

PHOTO: SAM RENTMEESTER/PANAX

# ‘I don’t need power, but I do want influence’

As a small child, Salomon ‘Salle’ Kroonenberg was unable to choose between languages or voyages of discovery.

As professor emeritus he now writes and talks about what he sees and thinks.

On 19 March 2010, he bade farewell to TU Delft.

JOS WASSINK

One side of the corridor in the Civil Engineering and Geosciences faculty building is covered with an enormous map of the world. On the other side hangs a row of photographs depicting mountains, ice floes and deserts, salt flats and marshlands. Salle has been on a trip. A large box, stuffed full of rolled-up maps, stands in the corner of his room. Beside the box is a crooked pile of compartmentalised wooden trays, each containing stones of various compositions and sizes, together with small pieces of paper bearing handwritten text.

## Who is Salomon Kroonenberg?

Salomon Kroonenberg is best known as a climate sceptic, although he prefers the term ‘climate relativist’. His award-winning book, *The Human Scale*, has sold 25,000 copies since it was published in 2006.

Salomon Kroonenberg was Professor of Geology at the Faculty of Civil Engineering and Geosciences from 1996 until 1 September 2009. He held the post of Professor of Geology and Mineralogy at Wageningen University from 1982 to 1996. From 1979–1982 he lectured in remote sensing at the University of Bogota in Colombia. Prior to that (1978–1979) he taught physical geography at the University College of Swaziland, and from 1972–1978 he was employed by the Geological and Mining Service of Surinam as a petroleum geologist. Salomon Bernard ‘Salle’ Kroonenberg was born in Leiden on 13 March 1947, and attended grammar school (science-based, pre-university stream) at Middelburg. He studied geology at the University of Amsterdam (1965–1971), and obtained a PhD in 1976.

## How many languages do you speak?

“That rather depends on what you include, but let’s say around ten. These include Spanish, Italian and Russian – I have just been awarded an honorary professorship from Moscow State University. That is my ‘sideline career’. There came a time when I was forced to choose between languages and geology.”

## So why did you opt for geology? Because of the travelling?

“That certainly had something to do with it. One of my uncles was a biologist. He collected crabs, lobsters, shrimps and woodlice from all over the world. I was keen to accompany him on his travels, but nothing ever came of it. He sent me envelopes covered with stamps. In those days, that was my way of giving structure to the world. He also brought me stones from America, stimulating my interest from an early age. I was given his geology textbook.”

## Is that how it started?

“Yes. When I was ten I used to visit my grandmother in Leiden, but I would also call in at the National Museum of Geology and Mineralogy, which was situated on the Garenmarkt. I thought that the minerals were quite beautiful – geometric figures shaped by nature. These beautiful crystals, and King Willem the First’s smoky topaz. I’ve always been fascinated by minerals, more so than by fossils in fact. I love their geometry and structure.”

## You set out on a voyage of discovery, like a latter-day 19th century scientist.

“I left after graduating in Amsterdam. I wasn’t the least bit interested in doing a PhD

– I just wanted to go! Then I got that job at the geological service in Suriname, and still managed to get a PhD, on the basis of my work there.”

## What did that job entail?

“I drew up most of the southwest quadrant of the map of Suriname, partly based on information that was already available. We also travelled into Suriname’s uninhabited interior with koraal boats and hammocks.”

## Do people still do this sort of work, or has every part of the world now been mapped?

“Not any more, actually, aside from specific exploration. These days, for example, people are exploring for gold. But there is no more map-making to be done.”

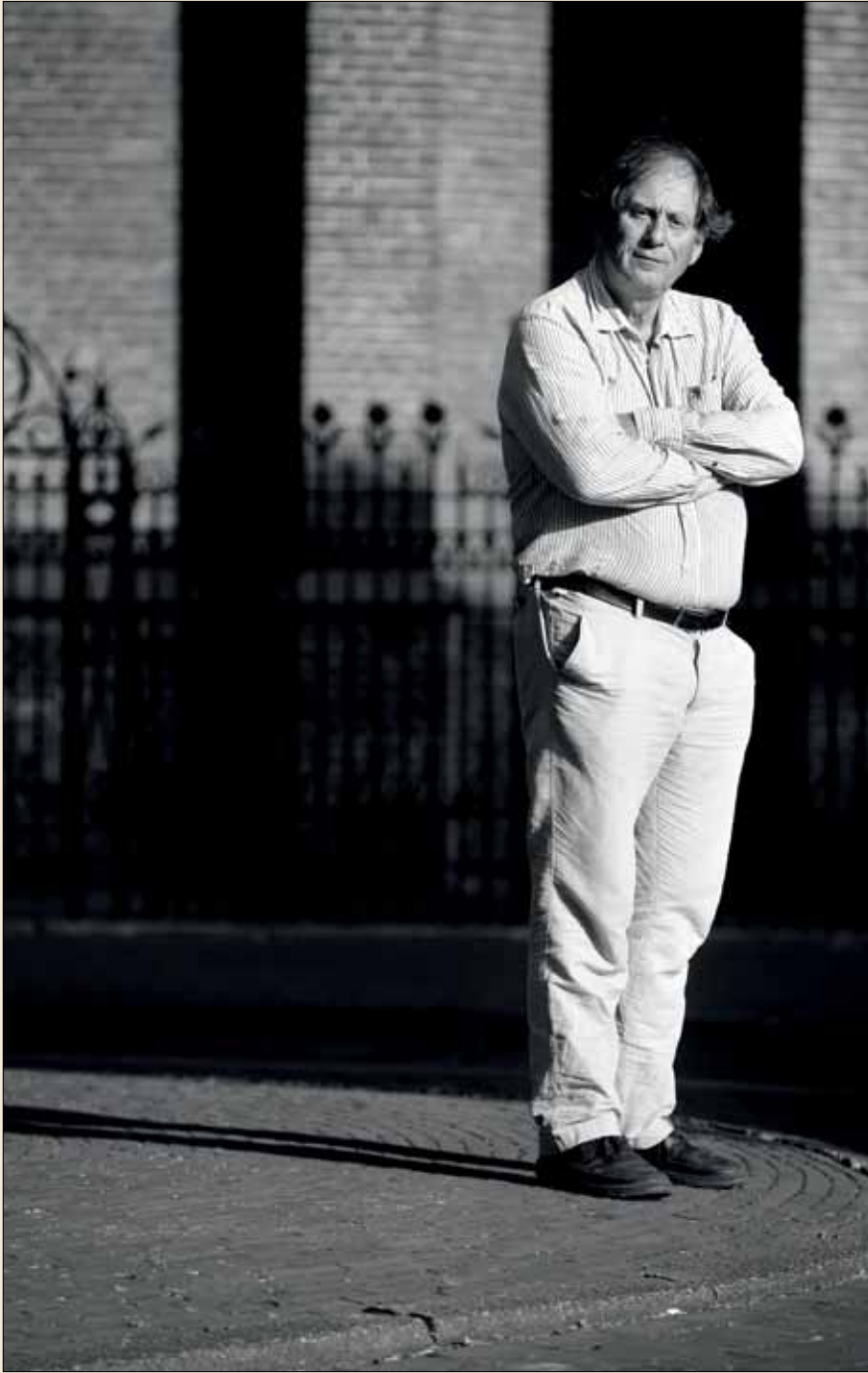
## Three-quarters of your book, ‘De menselijke maat’ (*The Human Scale*) deals with geology, yet it is widely seen as a statement about the climate. Was that your intention?

“It was the climate debate that prompted me to put pen to paper. The debate about the hockey stick curve [a temperature curve which also shows a controversial warm period in the Middle Ages, ed.] started in 2001, so that was already under way. The book is about geological time, not the climate. Nevertheless, the climate debate was a useful way of giving people a feeling for geological time. Many of those who read my book now know the climate is constantly changing.”

## By publishing this book you have acquired a reputation as a climate sceptic. Was that the intention?

“No. Moreover, the term had not yet been invented. Al Gore’s film brought matters to a head. It turned climate change into a

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*‘It is absurd to dispose of CO<sub>2</sub>  
by pumping it into the ground’*

global issue, with supporters and opponents. From then on people referred to me as a climate sceptic, although I prefer the term ‘climate relativist’. This is because while I’m convinced that the climate is changing, I doubt that we humans are currently the main cause.”

*In your view, are claims that mankind has destabilised the climate based on an overestimation of our importance?*

“You can say that we have released more CO<sub>2</sub> into the atmosphere than it has contained for ages past. That’s quite right, there is no denying it. However, is this really triggering a response from nature? The big problem is that there are numerous feedbacks. How do the oceans respond to higher concentrations of CO<sub>2</sub> in the atmosphere, how do plants react? There are so many feedback effects that you can justifiably express doubts about the net effect. Nevertheless, politicians are united in the view that we need to cut CO<sub>2</sub> emissions to save the climate. The fact is, however, nothing bad is actually happening.”

*Not yet at least. Many climate researchers believe a temperature rise of more than 2 °C will accelerate global warming by natural processes such as melting ice and the release of methane from the tundras. Why do you not mention the positive feedbacks?*

“The book was written in 2004–2005, before there was any discussion of a 2 °C maximum. I’m also not convinced that those feedbacks will occur. The best match for climatic fluctuations during the 20th century is mainly the variation in solar activity. Far more so than the CO<sub>2</sub> concentration.”

*That hasn’t been the case since 1980.*

“I do not accept the IPCC’s [the Intergovernmental Panel on Climate Change, Ed.] projections of a 2 °C increase! Our CO<sub>2</sub> fixation may simply be an irrelevant distraction, when we should instead be allowing for the possibility of cooling rather than warming.”

*Do you use green power at home?*

“I don’t think so, but then again I don’t have a car. With reference to your previous point, I favour a reduction in the consumption of fossil fuels, not to cut CO<sub>2</sub> emissions but simply because these resources are running out. I also think it is absurd to dispose of

CO<sub>2</sub> by pumping it into the ground. You need the energy output of an entire power station just to store the CO<sub>2</sub> produced by four other power stations. Rather than saving energy, CO<sub>2</sub> storage actually boosts energy consumption. In my view, those in favour of this approach are barking up the wrong tree. We should instead be using our money to develop new solar cells or to build dikes in Bangladesh, where farmland is flooded every three years. Then you can be certain you are doing something useful.”

*At 63, you are rather young to be retiring. What are you planning to do?*

“I’m currently working on a new book about the subterranean world – which is also the subject of my valedictory address – entitled, ‘Why hell stinks of sulphur’. The book is not just about the subterranean world as such; it also examines long-held views on the subject. Why is the subterranean world seen as terrifying, and the sky paradisiacal? The subterranean world always seems to get a bad press. The urge to tell that story is greater than the compulsion here to dot every last ‘i’ and cross every last ‘t’.

That was in mid-March. My next encounter with Professor Kroonenberg was well over three months after his valedictory lecture, which had the cheerful title of ‘Beneath the green turf is just the beginning’. This time we met in his apartment, close to the Nieuwe Kerk (New Church). White walls and a wooden floor. There is a huge pile of unread magazines in the corner next to the couch, as Salle has just arrived back from Spitsbergen where he acted as one of the tour guides.

*What was Spitsbergen like?*

“Great. This was a climatic education trip organised by the NRC Handelsblad newspaper. They had invited me along to act as the official geologist, to give talks on board about the climate.”

*Were you expected to adopt the role of climate sceptic?*

“That was undoubtedly the intention, but I did much more than that. I had never been to Spitsbergen before, but it has an incredibly interesting climatic history. For instance, it is the place that gave rise to the concept of Snowball Earth. A British geologist, Brian Harland, found traces of glaciation on Spitsbergen dating back

600 million years. Other continents have similar traces, so Harland interpreted this as evidence of a period of worldwide glaciation. American geologists later developed this idea into the concept of Snowball Earth, where the entire planet was encased in ice, from the poles to the tropics. I visited the places on Spitsbergen where these traces are found and showed the participants how much the climate has changed. I also told them how Spitsbergen was pushed from the equator to the pole over the course of geological time. I told the entire story in a series of lectures aboard the Plancius, an old naval vessel that has been converted into a floating hotel.”

*How did the passengers respond? Were these all people who were worried about climate change?*

“The majority of the audience were above the age of 55, fairly well off and approaching retirement. Such people tend to be rather sceptical about climate change. I was there with Heleen de Coninck, who works on energy policy at the Energy Research Centre of the Netherlands (ECN). To some extent, she represented the other side of the story. There were also scientists on board with twenty years of research experience. They can see signs of warming on Spitsbergen.”

*Spitsbergen is considered to be on the front line of climate change, isn't it?*

“The effects of climate change are certainly noticeable there. Researchers there have observed the reappearance of mussels that have been absent from the region for the past 6,000 years. So it’s not the first time that such changes have taken place. I used this theme as the basis for my talks. We can see warming taking place, but it’s not the first time this has happened, nor is it excessive compared to other periods of human history.”

*Your image is increasingly that of an itinerant geologist and speaker. Has this always been an ambition of yours?*

“I took early retirement because I wanted to work on my second book. I have had little opportunity to do so lately, however, due to my travels, my work for the Netherlands Organisation for Scientific Research (NWO), and inspection visits. You don’t pass up an opportunity like this trip to Spitsbergen, of course. I had been playing with ideas for that first book for quite some time. Following its publication, the sheer scale of the response

convinced me that it was more important to pursue this line than to carry on with my research at TU Delft, which can just as easily be done by others. However, others cannot write the book that I have in mind, only I can do that. This is the choice that I made.”

*It also gives you access to a larger audience than you have in the scientific world.*

“This is all spin-off from my first book. Wim Brands discussed this at the time, in his programme, ‘Boeken Etcetera’. That discussion produced a sort of snowball effect, which still rolls on. This was well over four years ago, in 2006, but my diary is still full of engagements. I enjoy this, and I also think it’s very good for geology. After all, to the best of my knowledge, no other geologist has ever appeared on the Pauw & Witteman show. A day after the broadcast, a headline in the NRC Handelsblad newspaper quoted Camiel Eurlings (caretaker Minister of Transport, ed.) as saying that while vulcanologists were having a ball, it was all very inconvenient for air traffic. He and I had appeared together in that programme. He had at least understood that vulcanologists were very excited about the ash cloud. It gradually takes root in people’s minds. I really get a kick out of that.”

*Are you planning on becoming a sort of ambassador for geology?*

“I don’t want to make too much of it. I enjoy... let me put it this way – I do not like power, but I do like influence. I don’t need to lord it over others. I’m not tied to any organisation, and that’s great. I can just be myself. Yet, at the same time, people are taking my ideas on board.”