

02 Expert Interviews



Dr. Michael Lissack
(Interviewer: Liza Wohlfart, IAT)

Dr. Michael Lissack is the director of the Institute for the Study of Coherence and Emergence (ISCE), a non-profit research institution located in Naples, Florida, Boston and the Netherlands, whose mission is to promote pragmatic dialogue concerning the areas of networking, emergence, and complexity studies with the aim of assisting practicing managers in the complex task of managing. Dr. Lissack is also the editor-in-chief of ISCE's journal, Emergence as well as the founder and chairman of Knowledge Ventures Inc, an educational tools software company.

Prior to 1995, Dr. Lissack was an investment banker. In 1995, he started an Internet mailing list that included professionals and academics interested in the areas of complexity and management. This community started by this mailing list later made up the basis for the Organization Science Related Programs unit of the New England Complex Systems Institute (1997-1999) and then the Institute for the Study of Coherence and Emergence (1999 to date).

Current Work

Q: What you are currently working on?

A: I just finished a philosophy book on coherence and organisations. And I've just started a book on the role of management schools and academic management studies in the current ethics problem in the United States.

Q: Can you tell us how your research work is linked to business development or complexity studies?

A: A lot of what I've turned to is the notion of what stories do people tell one another, what words do they use and what kind of character do they have. Then, just like with a person, who you are affects who you could be. So in that sense it's intimately connected with development. Because I am always looking at how you got to be who you are and what that means for where you could go.

Business Development

Q: What are the factors that make companies more robust?

A: Here I come back to my philosophical work on coherence. If you have a good sense of identity, such that you are prepared to dialog about the next thing, then that's an indication of robustness. Whereas if your sense of identity is uncertain, ambiguous or fragile, the only way you have robustness is with an abundance of resources; resources can create an artificial impression of robustness. Or if you use the BCG model, cash cows look robust. They are dying, they are not robust. But they look robust because they've got the surplus of resources.

Q: So you see a connection to core competencies there?

A: No. I think core competencies are nonsense. I don't believe they exist. I have trouble with that whole concept because usually calling something a core competency is a label affixed to a historic state and is not a label affixed to a process.

I'll give you an example. There is a part of Perkin-Elmer called Applied Biosystems that build DNA machines for specific medical tasks. So every job that comes into the plant is totally different because it all has to be customised. Now, if you say their core competency is DNA stuff, they'll tell you you're crazy even if that's what they do. Because anyone can do that, that's just a body of knowledge. They believe that their core competency is the ability to not assign people to jobs but to let the jobs find the people. So they have, aside from the manager, a team of fifty people who, when they become free, run around talking to each other about what is sitting there waiting to be done and they create their own team and do it.

So robustness depends on knowing what your abilities are, but it is abilities in the light of context. And that's why I am distinguishing between state and process. Because to sit there and find a label, senior management loves to do that. They love to say: "We're good at X. So let's put more money into X." And X was great two years ago. So then the context is all wrong.

Q: How can companies become more adaptive?

A: You need to be able to recognise your adjacent possibilities. A lot of people can't. They are at A, they want to go to X. And X is maybe twenty steps away. And they can't visualise what the next step is that gets them towards X. They can work their way backwards to like N. But they have no idea how to get from A to N. They do know if they can get to N, they can get to X. But they need to know what B and C are.

I find that a lot of people at a lot of companies are so focused on being able to articulate X, and then they hire consultants who work them backwards to N, that they never figure out B and C.

Q: Do you think there are any other things that have to be taken into consideration when companies try to be more adaptive?

A: Situation is everything. Trying to adapt best to practices. "Whole class", that is trying to do something as a whole without any regard to its parts, does not work. There are a lot of people out there pushing best practices. Well the best practice is a best practice in the situation in which it was actually practiced. You are in a different situation by definition. You must tweak, alter, play with the best practice to make it work in your situation. But that's not what people do. They pick it up like it was a whole thing, a sacred thing. And then it's no longer a best practice. It's just some perversion.

And if there is anything which you learn from complexity, it's that situation is everything, neighbourhood makes a great deal of difference. Adjacent possible concepts are things from complexity.

Complexity Studies

Q: So do you think that the complexity studies add anything new to the study of socio-economic systems?

A: I'm glad you used the word "studies", because it is not defined and there isn't any definition of what it is yet.

From the qualitative side, there are a lot of lessons that can be picked up and adapted into business settings. But they are lessons, they are stories, they are observations that have to be tweaked, just like what we talked about with the best practices. The people of the quantitative side have this mis-notion that because they can do it in a computer model, it applies in the real world. That's nonsense. It's no different than good accounting. Good accounting does not tell you anything about the company. It tells you what questions you should ask. Quantitative complexity models tell you about questions. But they don't tell you about the situation.

Q: Does this also have to do with unpredictability of complex adaptive systems?

A: Everything is unpredictable. Life is a complex system. If people talk about what is unpredictable, I say so what? So is the rest of life. Do I know that I am not going to drop dead during this phone conversation? No. Well, I don't think I am, but I don't know. We tend to act as if we know. But that doesn't mean we know.

And it's the same with strategies. There is a whole bunch of things that you just decide aren't going to happen. Although any of them could happen.

Q: So you base your strategies on probabilities.

A: No. If you base your strategy on that, sure, some small percentage of it will come out fine. You have to base your strategy on your perception of the situation and your perception of what the next situations are.

Q: Also on beliefs?

A: Yes, all on belief! And your belief may have nothing to do with reality in which case you're going to lose but that's life.

But there is an important exception to all of this. If you are involved with scheduling, complexity studies has made a major advance at how people do scheduling. How airplanes land at airports. How cars get painted. How production lines work. So that's the one exception where complexity studies has directly added something. Because there the computer models actually do work, those are Maths problems. And if you, for example, look at the companies that have come out of the Santa Fe Institute, what they're good at is scheduling problems. They're miserable at consulting, they're very good at scheduling problems.

Q: What has to be considered with respect to the transferability of complexity studies? Can metaphors be a good way to do this?

A: Metaphors by themselves do nothing. Metaphors tell you which things are like something else. But there is another side of a metaphor. By definition, it also tells you that these things are not like something else. And they are just as important, if not more important, than the parts that are.

So, for example, people often say that complexity is like jazz. Well, yes, but there is a lot of it that isn't like jazz and you have to talk about both. Because otherwise, you are just creating nonsense and you're not providing any guidance. Humans have this thing on dissonance. You believe something until you're confronted with something that's obviously not true. And then you just disbelieve the whole thing. If you run around telling employees, think of it like a jazz concert, we're going to do improvisation, and then you need to do something, e.g. filling out a form, where improvisation doesn't work, where the right way to do it is this rigorous set of rules. They will forget about it completely. Because now you have now introduced the jazz metaphor and they see it doesn't work. You need to take the metaphor located in a story. And make sure that the story is rich enough that it has both sides of the metaphor.

The major conclusion of the philosophy book is that management studies have gone astray by relying too much on metaphors. And this again is a lesson out of the complexity studies. Small-world and scale-free networks, for example, is a part of complexity studies looking at how things interrelate, and there is a whole observation about what is robust and what isn't robust and what is adaptive and what isn't adaptive about networking. And again, if you look at it as "what question should I ask", you can learn a lot.

Q: What is the common mistake with respect to the transferability of complexity studies to business development?

A: The common mistake is taking the metaphor and only thinking it means the same. You have to take a metaphor and say: "Okay, there is some good parts of this metaphor, but there is also some bad parts. And if I don't relate what the metaphor is about to the situation I'm in, I'm just going to go astray. Again this comes back to "situation is everything".

The notion of the study that you're doing, the metaphor is if I ask people who know a lot, I will learn something. That metaphor has its limits. You will learn some of what they know, but you're not going to really know the situations they're in. So you're not going to know all of the limitations because people don't tend to talk about the limitations and the mistakes they made. And the model is what's wrong, because the model says you can learn by asking. You can learn some things by asking. But all the failures, you tend to learn by observing and by being with, like an apprentice. And that's why I say you should tell a story, you need the richness of the story to make it work.

Q: What are the future trends? Do you think there is something after complexity?

A: I'm sure there is, but complexity still has another forty years to go. We don't even know that much about it yet. When there finally is a science, then we will be able to say what the next thing might be. It has survived for fifteen years. So we're pretty sure, it will hang around. It's not like catastrophe theory that only had a three-year life.

Q: So you think it will have a lasting impact?

A: Yes. But I don't think we have any idea of what that impact is yet. Because we have no science yet. We have the beginning stages and people are able to ask questions. It already had a lasting impact on scheduling. But that's one little tiny corner of the world.

Networks

Q: Do you think it is better to have a planned approach for networks or to let them emerge informally?

A: Better is a relative word. What is your purpose? If you as a person are after having a bunch of people that you can bounce ideas off and talk to, it's probably better if it emerges. It still will work if you try to force it a little bit. If you try to force it a lot, it won't work anyway.

On the other hand, if it's a corporate thing and you're trying to figure out who handles consumer service calls and you are using a network to pass out the calls, that can't be done informally. It has to be done formally or the calls will be just left on "hold" forever. So it depends on purpose.

Q: Do you think this also depends on environment, that if you have a pressure from the outside, e.g. you have to do something fast, then you have to have a planned approach?

A: This goes back to the purpose question, it's an externally supplied purpose. Let's flip it around. You are stuck on an airplane, there's a huge weather delay, so now there's an external force and it has kept a hundred of you on an airplane. If your purpose is to entertain yourselves for an hour, informal networking will work fine. If your purpose is to force the pilot to go back to the terminal so you can go get some food, I would suggest you try do something formal.

Q: So for research you also need a planned approach.

A: Depends on what you're trying to research. If you research networks themselves, you probably need something formal so that you actually know that you're doing it. Are you using the network in your research for support, informal might be fine. Are you trying to organise publishing the results of the research and getting the results exchanged, then it's going to be some place in between formal and informal. You're going to want to make the resources available in a formal manner and then let informal networks encourage the use of the resources. Purpose is everything.

Q: When do you think is the use of networks not advisable?

A: If you've got something that's private. And it's not ready for market yet. That's why companies do things known as being stealth mode. Stealth mode means that no one knows that they exist. They're doing their research, they're building their product. No one knows anything about them. They don't tell anyone they're there. They don't talk to their neighbours about what they're doing, they don't talk to their friends about what they're doing. It's a secret. And then when they're ready to emerge, then they start talking.

The Segway Scooter was done in stealth mode, for example. They worked on it for four years and they did not tell anyone what they were doing.

On the other hand, if you are doing something where the value in what you're doing depends on networking, then networks are great. You have to decide what the economic impacts are of what's happening. Do you want information out there or not? Do you need to control the information, do you need to control the timing of the information? Networks defy control. If you need control, a network is a bad thing.

Companies that want to do innovation, e.g. in the area of broadband communication, need networks to place a new product, because they're static. But the other issue is there's no value to what they're doing unless it's wanted by users.

Q: Should they have a planned or more an emergent network? And how can you choose the right partners within the value chain?

A: Well, you only figure out if you had the right partner in retrospect. That's no different than getting married and twenty years later you've ended up with the wrong person. And that's why in this country we have a fifty-two percent divorce rate. Most of us make a mistake. Let's take broadband as an example. 3 G has proven to be a disaster. Why? Because they can't find any reasons for user to use it. The ads in the US show people doing things like a wife trying to get her husband to come home from work by showing him some pictures of dinner. This is nonsense! So there the lack of networking with users has caused a problem. There was plenty of networking amongst the companies and the competitors to get a standard, to build the equipment, to make sure the transmission things were right. But there was no networking with users. So they came up with no compelling value. The computer industry is going through this right now. There's no reason to buy a faster computer. It won't do anything.

Again this comes back to what is the network trying to accomplish and where is the value. Networks can be very robust and they can be very fragile. And complexity studies can help in that respect. Somebody who needs a network has to observe what kind of network he's building so that he can try to reinforce the right kind. Networks are of different kinds. If you need a robust network and you're building a fragile one, you want to know that. A certain kind of network is very efficient but it's fragile. And a different kind of network is less efficient but it's very robust. The ones that have a few key nodes where they are interlinked to everything else, are very efficient. But if you shut these nodes or close them down, the whole thing falls apart. There are companies that have build networking organisations but are unaware that that's what they've built. And then they do such things as fire the person that's a critical node and wonder why their network falls apart.

A: And collective strategies can make sure that you have the right network?

Q: The right kind of network, yes. this is where the metaphor doesn't work. People go, oh, that's a network. That's not good enough. Networks come in various kinds.

A: What about a company culture?

Q: I've run an internet community for seven years now. It clearly has a culture, no different than a company culture. It has two cultures, by the way, because the culture that occurs online is not the same culture when we're at a conference and people meet in person. They've all been interacting online for five or six years now. They still behave differently in person, when they see each other in person once or twice a year. If you have an online community that has been going on for four or five years, a culture that will develop. People will develop short answers, they will start referring to things by stories and by metaphors. And all of that is evidence of culture.

There is also an identification with the network, but I wouldn't call it very strong. The only people that have very strong ones are the people who have totally isolated themselves and the only thing they identify with is this online community. For example, if you use a street every day, let's call it Main Street, you do not necessarily identify yourself as a Main Street user, although you use it every day. On the other hand, if there are construction works and you have to leave the road, in that moment, you think

about yourself as a Main Street user. You forget about it ten minutes later, but in that moment, you think about yourself as a Main Street user. And that's how a lot of these virtual things are. While you're engaged in it, or if someone asks you a question about it, then the identity pops up. But once you're away from it, then it recedes into the background.

A: Do you think that the culture makes companies more robust?

Q: It could. But it could also make them more fragile. Let's assume that the culture says that people don't get angry. Now somebody gets angry. The one event of somebody getting angry could cause the whole network to die. And I've seen that happen in more email things and more chat groups etc. than you want to count.

The problem is, that if there is forced interaction in person, if people have to keep relating you can get over a problem. You have to find a way around it. If you're not forced to relate, it's just as easy to say forget it. And online things depend very much on critical mass. So if enough people say forget it, you no longer have the critical mass of people. And the whole thing just drops dead. And online chat group that has fewer than 25 people involved, will not succeed, there's not going to be enough conversation. And again, this is something you learn from complexity studies, where the critical masses are.

General Questions

Q: What are the main future concerns of companies?

A: Survival. Will they still be around tomorrow, next week, next year. The world is in an economic turmoil and people worry if they will still be able to eat next week. When we go back to a good world economy, then we will start thinking about other things. But right now, their major concern is survival.

Q: But how can companies survive? Is this a question of robustness?

A: Robustness as an activity works on a small scale. If you are a large company and the world economy is bad, you think that the way to be robust is to gather resources to plan for the future. But your time horizon was wrong. You borrowed money that is now due and you can't buy it back. You might go out of business. If you do, three hundred thousand people will be out of work. Even in Germany this happens. It happens in the United States all the time. You can try. But the reality also is, you might get it wrong.

Q: Could networks be of help there?

A: It's not clear that anything could be helpful there. If you have made the decision to provide a product or service in an area where demand proves not to exist or to be insufficient, you're going to be in trouble. The people that made buggy webs, had no idea that there would be limited demand. On the other hand, if you stayed in the buggy web business till today, you are probably doing very well, because now it's a very specialised market and you can probably charge a lot of money with buggy webs. But at some point you probably employed three thousand people and now you employ thirty. Are you the same company? You may have the same name, but are you really the same company, is this the same identity? How does that affect your definition of robustness and adaptability. Is it the same thing that survived or has it become something different? Like the caterpillar becoming a butterfly. Is it the same animal?

Q: How will strategies look like in future?

A: Again, the most important thing is, look at the situation, look at the adjacent possibilities, figure out how you are going to survive till tomorrow and the day after tomorrow. This is the distinction between strategy and tactics. A strategy has a long-term perspective, tactics focus on immediate opportunities. If you focus on long-term things and you don't figure out the immediate, you may go bankrupt.

Long-term planning has its place. But it's a limited place. Just like corporate visions, I think, are dangerous. Most start-up companies do not fail because they don't have a good idea, but because they don't know how to manage their cash. Let's assume that you came up with a good idea for shoes. And there's a huge demand for shoes. In order to satisfy that demand, you have to put shoes in the shoe stores. You have to make the shoes, before you get paid for them. That costs money. You may go broke making shoes to satisfy demands. The shoes can sell, but until they're sold, you don't have any money. So you may go broke in the middle. Your strategy was fine, but your tactics were terrible.

Q: How will future organisational structures look like?

A: They will look like all kinds of things that they look like right now and there will be a little bit more of virtual things. And no one knows what that will be. Despite what all the academic theories say, organisations right now look no different than they looked twenty years ago. We describe them differently. But the organisations are the same.

With free-lance workers, here is a difference only with legal contracts. There were lot's of free-lance workers in companies before. The difference only concerns the legal structure.

Take for example, Joe Friday. He does a little bit of all sorts of things. I need him to do this task this week and that task the next week and that task the week after. Joe gets a salary but he is essentially free-lancing. Companies have employed lots of these people. The difference is now they don't employ them directly, they let them do their own contracting. But in terms of the work and how the work gets down, it's exactly the same. Joe is still flowing from project to project to project. The difference is that Joe has to negotiate his pay every time.

Q: If environments become more turbulent and companies are forced to set people free, who will be the shock absorber?

A: I don't really know the German labour law well enough, my assumption is that the social structure in Germany is set up some place between the Government and the employer. In the US, the normality is that the employees are supposed to look after themselves. If companies go bankrupt, it's fine, it's no big deal. That's a question of what the society thinks is okay. Americans would find the German system intolerable. And the Germans might find the American situation intolerable. It's just different attitudes.

Q: What will the role of management be like in the future?

A: Management can play a big role, if they focus on narratives and stories. This is something most managers know nothing about. What they don't realise is that stories will be told about them, about what they do. They need to pay attention to the stories. If they don't like the stories, they need to create other stories.

For example, there's a reserved parking place for the president and everyone else has to scramble. It's always raining, it's bad weather, and the president's parking slot is right besides the door. That tells one story. Now let's assume that an employee got badly hurt, but still comes to work every day. And the president sends out a memo saying "until Jane recovers, she's going to be using my parking slot". That's not telling a story.

But I guarantee that all the employees tell a story about it. There are always stories told about what the management does, not just about what they say.