
DW 2022: ACADEMIA

INTERVIEW WITH EVE HEPBURN

Dr Eve Hepburn explores how our engagement with academics from multiple disciplines around the world has helped disrupt our thinking and generated new insights into how we conceive of investment risk and opportunity.

All investment strategies have the potential for profit and loss, your or your clients' capital may be at risk. Past performance is not a guide to future returns.

MB The Rocky Mountains start their journey in Western Canada and wind their way nearly 5,000 km down to New Mexico. Situated in the foothills of the Rockies is Santa Fe, America's oldest and highest state capital. It's where tourists flock for art festival and, also, hiking and skiing. It's also home to the Santa Fe Institute. Every day at 3 o'clock at the institute, there's a tea party where senior faculty members and students swap ideas, and it's these ideas that we're interested in.

At Baillie Gifford we believe we can learn more from academics than we can from traditional sources of information, such as investment bank research. It's the philosophies of change at Santa Fe that inform and inspire our thinking about innovation, economics and society. And Santa Fe is one of over 30 academic relationships we have across the world, ranging from Toulouse to Singapore.

The topic of today's discussion is how we at Baillie Gifford are disrupting our own investment thinking. I'm Malcolm Borthwick, Managing Editor at Baillie Gifford, and my guest today is Dr Eve Hepburn, author, academic and analyst. She spent 17 years working at universities across the world before joining Baillie Gifford. Eve, welcome to Disruption Week. Thanks for joining us.

EH Thanks, Malcolm. It's great to be here.

MB It's Friday, we thought we'd try something a little bit different today. So far this week on Disruption Week we've talked about three areas, green tech, ecommerce in China, and entertainment. Today we're going to be talking about how we at Baillie Gifford are disrupting our own investment thinking and what we can learn from academia. If you've joined us this week, you'll be familiar with the format. It's a 45-minute webinar. Eve and I will chat for 30 minutes, then we'll be opening it up to questions from you, the audience. We'd love to hear from you, so if you do have questions, please use the Q&A function, which is live, and you can find it at the bottom of your screen.

We live in a world of assumed knowledge and we accept that knowledge because most of us work on the basis that it's correct. One of our jobs at Baillie Gifford as investors is to try and challenge conventional thinking, in order to find a point of



differentiation. That helps us identify long-term growth companies on behalf of our clients. That brings us on to today's poll. Because you're probably wondering why we're about to bring up a series of maps on your screen. The question in today's poll is which of these maps is not to scale? So, not to scale, and we'll bring up three maps. The first one is the Dymaxion map, that's A.

I'll give you a chance to take that in. And B is the Mercator map and, finally, the Gall-Peters map. Just a reminder, which of these is not to scale? We'll bring them up all together so you can see them next to each other. We'll come back to the poll in a few minutes, just to give you a chance to have a think about it. But, Eve, I wanted to start with your background is in academia, how did you end up at Baillie Gifford?

EH It was all quite serendipitous, really. Ever since I was quite young, I've had a strong desire to try and make sense of the world and, in order to do that, it helps if you can walk down different paths, try and experience the world from different perspectives. That led me to becoming an associate university professor for the bulk of my career, let me to becoming a start-up social entrepreneur and advisor to parliaments and governments, an author of 11 books.

When this role came up at Baillie Gifford, that really piqued my curiosity and interest. I've now become a research analyst and an academic coordinator at Baillie Gifford. While these roles seem quite [unclear], there's actually, I would say, a strong thread that runs through all of them. Which is, really, it sounds a bit cheesy, my desire to serve others, to serve society and, idealistically, to try and leave the world in a better shape than I found it in.

I think that's why I found a bit of an intellectual home here at Baillie Gifford, because I know that's what a lot of my colleagues believe as well. I think that really underpins the ethos at Baillie Gifford, of being long-term investors in our future and our better future. It probably also helps that I found quite a few of the fund managers to be quite academic, hopefully they're not offended by that. In that they're quite serious, they're very studious, but they're also incredibly passionate about ideas and research, as well.

MB I can see the similarity, having been a journalist myself, there's that element of curiosity. But tell me more about your role at Baillie Gifford.

EH Absolutely. I am a research analyst in the investment risk team. I joined a couple of years ago and I've, over time, also taken on the role as academic coordinator at Baillie Gifford, as well. Those two roles complement each other quite nicely. As a research analyst I was brought in to try and help the firm think about multidisciplinary approaches to risk. What does that mean? That means that, traditionally, risk has been shaped by finance and economics, by traditional models that help us quantify risk, historically.

What I'm trying to do is come in and really think about forward-looking risk from multiple perspectives, so using history and sociology and psychology to help us think about things like environmental risk or social risk or policy and regulatory risk. I've been doing some fascinating projects on things like the relationship between luxury and social inequality or the future of electrification and decarbonisation.



Then the academic coordinator position ties in quite nicely because in my research, I'm constantly reaching out to academics to help me understand how the world is changing. Then I'm also helping our investors as well and guiding them through that process of how to approach academics, how to understand what they're up to, and how to engage with them more deeply, as well. We've been thinking quite strategically about how we want to make more of these relationships that we have.

MB That whole idea of multidisciplinary thinking is really fascinating because we often have a tendency, whether it's through economics or looking at topics such as ESG, or looking at things in silos, don't we?

EH Yes, that's right. It's probably a fault of the universities, as well, that we do think in silos because they take students and they take them through one particular disciplinary path. They're not very good, generally speaking, at doing interdisciplinarity. That means bringing two or more bodies of knowledge together to tackle a given phenomenon. But the thing is, we are trying to understand really complex processes. How society works, how the economy works, how energy works. And in order to do that, you need those different disciplinary perspectives to give you those bigger insights.

MB That's important as investors. I wanted to go back to the poll and have a look at the poll results. Before I do that, I wanted to just bring up a reminder to the audience of just what the choice was, which is on your screen at the moment. The three choices was, and the question was, which of these maps is not to scale. A was the Dymaxion projection, B is the Mercator and C is the Gall-Peters. Let's look at what the audience has chosen. Round about 70% have chosen the Mercator projection. Is that correct?

EH Yes, we have a very clever audience today. The Mercator map is probably the map that's most familiar to us. It's probably the one that hung on our classroom walls in our geography classes. It was invented in I think 1569 in order to help sailors circumnavigate the globe. But the problem is, it is hugely inaccurate. It represents a really quite distorted view of the geometry of the earth. What it does, is it enlarges the size of North America and Europe, but it shrinks the sizes of Africa and South America. For instance on the Mercator map Greenland and Africa are roughly the same size, but in actual fact, Greenland is 14 times smaller than Africa, so there's a lot of distortion going on there.

MB Let's come back to the Dymaxion map and the person who invented the map which you can see on your screen at the moment, a guy called Buckminster Fuller, who's a fascinating character. He was born in Milton, Massachusetts in 1895. Quite unconventional, largely self-taught rocket scientist, natural philosopher, architect, author, poet. A person of many talents.

EH Absolutely. He was a man that defied categorisation. He was all of those things, but he didn't want to be represented as uniquely one of those things. That's because he felt that the boundaries between different disciplines, and especially that chasm between the humanities and the physical science is really artificial. He was looking for universal truths. He looked to nature and the geometry of nature for these universal truths, to unite disciplines and, ultimately, to try and develop technological solutions to



help mankind. And to help mankind see itself more clearly, as well.

That Dymaxion map that we saw earlier is very different from the Mercator map and, also, the Gall-Peters map, which also isn't to scale, it distorts the shape of different countries. What Buckminster Fuller tried to do with that Dymaxion map is really to, firstly, get rid of those inaccuracies, so it is the most accurate map. But, secondly, he invented it so you can actually fold it into a 3D shape. I think the shape is called an icosahedron. That allows you, if you pick it up, to try and see the world from different perspectives.

The other thing that I absolutely love about this map is that in the other two maps you see vast ocean separating the different continents. We have those people over here and we have those people over here, but in the Dymaxion map almost it almost looks as if we are all part of one island and one ocean. What Buckminster was trying to do is to show that we are all interconnected, we're all part of humanity and we're all inhabiting what you call this spaceship earth. He was an absolutely fascinating man.

I'll maybe tell you a bit about his career as well, which was far more fascinating than mine. He was kicked out of Harvard University a couple of times. He went to work on a cotton mill in Canada. He was an engineer in the Navy. He led a construction company and then something happened in his life that was really quite tragic. He lost one of his children, his daughter, he lost his job, as well. That basically put him in a position of considering ending his life.

But at that moment he had a bit of an epiphany. He felt as though it wasn't his life to end. That his life belonged to the universe and, really, he had this higher calling of trying to help humanity improve. And so, he dedicated his life as an architect, as an engineer, as an academic, to try and to find low-tech solutions to solve humanity's different problems. You might call that frugal science these days, of doing more with less.

Just to give you a couple of examples. We've seen the Dymaxion map, he loved the word dymaxion. He invented it, which means dynamic maximum tension, but he created, also, the Dymaxion House, which was one of the first mass produced prefab houses we've seen. He wanted to make it cheap and sustainable, so it used nature to heat and cool it.

MB They were circular, weren't they?

EH Yes, that's right, they were circular buildings. He felt that the triangle was one of the ultimate shapes in nature, so he built a lot of his creations on the basis of the triangle. He also created a Dymaxion car, that was a three-wheel car, that he eventually wanted it to be multi-use, that you could fly in it, that you could sail in it as well. Unfortunately, due to bad luck, that never took off. In one of his lesser-known inventions, which I love, is his rowing boat, which is basically made of two giant matchsticks, it's incredible. But again, that philosophy of doing more with less, I'd like to think that, had we known about Buckminster Fuller at that point, had we had an academic engagement programme, he's exactly the type of person that Baillie Gifford would have wanted to support.



Because he really was disrupting our view, literally, of the earth, of the world, but he was also trying to rethink the foundations of mathematics and architecture and geometry. That really helped us move on and how we think about the world.

MB In a very sustainable way, as well, looking at some of the black and white footage from 1974 and some of those interviews. It's incredible. I think what we've identified there is we're trying to find people who think differently. I often hear our investors talk about the fact that we're trying to find people who are cleverer than ourselves and who we can learn from. Let's look at some of these relationships, Eve. I wanted to start with... And you'll see a map just coming up on your screen in a moment, which is our relationship with the Santa Fe Institute in New Mexico. The philosophies have changed there. Tell me more about that.

EH Absolutely. Santa Fe is probably one of our most important relationships. A lot of the research being produced by faculty and external factors there have really quite profoundly shifted the way in which we've thought about several sectors, several industries. But for those of you who don't know, Santa Fe is an independent non-profit research centre that's based in the desert in New Mexico.

It's got a really interesting history. It actually emerged out of the communities of scientists who were working on the Manhattan Project in the 1940s, the US project to develop an atomic bomb. George Cowan, who was the founder of Santa Fe, he was one of the senior scientist working on the atomic bomb in the Los Alamos National Lab, a very famous lab.

After the Second World War, he and his counterparts were looking for ways to continue those interdisciplinary conversations that they'd had at Los Alamos because to design the atomic bomb, you can't just rely on one discipline. You can't just rely on physicists or chemists or engineers, you have to have them all together. Actually, the Los Alamos Lab, that was one of the first instances in the world where we had to bring together numerous different scientists from all over the place.

And so, George Cowan and his colleagues really wanted to continue that ethos because they saw the benefits of those interdisciplinary forms of thinking because you couldn't get it in the universities at this time. All of the universities, some of them still today, are very much siloed into different departments. George started a series of workshops in the 60s and the 70s, bringing together different scientists to tackle those big emerging topics of the day.

One of the first workshops was about complex adaptive systems, about complexity. That topic went on to shape the whole ethos of Santa Fe going forward. In fact, Baillie Gifford engaged with Santa Fe through their applied complexity network, which gives us access to dozens of incredible thinkers, with whom we've developed very, very strong relationships.

MB Applied complexity, complexity theory, could you explain that a little bit more?

EH That's a good question. Complexity theory is the study of things that are made up of multiple parts that all interact with each other in multiple ways. The scientists call these complex adaptive systems. Complex means that there's diversity of those parts that



make up the whole. Adaptive means change, so able to change and learn from past experiences. And system means those series of interconnected relationships.

That's all quite abstract, so maybe I can give you a couple of examples of a complex adaptive system. Imagine our clients, some of them might come from the humanities, some of them from the physical sciences, so I'll give you two examples of each. The National Health Service could be considered a complex adaptive system, it's a social system. It's comprised of hundreds of thousands of hospitals, of nursing staff, of doctors, of surgeons, who are all trying to meet patients' needs, but also, learn as they go, about what works, what treatments work. In that system a small event can have a huge impact. For instance, if we have a backlog of ambulances, that can have huge impact on the rest of the system. That's a complex adaptive system.

For the biologists amongst you, we can understand our immune systems as complex adaptive systems. Our immune systems are made up of millions of cells and proteins and organs. And they all work really hard to make our bodies healthy, but if there's an external invader, like a virus, which we've all come to know very well over the past couple of years, our immune system jolts itself into action, attacks the invader. But it has that memory and learning as well, so it remembers what that virus looks like, so if it encounters it again it's able to attack it more quickly. That's an adaptive system. Hope that helps.

MB Yes, absolutely. Give me an example of one of the relationships that we have there at Santa Fe, one that's inspired us.

EH I'd say one of the most significant relationships that we've had at Santa Fe is with Brian Arthur, who is a leading economist and a leading complexity thinker. He was actually the founding director of the Complexity Economics programme at Santa Fe in the 80s. What Brian does is try to study the economy as a complex adaptive system. Not the immune system, not the NHS, but the economy. He was interested in studying the linkages, the relationships, between different parts in the economy.

He's probably best known for his work on increasing returns and network effects. What I mean by that, basically when Brian was studying at university the prevailing economic thought at the time was that economy was based on the principle of diminishing return. That means that if you're a steel manufacturer or an oil refinery, then you produce these finite commodities, eventually they're going to run out and the cost will go up. But Brian challenged that thinking.

Brian in the 80s, again very unorthodox, was saying what if we had a knowledge economy? What if we have information that's actually infinite, rather than finite? Can we then see increase in returns in the economy? And he was right. What that meant was that one company, if it got an initial advantage at the early stage of its development, like talking to the right person or landing the right client. That initial advantage could then help it gain further advantage and further advantage, until it locks itself into the market and dominates the market.

That's been very helpful for our thinking about a number of especially tech companies who've gone on to do that, like Amazon or Microsoft or Mercado Libre. Who have



started with a small platform of users, gained that initial advantage, gone on to expand their networks and gone on to dominate those markets. In fact, I think one of the chief technical officers of Sun Microsystems, who's later bought over by Oracle, said that they launched Java, the program, the language, entirely on Brian's theory, which is really quite extraordinary.

We have been really humbled, actually, by being able to work with Brian, who's an incredible thinker, but also, just a lovely person to work with as well. He's been working on different projects with investors, one of which was, for instance, coming in to do a risk review of one of strategies, International Concentrated Growth. I think you were talking to Paulina earlier this week, she's one of the fund managers there. He came in, he spent the day with Paulina and Lawrence, to help horizon scan what are the big trends coming in the economy. He helped us think more broadly about the impact of artificial intelligence. He's one of the fantastic people we've been working with.

Maybe to give you another example of one of the other Santa Fe professors we've been inspired by is Jessika Trancik, who's an external professor at Santa Fe, she's also a professor at MIT. She studies the complexity of sustainability and innovation systems. She's really interested in the evolution of energy systems and how that's compatible with climate change and sustainability. Years ago she did this fantastic study, looking at the performance trajectories of different low-carbon technologies, in particular electric vehicles.

She demonstrated that over time electric vehicles would become, not just cleaner, but cheaper than internal combustion engines because we're going to see the price of batteries drop, we're going to see the cost of renewably generated electricity drop. She did the study many years ago and just last year the International Energy Agency declared that solar power is now the cheapest form of energy in history. She, again, was disrupting her field, very farsighted about how electric vehicles could change the landscape. She and her work had a profound influence in our investing, and in particular, some of our early holding in Tesla.

MB I think that's really helpful in terms of a lot of our clients will be listening, in terms of explaining the relevance of that. The records of what we're talking about earlier this week with Robert as well, when you were talking about Brian Arthur in terms of returns to scale. Some of the companies like Amazon and, also, Tencent I was chatting to Ria about yesterday. Another area is what do the academic institutions get out of these relationships?

EH I did a mini research project about a year and a half ago. I interviewed about 17 of our academic partners to really try and understand what were they getting out of it? How had our support helped their research? They listed a number of different benefits. I guess the most obvious is that we give them funding to do research. And they love research, that's what academics view as candy in a sweet shop. We love research, we love ideas and so, that's been really important to them.

It's a different type of research funding than what you get from, say, research councils or governments or other big institutional funders. In that we provide trust, we're very non-prescriptive, as well, when it comes to the funding, so we don't attach lots of



strings and bureaucracy that you would normally find. We trust the academics to invest that money into what they think is going to be really important. But the academics have also mentioned that they really enjoy the conversations with investors and analysts, as well.

They get as much out of those conversations as we do because we're giving them insights into how the industry is changing, which they may not know about directly. And that can help go on to shape their research. But we also help them with their networks, too. We introduce them to some of the companies that we own, we introduce them to some of our clients, as well. And that creates bigger networks, bigger communities of people who are interested in the same subject.

MB I'm going to go to one question earlier from the audience, it relates to what you were saying there. I'll come to it a little bit early. Do keep sending your questions in. Use the Q&A function which is at the bottom of your screen. Which is how do we measure success of the academic partnerships that we have?

EH That's a really good question. I'd probably say what we don't measure. We don't measure success numerically. We don't expect a financial return on our investments with academics. What we're looking for, how we measure success, is having those interesting conversations that can help shift our understanding of a different industry or a different sector. The challenge is industry assumptions. Another measure is the degree of learning that we undergo, as well. Challenging our own assumptions and is this valuable to how we think about our investments? I'd say those measures of success really are through the ideas and the instincts that we get from academics, that then goes on to shape our investment thinking, our investment research.

MB How do we formulate these relationships with academia?

EH Traditionally, in very much the Baillie Gifford style, it's been very bottom up. It's been largely driven by investors and analysts who have maybe read an academic article, as we again work with quite academic here. Or heard an academic speak at a conference. And we reach out to them. We want to discuss their ideas, we want to discuss how they're thinking about how the world is changing. This started about 20 years ago with pioneers like James Anderson.

What he was trying to do at the time was to depart from the herds of the financial services industry and look to academics to learn about the research that they were doing to gain new insights for his investment thinking. At that time he reached out to people, like Brian Arthur and Carlota Perez, and funded their research to help them create new research breakthroughs in what they were doing. But, also, to help him think about his holdings, his portfolios, his investments.

A few years ago we provided more structure around those academic relationships. We have a budget line now for our academic investment research, which is separate from our work in philanthropy and sponsorship. Originally the two were help together. We've been scaling up those relationships now over time and, in fact, we're finding now that academics are coming to us because they're aware of what we're doing in these areas. And so, they're keen to work with us on different research projects.



MB Maybe a good example is a relationship that's quite close to us, which is the James Hutton Institute, maybe an hour and a half by train north of Edinburgh to Dundee. I'll just bring up an image here of James Hutton, a figure in the Scottish Enlightenment. Many of you would be familiar with the likes of Adam Smith and David Hume. Hutton as also highly influential from a geography perspective because he worked out through rock formations that the world was basically over 6,000 years old, which was a radical thought at the time. Wanted to just to mention him, and that's why the institute is named after. But if you could tell us a little bit about our relationship with the James Hutton Institute and how we work with them, that'd be great.

EH Absolutely. The James Hutton Institute tries to continue Hutton's legacy in focusing on the environment, on land use, on soil, on crops. It's an agricultural research institute. Actually, we came across it because one of our investors lived quite close to one of the research farms that the James Hutton Institute operates, so he popped over for a chat, then that led to conversations. He invited some investors to come and speak to them a bit more and, so, that developed into a relationship that we currently have with them, which is to support a climate-positive farming initiative led by a wonderful professor, Alison Hester.

Why is this important? It's important because we know now that 25% of the world's global greenhouse gasses are produced by agriculture and land use, like deforestation. It's really important if we want to live on a sustainable planet, to find low-carbon solutions to farming. That's exactly what the institute does, it's exactly what this project does that Alison is leading. She's trialling out new farming techniques and methods, trialling out different types of crops. What livestock, like cows, eat to produce less methane. She's also trialling out different forms of energy for farms, as well, like hydrogen and electric tractors and other forms of vehicles, to try and reduce emissions.

That research that the James Hutton Institute has been doing, that Alison's been doing, has been really helpful for our investment thinking roundabout agriculture and, also, the future of food, as well. For instance, we have a holding with John Deere, the agriculture machinery company. The JHI, the institutes research has helped us think about the potential for the electrification of tractors. I think John Deere's recently produced an ammonia powered tractor, as well, so that's been really helpful.

Then, other companies that we have holdings in, for instance like Indigo Agriculture, that's based in the US. They are trying to create sustainable agriculture through a carbon credit system for farmers, to try and encourage them to move to more sustainable methods. That relationship, again, has been really important to how we think, but also, disrupting conventional, traditional agricultural approaches too.

MB It's interesting, a lot of our approach to investing is finding companies that are providing solutions to problems. I can almost see a correlation there with academia because we can help identify the problems and the long-term trends, which the companies are feeding into.

EH Absolutely. I think as long-term investors, if we're looking for the longest term insights out there, it is from academics. They are professionals who spend their entire lives



working on really complicated, complex topics. I think that's where we coincide. The academics themselves appreciate the fact that we have that long-term view as well. As our campaign says, we're not thinking in quarters, we are thinking in decades. And that's what academics are doing. They're looking to the past, they're reflecting on the present, but they're also thinking about what the world's going to look like in the future, as well.

MB Let's have a look at some of the questions that are coming in here. Where are you currently finding new relationships for the future?

EH In lots of different ways. Finding relationships through research that we're doing, for instance in our investment research projects we come across academic research. If we find that really interesting and helpful, we will reach out to academics to help with that. To give you an example, I conducted a project on the relationship between luxury and social inequality a little while ago. What I did was I reached out to a network of academics, so psychologists, historians, political economists, even a Marxist philosopher, business professors.

Together they helped me reflect on the psychological impacts of luxury, but also, how different parts of the world have different cultural relationships with luxury too. I was trying to synthesise all those very diverse views of what luxury means. Often we find those academics through our networks, as well. We're introduced to somebody, an academic might introduce us to another academic or we might meet them at a conference. We're constantly searching for new people who can bring us insights.

MB Probably surprised there's a lot of people that we're working with, Marxist economists, and what we can learn from there.

EH I think we should be learning from everyone, to be honest.

MB Is this unique to Baillie Gifford, what we do, or do other asset managers do it?

EH That's a good question. It's one that's a bit more difficult for me to answer because I've only been in the asset management industry for two years and I've only worked at Baillie Gifford. But I can tell you a little bit about our approach to how we engage with academics. I'd say this is very much based on a knowledge exchange model, and I used to work in knowledge exchange when I was an academic. I tried to facilitate knowledge exchange between policy makers working in the government and some of our academics.

What that means is that you're cocreating an idea, it's a two-way flow of conversations and information. The academics, as I said, benefit from those conversations as much as we do as well. Traditional corporate models of knowledge transfer used to be quite one way. A corporate institution would fund an academic, who would then answer a series of questions and give them that information. We veer away from that. I don't know if other asset managers use that model, but certainly when I was speaking to our academic partners, they said that that was one of the hallmarks of Baillie Gifford being different. Is that we really were looking for those two-way conversations.

MB I think a lot of it's also about, as John Kay alludes to, the whole idea of ubiquity, isn't



it? In terms of goals are often best achieved when pursued indirectly.

EH Yes, I would agree. I'd probably agree with everything that John Kay says, but absolutely. We're not looking to monetise, in some way, these academic ideas that we're being exposed to. We are looking for those indirect impacts on our investment thinking, about how we are renewing our view of the world.

MB Let's go to some more questions. How do you make sure that you get a range of views from these partnerships and we're not just backing up our own exiting thoughts and views?

EH That's a really good question. I would say that there is often a lot of synergy between our philosophy and what the academics that we're supporting do. But I'd say that we're also looking to avoid group think. We know that that can be very dangerous, and so, we're looking for people who can challenge our assumptions. One of the best ways to bed that in is through those interdisciplinary networks that I was talking about. If you get two academics to agree on something, this is a very rare occurrence. They like to throw mudpies.

What we do is we try to bring together academics, again, different disciplines, different universities, different backgrounds, to look at a particular topic. Be it energy systems or climate change or biotech. We try to synthesise those different ideas, but also, we don't expect all those academics to agree with each other. We're looking for that multitude of ideas. I think that helps us get away from that danger of group think.

MB Another question here about what's next for our academic relationships?

EH Another great question. I'm quite excited about what's happening next. There's a couple of things in there. Firstly, we're really trying to deepen and expand our relationships with academics. We currently have, I think at the last count, about 32 formal multi-year research relationships with universities all over the world, in Singapore, Toulouse, Brazil, the US, and elsewhere.

But these are just our formal relationships. We also have dozens of academics who come in and speak to our investors informally as well, come to give a presentation. And we're really looking to scale that up and we're, in particular, really looking to get our younger investors involved. We have lots of experienced investors who've lots and lots of academic relationships with. Bring those younger investors with fresh ideas, new relationships, make them be in the driving seat of these relationships.

Another thing I'm really excited about is we've created these bilateral relationships with academics around the world, but what we're trying to do in the future is develop multilateral networks. Again, bringing people together in different topics, be it climate change or luxury, and allowing the academics to challenge each other, as well. And getting to that solution of, how do we address the world's biggest problems, how do we develop technological solutions? I think Baillie Gifford is really well placed to play that convenor role, as well.

Because we've talked about today our linkages with academia, but we also have linkages with authors through our literary festivals. We have linkages with NGOs



through our community development initiatives. We have linkages with visionaries and founders. What we're trying to do is to bring these people together. In fact, we did that a couple of months ago, we had a Baillie Gifford forum for long-term thinking in Edinburgh. We brought together some of the world's leading thinkers from around the world. The conversations that they had amongst themselves were some of the most fascinating I've heard.

MB I think that's a really nice place to draw it all together. It's about learning from these brilliant minds and the network effects, how we can translate this into investment ideas. It's almost coming full circle from where we started, Eve. If you were to try and leave the audience with your key thoughts in 30 seconds, a minute, what would it be?

EH I would say that we should all try to be a bit more like Buckminster, like Bucky. I think we should all try and have a bit more courage to think independently, to think away from the herd. To adopt that long-term view so we don't get frustrated by that short-term noise. To challenge our own assumptions, be open to listening to others, including from Marxist political economists. But I guess, fundamentally, I think we should be paying homage to Buckminster's desire to improve the wellbeing of humankind. Because, as he said, we're all on this spaceship earth, we're all interconnected. We should all be trying to support each other.

MB That's a great place to leave it. We're all on spaceship earth and there's a lot we can learn. I hope you've enjoyed Disruption Week as much as Eve and I have, and also, the other guests. If you'd like to find out more about Disruption Week, please go to bailliegifford.com/disruptionweek. That's it for this week. That's it for this year, in fact. But if you'd like to learn more about what our investors are thinking about at the moment, you can go to the insight section on our website, bailliegifford.com/insights. There's no need to wait for next year because Eve and I will be at the IDEAS Conference, IDEAS 2022, later this year, so look out for information on that. In the meantime, thanks for investing your time in Disruption Week.

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