

THE GEODESIGN METHOD: an interview with Carl Steinitz¹

O MÉTODO DO GEODESIGN: uma entrevista com Carl Steinitz

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Recebido para avaliação em 28/06/2020; Aceito para publicação em 26/12/2020.

ABSTRACT

Carl Steinitz, professor emeritus of Harvard, debates in this interview about his academic and professional route related to the application of collaborative design and the importance of applying the Geodesign method. It highlights a consideration of the role of the university, the precision dilemma in territorial planning, the need for training more professionals and the possibilities of Geographic Information System (GIS) tools available for use in conflict mediation such as Geodesignhub. The English-language interview took place in Florianópolis (Brazil) on the Geodesign South America meeting in December 2019. The transcribed version in English and a translation to Portuguese are presented by the interview's authors.

Keywords: Geodesign; GIS; Collaborative Design; Geodesignhub.

RESUMO

Nesta entrevista, Carl Steinitz, professor emérito de Harvard, fala sobre sua trajetória acadêmica e profissional com relação à aplicação de projetos colaborativos e a importância da aplicação do método do Geodesign. Destaca-se, uma reflexão sobre o papel da universidade, o valor da precisão no planejamento territorial, a necessidade de capacitação de profissionais e a possibilidade de utilização de ferramentas de Sistemas de Informação Geográficas (SIG) para mediação de conflitos, como o Geodesignhub. A entrevista em língua inglesa se deu em Florianópolis, por ocasião da realização do evento Geodesign South America em dezembro de 2019. São apresentadas, a versão transcrita em inglês e a tradução da entrevista pelos autores.

Palavras-chave: Geodesign; SIG; Projeto Colaborativo; Geodesignhub.

RESUMEN

En esta entrevista, Carl Steinitz, profesor emérito de Harvard, habla sobre su trayectoria académica y profesional con respecto a la aplicación de proyectos colaborativos y la importancia de aplicar el método Geodesign. Vale la pena destacar una reflexión sobre el papel de la universidad, el valor de

¹ The interview was conducted during the Geodesign South America 2019, which was financed by the Foundation for the Support of Research and Innovation of the State of Santa Catarina [FAPESC].

la precisión en la planificación territorial, la necesidad de capacitar a los profesionales y las posibilidades de utilización de herramientas de los Sistemas de Información Geográfica (SIG) disponibles para la mediación de conflictos como Geodesignhub. La entrevista sucedió en Florianópolis (Brasil) en el congreso Geodesign South America en diciembre de 2019. Los autores de la entrevista presentan la versión transcrita en inglés y una traducción al portugués.

Palabras clave: Geodesign; SIG; Proyecto Colaborativo; Geodesignhub.

INTRODUCTION

Professor Carl Steinitz is an emeritus of Harvard teaching the disciplines of Landscape Architecture and Planning at the School of Design since 1973. He completed his Ph.D. in 1967 and holds a Master's in Urban Design at the Massachusetts Institute of Technology (MIT). Steinitz has a career dedicated to developing methods for analyzing large-scale projects and idealized the concept of Geodesign as a tool applied to decision making. Geodesign is applied on mediation of conflicts in environmental preservation and urban development projects. Steinitz is considered one of the pioneers and propellers of a generation of inventors in the field of Geographic Information Systems (GIS) and is the author of the book “A Framework for Geodesign”. He coordinated the International Geodesign Collaboration (IGC), which aims to spread the Geodesign method through workshops, already held in more than 170 universities worldwide. This interview took place on the Latin American edition of the event called Geodesign South America in December 2019 at the State University of Santa Catarina, Florianópolis (Brazil). The document is divided into two parts: in the first, the translation into Portuguese followed by the interview's transcription in English.

Interviewer 1 (Alessandra): *This interview is expected to take no longer than 30 minutes. We are going to ask you some questions about the field of Geodesign. Thank you very much for your time.*

Interviewer 2 (Wellington): *We are here with Professor Steinitz on an interview about the role of Geodesign in the XXIth century. Can you tell us about the beginning of Geodesign? Is there any specific moment or work that inaugurates its use or can be considered its origin?*

Carl Steinitz (CS): I started to teach at University level in my own way in 1965, and before then as a student at both Cornell University and as an architect at the Architecture Association in London as an architect with some urban design, and at MIT as an urban designer and then as an urban planning and regional planning as a graduate student, I decided when I finished and I went to Harvard as an assistant that I would teach large

projects and the reason for this is because my teacher was Kevin Lynch at Harvard and he was the famous author of the famous book *Image of the City*, but he wrote other books that were very important such as *What time is this place?* And a book about regions... He believed - and I believe - that projects that are larger than a single client or a single property are also design problems, and he never made a distinction between planning and engineering and architecture/urban design, but he saw the world the way Herbert Simon saw the world: design meaning *change by intention* rather than as a product. Later, many years later, I wrote a paper called *Design as a verb, design as a noun* and he taught me and put me into situations where design is a verb became very important: the method of the design. The first project that we did was to put half million people in the suburban area of Washington DC as a design problem, using the language of *Image of the City* as the design language, and I taught this was really interesting and much more important than building buildings, which I had done from my architecture work, and so I decided when I started to teach that I would teach big problems in a collaborative manner. And the first project was also the first project ever done as a design problem using computers in 1965.

Interviewer 1 (Alessandra): *In Washington?*

Carl Steinitz (CS): In Washington, in Delmarva peninsula, its published, and I've written a paper on the history of Geodesign, and I've written a paper of the history of GIS because the earliest studies that applied GIS to planning were done by my students and me at Harvard, because I was one of the first three people on the very first laboratory for computer graphics on spatial analysis. And from that point on, alone in the school, I would teach collaborative studios. About 10 years later, when I was already a professor, I started to control a semester not legally but effectively. So, I would teach my theory and method course of landscape planning in the morning, and then in the afternoon, the students would be doing the work on an applied project and the technics that we had started to develop for spatial analysis system planning. And I did that for many years. So, that was in the fall semester, and then some of those students would work with me in the spring semester with other students from other departments on a multidisciplinary big project, but they had to have one design coming out at the far end. The question then became year after year: *How do you make one design from each person making some pieces of some designs?* And I had some very important students. Many important students, one of them in the late '60s was Jack Dangermond, who founded the ESRI Company, who owns the ESRI Company. And for years and years, he would tell me: *When you are going to write a book about your work?* And at some point, in 2011, I decided to stop teaching students and seriously decided to start teaching teachers, because most people don't know how to teach collaborative design

and the students are in a collaborative problem but it's a horrible experience for most students. And I have done that for fifty years! So, I basically took my lecture notes, and I don't write, I dictate, and I dictated the book *A framework for Geodesign* and it was made in a mouth, and Jack's Company published the book because he is a friend of mine and many people have now translated it. It's in Japanese, in Chinese, in Portuguese, in Spanish, and also Italian that Michele [Campagna] translated into Italian. But that book is called Geodesign because a few years before Jack and others had a conference at Santa Barbara on Geodesign because the word had been invented in the 1990s. I didn't invent but I taught it was a very good word to describe the design of Geography, so I said "it's Geodesign", and my book was the first book that dealt with it as a method, not as a product but it's a method, as process and then when.... I've had done many workshops analogically not digitally using plastic and magic markers but mimicking how computer uses data. When Fukushima happened, when the disaster in Japan happened with the Tsunami, one of my former students was one of the most important landscape planners in Japan. She was the professor at Tokyo University, and she called "Tes" [Teresa L. Canfield] and me to come to Japan. So we were in Japan soon after the Tsunami, and we gave a workshop with Japanese friends, Japanese colleagues who I've talked with many times, and then when I come back to London to University College where I was an honored professor I gave a lecture about this, and a young man came to me and said: My name is Hrishikesh Ballal, I'm an engineer and I think you could do this digitally, and I've turned to him and said "I taught this 50 years ago" and then he started to talk to me and I talked to him about what are the steps, what are the tasks going from *no design* to *one design*. He is a brilliant software engineer working for Microsoft from a doctoral student and within 3 months he had the first version of *Geodesignhub* and we went back to Japan and we tested in another workshop and it became very clear that this is a workable system and in the subsequent years, Hrishikesh who owns the software in his company, it's not mine! He has improved and improved with lots of people helping him and things like this and now there are other people making some similar technologies, but the basic ideas come back to the experience of *how do you actually structure the teaching of a complicated multidisciplinary long-term problem?* And that's based, for me it's based on my experience starting in 1964 or 1965, but working with people like Michele [Campagna] or fifty other people, everybody twist a little bit, we learn a little bit, we talk a little bit, the software moves a little bit and now there are various themes in which is being used and I think that I have done, probably, I've lectured and done workshops on 179 universities, it's a lot of universities and a lot of workshops, and they are all different and some ways and they are all similar some other ways. And so, I am

experienced, I'm an old person, but I can feel for my experience when to make a move, when to intervene, when to do something new because something else is happening. So, it's not a formula, it's not one way of working, it is not one piece of software, but it's a *style of working*, and it has different rules. It's not your work is your work, and it is private, it's your work is our work and if your work is good, we'll take it, thank you very much! It's "I don't know, I have to ask you because you know more about hydrology than me", and if you say something intelligent, I say yeah, that's right and I will take into my design. And the sociology works really different, is *the sociology of making a design*, and the reason the sociology is different because the project is big, and it's complicated, and it's serious, and it's dynamic, and it's not let just make the sketch and build the house. No, that's not how it works! Because it's much more important and it's reasonably but not totally democratic. And it has to be managed because it is not anarchy, it's not anarchy, and I have done that for 60 years. I have done that for 60 years and now there are 50 people in the world who can do it, and we need 3000 people in the world who can do it. And the only way to do that is to teach the students, and forget the faculty, skip the faculty. It's really important... A friend of mine who was my doctoral student many years ago, he's the dean at the University of Beijing, at Peking University, and he and I once had lunch ten years ago, and I turned to him and said: *How many people do we need to do Geodesign?* You write a number on the piece of paper and I'll write a number and we'll see if we'll agree with it. I wrote ten thousand and he made the Chinese thing and I showed him my number ten thousand and he showed me his thing [Chinese anagram] and I said: *What is that?* He said ten thousand. I said: *Do we agree?* He said yes. Then I told the story to a colleague of mine, Stephen M. Ervin at Harvard and I said, "I said ten thousand and he said ten thousand", and Steven who knows Chinese he looked at me and said: No! The character in Chinese means many! All he was doing was being polite. You put down a number, he put down and many put it down.

Interviewer 1 (Alessandra): *Ten thousand is great!*

Carl Steinitz (CS): But ten thousand is about right if you look at a number of political divisions. *How many states does Brazil have?*

Interviewer 1 (Alessandra): 26

Carl Steinitz (CS): How many are the average number of municipalities in the state?

Interviewer 1 (Alessandra): *Oh! It varies a lot!*

Carl Steinitz (CS): Well, pick an average or count them. Google will know the number. May be fifty?

Interviewer 1 (Alessandra): *There are more municipalities. Maybe a hundred.*

Carl Steinitz (CS): Let's make a hundred. So, a hundred times twenty-some other states, it's two thousand people for Brazil. How many do you think about China? Five thousand. How many do you think about Russia? Two thousand. For America? Three thousand. There is maybe a number like twenty thousand. Let others alone. So, here we did a project today for one of the hundred in let's say, one of the hundred in Santa Catarina. How many groups are like that in Santa Catarina? May be ten? I don't know. But the same process we went with them could be in any municipality and so supposing that you did one a year or advice to one a year, so, how many people do we need in Santa Catarina? Where are they? And they are not professors? They are ten professors? But if each one has ten students that are capable in five years, you'd have fifty people. That's what we need to do.

Interviewer 1 (Alessandra): *Thinking about other Spatial Analysis methods, what are the major differences between Geodesign and them?*

Carl Steinitz (CS): The others are more precise, more accurate and in the long term more wrong.

Interviewer 1 (Alessandra): *Because it's...*

Carl Steinitz (CS): There is a theorem: *The more precise it is, the more right it is today and the more wrong it is in the future*, especially, if the primary conditions influencing the precision change.

Interviewer 1 (Alessandra): *yes!*

Carl Steinitz (CS): If you build a traffic model and, all of a sudden, the car radically changes the way they behave, the model is wrong. If somebody builds a new highway, the model is wrong. Keep that in mind: *You can always update but sometimes the fundamentals change, and I believe that we are in a world with an economic and technical climate where fundamentals that are going to be changing*. Let's make a diagram likely to be right but not precise like you saw in the workshop this morning. The people, the indigenous people said: Let's build a large diagram for housing. That diagram is twenty times bigger than the housing should be. What is the diagram saying? The diagram doesn't say: Build housing precisely here! It says: Build somewhere in here [pointing out probabilities of use]. And it could be this, this, or this but it is not this! So that diagram has probably life for thirty or fifty years. But this decision in this precision doesn't because it could be this [pointing out probabilities of use]. And this

is wrong if this happens, and this is wrong if this happens and this is still right. So, you are dealing with strategy, you want to be right. If you are dealing with tactics, they come later. So, to me, *the precision is not the beginning, it's the end!*

Interviewer 1 (Alessandra): *Hum. So, we can say Geodesign is more appropriated than the others in this case when considering long term analysis?*

Carl Steinitz (CS): And the beginning, and the very beginning of the strategy, I said that in my lecture: *Geodesign is best at the very beginning of thinking about the strategy and then you'll need other technics.*

Interviewer 1 (Alessandra): *yes.*

Carl Steinitz (CS): You may still use Geodesign but other greater levels of detail and the more knowing what you are doing and knowing why you are doing something and then where and when.

Interviewer 2 (Wellington): *The third question is: Is Geodesign mostly applied in academic projects? Is there any recommendation or procedures to teach it on academia?*

Carl Steinitz (CS): You are asking me two questions. It's fine!

Interviewer 2 (Wellington): *What about the public sector?*

Carl Steinitz (CS): Fine! Fine! Very good! In the projects that we have in the book in the first year of collaboration, we have projects that were done in academic totally, we had projects done outside the academic totally, and we have projects that "Tes" [Teresa L. Canfield] and I have run with no professionals at all! If only "people", and Ana Clara [Ana Clara Mourão] yesterday, on the first night, in part of my lecture, showed one in which 14 to 16 years old in a favela in Brazil did it with nobody else and you saw a project in the gaming where Geodesign was done in Minecraft (not exactly the way we would do in the workshop), but it was done by 6 to 12 years old. The most interesting examples are "Tes" and I ran a project that's on YouTube into a village in Ireland where the people did it themselves, and the second example of the people doing themselves was Ana Clara's project in the favela. The best project that I've done with real professionals was in Sydney (Australia) and that it's published. That is a paper that you can find the paper if you come to me after I give the citation with the planners of Sydney where the people making the plan for doubling the population for a part of Sydney and the second example is the workshop that Michele [Campagna] run, ran and is running now after we've done two workshops with Michele [Campagna] in Cagliari. But he is still running workshops for the metropolitan area with separate municipalities as teams in a collaborative workshop. With

Brian, I did a workshop and “Tes”, on the coastal zone of Georgia on each of 10 counties had their own team and we were merging and negotiating between the 10 counties. No academic at all! But university people running the process as I’ve said that this morning. I said that the role of the university is not to solve the problem but to *ask the questions that allow other people to solve the problem and set the framework for that*. And afterward, that is now being done and we’re proud of that. We are proud that it is not only one but now you’ve asked me a question that has a second question if it is academic? And if it is taught! I can say two things: One, I think that my book is very useful, it’s my lecture notes and I think that it’s now another language and people should use it as a textbook, step by step going through it because there are no answers in this book but only questions.

Interviewer 1 (Alessandra): *It’s a guide.*

Carl Steinitz (CS): But the second is: you have to have the experience of the workshop, not because of the technology but because of the experience of meeting with other people and having to talk them quietly and listening to them, and asking them questions and making the changes in your own mind that you think will going to be better. I’m very prepositive in teaching, I always ask at the end: *Do you think this design is better than the first one?* And everybody says yes! *And do you think the third one is better than the second?* Everybody says yes. *Why?* Because it is better, and they are smart enough to realize it and they asked themselves: *Why did that happen?* It’s because I was quiet, I was not yelling, I was asking a question, I was listening to the answer, I was thinking about it, I was debating about it, I was asking other people their opinion and maybe that’s what should happen into the design. It seems to me that *the combination of talking about it and the lecture seminar environment and then doing it but doing it slowly and it has not to be fast*. There’s no experience: It can’t be a lecture and it can’t just be a workshop because every workshop is different but the combination of that building an experience. That’s a way to learn!

Interviewer 1 (Alessandra): *Is there any context of application that you consider Geodesign has a better performance?*

Carl Steinitz (CS): No. I think that some problems are more difficult and that some problems have more importance. So, I think that the world is in such state now that the bigger problems of twenty, to thirty, to forty or to fifty-year time arisen are more important than a private house, the shopping center, the housing project, and I think that those are projects that our students regardless of professional or science should be thinking about. I think that you should be thinking about the future of the Southern part of Brazil, not tomorrow morning or the next building will be in Florianópolis. And, if you realize what

you know is not enough, you'll need to find the people in the university who know what you don't know and figure out a way to work with them whether it is this way or another way, this software or another software or no software at all and do it. If the university doesn't support that, the university is wrong and I discussed this with the rector of this university [UDESC] for a few minutes yesterday and I hope to talk to him more moreover on the next week, but the University system which is this way [vertical approach] has to go this way [horizontal approach]. Not only because this [vertical approach] is important, but the absence of this [horizontal approach] is a disaster.

Interviewer 1 (Alessandra): *Hum.*

Carl Steinitz (CS): Let me add something to the previous question: in collaboration, the smallest project was a half kilometer square, and it was downtown of Los Angeles, thirty years from now, the biggest problem was the Nile Delta doubling Cairo but when Cairo doubles every new house in Cairo removes agricultural land. So: *How do you double a city of 25 million without destroying your agricultural capability?* The answer is: You have to build in the desert! *How do you do that?* That was the largest project but as you saw on Brian's [Brian Orland] presentation some of us really think that we need some global spatial design alternatives. *How do you do that?* When you think that are ways to that and we hope in my lifetime, we'll be able to do it.

Interviewer 2 (Wellington): *Can you describe an experience you've had applying Geodesign that can be considered one very successful case?*

Carl Steinitz (CS): The one today [The workshop with Lâklanô indigenous and the reservoir of the dam created as a flood solution]. The one today, when you had indigenous people on a very complicated and very difficult problem starting out as distant observers and today coming in, taking over the project and leaving happy. That the project produces something that they think is a very good idea.

Interviewer 1 (Alessandra): *Do you think this has to do with the technology?*

Carl Steinitz (CS): Not at all! It has to do with the technology being able to work fast, easily, been understood, be transparent... There are no secrets, but it's also the people who are in a position to talk quietly, to ask, to listen and to make decisions. It's a mixture and it's not a *technological process*, it's a *thinking-doing-being process* supported by technology. I could do this with a pencil and paper or plastic and I've done it that many times. The technology makes it easier at some point; the technology could make it harder because it becomes more... When I talk to technology people, I always remember the story of the sewing

machine. It was invented a hundred years ago or a hundred and twenty years ago and that time it could do 3 things: this, this, and this [a gesture of sewing machine sewing] and by 1900, it was invented a Singer sewing machine and that was a company, a big company, a major company, American. And by 1950, the machine can do three hundred things and it was very expensive. After, the Japanese company Brother put out a machine that could do ten things and it was half the cost. But that ten things were the things people had to do, and so the people bought that machine, and the Singer Company was out of business because it got too complicated, too difficult to learn and held all the costs that nobody needs it, and nobody wanted because *it was too precise*. It would take one step like this, one like this, one like this, one like.... And most people just do this [showing an easy way the sewing machine works]. So, precision killed the company because it got too complicated. And that was really simple software [pointing out to Geodesignhub] and it does really simple diagrams but that's exactly what you need at the beginning of thinking. It doesn't work for details, it's not supposed to work for details but it works really well for complicated strategy. Well, there is a lesson; there is a lesson out there. If we had, how many people? Thirty people working on that, they'll learn in twenty minutes. Today, they are able to make diagrams in a real-time process of design. We made five, six, eight new diagrams this morning during the negotiation and it came in, you saw that? This morning...Well, try that with most software. So, this is a design for that kind of sociology, and it works, it works really well. It's being used two hundred times and I've had difficulty once or twice because of the problem, the people, the circumstances, but most of the time it works very well. You just need to be in charge of the *management of sociology*. It's not anarchy and it can't work that way!

Interviewer 1 (Alessandra): *Are there any common challenges in Geodesign processes? What about participation?*

Carl Steinitz (CS): Sure. There are a lot of challenges.

Interviewer 1 (Alessandra): *Is it about participation?*

Carl Steinitz (CS): There are always questions about participation. The question of who participates and makes a design is fundamental and it's a problem in any technology in any circumstance, any! It means that somebody is making the decision which influences somebody else and that person isn't in the process. Now, there are people using technology to think about exactly that problem. The best example is Helsinki [Finland] that I know where every citizen is linked into the Planning Department. That's a very interesting question: *Should you crowdsource plan?* In my opinion, maybe not! Because most

people think short term and not long term and there are projects that must hurt some people. Look at the project today, [Lâklanõ and damn issue] you had a damn, and it was put into the indigenous land, why? Because the indigenous people were less powerful than the people outside [the indigenous land]. But supposing that are no people, no indigenous people, they may pick that site anyway: Somebody in this farm would have been there, that person lost. Everybody there, downstream, gained. I don't know any project that I've been where the best design for most people didn't hurt somebody. So, this idea of who participates is really important. That's why the people who might be hurt have to be participants and their voices have to be heard. It doesn't mean that they win but not listen is wrong. For those on the size of the project that we do with, that is normal. We all have that problem; all of us have that problem. It is not a function of technology. It's a simple problem of the fact: It's human society! Alright? So, it's a good question but the answer is: Yes, we have that problem. So, you do the best you can by defining the ideas but when I speak about that Geodesign is best for contentious problems. The word contentious means argument, an argument problem. In the problem, the contentiousness of the argument is built in. There is always contentious! And the answer is: Can't you find the solution where everybody wins enough, and everybody loses a little bit? Sometimes you can, sometimes you cannot, there are no guarantees but it's not a function of the technology; it's a function of the circumstance and *Are there perfect problems?* Never! These are complicated problems in which some people and some places lose and most hopefully win. That is the best I can do, that's the reality of human life in complex places.

Interviewer 2 (Wellington): *Our GEOLAB over there [point to the lab] is developing important research in the field of cadaster. Professor "Chico" [Francisco de Oliveira] made that question. Can you talk about the interface of Geodesign with cadaster?*

Carl Steinitz (CS): I absolutely can. Geodesign is not based on a cadaster database but influences and impacts on a cadaster database. At some point, you must have a cadaster database if you want to manage land, manage meaning ownership, cells, uses, etc. Because the idea of polygons of property is universalized here, but the rights to its changes in some countries, the government owns what is below and what's above and, in some countries, the private person owns what is below and some are public, or some land is private in most countries. But what Geodesign is doing it can technically; you can put the cadaster map as the base map of a Geodesign. That's really easy! That's an API [Application Programming Interface], we know how to do that, we do that but the thinking except for public versus private land, the thinking doesn't do that. The thinking normally says: Around here is where this will happen, then, later on, we'll say well who owns this land, what do they

think, etc. and maybe it goes back and forward. But this, the thinking, it is not based on the cadaster. The cadaster is more toward the implementation of whatever you are thinking.

Interviewer 1 (Alessandra): *It doesn't have to do with the masterplan when you...*

Carl Steinitz (CS): When you call down to properties and laws then you must think about the cadaster.

Interviewer 2 (Wellington): *May we change the way we make cadaster with Geodesign or not?*

Carl Steinitz (CS): That's a very interesting question. Let me give you an example: I have a friend who is designing a cadaster system for a part of Nigeria and he has done the cadasters systems all over the world. It doesn't mean that the people in that part of Nigeria don't plan and it doesn't mean that they don't have a planning strategy, they do. And it doesn't mean that people don't know where their ownership lays which is traditional and it doesn't mean that they don't have a chief who says what a young person, the son of her, you have your own family and you'll have this piece of land and it will come yours. It doesn't mean that at all. But if the government there wants to have a market, a financial market in land or other kinds of policies that needs a cadaster system it needs to know who owns the land and who is responsible. And as you saw in one of the Lectures here at this Conference, that's a very complicated problem because people can disagree. So, it's much better if you have a Geodesign attitude and you can end up a cadaster map, but it doesn't mean you have to, because you can still work with them. Let's assume that our colleagues in the indigenous territory don't have a cadaster system, let's assume they don't. It still means that the leadership can decide with the community who can farm where and who can do the house where or where not to build the house. And for that, this exercise that says: We are going to do it around here, but we are not going to do around here [gestures showing different locations of housing schemes]. That's very useful and they have it in their heads, not necessarily in a cadaster map. They can say: From this tree to that stone is yours and from that stone to that stream is his. Ok, that's a cadaster but it is not on a computer.

Interviewer 1 (Alessandra): *Which place including countries or regions, are applying Geodesign the most until now?*

Carl Steinitz (CS): Which real places?

Interviewer 1 (Alessandra): *yes.*

Carl Steinitz (CS): Belo Horizonte, Sydney (Australia)... Belo Horizonte is the largest state [actually BH is a municipality] and Sydney is the largest city.

Interviewer 1 (Alessandra): *And how is the Latin American experience? How do you see this?*

Carl Steinitz (CS): I see this very well but not enough. The most advanced is where Ana Clara is in Belo Horizonte, and there the government really does work with it and she has taught most of the people and that's another good factor. The second most, currently, well now it might be here, but Sao Paulo. Paulo Pellegrino was working with me twenty-five years ago, he's a professor at the University of Sao Paulo [USP] and he has done one big project in Sao Paulo. This one here is probably the third but there are several, there are four, five, six, eighteen at least in Belo Horizonte.

Interviewer 1 (Alessandra): *There are other countries in Latin America?*

Carl Steinitz (CS): Yes. A large project in Venezuela, in Caracas through the University of Simon Bolivar and Argentina with Damián [Pérez], at the Agricultural University in Buenos Aires, has done a very large project and those are the ones. They are about, in the collaboration, there are one, two, three projects but there is nothing from Colombia, Ecuador, Peru, Chile, the Guianas, Uruguay or somebody from this Conference that are from Uruguay and I hope that she does something.

Interviewer 1 (Alessandra): *And Argentina?*

Carl Steinitz (CS): In Argentina, we have a Damián [Pérez] at the University of Buenos Aires.

Interviewer 1 (Alessandra): *Do you see any conductor factors that explain how it happened?*

Carl Steinitz (CS): Yes, I do. That the universities in Latin America are incredibly threatened by cuts in the budget and the politics of their country. The reason that you don't have many people. I had eleven countries in the first Geodesign Conference from South America, and they are not here. Why aren't they here? They are not here because they don't have the money to travel. It's a disaster in the South American academic system, a real disaster! And how do you overcome this? You overcome this by videotaping and sending videotapes and you overcome this by translating the book and making it free which everybody will get copies in Spanish or Portuguese and you'll see what you can do. You can cry about it, but you just have to keep pushing.

Interviewer 1 (Alessandra): *Yes. And the last question is...*

Interviewer 2 (Wellington): *The last question is: How do you see the future of Geodesign?*

Carl Steinitz (CS): Well. Let me say this: I think it is useful. I think the word robustness is important... I think it's robust! The range of things which we've demonstrated is big,

broad, and useful and if in the next couple of years, we can spread that, people will realize so I am optimistic. I am pessimistic about the stupidity of politics. So, on the one hand, I think we'll become increasingly impossible to do something, increasingly less possible to be willing to do something except another group will be saying: You must do something! So, if those intersect and the "must do something" win then these tools will be the tools that will be the most important. That's what I think and that's what I hope but I think that the next three to four years will be critical. Not after the belief of it will be in one way or another, it'll be: "maybe helping", "maybe too late" or "maybe quitting down" and the things will fall apart.

Interviewer 2 (Wellington): *Why?*

Carl Steinitz (CS): Because human beings and climate will intersect at the point where billions of people will be influenced negatively. Billions! Everybody! And the governments are not willing to the things that they have to do, in part, because they don't know what they should do. I take it very seriously and it's much more important than tomorrow mornings. It's much more important for most people than tomorrow morning's design decisions. For some people, tomorrow's morning is more important because they are starving.

Interviewer 1 (Alessandra): *Yes.*

Carl Steinitz (CS): And that's something, that over centuries, universities had led and not followed but led! So, I think that the universities even if they are products of the state, your university is a product of the state, but they can follow the state and they have to lead the state. That's my point of view.

Interviewer 1 (Alessandra): *Yes.*

Carl Steinitz (CS): And that is something the universities over centuries have led, I think the universities, even they are product of the state and they can't follow the state, they have to lead the state. That's my view. And even if it's illegal, they should be doing things across the faculty and the barriers are not the students. I've been in many universities and the students understand it, some of the students understand it, and very frequently the absolute upper leadership understands it. And everybody in their own field thinking the detail and going down in detail is an important thing whereas this is ignored, but I think it's important but not enough and this can't work alone but this has to be able to work together. And if the university doesn't do that the institution will not be supporting the people and they'll probably face problems that they have no way of being thinking about

solutions. And that's a disaster, frankly, not for me because I'll not be here but for your generation. In twenty years, you'll be in charge and the question is: *What are we learning now to let you be in charge twenty years from now?* And that's really important.

Interviewer 1 (Alessandra): *So, thank you very much. Do you like to add anything?*

Carl Steinitz (CS): No, I think you've asked me good questions and I've tried to give you whatever you think. Thank you very much.

[Applause]



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