

Hi everyone,

everything could be so easy: Why isn't science communication relying much more on »film« and its enormous impact? And why isn't it relying much more on »fiction« in films? There's good reason to believe that science communication misses a big opportunity to build more bridges to society. In this newsletter we share some thoughts and observations about this disregarded phenomenon.

We also pass on to you a film recommendation of autism researcher Simon Baron-Cohen, add some facts to the fake news debate, and present two videos which seem to be hardly comparable – but only at first sight.

Thilo Körkel, Kerstin Hoppenhaus and Sibylle Grunze

## What's going on

### **Blind to the obvious – the overlooked importance of film for science communication**

»Film« is still among the most impactful media available today. But the efforts of German research organizations to make use of it are indecisive. Shouldn't film be a core element of the dialogue between science and society?

But no German equivalents of the »Big Bang Theory« or »[Westworld](#)« are yet underway. The number of slots for scientific topics on German TV is declining instead of growing. And when was the last time you have been deeply (or at least a bit) impressed by a YouTube channel of a scientific institution?

In the twenty years after the so called [PUSH memorandum](#), in which the most prominent research organizations of Germany obliged themselves to promote the dialogue between science and society to the best of their abilities, not much has happened in the field of film.

Major stakeholders who drew a balance of the memorandum recently (e.g. the German VolkswagenStiftung in the [Frankfurter Allgemeine Zeitung](#), and the chief editor of the best known German popular science magazine on [helmholtz.de](#)) didn't even mention »film«.

Only Volker Meyer-Guckel, Deputy Secretary-General of the Stifterverband (the Donors' association for the promotion of humanities and sciences in Germany), referred to video, although to one single example. He extensively [discussed](#) the German YouTuber Rezo's harsh attack on the chancellor's party, CDU. Rezo's video was viewed more than 15 million times and, according to Meyer-Guckel, »characterized by a permanent recourse to scientific results and sources«. In Meyer-Guckel's recourse to Rezo in turn, there is a certain irony: Via a video, a YouTuber in the field of politics drew enormous attention to scientific facts while the scientific institutions themselves fail to do that in their very own field.

Not even in a consultation process among a few dozens of renowned German

representatives of science communication, carried out in 2018/2019 by the Federal Ministry of Education and Research, »film« or »video« were prominent keywords. From somebody involved I learned: »We're not in search« of new film-related approaches. During the consultation »no real need« showed up. But I should not worry: Video »is not missing completely« in the process.

And what about the [Silbersalz Festival](#)? The event, newly founded in 2018 in Halle an der Saale in Eastern Germany as an international science *film* festival, already misses the point. In its second edition it shifted its focus away from film to exhibitions, arts, virtual reality installations and participative programmes.

However, a few weeks ago, the president of the Max Planck Society, Martin Stratmann, somewhat unexpectedly took an interesting stand. At the conference »[Media Meets Science](#)« in Munich on 20th May 2019 he made a strong argument for fictional science films. Fiction, he said, can inspire broad audiences beyond the usual target groups for science communication. In times of increasing skepticism towards science this is essential: »If we lose trust of the citizens, we lose freedom of research.« Watch his talk [here](#) (in German). (tk)

## Focus on fiction

Science and fiction [were a topic](#) as well at the World Conference of Science Journalists in July in Lausanne, Switzerland (among many, many others).

[Kath Lingenfelter](#), [Nicole Perlman](#), both from the US, and [Anna Wu](#) from China are three of the best sci-fi screenwriters in the business. They have been working on »House, M.D.« and »Westworld«, »Guardians of the Galaxy« and »The Wandering Earth« respectively, among many other productions. In Lausanne they discussed the delicate balance of drama and accuracy necessary in science fiction and gave insights into their own origin stories in writing science fiction, and into some of the best science-in-fiction examples in recent history.

Like all screenwriters, they have to tell a compelling story with characters the audience will root for. But as standouts in the genre they also succeed at grounding spectacular plots in real science. They all agreed that, obviously, they can take some liberties with the science when writing fiction, but they also stressed that getting the science right (or as right as possible when dealing with the future) is the far more rewarding endeavor, for audiences and writers alike. And they let the audience feel their enthusiasm to track down arcane scientific details for their stories (like the shape of familiar constellations of stars when seen through a black hole) and their genuine interest in the topics of their productions (like correctly portraying [CPR](#) and other medical procedures).

Their best-practice examples ranged from the darkly funny cartoon series »[Rick and Morty](#)« (available in Germany on Netflix) all the way to the bloody mess that comes from [internal bleeding in zero G](#) in the ever amazing space opera »[The Expanse](#)«. (kh)

## Feature film recommendation: »Mind my mind«

»Mind my mind« by Floor Adams is a real recommendation, according to Simon Baron-Cohen, renowned autism researcher at the Cambridge University, United Kingdom. The film, [he says](#), »is a highly original animation that portrays the experience of an autistic young man as he navigates starting a romantic relationship and coping with the challenges of conversation and social interaction ... The animation team are to be congratulated for their insight into how to convey what goes on inside the mind of an autistic person during everyday decision-making.«

So we share some information about it: »Mind my mind« won several awards and

was screened at the Tribeca Film Festival 2019 in the section »Animated Shorts Curated by Whoopi G« and at the Stuttgart Festival of Animated Film in Germany. Next [screenings](#) will take place in Switzerland and The Netherlands in September. Enjoy the [trailer](#) and hope for the film to come to a theater near you. (tk)

## Don't trust YouTube when it comes to science

Misleading scientific information is not a peripheral phenomenon on YouTube. The latest observation to support this view comes from Joachim Allgaier, research associate at the Chair for Technology and Society of the RWTH Aachen University in Germany.

Allgaier has analyzed 200 YouTube videos about climate and climate modification topics. His result: »The majority of the videos in the sample (107 videos) supports worldviews that are opposing scientific consensus: 16 videos deny anthropogenic climate change and 91 videos in the sample propagate straightforward conspiracy theories about climate engineering and climate change.«

Allgaier's study, which was published in *Frontiers in Communication* on July 25, 2019, also found that videos which support the scientific mainstream view are watched about as often as those which opposed the mainstream – both groups of videos account for almost 17 million views.

The situation isn't any better when it comes to health topics. At the British Association of Dermatologists' Annual Meeting in Liverpool, Great Britain, in July 2019, Dr. Simon Müller of the University Hospital Basel, Switzerland, reported on a sample of the 100 most-viewed eczema-related videos on YouTube.

He and his colleagues came to the conclusion that 46 per cent of them are misleading. 36 per cent are even disseminating potentially dangerous information to eczema patients. Many of the videos stem from promoters of complementary and alternative treatments, and many of them discredit secured medical knowledge.

While, in general, the educational value of online video-sharing is undeniable, there is still no cure against YouTube's profit-oriented, but not value-oriented dissemination of content. Currently, the only way for scientists and scientific institutions to hold against is to publish their own view. (tk)

Read more:

Joachim Allgaier: [Science and Environmental Communication on YouTube: Strategically Distorted Communications in Online Videos on Climate Change and Climate Engineering.](#)

*Frontiers in Communication*, July 25, 2019

Joachim Allgaier: [Science and Medicine on YouTube.](#) In: Hunsinger J., Klastrup L., Allen M. (eds) *Second International Handbook of Internet Research*, Springer Nature B.V., 2019

Press release of the British Association of Dermatologists: [36 per cent of top YouTube videos on eczema are potentially harmful](#), July 3, 2019

Zeit.de-Interview with Joachim Allgaier: [Die Klimaleugner sind gut organisiert](#), August 5, 2019

## Upcoming events

[#LabMeCrazy!](#), Navarra, Spain, September 17 – 20, 2019. This science film festival run by the Museo de Ciencias at the University of Navarra aims at offering young

people a »refreshing, modern take on scientific knowledge«.

[BIO·FICTION Science Art Film Festival](#), Vienna, Austria, September 23 and 24, 2019. BIO·FICTION is the international Synthetic Biology Science, Art and Film Festival series. This upcoming »Futurebody« edition of the festival sets a focus on neurotechnologies.

[Foresight Filmfestival Nr 4](#), Berlin, Germany, September 26, 2019. An evening dedicated to the question, »in which world we can, want to, and will live in the future«.

Science section at the [Zurich Film Festival](#), Zurich, Switzerland, September 26 – October 6, 2019. Program available from September 12, 2019.

[Science Film Festival](#), in twenty countries in Southeast Asia, South Asia, Africa, the Middle East and Latin America, October 7 – December 23, 2019. In cooperation with local partners the German Goethe Institute promotes science literacy and facilitates awareness of contemporary scientific, technological and environmental issues through international films with accompanying educational activities.

## Reading material

»[YouTube science videos: The channels you should subscribe to](#)«

Lots of stuff to discover: The New Scientist sifted through a list of the favourite science YouTube channels of Simon Clark. Clark is a science YouTuber himself, with a PhD in climate physics and more than 220.000 subscribers.

»[Latest Thinking – ein Journal mit Videopublikationen](#)«

The founder of [latestthinking.org](#), Pajam Sobhani, explains in an interview how scientists can make use of Latest Thinking's standardized »video abstracts« to report on their recently published papers and to reach an international audience. The interview with the Hamburg-based entrepreneur has been published on August 6, 2019 (in German).

## Videos only look good if you watch them

### Crack the whip!



**Biomechanics of a Pianist**  
**By The French National Center for Scientific Research (CNRS)**



## How does a whip break the sound barrier? by SmarterEveryDay

These two videos are about as different in their tonality and form as two videos can be. On the one hand: SmarterEveryDay with its enthusiastic and playful host and engineer Destin Sandlin teaming up with the mechanical engineer and professional whip artist April Choi. On the other hand: a very serious group of French scientists and engineers. But both films are fun to watch for the same reason: They show very complex experimental setups, explain them in depth, and both don't have a final answer to their initial question.

Sandlin's and Choi's project starts out as a fun experiment to figure out how a whip breaks the sound barrier. As it is getting more complex with each step, more people get on board until the whole thing becomes a more and more »scientific« endeavour.

In the other clip, the French engineers Floren Colloud, Jean-Christophe Valière and Maëva Retailleau set out to determine how the particular sound of a pianist is influenced by his or her biomechanical features and movements. They knew from the start that finding the answer required a very complex experiment that would not yield quick answers, but they did it anyway.

Both videos allow a rare glimpse into the process of doing research and let us observe firsthand the great lengths to which scientists often have to go to collect the best possible data to answer their research questions. (sg)

»Science & Video« is a newsletter for science communicators. In »Science & Video« [Thilo Körkel](#) (tk), [Kerstin Hoppenhaus](#) (kh) und [Sibylle Grunze](#) (sg) pool their long-standing expertise in the field of science communication and moving images. We joyfully welcome the effects of digital disruption, are committed to defending high quality standards, and hope to be part of a future in which science communication via digital media has an increasingly powerful impact on society. Contact us at [thilo.koerkel@nature.com](mailto:thilo.koerkel@nature.com), [hoppenhaus@hgmedien.com](mailto:hoppenhaus@hgmedien.com), [grunze@hgmedien.com](mailto:grunze@hgmedien.com).

### IMPRESSUM

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