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Science Slam About Sheep Cheese and Car Tires

Alex Dreppec

Entertaining short talks on science topics – what sounds simple is the Higher School of science communication. Humor acts here as a door opener and charming invitation to those who otherwise find no access to science and technology. The inventor of the science slam sheds light on the origins and background of a genre that has brought funny science to the auditorium and the pub alike in recent years.

What Is That, Where Did That Come From?

Science Slam – does this mean that we put a colourful wig on Max Planck and he has to sing "A bit of fun is a must" on stage? Not quite. In any case, I would advise against it amicably.

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M.-D. Weitze et al. (eds.), *Can Science Be Witty?*,
https://doi.org/10.1007/978-3-662-65753-9_2

Science Slams are short presentation tournaments along the lines of poetry slams, i.e. with a time limit (ten minutes) and winners chosen by the audience, but with scientific content. In contrast to the poetry slam, anything that supports the presentation, e.g. PowerPoint, is permitted. The atmosphere should be more like that of poetry slams than that of a conference. This means that heckling is effectively rare but allowed, that emotional reactions are desired and that the audience has a certain freedom of movement. The latter also contributes to more relaxed facial features for some.

The audience chooses a winner by applause vote or in another, but as playful as possible (more on this later) – here again the reference to the poetry slam. In 2000/2001 I was on the road as a poetry slammer and at the same time I was preparing my doctoral thesis on the comprehensibility of scientific texts for publication under my civil name Dr. Alex Deppert (2001). In it, and already before (Deppert 1997), I had found out, among other things, that test readers are influenced in their assessment of the academic status of the author of a text by its comprehensibility, according to the motto: "The more incomprehensible, the more professional" (I have weighed the significance of such assessments elsewhere). As part of the same work, I was also looking for an idea for an applicable, practically relevant contribution to intelligibility research. A few weeks after it was finally too late to make changes to the text of the dissertation, I had the idea for a science slam. On the one hand, this moment of inspiration frustrated me, so I was downright angry about the idea. On the other hand, I was unsure about its feasibility. That's also why it took another three years until I submitted a concept to Darmstadt Marketing, and until 2006, when the idea actually found its way onto the stage in its (more or less) current form.

My doubts were not unjustified: The audience reacted extremely positively right away, but it was extremely difficult at first to persuade people (meaning researchers) to appear. I literally dreamt at night of the sentence "I'll take a look at it first". And with one science slammer, who initially turned down my request with reference to his upcoming relocation, I ended up having to help haul the stove, fridge, and washing machine in return for his appearance. In the end, however, I managed to fill the events.

Fortunately, media like the "Darmstädter Echo" reported on it immediately in 2006, and the "Frankfurter Rundschau" and "Spektrum der Wissenschaft" reported on it a little later, so that attempts by others to claim authorship were in vain.

At the time, it was in the air to transfer the slam idea to other content; for example, there were already "short film slams" in Stuttgart before the Science Slam. The miscibility of the components brought together in such cases, as with "song slams" for example, is not really surprising. A slam with short scientific presentations offers more "distance" between the original scientific context and the slam context. The decisive factor is the atmospheric change, which makes interesting or surprising things possible.

Anyway, the idea has spread from Darmstadt more or less all over the world and is still moderated in its birthplace by Axel Röthemeyer, who has also been there from the beginning, and me.

Is Everybody Allowed to Do That?

Anyone who conducts research can participate. The basis is research to which one has made one's own contribution – in other words, one's own share in what has been reported.

Particularly in the case of humanities scholars, one can also say: the basis is one's own original perspective on what has been reported. The fact that, for example, the public relations department presents the research of others "in person", i.e. in which the person giving the presentation has no part, and perhaps even in clothing printed with company logos, is not at all welcome – to say the least. However, in my view, "own research" cannot and should not be interpreted too narrowly either. I regret that some excellent science slammers were not qualified for German championships because of criteria that were interpreted too narrowly. I am pleased when students whose own research does not yet have the scope of that of – let's say – Max Planck participate. Improving production processes, for example, should also be accepted as research without further ado. Personally, I really like it when potentially more or less all of humanity could benefit from a new research approach and not just a particular company.

Can you learn to do that? There are now workshops for budding science slam stage performers. Wonderful, I also offer such workshops from time to time. But I hope that the workshops don't lead to a situation where only certain role models are copied and remote-controlled clones stagger onto the stages. So far, most of them have found their way onto the stage even without such a workshop.

The Science Slam is clearly not limited to junior scientists in my opinion. That would be too "cute" for me. It serves as one of many means of interdisciplinary communication (which has already led to new insights in my eyes), of communicating scientific findings back to the (research-funding) public, as a laboratory for comprehensibility and science communication, and perhaps also for acquiring young talent. Science Slam, however, is not a sandbox for up-and-coming scientists who may not yet be taken entirely

seriously. Perhaps not everyone who has already collected scientific merits wants to go toe-to-toe with other, less renowned fellows and then compete with them on the basis of an audience judgement. That is, of course, to be accepted.

Empirically, doctoral students are disproportionately represented – and the grammatical form of the masculine is also meant here in terms of content. Female slammers are highly welcome and successful, but less often found on stages than their male colleagues. Why this is so is discussed in the scene from time to time. If a way could be found to change this in the long term, it would be nice.

Then there is the question: Is everyone allowed to organize it? Yes! When I renounced trying to collect royalties for organizing science slams, I did so, among other things, out of content and personal obligation to the inventor of the poetry slam, Marc Kelly Smith. The latter acted likewise so that everyone could implement his idea – which otherwise probably would not have gone around the world in such a way. It also occurred to me that the idea of the Science Slam would probably be taken up by students and remain more in the alternative and "low budget" realm. I didn't begrudge those engaged the few bucks they would make on it for a lot of effort … I thought. I didn't think of more or less large agencies that would make significant amounts of money from science slams (which, sure, have to be taxed, and then there's the retirement plan, the hungry dependents …). In the meantime, these too have contributed to the spread and development of the Science Slam. I still won't, can't, and will not hold up my hand. But I would be happy if the science slammers, where appreciable sums are earned, would always participate in it with a sense of proportion – and not in the form of higher prize money for individual "champions", because the hierarchies must remain flat and the competition playful. But researchers rarely have anything to

give away at the beginning of their careers, and their enthusiasm is already exploited often enough.

The audience chooses a "Slam Champion". It was clear to me from the beginning that it wouldn't really be fair. Apples and oranges, no, actually sheep's cheese and car tires are compared. And some certainly agree simply because they think sociology is cooler than physics, or the material scientist smiles nicer than the Germanist with the ill-fitting sweater. But they all find a hearing and a great deal of interest and approval.

The audience is asked by the vast majority of presenters to behave respectfully and not to embarrass anyone. This is just for safety. So far the audience at Science Slams has always been positive and polite. I could still do well without the competition altogether. But it's part of the meaningful interaction between audience and stage, and maybe that's why it seems important to the audience.

How's That? Does It Have to Be Funny? Examples and Standardization Questions

Science slammers should win the audience over. For this, general comprehensibility – or comprehensibility for an interested, interdisciplinary audience without specialist training – is indispensable.

I tend to reject further standardisation than the ones mentioned so far – and I am always surprised how quickly self-appointed regulators and standardizers appear where certain freedoms exist and proclaim. For example, what a successful PowerPoint presentation should and should not look like. Freedom and creativity are crucial. The Science Slam must allow the stage people both. The great forefather

poetry slam has changed in many ways, not always for the better in every respect, but it remains in motion. Who wants to dictate today how you can or will express yourself on a slam stage ten years from now, and how audiences will respond? I suppose coffin nails are also subject to numerous norms …

The following description of conditions that have been observed so far is therefore not intended to convey a normative character.

A wonderful sense of humor characterizes many science slam presentations. There are countless reasons for the use of humor: It is demonstrably a means to promote attention (cf. Kassner 2002) and against fatigue (cf. Klein 2004). This also makes it a door opener for serious content, among other things.

But more interesting (by now, to me anyway) is how the humor comes about and what kind of humor it is. It is often related to other features of the performance. Hill aptly summarizes often observable features: "Slammers often illustrate the relevance of their research area with references to everyday life, illustrate complex issues with images from the internet, explain difficult-to-understand content using metaphors and analogies …" (Hill 2015, p. 128).

The combination of all these elements with a surprise effect, for which a certain originality is required, provides the humor. André Lampe (2017), for example, describes the starting point of his efforts to explain his own research topic in a comprehensible way, based on a situation in which he had to justify himself to his "funders": "So there I sat, scrutinised by sceptical looks. The expectation hung in the air that I would explain … what my actions were in my thesis and how they justified the sums of money I had invested. The fact that respected authorities sat before me … did not make matters any easier …'What do you do all day, anyway?' my

father asked …" (p. 56). Here the reference to the everyday world becomes clear as well as a certain self-irony, with which one generally looks better in front of an intelligent audience than with jokes at the expense of the less educated.

The closeness to everyday life is often also evident in the choice of words: For example, Nuria Cerdá-Esteban (2017) explains at the beginning of her talk, "Until now, we … know very little about how a cell decides to one day become a pancreas. What would make one spit digestive broth into the small intestine day and night?" (p. 11). This should not come across as forced – which, however, is rarely the case.

Direct contact with the audience has a positive effect, a "flat hierarchy between stage and hall". Audience and slammers are very often on first name terms with each other.

Everyday or even work clothes and the renunciation of suit and tie often symbolize the flat hierarchies. But authenticity is more decisive. If you are born with a tie, so to speak, you are also welcome on stage.

Revealing weaknesses and reporting failures increase tangibility. Lydia Möcklinghoff (2017), for example, reports on her (generally successful) research on the great anteater: "For six months of the year, I fight my way through the thorny bushes of the Brazilian Pantanal, am attacked by water buffalo – and ignored by the research object" (p. 96). One absolutely believes that she felt this way in between, and laughs delightedly at the unexpected openness.

Metaphors and Analogies Build Safe Bridges

Many of the speakers use metaphors and analogies, as it were, to bridge the "gap" between the subject-specific prior knowledge of a large part of the audience and what they

want to convey to them. Some choose a kind of guiding metaphor (e.g. André Lampe with his "testicle cracker fish"), others a quick succession of numerous metaphors – e.g. Boris Lemmer, of whose wonderful performances several recordings can be found on YouTube (as well as those of others mentioned here). In the best case, these are original metaphors rather than conventional ones (cf. Deppert 2003; on metaphors in science communication, see also Weitze and Heckl 2016, pp. 60 ff.).

Remfort and Wöhrl (2017) make an analogy; they explain Heisenberg's uncertainty principle as follows:

"… a very good basis for discussion when the police again believe they have flashed you at 120 km/h in the 30 km/h zone, because either you were driving 120 or you were in the 30 km/h zone! Both at the same time are quantum mechanically impossible!" (p. 34). By the way, the audience here realizes that this is "just" an analogy and such a discussion with the police would have little chance of success. I'll bet my left big toe that more people actually know and remember more about the uncertainty principle after this lecture than before. Perhaps the advantage of comical metaphors and analogies is that, on the one hand, they clarify important aspects and, on the other, they are too outlandish to be seriously misunderstood. (This is true of many metaphors, by the way: Who believes that footballer Thomas Müller tears antelopes at night because he was once called the "lion of the national team"? Long live context.)

Often, "more scientific content" in the classical sense is found in alternation with the aforementioned elements. This becomes clear, for example, with Kai Kühne (2017), who presents himself on the slam stage as a comic artist on the side. Others do this too, but it is not the rule.

It often becomes satirical in connection with self-irony or the presentation of conditions and facts for which one's

own research seeks to provide a remedy. The potential of the science slam as a forum for criticism of parts of the scientific community or as scientific satire in this sense has not yet been exhausted. Tobias Glufke (2017), for example, already intonates this. But there is more to come. Go ahead – stage and audience are ready!

Is This Populism? Thigh-Slapping?

There is criticism of science slams, of course. But I don't think there are many critical voices when I consider how surprisingly quickly science slams have spread. Apparently, many in the scientific community immediately understood that this format is not and never wanted to be any kind of competition to internal forms of communication.

Decisive for whether criticism of the science slam as an event format seems justified or not is, for me, the following question: How many viewers would have taken the trouble to read the original publication in question if they had not come to the science slam? See. The reverse case, that a small portion of the audience subsequently reads an original publication because of the Science Slam, is far less unlikely. Therefore, the science slam could only be accurately criticized if one could say, "It would have been better if Hans Karl had learned nothing at all about this and died stupidly in this regard than if he had learned what the science slam taught him." That would be strong stuff and probably pretty arrogant. Fortunately (for me?), I have very rarely thought such things at science slams. But their own arrogance does get to some people's hearts, and science that is (in parts) generally understandable takes away a demarcation line for those who feel the need to elevate themselves above the general public.

Who else pays for most of the research? That's right, the public! So they should also be allowed to demand to know something about the research. And understandably so, even if one has not previously studied twelve semesters of experimental theology. That can be annoying for the researcher. But that this demand has a long tradition and manifold justification, quite "incidentally" is also a democratic imperative, has been widely secured (cf. e.g. Weitze and Heckl 2016; Hill 2015, 2018; Deppert 2001). A society completely disintegrating into highly specialized disciplines that can hardly communicate with each other is (unfortunately) not a real utopia.

And then there is the matter of humor. Of course there are negative examples. Science Slam is an open forum and it is ultimately the responsibility of the presenters what they do on stage. However, my impression is that especially "highly educated" Germans often equate "laughter" with "ridiculous", which is perceived quite differently by US-Americans and Englishmen. This is often (not always!) noticeable in lectures in the classical science business. Perhaps this is the small kernel of truth in the cliché of the humorless German and a reason for the tendency towards differences between lectures and texts in the German- and English-speaking scientific community (cf. on scientific texts, e.g. Stolze and Deppert 1997; Deppert 2001). I often find modern art really good when I find it really funny. My non-German friends tend to understand that. The others think I'm making fun of it and find what I'm laughing at bad. Feature films that combine a serious subject with comedy hardly ever come from Germany, with a few notable exceptions. Lead-heavy problem films often alternate in this country, unfortunately, with completely pointless duds … but enough of that.

However, I would not like to sweep accusations of populism and "vulgarization" off the table so easily. At present, some common "popularizations" of political content are having such a negative effect on the cohesion of society that one has an involuntary impulse to refrain from any popularization. My co-host Axel Röthemeyer once put it this way in an inimitable way: "Of course this borders on populism. The stage attracts attention-seeking nuisances like the organic garbage can attracts fruit fly swarms. But proven again and again: some butterflies too! Also: of course it's entertainment, entertainment, fun. Sorry, we are influenced by the nineties, just like the idea of the Science Slam was impacted by that time, and that's just the way it was then. People didn't think so much about the fact that it would be better to tear down the stages because of the populism plague" (oral communication). Axel continues, by the way, as do I. Because at second glance the common populism is at least in parts the effect of a "de-intellectualization", which the Science Slam exactly opposes or – at least in my opinion – wants to oppose.

Lastly, I want to juxtapose my hope for what science slam can be and my memory of what non-communicative parts of scientific work can look like in two poems:

Speakers for Scintillation

Don't be held captive, be trapped
by nasal snob's big drivel crap
free this pie in the sky, this lame gush
from phrases' crumbs with the (lint) brush
Shaken off footnotes and handouts lie
around in the straw and down in the grass
while on the stage, all the messengers fly
and fill brandy in spyglass and opera glass
See scribes waver out of their encyclopedias
they become bright and magniloquent

Eight flushed thoughts will conquer all media
bound to follow the track of their writing's scent
They want to stand in the light with capacity's
quotations, they will fight opacity
where microphones borrow the spirit sound
where ideas use stages to stroll around
Speaker cables lay fuses to feed inspiration
from science to audience, to brain scintillation

During Stupid Required Reading

In the seat pads, hear some of the hidden mites sneeze
Just don't try to blow all this dust off the pages
cause it has been part of the printing for ages
You swallow the dust, but it still won't decrease
Before cooking your chair glue, oppressed is your backside
overfed with the bilgy gooseberry sauce
you deflate the part that's infected by dross
under which takes place the mating of dust mites
You can also, instead of just studying the book
and its grave leaden letters, simply first toast it
or epilate your ragged beard with a post-it
and tickle yourself at the inner ear's nook
Instead of perishing limply in gloomy halls
and harass yourself with affliction
just give your left middle finger some friction
rise it high, step outside of these goony walls
Say goodbye soon, because that's the idea:
if once the dumb circles close all around here
it will shoot out of open sphincters, I fear
in section "D", between "Derrida" and "diarrhea"

The Author

Alex Dreppec (Fig. 2.1) has published volumes of poetry in the legendary Hermit Press, chiliverlag and Ariel-Verlag, among others. In addition, there has fathered more than 300 other publications in German and English-language

Fig. 2.1 Science Slam creator Alex Dreppec on stage. (Photo: Ellen Eckhardt)

literary journals, textbooks, publications in numerous European countries, the USA, Canada, India and China. He is represented in anthologies and on CDs from Reclam, DTV to Mailart, e.g. with three texts in "Hell und Schnell", the standard reference co-edited by Robert Gernhardt on German-language humorous poetry from five centuries (circulation: over 50,000).

He is the inventor of the Science Slam, and also publishes non-fiction texts and scientific essays on a relatively regular basis.

What else? Vocational school teacher (with pleasure!) and active in the SlamBasis e. V. organisation team, which organises the "Krone Slam", among other things. Leader of writing workshops at schools and universities. Appearances on radio and television (Arte, MDR, HR1, WDR). Around 1995 release of pop music with placements in Airplay – and DJ charts. Before times Poetry-Slam-Champion in numerous cities. One of the founders of the "Darmstädter Dichterschlacht" (Darmstadt Battle of Poets), which was sold out at times with over 1000 spectators.

Doctor of psychology, doctoral scholar of the state of Hesse, inventor of a salad dressing: warm peanut butter and mix with warm water and yogurt, salt, pepper, lemon or light vinegar, a little sugar or acacia honey, coriander (fresh and finely chopped or ground). To taste a little (spring) onion, garlic does not fit. Enjoy your meal!

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