreciate it. I wanted to say congratulations on the G100 club! That's very, very exciting, and you are a great example for women globally for sustainable banking and investment specifically, but also in general as a female in fields that do not tend to not be female heavy. I really appreciate that, being a female in mathematics. Thank you so much for being here and chatting with us, especially with [this month's] theme of AI and Faith at the global scale. I'm really excited to hear about Switzerland and what you've been doing with your work in general.

To start, my first question is: Can you talk about your experience as a faith-based person working in organizations that are usually viewed as non-faith places?

Dr. Nicoleta Acatrinei:

Thank you so much, Mayla, for having me. It's such an honor, and we should thank you [women], really, because you are also filling the gaps that we are looking to fill and to balance. It means the proportion of women in some sectors of activity [is increasing]. History has shown that women are brilliant all over history, it's just that we still do not have the recognition and the place and the open doors that we deserve, and we have to fight too much, but we do it. So thank you. You are one of our doors opened.

Dr. Mayla Boguslav:

That is what excited me about doing this interview with you- that you're a good female role model for women everywhere, especially spaces that don't tend to have a lot of females. So I do really appreciate that for sure.

Dr. Nicoleta Acatrinei:

The question you ask is very important actually, because I would say it is the nexus of everything. It's the life of a person who has a faith, and it's living in a society which does not necessarily share the same faith, or even when it shares it, it still separates the private faith from the public space where we interact with others. I think this is very important to understand the contours, or the limits of what we can do and what we cannot. But as someone who actually lived in a dictatorship where it was forbidden, even a life threatening situation, to speak about your faith, I learned to live my faith independently of any context. It helps you to be able to live that also in a context where you live surrounded with people who have different world views- not necessarily fake, but just different world views. To me, it is about an internal verticality between your values and your actions, and if at a certain point that means making some choices, it's up to the person of faith to make the choices that align with her faith and to accept the price of that. But in reality, as I said, I lived in a dictatorship where it was forbidden even to pronounce the name of God. To wear a Cross was a big no-go; it was very dangerous. I learned through that [experience] that faith, at least for me as a Christian Orthodox, is the Union of God and looking

to realize and fulfill this union with God during our lives, and you can do it anywhere in any context. If we in the dictatorship were able to do it, that means it is possible. I saw people around me who paid a really high price to do it, but they did it.

I do remember when I came to Switzerland that the irony was that I was an economist. I'm an economist, but I'm a Christian Orthodox Economist female who found herself to be a teaching assistant and a masters student in the Protestant Faculty of Theology at the University of Lucerne. This was absolutely not in my career plan, but very enriching for me both personally and professionally. I had this rule all the time: Do not speak about my faith. It was not necessary to go out and say "I'm Christian Orthodox, look what I do". It is a very interior faith, so we build an Interior Kingdom if you want a life with God. And of course, while I was in the faculty of Theology, these questions quite often came to me- what do you think about this or that? I always tried to discern what exactly was the meaning of that question. Was it really a desire to learn, was it really a desire to discover a new faith, was it just curiosity, or was it a kind of [trick] to try to make me change. Depending on the context, I would choose to talk or not. But you can, as a person of faith, evolve very well in non-faith institutions and at a certain point it's up to you to make the calls for every dilemma that could come out of this situation.

Dr. Mayla Boguslav:

I definitely feel this idea of being able to live your faith in any context. I'm a Jewish female mathematician and computational biologist, and my Judaism influences a lot of what I do, but depending on the space that I'm in, I will choose whether or not to say that. I generally don't feel persecuted for it, so I don't feel like I cannot say it most times, but I do understand that there are times where it's just not relevant or you feel like you are being persecuted. Context matters, and I'm sorry you had to live through the dictatorship, but that is a valuable lesson that we can be faith based in any context, as you were alluding to.

To get at that a little more, why do you do what you do? What drove you to be an economist, and if there was some faith influence there, what was it?

Dr. Nicoleta Acatrinei:

Actually no, it was the philosophy. I loved two things in my high school: philosophy and mathematics, and it happens that both professors who were teaching philosophy and mathematics were often bringing in economics as examples of the real world. I found that economics was the field where I could mix mathematics with philosophy. Applied mathematics and applied philosophy equals economics.

Dr. Mayla Boguslav:

Interesting, because I also actually majored in mathematics and philosophy, specifically Jewish theology. I also did premedical and I combined all of those to do natural language processing on

biomedical data. But it's a very philosophical question that I work on in biomedicine, because I really focus on what questions we ask and how we ask a good question. I totally agree with you in this idea of combining all these things to find what you do. I feel a kinship over the love of math and philosophy.

How do you think your faith, or faith in general, influences how we spend and invest our money?

Dr. Nicoleta Acatrinei:

I think this is a very good question because when people ask me what I do, I usually define myself as a scholar, because I'm still exploring this fundamental question about human life. The lenses I have, like economics, philosophy, mathematics, and now finance, are all part of the big economic world. When people ask me what I do as a scholar, and I tell them that I study economics and religion, they say those have nothing in common! Why would you study that? It is true that they seem very different, even opposite. But in reality, if you go a little bit deeper, you see that there are influences. If you look at economics and finance, you'll see that the very first texts we have on this are in religious texts. The first texts we have on a sustainable economy and sustainable development actually come from the *Torah* (the Old Testament), including how you have to manage your agriculture and your money. So both fields, religion and economics, have common roots and they influence each other a lot from a historical point of view.

From a personal point of view, I would [ask how we could] say that somebody could invest money without considering his world view, his faith, his religion, and his community. For example, if you are Jewish and not practicing but still in the community, when you invest your money, you will still be infused by the principles of investing from your community. This is one thing which I will call indirect influence. The direct influence is when you really have a relationship with God and you develop it and you live it. That is like a condition in mathematics, to have an alignment you need a necessary and sufficient condition. That means every decision and every action needs to be aligned with that goal, and I would say it comes naturally. It should be clear, if we are clear in our faith and in what we want to have in this relationship with God and what kind of humans we want to become.

I actually did quite a lot of research on the impact of religious beliefs in the workplace. This is very important, because it [relates to] everything you do at work. At a certain point, there are actions that come as a question, and we have to make decisions. Maybe I wouldn't go along this path because it will take me to a place where I'm not aligned with God anymore, and you make the choice to remain on your trajectory, like a very faithful star. How do we take this relationship between the world of economics, finance, and faiths? They are necessarily related either as fields of studies, or as social phenomena, both at the level of nations and at the individual level. If again, [we are assuming] this is a real and authentic relationship with God, but that's not our discussion.

Dr. Mayla Boguslav:

I totally agree with you. I've never thought about this around money and finances, just because that's not what I do, but I've actually been asked the exact same questions- why are you a mathematician or scientist and religious? I think it's exactly the same as you just said. We choose our axioms, and then we build a society based on that. An axiom in religion may be that I believe in God or God exists, just like an axiom in mathematics. I find it funny that people struggle with that, because to me it's so simple. You're also right that when I invest or do things financially, especially as a part of a community, I think about the Jewish principles of *Tzedakah* (charitable giving). Even if I'm not actively thinking about it, it's always there because it's so much of who I am. It seems like your work is also helping us to be able to see these things much more concretely, even if it's implicit or subconscious.

Dr. Nicoleta Acatrinei:

It was one of my desires, actually. In my research I give visibility to invisible phenomena. In my PhD, I studied altruism in the workplace, because altruism exists in all workplaces and it is what makes these workplaces more efficient. If we calculate how much altruism employees bring to companies, they would be amazed! In my PhD, I approximated it and it is incredible how important it is to show a figure and be able to see this altruistic behavior given by the employees in your company. The employees don't know it either, [and we can show them that] this is your altruistic contribution to the company. By doing that, in fact, we recognize the value [of altruism] because you can't value what you can't measure or see. I came to study this because I challenged the assumption of economic models of *homo economicus*- an axiom that all humans behave selfishly, they are maximizers, they are lazy, and they look for instant gratification with a very low cost. These are the big four natural laws that govern the *homo economicus* theory, and I challenged them. I said that's not true- I worked in banking, I worked with people. People are not all selfish. They are not all maximizers. They're not lazy; they love to work. I wanted to offer a counter perspective which would be more realistic and closer to the real behavior of people in the workplace.

Dr. Mayla Boguslav:

I'm glad somebody is pushing the boundaries of what it means to be a human in society and that we're not all, as you said, selfish maximizers and all these behaviors. I think what you're getting at is that a lot of this is influenced by faith.

Dr. Nicoleta Acatrinei:

It came after I saw that religions had a better appreciation of human nature. I saw that where economics and psychology were still looking for principles and foundations, religions were speaking about human nature and the capabilities of human beings in a more accurate way.

Dr. Mayla Boguslav:

Faith is one piece of AI and Faith, and I'm curious how AI influences this and how that has changed over time.

Dr. Nicoleta Acatrinei:

Yeah, I'm so happy that AI and Faith is blossoming because when David Brenner, our chair, contacted me, I was working at Princeton University on altruism, AI, and religion.

That is the nexus of all of this and is why I came to this community and I started to love it deeply. It really offers a place where you can discuss with experts from different backgrounds and discuss topics and present your research with ideas that sometimes would be more difficult to put in an academic program, until it becomes an academic program. You have to change it, and I'm pleased that I have the chance to do so. I even gave a lecture on that- how to combine altruism, AI, and religion in the workplace. It's true that you don't find many places to do that, so the idea to create this community where people can come to discuss and exchange and learn from each other, this is it! This is a learning community with a huge learning experience and a place where we share this knowledge with others. We are a hub where anyone from this society, from any religious background or without religious background, can ask these questions about the introduction of AI in our lives. It's posing new ethical dilemmas for us, and I want to discuss this with people who are involved in the heart of these things.

Now we are at the stage where we are a group of more than 150 experts and we have regular newsletters and town halls. It's very nice to have members, but at a certain point we need to extract the honey bear knowledge from these members and make it useful for the society we see. It is a place where whoever is interested in the intersection of AI and faith is welcome. And how could someone not be interested in these kinds of topics? Because AI is everywhere, I mean, we already live in a world run by algorithms. I think it is very, very important that we discuss that, so we can also participate in a more informed way in these debates in society.

I also observe that people are between exaltation and complete rejection of AI without a way to reflect on this position. I generally say I don't like when we talk about this from an opinion point of view. When I exchange something, it's not my opinion. It's based on science. It's based on what I read. It's of course limited to my own cognitive capacity of acquiring knowledge about AI, but it's not an opinion formed from nothing. We have the obligation to inform ourselves about AI before forming any kind of opinions or discussing and debating. I do it for self-respect. I want to know, I want to inform myself, and we now have the possibility to do so. When I attend these kinds of meetings at AI and Faith, or when I meet people like you for example, this brings me a completely different perspective. You know something I didn't think about. That's so enriching. That's the goal. We learn together, we become wiser together, and we contribute to the debates and society on AI in a more informed way.

We talk a lot about the need for regulations or how we react to the introductions of AI. Recently I just read, and this will be confronted sooner or later, that somebody was fired because they didn't want to use AI at work. Other people are fired for using it! If you are not informed about this, how could you even start a discussion with your workplace or company about the role of AI in society and life?

Thank you for being in our community!

Dr. Mayla Boguslav:

Yes of course! I joined just last year, so I'm pretty new but I really enjoy it. I agree with you that it's very much a place of learning and I appreciate that everyone comes to this community wanting to learn from everyone and that everyone's faith is just accepted. I love sitting in spaces with lots of diverse groups of people, and this is one I really appreciate from that perspective.

Dr. Nicoleta Acatrinei:

It's different places and different backgrounds. You, for example, are mathematics, philosophy, and Judaism, and you will have people who are not necessarily academics, but they come from a professional experience. We have somebody who has worked in robotics for 30 years and who is a Christian. We have a Rabbi, who I did an interview with, and I was very interested to learn more about the biblical foundations of AI. We have Muslims, we have Hindus, we have all religions and this is really important because in the end it's about the human being, it's about human nature.

This is one of the biggest challenges of AI. We say it's anthropological in my research. That's why we talk about consciousness, sentience, and personhood. The introduction of AI is really challenging us for the first time and sending us back to these fundamental philosophical questions about who we are. AI has brought up questions like whether somebody can download your brain, and that means the question of who we are is back on the table. I would say the 21st century will be the century of self knowledge and a rediscovery of our own human nature.

Dr. Mayla Boguslav:

Actually, right before this, I did a book review of God, Human, Animal, Machine, by Megan O'Gieblyn, and she asks all those questions and I love thinking about them.

I'm curious to hear more about what faith says about sustainable banking, both from a Christian Orthodox perspective and faith in general.

Dr. Nicoleta Acatrinei:

I will talk in general about the relationship to money because that is how religions frame it. This is a big lesson that we forget all the time at all ages. Money is a tool. It's never a part of the value

of the human being or the relationship with human and God. It really belongs to the sphere of human activities, but human activities don't always have an impact on the relationship with God. It's perpendicular- the vertical with God and the horizontal with the world of substances (banking). We didn't call it money before because we had products as money, but the idea is that there is something of value that allows us to run our businesses in an efficient way.

From a religious point of view, it's a tool. It's never bad or wrong. In the world of banking, finance, and economics [there is an assumption] that sometimes religions have the tendency to moralize the finance sector, the economics, the profit making, and so on, and say these are evil. In Romania we had words that said, "money is the eye of the devil". So, money was quite often related to this evil, negative thing. But in reality, if you read the sacred text, and not their interpretation, it says money is a tool. The idea is the kind of relationship human beings establish with money, and this is a tool between a master and servant. So, who is the master and who is the servant? When human beings are the masters of money, that's perfect. When the money becomes the master of the human and humans are just the servant, that's a problem. Keep this in mind.

Now let's say this is the banking system and everything we have in the world. Is it our servant or is it our master? If we really want to have a sustainable banking system, which is in service of the economy, people, sustainable development, and flourishing, we have to ask this question. Who is the servant and who is the master?

During the Enlightenment, we had the perspective of the human being. The value of the human being was quite important. All philosophers in the Enlightenment wrote treatises on human nature, the nature of religion, and the nature of money. In the 20th century we had recognized the value of human life and human dignity in the economic field. Unfortunately, we lost this philosophical ground. We started to have a very mathematical way of considering economic phenomena. We jumped from value to price- we changed concepts completely. We are focused on a very mathematical model, microeconomics, macroeconomics. I love mathematics a lot, but at a certain point we need to reintroduce the value of the human being in this equation. That's why I wanted to have an evaluation of the altruism of people.

The [original] meaning of economics is the way you manage your household. A household was comprised of everyone, the products, the businesses, the people, the animals. Everyone was there and we would manage this in a sustainable way. In antiquity they had a different word for business and making money out of money, and this was seen as very bad. The Roman administration wouldn't want to be identified with the people who make money from money. People felt that when you make money out of money, it's missing something.

I think this is where we have wisdom in faiths, because religions had sustainable finance principles in their sacred text from thousands of years. Religions invented sustainable finance.

It's not the United Nations with the SDGs (Sustainable Development Goal) or the private sector with the ECGs (Economy for the Common Good), it's religions. They did it and they practiced too.

Dr. Mayla Boguslav:

Going back to this month's theme of AI and Faith at Global Scale, I'm curious about your perspective. You've lived in Romania and Switzerland and traveled all over, and I want to hear your thoughts on AI and faith and economics at a global scale.

Dr. Nicoleta Acatrinei:

This is a very important question. I attended Davos (the World Economic Forum) this year in January and my mantra that I shared with my team was this: We need to think about everything on a global scale. I work with my colleagues to figure out a vision of what the main contribution of AI and Faith should be to the world. These questions are not a territorial problem. This is not a small-scale problem. It is a global problem. You need to start somewhere, but we need the vision of which kind of problems we want to address. When you work on these problems at a global scale, you realize that the problems you find in your work are the same that somebody else found and they might have already found solutions or something that could inspire you.

Global scale is also about impact. We want to change something. We want to influence the debates on AI and Faith. We want to contribute to regulations and policy, but if we don't have a global vision and if we don't learn from each other, we can't have an impact. In my experiences, I travel all around the world. There are always new universes to discover; it's endless and I think the risk here is limiting ourselves and thinking that we are sufficient. We need to integrate more and more people from different backgrounds to address this global issue.

The last thing global scale means is the capacity to listen. At a certain point you need to close your eyes and listen to the *brouhaha* of the world and see where we are going with this. You can't have a lucid discernment if you don't have a global scale perspective of a phenomenon.

Dr. Mayla Boguslav:

Have you thought about a vision for a new goal in relation to this for AI and Faith or the community at large?

Dr. Nicoleta Acatrinei:

I have, and I love this question. When I was in Washington, DC, two years ago, I was with the lady who is responsible for employment resource groups at Google. She asked me if I could see what we should do [about the impact of AI]. And I said we need to think about everything we discussed today, which will impact the generations after us. So, like we do in mathematics, we figure out what we want to obtain and then we figure out the equations. We do the same for this.

What kind of human being do we want to see on this planet in 200 years? What kind of society do we want to see?

What I want to see is a human being who is prosocial and who is altruistic, a human being who is flourishing. I think this is a concept that should be used more with people working in AI. They need to see it is a human centric society, where AI serves that.

I'm quite challenged by recent readings that talk of AI centric society. AI is never centric; it's a tool. How can a tool be centric? It is the tool of the future, but it can't be centric because it's a tool. This is where I come back to my anthropological approach. We already have the wisdom to make the right decisions. I'm not afraid. I'm not blindly accepting everything in AI, but I'm not afraid. This is just a tool, like money, like everything else in our lives. Technology has improved the lives of human beings so much, in so many fields. If we do it wisely, it will be for the benefit of humanity.

Dr. Mayla Boguslav:

I like that. We'll leave it off with human centric and with AI as a tool, whether that involves faith or other contexts. And I love your question: what kind of human beings do we want to see in 200 years?

Dr. Nicoleta Acatrinei:

We don't have this vision of the human or society yet, but I hope you, the young generation, will answer this question for us.

Acknowledgements

A big thanks to Dr. Nicoleta Acatrinei for taking time for this interview. Thanks to Dr. Mayla R. Boguslav for hosting the interview and writing the questions, and thanks to Joshua Mendel for editing and proofreading this article for clarity.