

Karin Knorr Cetina: An Interview with Alex Preda

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Submitted: October 27, 2021 – Accepted: November 11, 2021 – Published: January 17, 2022

Abstract

Karin Knorr Cetina was already a well established figure in the Sociology of Science and Technology when, in the mid-1990s, she changed the focus of her ethnographic investigations to financial markets. What followed was a series of edited books and journal articles that made significant contributions to the Sociology of Finance. In this interview, Karin, who is the Otto Borchert Distinguished Service Professor at the University of Chicago, reflects on the intellectual drivers of her research interests in financial markets, on the evolution and challenges of the field since the 1990s.

Keywords: Sociology of finance; sociology of science and technology; markets; economic sociology.

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Alex Preda: Karin, it's a great joy to have this conversation with you, especially since we've known each other now for over 28 years. I've been briefed about the main topics of this interview, and one of them is to reflect upon the mid to late-1990s, when sociological interest in finance arose again. We had this interest before in sociology, in the mid 80s. We all remember the work of Patricia and Peter Adler. But after the mid 80s, there was a pause I would say, and then in the 90s, there was renewed sociological interest in finance, and you had this interest too. So, my first question would be for you to reflect upon, what awoke your interest in finance, as a sociologist of science?

Karin Knorr Cetina: This is always a multi-dimensional question. But it certainly mattered that I had the Cern study, the study of high energy physics, finished and I was not looking to do another laboratory study, I wanted to do something else, really the study of high energy physics where practically I did all the high energy physics part myself was time consuming, and highly interesting. But also demanding in the sense that you wanted to do something else afterwards. And there was one thing left from the Cern study that haunted me, and that was the global nature, high energy physics had become very global, in an institutional sense, in the financing sense, during the last part of my study, and it was too late for me to do much about that, in the book that I wrote, the book *epistemic cultures*. It was also a very big topic.

So I left the topic, more or less, or at least to the degree to which I would have been satisfied with it, I left it aside. But I wanted to continue to understand what happens on a global level. And so that was one thing that pushed me in the direction of financial markets. There's always also I think, when one delves into a new topic, there's some preparatory things that have happened before, even if that didn't happen intentionally. And in my case, you know, I'm an avid reader of the *New York Times*. And on the front pages of the *New York Times* for years, for many, many years, even while I was doing the Cern study, there was a lot about what I after the fact recognized as finance issues. I didn't even know that in the beginning. I am not trained as an economist, and what we knew about finance in sociology came from Marx really, but often Marx was no help in explaining what I read, because Marx talked about the production economy, and what I was reading was about takeovers and investments and financial markets. And that was a secondary economy.

So these topics always fascinated me because of the imaginaries around the financial stories in public media. And then the rest that explains my interest was really opportunity. Two major opportunities. I think one was that you joined us in Bielefeld at the time, and you had an interest in the economy. And remember that you had that even when you came. You were not completely naive about economic issues, meaning unknowledgeable, you already knew quite a bit, you must have observed some of it. And you had that interest. And then the other thing that happened, I think you may have been part of the session, that was Urs Bruegger came to give us a talk. In our colloquium, I think it was in our lab studies colloquium that we had at the time. And Bruegger was at that time still in Zuerich working in financial markets, in one of the two big banks in Switzerland in Zurich. At the same time, he wanted to do a PhD and then maybe do something else than being a trader afterwards. He had heard about my interest in financial markets from a student of us. She told him about my interest. And then I invited him to that colloquium. And, you may remember, we submitted a grant proposal in economic sociology? Yes. You were on it, and I was on it. And I'm not completely sure whether that happened before or after, I believe maybe it happened before Bruegger's talk. So I was very interested in that talk. And I became fascinated by the talk. And then the talk led to our teaming up, Bruegger and I, and the next thing that happened is I was trying to do a study

of financial markets on the trading floor in Zurich.

The talk fascinated me but what I always need is a site visit. And at that site visit I went on the trading floor with Urs Bruegger, he introduced me. And, and I was immediately hooked again, I thought, okay, this is exactly what I was looking for, to study that. The looks of the floor brought up another memory from my study of high energy physics, the floor was a highly, high tech setting, obviously, has always been in financial markets, though not in banks, generally, very high tech. And so there was a continuity to the high tech setting in which I had worked before where the detector was the high tech thing. But it was a completely different, a completely different version of it. And a version of it, which I somehow sensed was also much more future oriented or was, you know, it seemed to be more a setting that pointed to the future of our capitalism and of society generally. So these were all these impressions and sometimes these contingent experiences are epistemically efficacious, you know, they stimulate you and they enforce an epistemic desire to understand a particular area better.

I have to add that at that time, first of all, I did not know economic sociology well enough. The version that existed in the German speaking countries, I really never found a way into it because it was mostly industrial sociology. It was not economic sociology in the American sense. And at the time sociologists did not talk about finance. And that's a very general thing that continued until the financial crisis in Germany, then they talked about finance. They didn't really look at the financial systems, but at the consequences of financial markets, for the economy, for the population, you know, and in terms of power, in terms of who occupies what power, for what reason, in terms of politics, but they never opened up the system, they never looked inside the system was my impression, I have to say my impression, because I haven't systematically studied the literature, but I think it's not an unfair take on the German situation. And I knew American economic sociology to some degree, but not sufficiently, I think, I was not well versed in it. So really, my entry into that area of financial markets was not so much stimulated by some scholar, or some connection I had to economic sociology.

I think both Donald MacKenzie and Michel Callon, who I think are the main anchors of economic sociology in the science studies area, if MacKenzie worked on that, at the time, I didn't know it. I didn't speak with him about it. So he was not an original influence. Of course, I got to know his work on finance later on very well, and continue to follow it and appreciate it, highly appreciate it. But I didn't know it at the time. And Callon published his piece I think in 98, so we're relatively late. And I didn't immediately read it. And it is not that well written. The introduction to that book he edited. It's not a bellwether piece. Or even when I did, I wasn't particularly how should I say, taken by it? But I didn't have that either. At the time you Alex were still a student originally, but then progressing towards the dissertation. Students have always been important to me. I didn't have to deal with all by myself, I had someone to talk to about this interest and to work with as we did on some of the grant proposals.

AP: Thank you. I want to linger a little bit on the mid 90s. If we look at how the sociology of finance emerged, we had for instance Mitch Abolafia or Charlie Smith working in New York City. And of course, New York City is a big financial centre, and we had Michel Callon and his group working in Paris which in the European context is a significant financial centre, and then Donald McKenzie working in Edinburgh, which we can make the case is still a significant European financial centre, but we were in Bielefeld. Bielefeld, no matter how we praise it and no matter how much we appreciate it, is not a financial centre. So we cannot say that in Germany the sociology of finance emerged in Frankfurt, or that it emerged in Munich, or that it emerged in Cologne. Some of the major contributions made by you were coming from Bielefeld. Do

you think that being in Bielefeld, in a setting that was not a major finance centre, was more of an advantage or a disadvantage?

KCC: Well, at a first sight it's a disadvantage because you are not having anything close by that you can work with. And I remember well that in that first attempt to look at the economy, we looked at banks and one had to travel, you know, it wasn't really working to look at banks in Bielefeld. So you have to travel to these banks and to try and get access, to go to the places where they are located. So it was not an advantage. But on the other hand, Bielefeld had many advantages. You know, one advantage I had used during the study of high energy physics was the chance you could switch between teaching and research. So you could sort of get out of teaching for one term and doing more research and then teach more the next term, and that sort of thing was an advantage. And in Bielefeld, you have a micro sociological tradition. And you have a systems theory tradition. And both of these traditions offered the possibility to talk with people about things encountered in financial settings. The surrounding supported a particular approach. And it was a good thing at the time. Sociology was a faculty in Bielefeld and not just a department, as you know, it was much larger and had a much smarter architecture, it had political science, it had anthropology. And so it wasn't just sociology, it was much more. It offered a strong support because of its tradition, for a particular methodology, ethnography, which I taught at the time in Bielefeld. And so the intellectual milieu of Bielefeld was stronger, I would say, I hesitate to do that to my Frankfurt School colleagues, but at the time in the mid 90s, my sense was that Bielefeld's intellectual climate was stronger than Frankfurt's, which had a good tradition in political theory. But I'm very happy that I didn't buy into that tradition, in which case, I wouldn't have gone into the system of financial markets fully, but would have turned them into a topic of, of, you know, resulting deprivations for the population, or a topic of capitalist interference with economic development. That is not what really interests me about markets.

Again, I have to refer to the study of high energy physics. I was launching this study from Bielefeld. And of course, there's no high energy physics laboratory in Bielefeld. But there is a national particle physics research center in Hamburg, DESY. Before I went to CERN, I did consider researching DESY and because it's always a question of access, and as it might have been easier to get access to DESY via German financing agencies, I debated that with myself but did not go down that line. Mainly because, actually because the really top level appeared to be Cern in terms of research at the forefront, and they had strong German participation. It was a conscious decision, an intentional decision to go to the top level, to the main European institutions instead of DESY, and I went to CERN. So, I was not afraid to take on a research site in Zurich quite a bit away from Bielefeld, because of my previous experience.

AP: Thank you. I want to talk now a bit more about the relationship between science and technology studies on the one hand, and the sociology of finance, on the other hand, simply because at least in Europe, we had three sites, Paris, Edinburgh and Bielefeld. All with a very strong reputation in the science and technology studies. And all of them got interested in finance, do you think that any of the debates which were going in the 1990s in science and technology studies had a relevance for sociology of finance?

KCC: The thinking in science studies, the conversations we had, all of that should have had an impact. In my case, I know that I wanted to go on the trading floor and follow the practice of finance, rather than study the institutions, the banks, or study the industry, or study the consequences. I think that's directly linked to science studies and the continuity of conversations we have partly at colloquia and workshops and conferences. But also partly, in smaller

meetings that we had when someone came and gave a talk, the idea that it was important to go to a lab, for example, and not to simply interview scientists, somewhere, you had to go to the site where things are happening.

The site question was part of our conversations, and that conversation started more than 20 years before the sociology of finance. It started at Cornell really, the first social studies of science meeting of Cornell in 1976, and it led to and implied an internalist gaze at the practice of science. And the internalist view I took of financial markets comes directly from how productive it was in science studies. The other linkage is the one I mentioned before, it comes really from my experience at CERN, is the global question, the globalisation question. I was thrilled to be able to go into an area that was global in nature, currency markets. So, that certainly has a personal science studies background. Symmetry thinking as a general principle was for me also important in the sense that you are not approaching finance from a political economy or critical theory standpoint, but from a standpoint of more detached observation and that you investigate participants' actions and practices. You are also not limiting yourself to particular temporal presuppositions, or to a particular perspective, that was also important.

The concept that became important in social studies of science later is performativity. I just didn't have that concept at the time, and I have been critical of it later on. So, I am not a performativity theorist. And MacKenzie's work is, of course, completely down my alley, because he is opening up many black boxes and looking at their inside and seems influenced by his own previous research and is bringing a science studies sensitivity to finance. And, you know, in my case, that sensitivity was also to the technological environment. So I didn't see knowledge as usual immediately relevant when I went on the trading floor, but I did see technology, and what I knew from studying science raised questions about the epistemics of information knowledge. So there was the continuity of seeing the object world, for example traders' continuous interaction with screens, as relevant to and having to be written into a social science understanding of financial action, one couldn't simply stay on the human or human firm level, for example. And now, with the takeover of financial markets by quants and algorithms, there is a whole other level of relevance of science and technology that in a way confirms the intuition that drew me as a student of science to the study of finance.

AP: Staying within the topic for a little while, we can make the argument that the sociology of finance has benefited from science studies contributions, we can make the argument that science studies has opened up to finance nowadays, we see regularly articles on finance being published in *Social Studies of Science*. Before, that wasn't the case, we can argue at least not to the extent that it is the case today. How do you see the future of this relationship? Can we make the argument that this contribution is to be continued in the future?

KCC: Yeah, I am not sure about that. Because the question is, what are the science studies goals? And what have science studies today that is useful for the sociology of finance? The concepts that had a lot of influence, like performativity, are not that new. They are 20 years old, and have been criticised by sociology of finance scholars in the US for example. It really depends whether you can see STS as a coherent discipline.

Now, as it was a while ago in the 80s and 90s, at that time STS stimulated a number of directions of research, six or seven. But it was relatively coherent in that these groups of people talked to each other, met each other at conferences, and shared, I would almost say, certain kinds of interests and principles. And I'm not sure whether you can say that of STS today, it's a much more diversified field. There is not that coherence any longer. It hasn't progressed in a way where I see it necessarily, you know, as future oriented to the degree to which finance appears

to be, is also oriented to historical developments, it's oriented to working with computational data. It does a lot of things that are very interesting. But whether it provides for background interests and understandings on which we can constantly draw in, is another question.

Also, economic sociology in the US has its own strong tradition. From the 1980s on, economic sociology exploded in the US, not immediately in Europe, certainly not immediately in Germany, where it's continued to be more of an industrial sociology, even here in the US, this was the case. But the field of economic sociology grew, and has some fantastic, excellent scholars in there. And I can't see how, you know, whether it would need a lot of STS. I see a split, a split between what's called Social Studies of Finance, which in Europe is often linked to performativity. And, on the other hand, the economic sociology in the US, which is not linked to performativity and has its own traditions and its own dominant topics often centered on embeddedness, for example, the relationality of economic action, that's a strong tradition in economic sociology, and there are other traditions, an institutionalist tradition, which is important. There are some people who bridge some of these gaps, who on the one hand take something over from the social studies of science, on the other hand, continue the tradition of an economic sociology in the US.

AP: You talked about the links between the sociology of finance and economic sociology. Now, before I ask you this question, I want to make the following case. You know, I work in a business school, the finance department is separated from the economics department, which is separated from the management department, marketing and so on and so forth. How should we see the sociology of finance, as a subset of economic sociology, or as a separate domain?

KCC: I see it more as a separate domain. Also, for cognitive reasons. When you look at what the people investigating the primary economy are doing, you know, even the notion of a market has to be revised, when you look at financial markets, it's not a producer market, it's a different kind of market. So I see finance really as a separate domain. When we try to understand an economy, then there is consumption, there is production. And there is the distribution of goods, which is associated with primary markets. These are three pillars, but then there is finance which should be seen as a separate pillar. I've always seen it as a separate pillar, because it has to do with credit, doesn't it? It's not consumption, it's not production in an economist's sense.

In the 1970s, as you know, there were a number of theories being produced by finance scholars in academia, theories that had to do with financial markets, Black and Scholes, the efficient market hypothesis, all of that was produced around in the 60s, 70s. For financial markets, not economics. There are some overlaps but in terms of what they are doing and what theories they are using and which direction they are working and what communities they are in, finance is clearly a separate specialty. Economic sociology and the sociology of finance should be seen as separate specialties too. I do not see myself as an economic sociologist, I see myself as a sociologist of finance, an anthropologist of finance, if you wish, but not of the economy generally.

AP: I want now to shift my focus to micro sociology. You taught me its importance. Without any doubt, what place do you see for micro sociology in sociological investigations of finance?

KCC: There's a continually important place for it whenever you are looking. Think of real markets, they operate, in my view, on a micro sociological level, they may also operate on an international level, especially over the counter markets, they are located in big banks, the

first tier markets that trade the highest volumes. What happens on the trading floor is oriented to what happens on another trading floor in another country, and mediated by scopic media, and trading is interactional, whether with another trader in conversational trading or with the market on screen directly.

A financial market is on a fundamental level an interactional social form. It is not an organisation. That's reflected in the line institutional economists draw between markets and hierarchies. And therefore micro sociology will be useful, it is hugely important to understand markets. If you look at markets that are global, many financial markets are not local, but currency markets are by nature transnational is always one currency against another. The fascinating combination we have here is that we have something going on that's very large scale, not in terms of numbers of people involved, but in terms of effect and impact and volume of trading as well as geographical scale, that's very large scale and really global, but it can and should be studied from a micro sociological perspective because that's uniquely adequate. With macro sociology, you shift the perspective, you may ask, for example, what does the volume of foreign investments do to the economy in a particular country, then you look at volumes of investment and you look at the economy of a country and you are on an aggregate level, but as long as you are interested in the market as a system of practice and as a particular structural form in society, you need micro sociology to study that both methodologically and theoretically.

AP: Thank you. Now, I am going to ask you a question in preparation for the grand finale, so to speak. You've made so many conceptual contributions to the sociology of finance. Global microstructure and scopic system, synthetic interaction and synthetic situation, post social relationality immediately come to mind. This is just what I spontaneously enumerated. If you were to evaluate your own conceptual contributions, which one do you think is the most important?

KCC: From the ones you mentioned, I think it's still the maybe the notion of scopic system and scopic media, we'll switch to media. The switch to media didn't come naturally to me. I haven't studied media, really. But I had to somehow come to grips with the technology I saw in financial markets, and that's a story in its own right, and this coming to grips took me long enough. But the notion of media was important there, you know, scopic media, I think, is still very important. At one point in time, I thought, with the switch to algorithms maybe the screens are going black. Because algorithms don't operate on screens, you know, they don't need screens, they operate on an infrastructural level. But that hasn't happened at all, those screens have multiplied, you have now sixteens in front of you, and not six. And it also leads to the idea of a synthetic interaction, to have these algorithms as synthetic actors. An algorithm in my view is an energetic medium, it's a media structure that has acquired agency. These synthetic actors, if you call them that, they may need a full set of information infrastructures, they need a whole infrastructure to be able to work. So I think the scopic system notion leads to the synthetic actor notion or is combinable is with the synthetic actor notion via this notion of media and agentic media, and therefore in terms of a whole line of research and further concepts emerging from one, that is probably the most important in the set you mentioned.

AP: Thank you. And now, as I said, the grand finale, which is a set of several questions, I know that you have been writing a new book on finance, tell us more about it.

KCC: Well, this book is a much delayed one, on the currency markets I have studied. But it's also a relatively theoretical book in the sense that I had to come up with a notion of a financial market. I needed to differentiate between financial markets and producer markets, I had to

understand the role of sociality or what sort of sociality global markets financial markets have or can have, when these people do not even know each other. And when you cannot see them, you cannot say that they work together, or that they meet each other all the time. Some of them do at times, but mostly they don't. And so it was important for me to work out an idea of sociality, that's captured by the notion of a regime of attention and attentional integration, it's really the role of the human observer in these markets, all these participants observing the market simultaneously and deeply, it's a coercive regime of attention. And I link this to concepts of temporality. It is done now, but it took me a while to understand some of these things, especially now in the last part.

I had the problem of also experiencing the transition into algorithms, which happened mostly since 2005. So relatively soon, you know, after we started looking at financial markets, algorithms took off, they were no longer are invisible, they became very visible on screens, and they changed these markets structurally, completely, where they have taken over trading, and even where they are trading alongside human traders, they are changing the structure of the market. In that sense, you know, it's, it's been a long journey for me, but one that is rewarding. And only now, as only in the last year or two, I have the impression that I've also managed to approach the question of algorithm innovativeness, which leads to semi-autonomous markets. And this notion of semi-autonomy interests me, because it reflects back on the role of human beings, in a future when there will be more and more algorithms around. So the long journey is a long engagement, whether it ends in a book or not, is in a sense, not the most important, but it has been a long engagement. On the level of intellectual understanding, of intellectual fruitfulness, if you wish, it has been worth it. And it has prepared me for a next step into something else.

AP: Actually, I find, personally, that slow writing is much better with fast writing. It's this analogy with slow cooking versus, you know, fast food. And I always keep in mind that it took John Rawls, for instance, 10 years to write *A Theory of Justice*. So we have a good example here in Rawls's work. It takes time to write a good book.

KCC: Yes, yes. I have also learned a lot, I have to say, I have learned a lot from several of my original students. Certainly in the area of financial markets, I've learned most from you. I don't know whether this is relevant to an interview like this. But it's been productive to have that sort of partnership for me. It's very lonely, if you don't have anyone discuss things with, except colleagues in your department, who have all been recruited in order to complement each other and don't work in the same area in which you work. I was happy to have the opportunity to work with students in Bielefeld at the time before you came, and then with you when you came and also later in Constance with you, and to have the opportunity to discuss complex systems like financial markets. It's important to meet occasionally, and that one could talk. For example, if you do a book, if you continue your work on synthetic capitalism, I would like to be informed about that. And I think that's a very interesting, a very interesting project.

AP: I borrowed the concept from you.

KCC: I wish I had it myself. And it could be a very interesting, a very interesting undertaking. You have to put some of the semi-autonomy stuff in there. Because it fits, I think. One of the joys of such conversations is that you get insights from them. I get insights from talking to you, I get insights from my work, but also from that of others, especially yours. Aha, this how I should have thought about this. It might sound very egotistical, but it's very productive to have great interlocutors in one's area of work.

AP: I look forward to reading your book. Do we have a title?

KCC: Well, I still have the old title. I had the old title *Maverick Markets*. Really, I think of financial markets as a social form, but I don't simply think of them as networks, I think of them as this weird social form. And so I used the word "Maverick." I don't know whether this is going to survive the editor's gaze. But if you have a subtitle that is very descriptive, like "Currency Markets as a Global Social Form", this might work. I have completed the last chapter. I'm now going through chapters at the moment, the last two chapters in terms of bibliography and things like that. It's really finished. And that's unbelievable, even to myself, but it is the case. It's still a lot of work as you know, but it's good to be in this stage. It's good to be in this stage.

AP: This great news, I truly look forward to reading your book and get ideas from it.

KCC: The problem with these books is, as you progress over time towards the end you have new, interesting ideas and then you think you should put that in the beginning. But if I do that, I will make sure that I don't have to reconstruct the whole book around these questions. It would take me another 10 years if I did that, and I want to go on to something else.

AP: I didn't have this question on my initial list, but I'm going to ask anyway, what's your next project? I know you're not going to stop now.

KCC: Yes, now the next project is actually already a finance project. It is in collaboration with the University of Siegen and financed by the German National Science Foundation. We have an SFB there, and my part is really looking at algorithms as agentic media generally, and to also try and bring into the picture some of the producers of these algorithms and what they are doing. We are looking at three different kinds of what we call agentic media. The one is bots, communication media. We want to look at drones and autonomous flying machines too, how they are engaged by the worlds that receive their images, by the public who see them, how they are engineered on some level, and what role algorithms play in these things. We are really interested in semi-autonomy as a social form and what it implies. Agentic media and semi-autonomy are the top notions in that project.

AP: It's sounds fascinating to me. I can follow every single bit of it. I can see into it, almost literally see. Karin, thank you so much.

KCC: Thank you for the questions. The questions one gets are very important. And they got me to think.

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