Collaboration in Global Public Health Interviewer: Paul Verschure (Convergent Science Network)

Welcome to the Ernst Strüngmann Forum podcasts—a series of discussions designed to explore how people collaborate under real-life settings. Joining us in the series are high-profile experts from diverse areas in society, whose experiences will lend insight to what collaboration is, what it requires, and why it might break down. This series is produced in collaboration with the Convergent Science Network.

P. Verschure My name is Paul Verschure and today I am talking with Annie Sparrow from the Department of Population Health Science and Policy at the Icahn School of Medicine at Mount Sinai in New York. Annie, welcome to our podcast. Before we look at the topic of collaboration, could you give us a short biographical sketch of your career path so that we can understand from which perspective you will take when looking at challenges to human collaboration.

A. Sparrow I work in public health and pediatrics, while often working in the more difficult places in the world, and teaching and practicing medicine, these are my specialties. This [public health] is a super interesting field and perhaps as a pediatrician, it's easier to even think or talk about it because it's not a profession you can even go into without being able to get down on the ground and collaborate to figure out what's going on with patients. It is similar to veterinary scientists in that respect. I'm somebody who would much rather be on the ground, working with the people who I often speak on behalf of, than managing people from afar.

P. Verschure At what point did you discover that what you really cared about was to look at public health challenges in conflict zones? How did that transition? Was it a coincidence?

A. Sparrow You're right. That was a huge transition for me. I spent the first 10 years of my career doing pediatric intensive care. In the UK, I did retrieval medicine [rapid response emergency care] at St. Mary's and the Royal Brompton. That high intense work takes place in an ivory tower. It's very fulfilling to do that kind of work. In Australia, we think of it as like the Australian flying doctors [The Royal Flying Doctor Service]. Then I was exposed to how the rest of the world lived. My brother had spent ten years or so in Afghanistan, and I went to work in Australian refugee camps to see what was going on there, because they were filled with people who were locked up as illegal queue jumpers; the type of people that we don't want here, and as criminals, as terrorists. I thought I should go and see for myself. And that led to an extraordinary collaboration across all the different fields of medicine. Not just pediatrics, but psychiatrists, surgeons, family medicine: every specialty that we have in Australia. Normally we have quite a hard time talking to each other. We don't really talk to orthopedic surgeons or plastic surgeons very much. But with children in detention under these very punitive circumstances in the middle of the Australian desert, this was something we could get around, and we did. As a medical community, we managed to get children out of detention and to really change conditions in a way that shows the power of collaboration. That was a long time ago, but that was probably my starting point in terms of moving away from pediatric intensive care and into public health more broadly, figuring out how to effectively advocate and work on behalf of people who don't necessarily have a voice, and how to figure out how to be effective at that. That was where I started.

P. Verschure Do you feel today that you're still in the trenches of these kind of public health challenges, or do you now stand at a different position relative to those trenches with more of an overview and a link to, let's say, policy-making guidelines, and so on. Where do you position yourself there today?

A. Sparrow My position is quite interesting and unusual because I'm one of those few people who still practice medicine. I can still get down in those trenches. For example, pretty much every year, except since the pandemic began, I go to eastern Congo and work on an island called Idjwi, where there are about 200,000 people, and they have a life expectancy at birth of 26 years. That's pretty much medieval, and there are only half a dozen doctors on the entire island. To go there and

work is something that is deeply fulfilling for me, but it is also a way of helping kids start the school year healthier and better off by deworming them and treating them for malaria. That's an ongoing collaboration, and it's effective because of the ability to be both a doctor and to know how to treat people, but also be able to make the case at the higher policy levels. It's interesting straddling those areas because not many people do it. For example, the WHO is filled with doctors who haven't seen a patient in 20 or 30 years; that puts you in a very different position. There's not many of us who can be both clinicians and academics and also understand how to write policy effectively, or to create the solutions that are necessary.

P. Verschure So, you're really coming from multiple directions. What then, is collaboration for you, and what is it good for?

A. Sparrow Collaboration means that you can get anything done. I think that is the lesson of the pandemic. That is the nut we have to crack if we're going to move forward globally. The pandemic has taught us that we're never going to have international collaboration the way we did after World War Two, perhaps, so we need to build global coalitions more effectively to get things done. What I've seen and experienced after a career in medicine and public health, where we're always interested in other people's specialties and areas and so forth, is that suddenly, in the last 18 months, I've collaborated with more people, with more specialties within science and medicine, but also across every other sector, across trade, business, sport, and education: we really do know how to get things done and we can. That has also been my experience with the Tokyo Olympics, for example, where in my role as an adviser at the Center for Sport and Human Rights, a lot of us were concerned about the safety of the Olympics, and not just for the athlete's health, but for public and global health. And although journalists have been key in driving some of the issues, people don't tend to listen until you put something in an academic journal. With the help of the colleagues that I've developed over the last year, for example, in the International Trade Union Confederation, I reached out to several colleagues who are my coauthors on this piece in the New England Journal of Medicine: Lisa M. Brosseau who is an industrial hygienist, Robert J. Harrison who is an occupational health and safety scientist and doctor, and Mike [Michael Osterholm] who is an American public health heavyweight across so many areas. To write an article that had the legitimacy of a peer-reviewed journal can suddenly start to move mountains that otherwise aren't movable. When you all come to the table with the same agenda, which is not about self-interest, but about the common good, and each has these valuable contributions, then it's much easier to move these mountains. The currency of collaboration is trust. That's the lesson I keep going over and over. You can get anything done if you trust each other.

P. Verschure In the last 18 months, you've collaborated with many people in many different contexts. If I understand it, beyond what you had expected. In these different areas, what made that collaboration? Is it common objectives and trust? Was that a common feature of all these processes, or were they also different? Are there other features that we should consider?

A. Sparrow You can't really get public health done without a collaborative effort. I find it easier in my capacity as an independent commissioner to work behind the scenes to build collaborations. It's also a criterion for being a pediatrician, that you're not really allowed to have a lot of ego or be bothered about being wrong because lives are at stake. We learn that lesson very early on. If I don't know the answer, the most important thing is to ask somebody who does. That's how I operate. I think I don't know, but I know how to find somebody, and I'll ask him whether he does know, and that way you've established the connections to get things done. I found myself far more effective outside the UN [United Nations] than within it. Part of that is because the UN has this kind of institutional inertia that makes it very difficult to create an ethos or a sense of purpose among staff that actually fulfils your organizational mandate. I think it is easy to work with people when

your common agenda is more important than your personal ambition or financial interest because those things can really get in the way, and that is a really difficult issue, I think.

P. Verschure But that's also where collaborations might face challenges. Let's focus on the ones you build. You said explicitly, "I go out and build collaboration." If you go out and build collaboration, how do you do that? What are the steps? Do you follow a specific approach there? Do you have certain benchmarks that you then set yourself in building collaboration?

A. Sparrow I think that depends on what needs to be done. In my work in Syria, for example, on something as specific as a polio outbreak, I knew the limits of my own expertise, so I reached out to people who know more than I do, and I asked them. That's fundamental. No one has to know everything; you just have to know who to ask and in doing so, that's engaging in itself. Because I think most of us want to be able to do the right thing or help or participate in achieving a greater good. When you all bring a different thing to the table there's a natural energy towards moving forward. That process in itself is a way to then build upon a strategy. For example, the first polio outbreak in Syria was in 2013 when it re-emerged after not having been there since 1995. It was a way to get a much bigger interest in conflict and to re-humanize conflict. It was also a way to help accelerate opening the borders and to remind people that health is something that requires every other sector to collaborate. You can't get health done unless you get everything else right too. Health requires nutrition, it requires water, it requires safety, communication, a place to do things, shelter: pretty much every other piece of the cluster that the humanitarian organization draws out. I think that is what COVID has shown too. It's fundamental to getting anything done. There is no such thing as a right to health per se. It depends on the right to education, it depends on getting to work, it depends on food, communication, and providing people with the tools to look after themselves. When you show people that this is how we are going to move this mountain, then I think it's much easier to see, OK, this is my area of expertise, and this is what I can contribute and then build upon it to say, oh, by the way, this is not only this strategy to get the border open, but have you thought about the G7? Because at that stage, for example, in 2014, Russia had to provide state of the world about where we were at with polio, which was another way to then put pressure on Assad to stop the bombing, to create humanitarian pauses and allow polio vaccination. That wasn't my idea. That was Ron Waldman's idea, who's a guru at The Milken Institute. When you have these conversations, they can go amazing places when you're not invested and you're open to other people's ideas.

P. Verschure For me, several things stand out now. Your definition of health, of getting health done: only a tiny fraction of the world population lives in an environment where we get health done. Because you see it more as an integrated process pertaining to the whole of the sustainable development goals. All of that has to work together constructively before we can really speak of health. This defines it from a global, integrative perspective. But earlier you said: I do believe everybody has an interest in serving the common good of health. Do you really believe that?

A. Sparrow When you show people how they can actually contribute, people can be deeply interested and invested in doing so. The mistake with sustainable development goals (SDGs) is that there are 17 goals, Paul. It is either adorable to think we could do 17 things at once or just plain nuts. And unfortunately, people are invested in each of their goals, while paying lip service to the fact that, of course, they're all connected. Think about this time two years ago: it was all about climate change, which, of course, is an enormously important global problem, but that was it. And then suddenly in the space of a few months, we were laser-focused on a single common health agenda: stopping COVID. It showed that we can't get anything done without having a foundation of health, but we didn't understand, and we still don't understand, how to do that and what that actually means. We even talk about the importance of nutrition, or controlling diseases, and

sanitation, and safe water, yet we don't realize that perhaps the single most important determinant of our health is our work. For children, it's their education. And I don't mean online, but the schools, and investing in education, investing in actual work is incredibly important at a time when education per se is one of the vanishingly few ways out of poverty and the gigantic recession. We can't weight all these goals equally. I'm not sure that saying to people we have to focus on health first is going to have a lot of buy-in. On the other hand, help to find a way to overcome a lot of the other barriers, because it is universal. It's one of the things that we can all experience in different ways, whether you need a hip replacement or a pacemaker, and now we're all frightened of COVID, but that doesn't apply equally in all countries. It is something that we all understand. They can use it as a way to not talk about the political issues that are otherwise barriers.

P. Verschure There are two things here. You are assuming that other people want to collaborate because they also care, as you do, about these health issues. And you said earlier, if I don't know, I go ask someone. But it must have happened to you as well, that that someone doesn't want to give you the answer because they're not necessarily sharing that overall objective with you. Take the Syrian situation. There were people weaponizing health, so they would not give you the answer. How do you deal with that in your model of collaboration?

A. Sparrow You're right. That's a huge problem because to a large extent, when you find people, you find your co-collaborators because you have the same common purpose, so you naturally attract each other. You introduce yourselves to each other, and that's how you enter other people's circle of trust. There's any number of people that I can point to and ring up and say: "I need your help," and the other would say: "Yes, Annie, what do you need" and vice versa without having to ask: What is it for? How much does it mean in terms of time investment, money? It's just a yes, and that's the value of trust, with those people you can move mountains, or at least to a certain extent. This is the problem with the political agenda and those that are invested in the status quo or the institutional inertia that characterizes the United Nations. It's the same with the Tokyo Olympics. The International Olympic Committee President, Bach, makes Sepp Blatter, the ex-president of FIFA, look like Mother Teresa; there's no interest in health, public health, or global health of any kind. It's an organization that's characterized by maximizing its revenue streams and maintaining its feudal control system. There is no openness there despite what we have worked so hard to do. But at least you can try and shine a light to create greater accountability going forward so we don't repeat this five-star fiasco.

P. Verschure This is interesting because it means we have to qualify successful collaboration. As you are describing it now, it depends very much on a subset of all possible collaborations among people who do share these common, more idealistic goals and who share trust on that basis. That means successful collaboration also for you, was very much within those networks. If you step outside the networks, you mention the International Olympic Committee as an example and Russia in the case of the polio vaccination campaign, then you see it is also an opposition. Now you have multiple collaborative systems in opposition, and apparently, another approach is required. You mentioned someone who proposed to use more diplomatic, economic power to change the approach of such an opponent. Is that a natural collateral of the collaborative system, within their shared values, their shared goals, their trust? Between such systems we speak about power relations: Is it also the role of the United Nations, for instance, to manage those power relations between multiple, partially exclusive collaborative systems?

A. Sparrow It is certainly in their role to broker those relations and to provide a platform. It is not something they're clearly very successful at doing, and we all know that. I don't think there's been a natural trajectory toward self-interest, nationalism, retreat from multilateralism, which doesn't help.

Historically, there's always been a commercial interest, particularly for public health. 150 years ago, nations started meeting and arguing over the cholera pandemics because they didn't want Europe, America, and the UK infected by those Asians, or those Muslims bringing cholera across the Mediterranean. They argued about it for four decades worth of sanitary conventions and conferences. The only reason that they then came to a consensus was because the British lost control of the Suez Canal in 1898 or so, and when it opened up, there was a commercial common incentive to standardize quarantine measures. That drove that standardization, and that then became the international sanitary regulations that were the forerunner of today's international health regulations, which countries are meant to adhere to, particularly to control pandemic threats. But that only goes so far. We can say the same thing. I married in New York, and New York was very famous for talking about their tap water, which is delightful, but it wasn't always like that. We all know the history now, courtesy of the musical *Hamilton*, of the famous fight between Hamilton and Aaron Burr. How Aaron Burr took the money, created a bank, and forgot about the water. He invested a few thousand, relative to the time, that was meant to be put into it. It took another six years, and it wasn't until people started complaining about the taste that the water source became cleaner. Again, it was a profit-driven incentive. But I don't think that's enough anymore because without trust the commercial incentive is also not enough. We have seen the fact that there's a commercial incentive to vaccinate everybody, for companies to transfer tech, to waive the IP [intellectual property waiver]. It's not happening. And just saying that their work would be more profitable if we did so is not a sufficient argument. It's not enough anymore without figuring out the ways where we reconnect to each other. That is when it comes back down to this global shortage of trust which should not be a surprise. I mean, investing in a vaccine is amazing. We can see the power of scientific collaboration to produce these vaccines. But if you don't invest the same amount in figuring out how to get people to roll up their sleeves, the best vaccines won't work without social traction and trust. Quite apart from the misinformation that is deliberately sown, or the conspiracy theories, I have found time and time again that showing up and listening and building those relationships of trust, that's what pays dividends. You can't do it even with that aim. It has to be an agenda with an integrity that is without intention. I learned that, and it took me a long time to learn that lesson, and I say that with humility and probably the arrogance of thinking that I knew what I was doing. When I went back to Syria with my son, who made me go back at a time when I thought I had nothing more to give, I was kidding myself if I was doing anything more than a drop in the ocean. Who did I think I was? A white Australian showing up treating a few people with typhoid or diagnosing a few cases of polio, and he said: "Mum, they are friends, we have to go back." That taught me the true value of solidarity and hanging out. It's years later when we need each other, and that trust is there because it's built on a foundation, literally built on the ground, being together, eating together, sharing together, laughing together, and crying together.

P. Verschure Can you describe in more detail how you built up this polio initiative in Syria? Because it's one thing to decide to do it and to create the conditions under which it can be done. You need a huge network of participants out in the different clinics or the shelters to inoculate people. Plus, you must convince the population to participate. How was that process structured?

A. Sparrow The Syrians did that, not me. I simply started going there to explore the relationship between health and human rights, because I think that when you violate people's human rights, it comes out in health, both individually and at the population level. But because I was there as a pediatrician, I became increasingly involved in, and open to, providing advice, and help, and clinical services and training wherever and whenever it was asked of me. I kept going back. I started going to the border first in Lebanon and then in Turkey, and then you develop these relationships of trust and access to those networks. The Syrians were amazing at managing a

polio piece which the government in Damascus was busy trying to cover up and had no interest, of course, in vaccinating the northern, politically unsympathetic areas which had been neglected for years. That's the power of a civilization that has an enormous reach within its networks and enormous trust within itself, because that can't happen unless that has been there for a long time. They're a very civilized people to be able to pull off these amazing, massive campaigns and get 92% of the population vaccinated during a time of conflict. We couldn't do that in the States. This is the thing about trust: it's a long-term investment. I was able to be the person who conveyed it at a policy level and could write about it and hold the argument. Of course, it is an advantage (I don't mean to sound precious) to have a lot of degrees after my name. Every time I change countries, I have to requalify—in Australia, the U.K., and in the U.S.—and it's helpful when you need to have the argument. I spent some time at Human Rights Watch learning the law as well so I could understand it. I can take the heat, as it were, so that two ends could receive the funding and support to be able to do these things and to protect their population. But I can only take my hat off and kneel, thinking that I've never seen a population withstand so much and still get so much done.

P. Verschure How did they do it? Was it top-down leadership? Was it bottom-up trust and a shared set of values and goals? Can you explain it?

A. Sparrow It was certainly driven from the ground by the people who stayed and made that choice to keep working, to volunteer. I'm not necessarily talking about the doctors or the nurses. The pharmacists and the dentist are fundamental in that kind of situation because they're super good at managing both the logistics and understanding the patients and their drugs and so forth. Doctors alone—I can manage a cholera camp or an ER but you really need a dentist or a pharmacist to do all the supply chains and get those things done. That's a huge feat. It still is remarkable to me. I feel that they demonstrated solidarity in the face of such brutal oppression and determination and that they did it for their children. They didn't decide to stand up and figure out all the different ways of dying, being shot at, being starved, being tortured, being gassed, being bombed, being incinerated. They came out to figure out all these different ways of living for their children. We would all do anything for our children, and they would figure that out too. The masses of people who became volunteers; paramedics who educated themselves. They shared their skills in a way that contradicts what we understand of medical ethics. You're not allowed to operate in anybody else's field, but you have to do that in war zones and in these settings and to share skills. When people can see the lengths to which you will go to help protect children from being paralyzed and needlessly suffering, that also helps at the receiving end. You can also imagine how westerners, like Save the Children, for example, would come in and do a cultural sensitivity exercise. You would get everyone in the village together, have lunch together, and say this is what we're going to do, this is why we need to do it. We want to help in planning, whether it's a polio campaign, or measles campaign. Then: We need all your signatures to get reimbursed for the lunch. It's like, seriously? It's so insulting in a way that I cannot believe that you would you do these things. It's so counterintuitive to how what we would really call cultural competence, especially in such a population that is so generous and hospitable and is suffering such tragedies.

P. Verschure In the polio campaign did you see people collaborating across the lines of conflict? Would people who were supporters of the government still work together with the revolutionary people who want to build a new nation? Would they work together across these lines of conflict in order to advance the polio vaccination campaign?

A. Sparrow As far as possible, absolutely. It's much more so from the north. The northern ethic was to help people everywhere, insofar it was possible. For example, they would hide the polio canisters in

milk, disguise them, so that they could cross into villages that were under government control and then vaccinate kids. And they would not mark the thing with purple ink, because otherwise retaliation could be expected. But certainly, some government people would look the other way in order to let this happen, because there is some common understanding. The polio vaccination campaign was so successful that in the end, UNICEF even encouraged and supported the Syrians to cross the border through Iraq and vaccinate those in Iraq as well because we know polio spread there. That shows the extent of the trust and their reach, which was possible because people stayed and demonstrated every single day that they were going to do the right thing, no matter what.

P. Verschure What's the vaccination rate? How big a fraction of the population got vaccinated?

A. Sparrow The first round alone was 92% which was just massive. You wouldn't expect to have a result that high in a conflict zone. You have to do several rounds, of course—6,7,8,9 rounds—and certainly that's what stopped the polio outbreak. It took several months but it was successful. By the end, 93–94% of the population was vaccinated. It came back in 2017 but this time it was vaccine-derived polio, which shows too that there had not been a serious effort to vaccinate the population. By that stage Deir ez-Zor was under government control because vaccine-derived polio only comes back when they haven't vaccinated people for a long time.

P. Verschure This is a massive public health effort. It's collaborative as you describe it. They reached 94% more or less vaccination rate. Now in the US in response to COVID where we have infinite resources to get the population vaccinated for the last seven months or more, we have reached about 50% vaccination rate. What's the difference between these two collaborative systems?

A. Sparrow It's been a very long time since we've actually paid any attention to the importance of trust, and we have adopted a model that is disease-driven and subordinates people to the virus and to the vaccine. So, as long as you do that, it's very hard to see how we will get sufficient social traction to get people to roll up their sleeves, because we are effectively saying this is all we need to solve the pandemic. Everybody has to get vaccinated. Well, that's not true. That is absolutely not true, and we see that right now more broadly across the world. The effort that has gone into this. Let's keep those nasty diseases "there" in what we used to call the global south and make every effort to make sure that Ebola, or SARS, or whatever the threat is, doesn't come here. But we won't address these "killers" like malaria, or the other ones that kill your children much faster, and at a much higher rate on a daily basis, because they're no longer a threat to the West. That is not a force that can last very long. Across America we can see that people whose health has been neglected don't have services, they don't have access to a decent standard of living, a great job, their kids are not going to school. If you ignore what we would call the social, political, economic, or the environmental determinants of health, and all that we say is that you just need to be vaccinated, well, that's not true. It's a very negative approach to public health and ignores a host of issues. If you want us to stay home, then give us some social protection, give us some financial protection to allow us to withstand this. Provide the tools to look after one's own health, like rapid tests so that you can test yourself every day and have some agency. These are measures that build trust so that when a vaccine comes, you are much more likely to accept it because you're part of the solution. This paternalistic, prescriptive approach has ignored the importance of communication and says, do this, do this, do this, but hasn't explained it along the way and takes a long time to update their priors. Telling people to wash their hands and wash surfaces when it's an airborne virus, and when they finally say, ok, it's airborne, but fail to say what needs to be done—it's not very helpful. Saying "mask up everybody" at a time when masks are probably becoming less effective because the Delta variant and the others are more infectious. What are

people going to do? It's like a year ago we watched the world lay down its tools willingly to control this. We've never seen that kind of paradigm before. Of course, governments said we have to shut down, and people did it willingly. Now people are fed up, not only with the economic cost but because where is the truth? Where's the trust? We're not going to do something unless we can see why we have to do it. Where are the tools? Give us a tool or engage us.

P. Verschure But Annie, in your description in some sense what you are then saying is that the COVID-19 crisis also shows how health care systems are not working anymore as collaborative systems.

A. Sparrow Absolutely.

P. Verschure We have lost effectivity from a public health perspective.

A. Sparrow We commoditized health. In the minute we made it into a commodity, it stopped being health care. The real global public good here is not vaccines, it's care. That's what the Syrians demonstrate in spades; they know how to care for each other. They have an architecture of care that is just so obvious and so deep that it cuts across racial-ethnic lines in a way that we need to learn from. We need to remember to invest in health-care workers, which we obviously need, of every kind, not just doctors and nurses, but the janitors, the porters who push the trolleys, everyone who is in the line. It's hard to see how that will work unless we also invest in caring for each other. That theory of care—is that what it's called? Part of that is finding the tools that help us reconnect at a time when we're already disconnected and living digitally. And some of those tools include things like rapid tests, which can help us look after our own health, our family's health, our communities' health: those are the building blocks for collaboration.

P. Verschure But this is what we see here: by commoditizing health we have reached the end of the sustainability of health care systems, especially in the US. It also is at the point of just not being sustainable anymore. So, is the current system future-proof? Or are you arguing for a complete reorientation of the approach to health that is based on collaboration and different values? How do you see that?

A. Sparrow I think it's essential. This is the opportunity, because we've gone as far as we can with the biomedical approach: that there is an antibiotic, or a drug, or a treatment for everything. There isn't. Pasteur was a PR genius. He really knew how to market the germ model, and he did. That was the point at which people fully recognized the importance of social justice, of shelter, of decent living, of a decent standard of living, of a decent job, of all these other things that are the building blocks of health. And we simply went down the biomedical model as if every disease has one single cause and there's a drug or antibiotic for all of us. That's just not true. It's pretty lazy. It's the low-hanging fruit.

P. Verschure Sure.

A. Sparrow The WHO [World Health Organization] was created out of the ashes of World War Two, and the health office that was in Geneva. It recognized this shift that health wasn't just the absence of disease, but the presence of physical and mental and emotional health. Mental health, we know, is a prerequisite for physical health, but we still just pay lip service to it, even having recognized that and being given the mandate to get beyond these negative approaches to public health, like vectors and vaccination. Vaccination, of course, we love it, it is our preferred tool of mass salvation. But it can only go so far. But that approach didn't last very long because the Cold War starts, the Iron Curtain comes down, and the superpowers preferred their model of disease diplomacy in chained vaccines because it's much easier than actually putting in place these other measures. Governments like short-term solutions; they don't want to invest.

P. Verschure Maybe it actually goes deeper. If you look at the scientific models, the epistemology of it, reductionism is the way in which you often end up looking at the world. Even though we are trying to understand a multi-scale integrated system with collaboration, we, of course, face a similar challenge. It also means that the way you describe collaboration in public health is actually a very tiny minority of all our activities within health systems and in public health. The majority sits more in this incentive-driven, highly fragmented commoditizing of health. And then we have enormous artifacts that are very costly for society—take the opioid crisis that the US is facing—but are you fighting a rear-guard battle here? Are you the last of the Mohicans of how things could have been? Are we off in this direction, and there's no return because the power behind it is enormous? Health as a non-collaborative issue of neoliberal exercise? Do you still have a chance to change that? And if so, where would you start?

A. Sparrow Well, I am, we are, I suspect you are too, are condemned by hope. We didn't always have this *Homo economicus* approach to health. Nor did we, when you look at what Rockefeller did at the turn of last century: they did what McKenzie Scott is doing now. There's a willingness to put money into areas with a high degree of trust because we had to find a different way. It's very clear now with the variants that this "here-there" approach isn't working anymore. We can't keep things "there." We did it before with HIV. While we won the battle in terms of making HIV drugs accessible, we certainly lost the war with Big Pharma and patents. The rationale was that they can't have them in the global south because people aren't literate. They won't be able to read the label. They won't take them on time and will create drug resistance. That's not true at all. That was disproven because Africans are much better, more compliant than many people across America. Twenty years later, have we conquered HIV? No, because it's much more than about making drugs cheap. We have to address all the other issues that go into why people have AIDS, and get AIDS, and the agency, and all of the human rights, and the issues. A woman's ability to inherit property will protect her, not just from AIDS, but from poverty and domestic abuse, and provide children with a much greater ability to go to school, etc. There's an importance of recognizing the linkages that mean that you can do an enormous amount if you put in the legal framework and uphold it, for example, and you understand those connections. Looking at the variants more deeply, we have created the viral equivalent of the Hydra [Lernaean], the nine-headed monster. Every time we create a new vaccine, it doesn't matter, more heads will keep appearing. If we can't learn this lesson now, then yes, we pretty much are doomed, because the next pathogen is almost certainly here already. We haven't identified it yet. An approach to public health that is limited to vaccines and doesn't start with people as part of the solution and figure out how to produce these grounds for collaboration…we can do that, and that's the only way we can defeat the virus. I mean, human collaboration is formidable. But as you say, the forces that are lined up against that are also considerable.

P. Verschure But in some sense, the medical professionals are one of the big obstacles in the way of building a truly integrated health system, or would you not agree with that?

A. Sparrow Go on.

P. Verschure They are the ones who are representing a part of the power structures that have been following the route of the commoditization of health. They have been selected into that system. The ones who have more idealistic goals are not part of it because they wouldn't survive in that environment. It is highly competitive. It's very much about the monetization of health. The guys who are good in that game will protect that game because this is how they are important, have status, and make lots of money, and of course, usually they're guys. So, are they not one of the big obstacles we face? Because in parallel, as you indicate yourself, for many pathologies, we see very little progress on curing anything, because people are just climbing up the wrong tree and

they think they're getting to the moon. Is this one of our biggest obstacles? That the way we have currently implemented health as a non-collaborative system is the first thing we have to dismantle to make progress?

A. Sparrow Yes, everything you said is true. I think dismantling something is very difficult, and it's probably easier to provide a way forward that enables people to start to collaborate positively so that they don't have to necessarily detach or declare their attachment to that model.

P. Verschure What's the way forward if people are so conditioned around their incentive? Can you sketch that way forward?

A. Sparrow Perhaps it is easier to start with places where this conditionality or these conditions aren't already cemented. Across Africa, for example, people are tired of looking to the West for solutions. And we see this hypocrisy where Gates [Bill Gates], on the one hand, forces Oxford University, which is providing the only open-source vaccine to partner with AstraZeneca, which has never produced a vaccine before. Because Gates perceives intellectual property as a lifeblood of the universe, which is nonsense and is toxic. Then by contributing also to COVAX, which is aiming to supply vaccines to the world that doesn't have access, that is hypocrisy of the first order. Meanwhile, Boris [Boris Johnson] withdraws 95% of developmental aid, of which so much goes to Africa, including 100% of family planning which supports the US's attitude in the Global Gag Movement, but then says, but we will put a billion into vaccines. This is nonsense and there's no accountability for these kinds of pledges. Africans are at that point where I think, OK, let's start here, where we can divest ourselves of the West being addicted to "developing us" as it were. Across Africa, there are enough innovators, enough tech, enough people, there is a rising middle class and wealth that means they can invest in their own health without having to go down that Western biomedical model putting the disease first. They can see much more clearly that the only way to stamp out new diseases is by making people healthier. That starts with the actual conditions in which people live; it starts with exploring. It's not that there aren't certain tools that we think could make people a whole lot healthier. We know that fecal transplants are incredibly successful at making our biome healthier and protecting us from all sorts of diseases. We know that viruses are responsible for at least 25% of all cancers. How about we invest in more live vaccines, which we use anyway, like BCG [Tuberculosis], measles, or polio, which we're all familiar with, and are especially well used across Africa and Southeast Asia as tools which might protect us against a lot of these expensive diseases, so we don't get them in the first place. We suffer from a global-value imagination. It's going to be very hard to get people to detach from our addiction to this biomedical model, I fully agree. I think it's easier to start where it's possible.

P. Verschure Before we go for the final few questions, I would like to go back to your involvement in the Olympics, which are running right now, where overall, the situation is not great. There's also lots of debate about actual quarantine measures taken, about the testing, and so on. You wrote a paper published in May where you were also urging the International Olympic Committee and the local organizers in Japan to rethink the measures they took. In that sense that is also an invitation for a collaborative effort to find the best way forward. Did your paper have that impact?

A. Sparrow No.

P. Verschure OK, why not?

A. Sparrow Because they don't want to collaborate. That was very clear right from the beginning. Obviously, the natural people to collaborate with are the athletes or the athlete's associations themselves. They're the ones who have gained all the wealth of knowledge of expertise, best practice over the last year and a half. I say that as somebody who was involved in counseling the Women's National Basketball Association last year, and they had a very successful season: 87 games

without a single positive COVID case. But instead of inviting the people who know what they're talking about, the role of players' associations, for example, and the experts. I am not an expert around sport. I know people far more informed than I am, but I know whom to ask. The Center for Sport and Human Rights is full of experts where you think, OK, why don't we just find out where the experts are and ask them? Instead, there is this ethos of handpicking experts who the IOC know will tow the party line. There's also a fear that if they step out of line, they'll be excommunicated. Even though we were, myself and Mike Osterholm, who is such an amazing man, and an American public health heavyweight who has no fear and is such an expert. Instead of listening to what we're talking about, let's fully pay lip service, and we can see that. Relying on vaccination is a nonsense strategy when you could already see vaccine breakthrough. We know that vaccines' primary purpose is to stop severe disease; it's not to stop spread. Instead of taking a science-based approach or a risk-based approach, they created this charade, and then, how can we be surprised when it doesn't work out? The good thing is that because of that paper, we have raised the stakes to a much higher level and created a lot more awareness about what's really going on because there's a huge lack of transparency. How do we know what's going on? How do we know what the real tracking protocols are? How do we know how people are living, eating, sleeping? The athletes themselves, their mental health. They have a hotline for mental health, and for women, or for anyone who gets sexually assaulted, which shows you a lot about this approach, that no one is going to report. It's a great way of saying it didn't happen. Who is at the end of the line? That's a bit of a, it's not meant to be a diversion or a digression, it sort of epitomizes the whole approach, where they are not taking it seriously, but there are measures that look like they take it seriously, meanwhile there's this disregard of athlete, public, and global health.

P. Verschure But there's an interesting aspect to this because there are two ways to interpret the International Olympic Committee's response and the Japanese organizers. On the one hand, it could be that they have alternative objectives: their goals are different. Their goals are essentially in collision with the wants of public health. They're not telling you what these goals are, but that's why they are not listening. This is one possible interpretation. The other interpretation is sort of plain stupidity and mediocracy. That people are following in a habitual perspective on how public health should be organized, how these kinds of events should be organized, and they just march along that habit. If you challenge them to deviate, it is just rejected because the world looks just fine from their habitual road model. Which of the two sides would you take as your interpretation of this lack of response?

A. Sparrow You're right. One of the most frightening things is colleagues that I respect deeply who are utterly convinced, or who have been up until the Games started, that everything was absolutely fine, that we were drama queens who were banging on about nothing, that vaccination would protect everyone. It's not a big deal. And you think, wow, I'm not sure where you're standing. The world looks very different to me and to my colleagues. I agree that there is this fairly lethal combination of mediocracy and complacency where we have forgotten the importance of public health. The pandemics of the twenty-first century, SARS and H1N1, should have been dress rehearsals for this but instead have been interpreted as "oh, it's never going to get that bad." In the last century, people talked about the death of infectious diseases, which is deeply arrogant. We're facing pandemics, and climate change, and antimicrobial resistance. Those are the three global narratives that affect us all. Once our antibodies go, we are really...

P. Verschure Humans have declared victory over many natural phenomena on many occasions to then get bitten on their backsides very rapidly. So, the time capsule we're going to send to one of the

possible inhabited planets in the future will just say "we killed this planet out of stupidity." This is this our main opponent in building collaboration?

A. Sparrow Where the IOC is concerned, they have a long tradition of rising above the rule of law. I think that we can see now that you can only rise above the laws of nature for so long. We should take a cue from the virus and understand that this is the opportunity for change. The Olympics work a whole lot better. People perform better and higher, faster, stronger together when we can create the best environment. When you do that right and from the right intentions then it's a more profitable environment as well. That works for everybody. It is a global win-win, which is one of the most tragic things, because that's where instead of having these bilaterals which are non-transparent, let's have the kind of conversation where we can all see the advantage.

P. Verschure There's another thing that worries me about your paper. It's published with some real experts in one of the leading medical journals in the world. We have our mouths full continuously about evidence-based medicine. Here's the evidence delivered in a highly credible, authoritative journal, and there's absolutely zero impact. So, is it a pretense that evidence matters in these debates on global health?

A. Sparrow That is probably the real question, isn't it? The evidence from the very beginning of this pandemic has been that it was airborne, microscopic, asymptomatic. We could see that right from the beginning where the Chinese doctors that were infected were not the ones in the E.R., or the ICU like we saw in SARS. It was the family physicians, ophthalmologist, the elective people on elective surgery wards, and the surgeons, that showed us that it was being transmitted asymptomatically and it had to be airborne. And of course, the Chinese cover-up…governments always cover up epidemics, we know that. That's pandemic 101, public health 101. The problem for the World Health Organization is that the countries adopt this stance of: "You're not going to come in and cross our boundaries or interfere with our sovereignty unless we say so." They have no independent ability or financial clout to be able to figure out what's really going on. Despite the evidence of it being airborne, and a lot of scientists making a lot of effort to get it out there, it took an enormous amount of time for both the CDC [Center for Disease Control] and the WHO to update their priors, and we didn't see that until May this year. And you think, wow, this comes back to the importance of communication, even well before evidence is available. That's the precautionary principle after all. It's like, this is what the evidence looks like, and we know that the disease is operating like this. Let's adopt the airborne precautions. Let's mask up. Let's look to our ventilation. Let's look at air filtration. We can see that is part of the problem now. We didn't do that. People haven't been honest about saying: "Ok, we screwed up here." Fauci himself said, "I'm sorry, I got it wrong." It makes it much easier to listen to him the next time around.

P. Verschure There's a real issue here, right? Because if you put in this effort to write this paper, put all the arguments together, and there's subsequently no response from your target audience, the IOC, and the Japanese organizers, it erodes trust in public health measures; it erodes trust in the science behind it. Because the general public says, "well, these people make all this noise, but the guys in power are not impressed." Are you now obliged to keep on hammering on this message until they give in just to safeguard the trust in medical knowledge?

A. Sparrow Certainly, I'm not going to give up my position, or my importance of evidence, or my standpoint. And when I say that there's no impact, I probably sound far too binary. It certainly has created much more potential, even moving forward, to hold the IOC accountable for this five-star fiasco. That's super important because this cannot be the global standard going forward. We have the opportunity at a moment in time when we can see the importance of science, then let's hold onto that ribbon. Let's hold on to that quality, hold that line, and use it to inform our event, whether it's the Olympics or football, or Beijing, or the World Cups going forward, or the Dubai

Expo, or whatever it is, going and getting back to school. Let's use that evidence and let's hold the line on the quality and the rigor that we know. It is important to stop, to call a spade a spade. All the big winners of this pandemic have been the tech guys who continue to churn out these ridiculous contact tracing apps that do nothing, haven't shifted the level on the dial one iota, and yet there's all this pretense and lack of evidence that they do. There's no app for public health. It's not easy. You have to go out there and do the work. And it is work and it is harder in the face of people's addiction to easy wins. Achievement is just that, and it's not even a win with an opportunity to directly put people first. We have to do that. We know what that looks like; it's not rocket science. We have to invest in it.

P. Verschure Annie, my last two questions. Do you believe humans will ever succeed in building sustainable collaborations in global health? Is it even possible? Will we be able to?

A. Sparrow Yes, I do. What is my experience from the pandemic? I do believe. I look around and I see all these different connections, and I'm grateful to them all. All these new colleagues and collaborations that have been enabled. It certainly has enabled me to try and do my best to help advance, to take part in this endeavor. I think it is possible. Maybe I am condemned by hope.

P. Verschure And if you could change one trait in humans—let's say we give you the most advanced technology—what would it be so that they could achieve sustainable collaboration?

A. Sparrow Well, I think this is the collision of *Homo economicus* and very fundamental. What is the other? That for human beings to cooperate and overcome these global challenges, they have to be able to put people before profit. We have to give up our addiction to money. We have to recognize that there's a limit to capitalism and to the *Homo economicus* model. That means we can only go so far down this model, and if we carry this model to the end then, I'm sorry, you're going to kill so many people that you're not going to be able to make a big profit anymore. We're not going to see big pharma change because drugs are the most profitable industry on the planet. That's maybe why that's one trait that I think has to change if I could actually change anything.

P. Verschure Annie Sparrow, thank you very much for this conversation.

A. Sparrow It's a pleasure.