FOCUS

ONE WAY OR ANOTHER

ILLUSTRATION: REGINA MARIA MÖLLER, VG BILD-KUNST BONN. WWW.REGINAMOELLER.NET

WE CULTURED HUMANS

TEXT: STEFANIE REINBERGER

In many ways, our thoughts and actions are influenced by our social background, which is why people's behavior varies so widely between different countries throughout the world. The psychologist Daniel Haun, Director at the Max Planck Institute for Evolutionary Anthropology in Leipzig, has made cultural diversity a focal topic of his research. His theory is that we cannot ultimately determine what it is that makes us human until we are aware of what we have in common and what our differences are.

A person who works harder ultimately gets to rake in more of a well-deserved reward. That's only fair, isn't it? That's how children as young as three see it – at least in our part of the world. They apportion rewards according to effort, and prefer to share with other playmates who have been more actively involved. This has been confirmed time and again by experiments. If you think that the result of these studies is all too logical, you probably come from Germany, or you at least live in an industrial society. However, what might seem perfectly natural to us does not necessarily apply to people elsewhere in the world.

Culture influences our perception and actions. And everything that we now know indicates that the distinct, diverse culture of Homo sapiens is unique compared to those of other species. But what enables people to develop such broad cultural diversity in the first place? What are the foundations of human cognition that make us stand out from other species and make us human? These are the big questions that the Director of the Max Planck Institute for Evolutionary Anthropology in Leipzig, Daniel Haun, has been investigating, and which he has been studying since setting up the Department of Comparative Psychology there in 2019.

Our culture determines what we regard as being fair

"In different cultures, people have very different attitudes towards social relations, social emotions, color, numbers and space," he explains. "It's remarkable when you meet groups of people who see things that you don't, who notice things that you are unable to notice yourself, or who regularly do things that you wouldn't do." In one study, a research team from several Max Planck Institutes and the University of Jena observed just how differently people behave in certain situations. They asked children aged 4 to 11 to fish for toy blocks in a fishing game. In each case, two children fished for the blocks from two different containers. The magnetic blocks of one child had been manipulated, making it impossible to pull out some of the "fish". Afterwards, the two children received small prizes according to the total number of blocks they had both caught, and were asked to share the reward between them. As expected, the German children strictly apportioned the prizes according to performance, with each child getting the same share of the reward as the number of fish they had caught. There was no discussion.

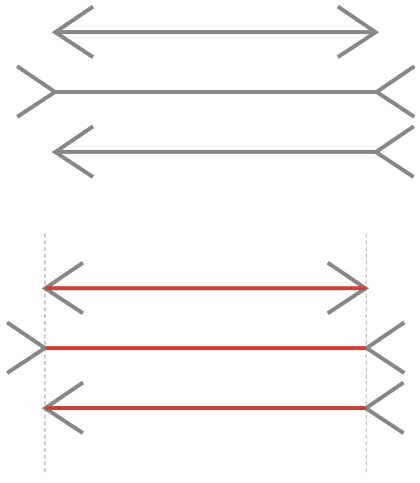
Young members of the ≠Akhoe Hai//om, an egalitarian community of hunter-gatherers in Namibia, also divided up the rewards according to the number of fish caught. However, they did so in a far less clear way than

"You have to ask yourself what validity studies have that focus solely on U.S. college students."

DANIEL HAUN

the children of the same age in Germany. Instead, they shared the reward about evenly, with the more successful child getting one block more. However, the researchers were astonished by the approach taken by the third group: Kenyan children from the Samburu people, a society with a strict age-based hierarchy. "The children chose a wide range of different distribution models, up to and including one version in which the more successful angler was left with practically nothing," Daniel Haun, who was involved in the study, explains. "We were completely unable to relate to the principles behind this approach." One important conclusion was that our concept of fairness is also influenced by our culture.

Another example that is almost even more striking is the Müller-Lyer Illusion, a well-known optical illusion. The illusion consists of lines that have arrows in the form of open angles at each end. Some of the tips point inwards and others outwards. Depending on how they are arranged, we unfailingly perceive the lines as being longer or shorter – although in fact, they are all of equal



GRAPHIC: GCO FROM FIBONACCI/WIKIPEDIA (CC BY-SA 3.0)

Partial illusion: in the western world in particular, humans incorrectly perceive the lines between the arrows as being of different lengths. People from other cultures in other parts of the world are not deceived by this optical illusion at all.

PHOTO: DANIEL HAUN/MPI FOR EVOLUTIONARY ANTHROPOLOGY

A long way from western norms: a girl from the ≠Akhoe Hai//om people in Namibia takes part in a psychological study.

length. However, this visual phenomenon doesn't work everywhere in the world. As Haun explains: "It already emerged back in the 1960s that there are societies in different parts of the world where people perceive the lines to be of equal length when they are (truly) of equal length – but it's impossible for us to see it." Both examples underline the fact that the way in which our cognitive abilities are expressed depends strongly on the environment in which we live – particularly our society and its culture. "You then have to ask yourself what general validity psychological experiments have that are conducted only with psychology students from the U.S. as subjects, or developmental psychology studies that observe only European babies and young infants," says Haun. At any rate, it is not always possible to make generalized statements about human perception and thought processes at this level.

However, Haun is not interested in challenging the psychological research that has been conducted to date. For him, cultural differences are a primary key to answering the questions that he is examining in his research. "In order to comprehend what enables people to develop cultural diversity in the first place, we have to understand the relevant fundamental development processes from which cultural variation arises. We compare these with the development of other species and look for reasons why our unique human cultural evolution was made possible."

Here, it's not enough simply to compare people from different cultures. The age of the test subjects, or the demographic composition of the population, also plays a role. "Age is a very important factor for social learning," says Haun. What he means by this is a form of learning in which we observe the way in which other people do certain things. This approach is used in all human cultures.

But do children orient themselves to others in the same way all over the world? And what criteria do they use when choosing role models? Haun investigated this question alongside an international team. The study involved children from seven different cultural groups, from Germany, Brazil and Indonesia, as well as the BaAka people in the Central African Republic, the

→

PHOTO: KINDER-UNI JENA

On an educational mission: for Daniel Haun, it is important to raise awareness of the diversity among humans, as well as to point out our special characteristics. He also presents this topic at the Kinder-Uni (children's university) in Jena.

≠Akhoe Hai//om in Namibia, the Samburu in Kenya and the Bemba in Zambia. The study was centered around a simple dispenser – a box with three different colored tubes. If you put a ball in one of the tubes, a small toy falls out at the bottom. Children aged between 4 and 14 were then allowed to watch videos in which children of the same age showed them how the box works. In each case, three children demonstrated how to work the box using one and the same tube. Then, one other child demonstrated the procedure on another tube three times in succession. The result was always the same: the dispenser ejected one toy for every ball thrown in. Then, the children who watched the videos were each given a ball and had just one attempt at also getting a reward.

The extent to which the children based their actions on what they had seen in the film varied very widely depending on their cultural background. However, there were also some fascinating things that they had in common: "Although the cultural variation was high overall, across all cultures, the degree to which the children were inclined to adopt the majority approach changed proportionately depending on their age," Haun explains. Overall, both the youngest and oldest children in all groups most frequently emulated the behavior of the three role models instead of following the repeated demonstration given by the individual child.

"We're running out of time: globalization is blurring the differences between cultures."

DANIEL HAUN

"Results like these show us how important it is not only to observe individual children in different situations or performing certain tasks," Haun continues. "In fact, we need long-term development studies, from birth until they reach adulthood." In this way, he says, reliable data can be obtained that make it possible to reach a conclusion as to which cultural factors influence which developmental processes – and for which developmental processes there are no variations at all.

And all this ultimately not only applies to studies about humans. To find out which cognitive abilities and ways of behaving are uniquely human, we also need to draw comparisons between ourselves and our closest relatives, chimpanzees and other apes. Here, too, behavior varies between different groups. "This is not so clearly evident as it is for humans, and the extent of the variation also depends strongly on the composition of the population," Haun explains. "However, there is no doubt that not all chimpanzees are the same, and we have to take a much closer look before comparing the behavior and cognitive abilities of non-human primates with those of humans."

Haun's research project involves countless behavioral studies, observations in a wide range of different human cultures and in various groups of apes – with the largest possible number of test subjects and ideally over long periods of time. It is quite clear that no single research career will be able to cover all this work. And there's one more problem: "We're running out of time," says Haun. "The increase in globalization is blurring the differences between cultures, while at the same time, non-human primates are dying out because their habitats are being lost." The lower the degree of variability on the planet, the more difficult it will become to filter out similarities that go beyond cultural background – the essence of what it means to be human. "Perhaps two or three generations of researchers will be able to move this project forward. After that, it may be too late."

SUMMARY

The culture in which we live not only determines our values and preferences, but also the fundamental characteristics of our being, such as our concept of what is fair and our visual perception.

Using psychological tests in different cultures and among different ages, researchers are working to document what makes us different from each other, and what we have in common.

Comparisons with the way apes behave are also required in order to filter out what is specifically human.

The corona crisis isn't improving the situation. "Field research is almost impossible under the current conditions," Haun says. It's quite clear that the present situation is hard for him to bear – when there are so many exciting cultures out there in the world and so many interesting issues that he wants to explore. Even so, the Max Planck Director has plenty to keep him occupied. He is using the time to establish new methods. Artificial Intelligence and Machine Learning are important topics for psychologists. The aim is to use both in the future to automatically evaluate psychological studies in order to be able to study larger numbers of test subjects – perhaps even in their normal everyday lives, away from performing tasks in a study environment. A large number of test subjects is crucial in order to ultimately understand the connection between individual development, social environment and geographical surroundings among humans and apes.

Despite all the challenges, Daniel Haun's team continues to work to make contacts and establish research units in different parts of the world that will remain firmly connected to his Department over a long period of time. This is an important prerequisite for being able to work continuously with specific cultural groups. For the scientists in Leipzig, it is also important to work closely in cooperation with people who are native to the various study sites, because as locals they are familiar with the language, culture and ways of behavior in their home countries. "Cooperation with the people on the ground is essential for the success of this project. That's the only way that we can ensure that studies are culturally appropriate and are interculturally comparable."

The aim is not to be judgmental

The team is also involved in the Many Primates project, a scientific consortium researching apes, in order to create a stable network of zoos and rescue centers. "The time when individual groups conducted their own research has passed. Science is a team sport now. For our research area in particular, it is essential that we collaborate with other researchers," Haun explains. With this in mind, he also plans to invite other psychology research groups in the future, to examine their areas of study together with his team with a focus on comparative cultural psychology. "As Max Planck researchers, we have a particular responsibility to create added value for the scientific community," he says.

He also takes responsibility for another aspect of his work. One thing is very important for him: "When we investigate cognitive differences between individual cultures, we must never judge them in the process." In the past, a lot of information has been misused for political purposes. For Haun, one thing is clear: cognitive abilities in humans are expressed in different ways. They can be fascinatingly diverse, surprising, and sometimes entirely incomprehensible from our own perspective – but they are always determined by the influences and demands of the individual living environment. Here, there is no such thing as better or worse.

www.mpg.de/podcasts/vielfalt (in German)