“I want key decision makers to be geographers“

Joseph Kerski (im Gespräch mit Thomas Jekel)¹

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Thomas Jekel (TJ): Joseph, happy to have you around in Salzburg. You are here in two capacities – first being employed by one of the market leaders in the GIS-industry, secondly being deeply involved into national US initiatives for geography education.

With Austrian teachers, we have been discussing topics that are related to privacy, privacy in terms of spatial privacy. Think of what you did before coming here, you twittered, you have your professional networks on facebook, you sent us several links that were related to your personal interests in your spare time. I could make up a very clear picture of this Mr. Joseph Kerski, even before you arrived. What might be interesting to Austrian teachers is: How do you select what you publish online? Which part of your personality do you make public and which you don’t? What strategies do you apply?

Joseph Kerski (JK): The boundaries, as we all know, between our professional lives and our private lives have really blurred with the technologies that we have available today. Right, you’ve got students facebooking you and want to be your friend on facebook, you’ve got professionals that join your LinkedIn group and then you suddenly find out not just about their professional associations but about their children and about their hobbies. So, it’s a very interesting world, but by and large, I like the changes. They are providing us with a more complete picture of who we’re working with and allow us to choose the kinds of associations, people etc. that we wish to be associated with. As time goes on I think many of us have come to this conclusion that we like the subject matter that we’re working in, but the people that we’re working in are even more important than the subject matter.

I chose geography and education long ago, and the more time goes by the more I value the personal relationships that I have with people in our profession. It is even more important than the subject matter. When we are all retired and reflecting on our careers I think what we’ll all remember is the kinds of personal relationships we’ve had, that came about because of our professional relationships. We wouldn’t know each other if we hadn’t both done in the field of geography and GI, but I think we’ll value that even more than the fact that we’ve studied glaciers or population or hurricanes or earthquakes. That’s important, but I think the personal relationships are even more important.

I see myself as not just a professional geographer, but it’s part of who I am. Probably most of the people in the field of geography are career lifelong geographers. Even if they eventually go into solar power, or real estate they still have their geographic framework to all the things they do. That being said, it is an interesting situation when you’ve got all the social and technological networks that allow you to publish things about yourself, but I don’t see that as a problem for myself as a geographer. For example, the ArcGIS online webmap that I put up for conference included many things that wanted to do when I visited Salzburg. But also I put it up there because I thought other people at the conference and other people travelling here in the future might want to look at those places too. Everybody wants to go to the fortress, everybody wants to go to the Hallein Salt Mine, for example. I don’t see that as Joseph Kerski’s interesting places, I saw them as other people would want to visit those places also.

**TJ:** At the same time people would say that you’re under perfect control, or you might be under perfect control, because everyone knows when you are where. Everyone doing his own geography is nothing new. The only difference is that we leave quite a lot of traces, we can be followed and this is something people are anxious about. If people are anxious about this, should we simply tell students at school or at university that the concepts of privacy have changed or should we teach them how to select between private and public sphere?

**JK:** I’m working on a book right now called “The GIS guide to public domain data”, and in that book we have a whole chapter on privacy, and we have a whole chapter on the changing nature of open government. It’s an important issue. What I want students to do, what I tell students in my GIS classes at the University of Denver, for example, and in all the GIS institutes and trainings that I do for educators, is that we need to raise these issues so that students can realize that they have choices to make. That really nothing is private once they are posting anything to any network, even if it’s your own friends or your own group. How many times do we read daily that, for example, the city bank corporations files have been breached and all that information is public?

These are daily stories. Educators need to bring it up with the students, that nothing that they post is private. Therefore you need to be very careful about what you are posting and recognize that you have choices. And, as you point it out, this is, in some ways not new. The moment you used your credit card years ago, companies could track your purchases, they knew where you were, they knew what you were buying, and all that is fed into geodemographic datasets that people can, that marketing companies will buy.

**TJ:** We had a wider discussion last year that was started more or less by proud leftist geographer Bernd Belina who said we had to decide between two things. Either, training students for the military, for institutions of control, for a global jobmarket, … or education. What are the differences between training and education for you?

**JK:** When i used to work at the US Geological Survey, it was during the time when a lot of geographers and cartographers had just come over from Defense Mapping Agency, and they moved quite easily into the civilian government sector from the military government sector. Interestingly, as the civilian mapping agencies have shrunk, some of them have actually gone back to the military gov-
ernment sector. In another example I know someone that’s quite prominent in the field of cyber military geoinformatics that was a former university professor who used his skills quite well in both fields. Thinking about all the different people using GI these days, depending on our political and other ideologies we may not agree with them. But, I would like everybody that’s making key decisions – whether it’s in energy exploration, or in the military, or in the universities – to be using geographic information. I want them all to be thinking spatially, no matter what kind of decisions they’re making, because I think that the more they’re thinking spatially and using geographic tools of various kinds, the better their decisions are going to be. I want those people to be geographers.

On training versus education, I don’t draw the line in concrete. I think traditionally people have tended to sort of box things and separate them and in that way of thinking training was more for a specific task and you really wouldn’t consider the research base and the theoretical underpinnings. Education has traditionally meant you might be learning certain tasks but you also have that theoretical and research base. I like to think of all the work that we do in the field of GI as education, and not training. We’re not training you to do a buffer as the tool that you use to define proximity inside a GIS environment or actually asking you to think spatially and think about proximity – but you’re really thinking about why would you think about proximity in the first place. So, it’s really nudging towards the education side.

TJ: The book ‘Learning to Think Spatially’ has become really influential in pedagogics of geography. However, when I read it I felt that there was something missing, really. If you followed that approach you’d probably produce very good scientists, people who use the spatial approach wherever they can – even if it’s less useful for a specific topic. But it misses out on the politics of GI: all those applications that help to participate have been absent. Shouldn’t we think more in terms of citizenship and day to day life than in terms of science education?

JK: That “Learning to Think Spatially” report came out of the National Research Council. Like all reports that come out of the NRC, it’s got a heavy science bent. But I think it’s one of fifty key documents that we need, so you’re right, we need the supplementary documents. I think one of the other important things that have come out in the last 10 years is the Geospatial Technology Competency Model, linking industry and their needs with what we’re doing in education in terms of Geographic Information Science. You’ve got a whole set of competencies, not just the traditional academic disciplines computer science, geography, cartography, mathematics, history. It’s all those personal competencies below it, and all the organizational competencies above it. But we’re still in sort of the youth of the whole field, and the amount of research done in this whole field is tiny compared to what we really need.

TJ: If you think of a person who has just finished school at the age of 18, what do you consider are the main competencies that this person should have concerning GI in general?

JK: I think that the societal issues are more important, you touched on several of them earlier, the privacy, dealing with data. If we thought we had a lot of data in the last decade, it’s nothing compared to what we will have in between 2010 and 2020. We’re going to have citizens as scientists – we already do. We’re going to have a wealth of data and we need students to be able to sort out
the valuable, the documented from the other and be critical consumers of geoinformation. They need to think about privacy and issues like that, think about open records versus copyright, fee-based data versus free data etc. All those sorts of things I think are even more important than the core technologies of how to represent geographic information, of geographic analysis.

**TJ:** You’ve been visiting several GI in education conferences. What type of role do these conferences play in getting things into real world secondary education and do you have any suggestions to make these events more efficient in terms of transfer?

**JK:** I think they’re critically important. When we conducted a survey a couple of years ago on one of the chief challenges of the growth of GI in education the thing that comes up time and time again in all of these surveys is: I feel like I’m the lone trailblazer, I’m the lone person to carry the torch in my educational institution. We need to connect these people in different countries, in different educational settings.

In the future, we need to find ways of reproducing what we’re doing here online. We have to be able to do this virtually. Now we’re kind of touchy-feely human beings, right. When we like to have these face to face conversations because it’s going to be a real challenge for us to do everything virtually, we need at least get into the position where we can do a great deal of this in a virtual environment.

**TJ:** You are currently president of the National Council for Geographic Education (NCGE) in the United States. What are the main initiatives you plan to have beyond GI technology, for the next two or three years?

**JK:** The NCGE has been around since 1915. The president is only there for a year, and as a team and a network, it is only as influential as the members. When people in the NCGE or the Geographical Association or the Austrian teachers of Geography or whatever association you are talking about say: Oh, we should do that, we should do this project, we should develop these curricula pieces, they have to do it. One of the things that I’m trying to do is build bridges for them to be more effective.

I try not to have Geography sitting in a box and nobody else thinks about geography or spatial thinking. I want people to know that it’s actually embedded in history, and technology, and science, biology, environmental studies et cetera. The second thing – I’m trying to position us in important project applications for educational policy. We are right now with a grant that the National Science Foundation funded on defining core documents on geographic literacy. What does it mean to be geographically literate, who and why should we care? We’re a part of that. The third area of activity, though is technology, I’m trying to nudge those geography educators into embracing some other things that we’re talking about here, web-GIS, GPS, Remote Sensing, and trying to incorporate spatial analysis into their curricula.

**TJ:** What would the ideal geography course at secondary school look like in 2020, if you had your say?
JK: I would spend a good third of the time in the field. That’s what we already did, but now it’s so rare, due to the costs and other considerations, so we can’t have those students getting hurt now, we can’t be out on cliffs... I would be in the field, I would have in the field technology – geotechnologies and social media. I would lay heavy emphasis on analysis, we can’t just be plotting our field course as dots on a map and say: Great, ok, next. We have to be analyzing, that’s one of our strengths, and students have to be working with data. We have to have students knowledgeable about what’s good data from data that’s not good. How do I deal with errors, how do I deal with uncertainty?

The geographic content, how do cyclones generate, how do they sustain themselves, what are the processes in weathering, what are the processes in climate change, those core concepts have to be taught, as well.

TJ: Joseph, thank you for the interview.