INTERVIEW

"I see myself as a cartographer"

Benedikt Ziegler

After an artist's residency on a ship in the Arctic Ocean in 2014, the Zurich-based artist Sandra Kühne has now arrived in Saudi Arabia on the artists-in-labs residency programme. She will spend three months in a marine biology lab at Kaust, Saudi Arabia's main technical university, near Jeddah.

What interests you about marine science?
It is a multidisciplinary field of research combining diverse areas such as biology, ecology and oceanography. I'm interested in exchanging knowledge with the research scientists. I want to discuss similarities and differences in the ways we visualise data and map space, as well as ephemeral phenomena such as ocean currents.

Why Saudi Arabia?
Because of the Red Sea Research Center at Kaust and their research on coral reefs, which constitute one of the most diverse ecosystems in the world. They are very fragile and consist of a community of interdependent species. I'm interested in observing and understanding this complexity and vulnerability. Focusing on coral reefs, I will look for ways to show themes of interaction, balance and symbiosis through my art.

What is the link between marine science and your art?
I believe that art and science are related in terms of developing ideas, observation methods, work processes, visualisation and model-making. I imply methods of cartography in my artistic research and practice. I see myself as a cartographer, collector, writer, translator and discoverer. I explore strategies in mapping both real spaces and spaces of language. In my cut-outs and installations, which are mainly made from paper, I translate two-dimensionality into three-dimensionality. I'm creating and presenting drawings and maps as objects in space, where lines lose their balance: they shift and change their shape just like the world's fragile ecosystems are changing.

NEWS

Boosting the outreach of scientific findings
Wikipedia exposes more people to research findings than any other source, shows a University of Chicago study that analysed 19.4 million articles and their citations. Open access journals are 47% more likely to be cited in Wikipedia. doi.org/brz4

Reviewing the reviews
The new website Academic Journal Reviews allows scientists to share their experiences with peer-reviewed journals, reporting on issues such as the fairness and speed of peer-reviewing processes. academicjournalreviews.com

Narcissism and misbehaviour are correlated
Narcissism is more prevalent among scientists in high academic positions and correlates with misconduct, claims a survey that examined 535 biomedical scientists in the Netherlands. doi.org/brz5

An open database on clinical trials
Ben Goldacre, an advocate of medical data transparency, launched a beta version of OpenTrials.net in October 2016. This online database gathers information about clinical trials, allowing anybody to add relevant data.

Artificial intelligence for researchers
The platform Iris.ai uses machine learning to classify abstracts of scientific articles in order to suggest relevant literature.

Facebook money for science
Mark Zuckerberg and his wife Priscilla Chan announced their plan to invest three billion dollars in disease prevention and therapy. A USD 600 million research hub is being planned in San Francisco.

FIVE QUESTIONS

"Research is a fundamentally international activity"

Annette Boutellier

Thomas Zurbuchen has been appointed as the new head of science at NASA. A Masters and PhD graduate in physics from the University of Bern, he is the first non-US-born citizen to assume this position.

What will the coming years bring?
NASA will continue to address big cosmic questions about the mechanisms that underlie Nature, and especially the origin of life and new habitats. By the end of the next decade we will be able to image extrasolar planets, for example. We will continue to study phenomena such as volcanic eruptions, tsunamis and changes in our atmosphere and oceans, in order to make better weather predictions and save more lives.

What is the status of fundamental research at NASA?
We do both fundamental and applied research. While the former tries to answer some of the above questions about our origins, the latter continues to develop technologies and tools to avoid environmental disasters, such as asteroids that could hit Earth.

How do you feel about commercial competition like SpaceX?
Commercial activities are very welcome to NASA, since they are a sign of economic growth. Private approaches also create new knowledge, and we see them as constructive partners with whom we can collaborate to create better spacecraft, for example.

What's your relation to Switzerland?
Even though I have been a US citizen for ten years now, my roots lie in Switzerland. I don't think I would be here today if the SNSF had not supported my initial plans to go abroad. After all, research is a fundamentally international activity and Switzerland is a great place to ignite it.

How is Swiss space science perceived abroad?
Switzerland has always been at the forefront of space science, from the first experiments on the Moon carried out with Swiss instruments to the discovery of the first exoplanets and the development of precision instruments in today's spacecraft. Switzerland could maybe try a bit harder when telling people about its immense contributions to space science.