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Bringing research alive through stories: reflecting on research storytelling as a public engagement method

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Abstract

Stories are vital in making sense of our lives – and research. Consequently, 12 researchers from the University of Sheffield underwent a three-month training process from September to November 2019 to learn how to shape their research experiences into accessible, ten-minute, spoken stories. This culminated in a storytelling evening as part of the Economic and Social Research Council's Festival of Social Science, at which researchers from different disciplines discussed various nature–society dynamics in diverse field sites in the Global South. By reflecting on the training process and the performance through qualitative interviews with storytellers and audience members, our study answers the research question: What lessons emerge from an interdisciplinary group of researchers engaging with research storytelling for public engagement? Our study addresses gaps in the literature by focusing on interdisciplinary research storytelling, spoken ten-minute stories, bringing together storytellers' and audience's viewpoints, and providing practical recommendations for researchers and practitioners. We argue that research storytelling can have diverse benefits for both researchers and listeners by promoting learning in an accessible format, boosting self-confidence and helping (un/re)

learn scholarly communication. However, professional guidance and peer support, as well as ethical sensitivity, are crucial.

> **Key messages**
> - To face the unfamiliar task of communicating research in ten-minute, spoken-word stories, a professional storytelling training process was helpful to (un/re)learn scholarly communication conventions. This helped to shape compelling stories, while peer support from an interdisciplinary group safeguarded ethical sensitivity.
> - A conducive environment, involving holding the research storytelling showcase outside a university setting, can be helpful to both storytellers and audience.
> - The opportunity to be challenged through research storytelling can be enjoyable, as the costs (in terms of time and other academic priorities) are outweighed by the benefits: boosted self-confidence, crystallising arguments and research questions, and accessible outputs for a wider audience.

Introduction

> A piece of information has lost its purchase with the moment that it was new. It only lives in that moment … A story is different; it does not expend itself. It holds on to its strength and is able to unfold even after a long time. (Walter Benjamin, 2007: 110; our translation)

> The truth about stories is that that's all we are. (Thomas King, 2003: 92)

On a stormy November night, a diverse group of researchers and members of the public braved the elements to spend the evening in a Sheffield cafe as part of the Economic and Social Research Council's Festival of Social Sciences. The researchers, from different backgrounds, disciplines and career stages, undertook to communicate diverse nature–society dynamics at a public venue, standing in front of a non-expert audience, only armed with the power of words. At this event, the 12 academics performed short, ten-minute stories drawing from their research on plural, complex people–environment dilemmas in field sites across Africa, Asia and Latin America. The stories ranged in focus from the global to the local, traversed countries and continents, and involved a cast of researchers, local people, natural resources, commodities and animals. Titles varied from 'Connecting places for nature, people and peace' to 'A journey toward participatory research' (for all available videos, see University of Sheffield, 2020). The event was the culmination of a training and collaboration process on research storytelling as a public engagement method which was initiated by Professor Frances Cleaver and led by professional storyteller Tim Ralphs.

In this paper, we reflect on this collaborative process and the storytelling performance, answering the research question: What lessons emerge from an interdisciplinary group of researchers engaging with research storytelling for public engagement? This is an important question because, despite the many benefits we document from this research storytelling process, engaging with storytelling may seem like a risky choice for some researchers. The adage 'The plural of anecdote is not data' has been levelled at qualitative social science irrespective of storytelling work (Dahlstrom, 2014). Equally, for natural science disciplines, translating quantitative data into stories comes with its own challenges. While some

disciplines may be more used to drawing on and developing stories in their research and communication, our group were all new to this ten-minute, spoken storytelling format for non-expert audiences. In scrutinising this experience of research storytelling as public engagement, we argue that it can be highly beneficial for both researchers and listeners, although professional guidance and peer support, as well as ethical sensitivity, are vital. We do not claim our experiences to be representative, but we analyse them as a contribution to the intensifying discussion about storytelling, research storytelling, and research storytelling as public engagement (see, for example, Borum Chattoo and Feldman, 2017; Boye, 2019; Christensen, 2012; Cormick, 2019; Djerf-Pierre and Lindgren, 2021; ElShafie, 2018; Joubert et al., 2019). We consider several questions:

- How was the storytelling process and event beneficial to the participants?
- What were the practical, ethical and professional challenges it posed?
- What can the experience tell us about the efficacy of storytelling for public engagement and researcher capacity building?

In so doing, we aspire to fill multiple gaps in the literature. First, we discuss research storytelling by investigators from various disciplines, ranging from geography via biosciences to international development. Our interdisciplinary outlook thus closes a gap as, for example, popular journals such as *Journal of Science Communication* focus predominantly on communicating natural sciences (JCOM, 2020). Second, we reflect systematically on research storytelling as ten-minute spoken performances. This lively form of public engagement, which does not fit neatly into the categories identified by the UK National Concordat on public engagement (RCUK, 2010), is currently under-researched. Third, the study brings together reflections from storytellers and audience members. As this has not often been done in the research storytelling literature, reflecting on the space created between storytellers and listeners (Lewis, 2011) is also a methodological contribution. Finally, we offer practical recommendations to researchers and public engagement professionals, also filling a gap.

For this study, we conducted 18 semi-structured, qualitative interviews with storytellers (n = 11, including the authors) and audience members known to the authorship team (n = 7). We allocated pseudonyms to our participants: storytellers received pseudonyms earlier in the alphabet (A–K: Ali, Barbara, Christine, Donna, Elena, Flora, Gina, Hosia, Isaac, Jen, Konrad), audience members later in the alphabet (M–V: Michael, Nadia, Patricia, Riya, Sabrina, Teresa, Valfredo). Each pseudonym is representative of the interviewee's gender, but not their cultural background. As a condition of informed consent, we anonymised all interviewees. The interviews asked storytellers and audience members about motivations for engaging with storytelling, and perceived benefits, costs and difficulties, as well as choices around structure and performance. The interviews were coded axially in NVivo 12 to identify common themes within and between the storyteller- and audience-member groups (Mikkelsen, 2005) – that is, identifying higher-order clusters such as benefits and costs, and specific manifestations such as (un/re)learning. For triangulation, we reviewed 13 evaluation questionnaires completed by showcase attendees. The Sheffield storyteller team also organised the workshop 'Research storytelling: A beginner's guide' at the POLLEN20 Political Ecology Network conference. There were 90 sign-ups for the storytelling showcase, and over 100 registrations for the workshop, demonstrating considerable levels of interest. While not exhaustively evaluating the public engagement process (Reed et al., 2018), our study consulted event attendees on their experiences.

First, we briefly review storytelling in research, focusing on its role in communicating research findings. Then we present our empirical findings on the why and how-to of research storytelling, ethical challenges including confidentiality or misrepresenting the Global South, and the costs and benefits of research storytelling, especially capacity-building benefits around learning, unlearning and relearning for researchers and listeners. Finally, we propose three lessons for engaging with this type of spoken-word research storytelling as public engagement.

Research storytelling and public engagement

As Benjamin wrote, 'experience going from mouth to mouth is the source from which all storytellers have drawn' (Benjamin, 2007: 104; our translation). This quotation appears pertinent to all academic uses of storytelling: it reflects the importance of oral sources in building knowledge, but it also highlights the contingent, interactional quality of knowledge creation. It applies whether storytelling is used to obtain knowledge from participants, that is, as a research method, or to share knowledge by researchers, that is, to communicate findings and engage with the public. As Christensen (2012: 232) aptly puts it, 'At its heart, research is storytelling.' In academic discussions on storytelling, storytelling is rarely precisely defined. However, storytelling is generally understood to be vital to cognition, and building histories and narratives, and thus to promoting social progress (Harris, 2019).

In the research context, storytelling broadly falls into the categories of being used as a research method or as a communication method with non-expert audiences. As a research method, storytelling has been used in, for example, organisational research (Boye, 2019; Rosile et al., 2013), citizen science projects (Kang, 2019; Mahajan et al., 2020; Richter et al., 2019) and health research (Geia et al., 2013; Murphy et al., 2013). As oral traditions of passing on knowledge and making meaning through stories are prevalent in many Indigenous cultures (Christensen, 2012; Datta, 2018; Drawson et al., 2017; Pualani Louis, 2007), storytelling is particularly common in engaging with Indigenous communities (Geia et al., 2013), including to explain abstract concepts in a fun way (Goulão, 2018). Many have recognised storytelling as part of wider efforts at decolonising research methodologies and epistemologies (for example, Datta, 2018; Geia et al., 2013; Pualani Louis, 2007; Rieger et al., 2021), including in the digital realm (Cunsolo Willox et al., 2012). On the public engagement side, diverse accounts, especially from the natural sciences, detail using stories to promote engagement with science (for example, Bordenave, 2018; Cortes Arevalo et al., 2020; ElShafie, 2018; Olson, 2015). A post-event case study at National Museum Indonesia concluded that storytelling helps secure public and cultural engagement (Soerjoatmodjo, 2015). However, this distinction can get muddied, for example, by storytelling being part of the research while also being used for research dissemination (for example, Christensen, 2012; MacKenzie et al., 2013). This equally can push storytelling into the domain of activism, where it is also common (for example, MacKenzie et al., 2013; Michie et al., 2018; Polletta, 2009).

For this paper, we chose to focus on storytelling as public engagement, as the collective training process was aimed at public engagement through ten-minute spoken stories by interdisciplinary storytellers, which are under-researched in the literature. We are equally aware that this form of storytelling was predominantly one-way communication, and thus less participatory than it could be (DeVasto and Creighton, 2018; Veland et al., 2018). However, our study sought to remedy this somewhat by asking storytellers about audience responses, and by inviting audience members' viewpoints to explore the – under-researched – space between the storyteller and audiences (Lewis, 2011).

Using research storytelling for public engagement entails diverse opportunities, but also pitfalls. Our understanding follows Bauer and Jensen's (2011) definition of public engagement as communicative action, that is, establishing dialogues between scientists and various publics. Public engagement has grown recently, with humanities and social science scholars even more active than science, technology, engineering and mathematics researchers in the UK (Hamlyn et al., 2015). Engaging accessibly with non-academic audiences is particularly important for issues of global significance, including social justice (Borum Chattoo and Feldman, 2017; Cameron, 2015) and climate change (Harris, 2019; Moezzi et al., 2017; Veland et al., 2018), as discussed in our stories. Engaging with non-academic audiences is a key motivation to use research storytelling (Burchell et al., 2017; Cerrato et al., 2018; ElShafie, 2018). A prerequisite is learning, unlearning and relearning conventions around scholarly communication (Bauer and Jensen, 2011).

While the bulk of the literature emphasises learning opportunities for the audience through storytelling, some voices equally highlight the opportunity and need for learning through storytelling

within academia, be it as a research method (Christensen, 2012; Goulão, 2018; MacKenzie et al., 2013) or as a public engagement method (Cerrato et al., 2018; ElShafie, 2018). Finally, a key driver of storytelling in public engagement is the privileged status of narrative in human cognition (Graesser and Ottati, 2014) in terms of retaining information (Negrete, 2003). In this sense, it compares favourably with traditional logic-based scientific communication (Dahlstrom, 2014). Glaser et al. (2009) show that storytelling processes, including dramatisation, emotionalisation, personalisation and fictionalisation, affect critical cognitive information processing. Dramatisation concerns organising information into a beginning, middle and end, which has also been described as a 'narrative arc' (Joubert et al., 2019). Emotionalisation means enhancing the emotional dimension of the material, personalisation concerns heightening the personal aspects, while fictionalisation concerns mixing fictional with factual information (Glaser et al., 2009). In the next section, emotionalisation, dramatisation and personalisation will play a key role in storyteller and audience accounts, as humanising researchers and research was considered a key benefit of storytelling.

Research storytelling also entails potential pitfalls. Problematising challenges is essential to avoid sanitised positive accounts of public engagement experiences (MacKenzie et al., 2013). The first challenge concerns the need for training (Cerrato et al., 2018): science communicator Craig Cormick (2019) argues that there is no one-size-fits-all in storytelling, as stories align with different values of different people. As the ability to communicate with diverse, non-academic audiences is key to public engagement (Bauer and Jensen, 2011), there is a particular 'how-to' to storytelling which needs to be learnt, including structuring elements such as dramatisation, or interaction-enhancing personalisation (Glaser et al., 2009). What is more, there can be competing imperatives between public engagement and more conventional publications, which are likely to receive more recognition in academia (MacKenzie et al., 2013). Professional incentives in academia continue to be focused on research, funding, teaching and administration, rather than on public engagement (Burchell et al., 2017). Other challenges are ethical (Dahlstrom and Ho, 2012). These include risks of speaking inappropriately for less powerful research participants, such as Indigenous people whose perspectives and knowledges have often been subjected to misinterpretation, commodification, mystification and simplification (Pualani Louis, 2007). Further ethical challenges concern the need to maintain confidentiality, and to remain accountable and truthful to the research and research participants despite the narrative format. We examine these potentials and difficulties below through our empirical material.

Storyteller and audience reflections

The why and how-to of storytelling

Our storytellers' rationales for being involved, and our audience members' reasons for attending a research-storytelling event, dovetailed. As found by Cerrato et al. (2018), our storytellers were motivated by a sense of duty in sharing research with non-expert audiences (Ali, Barbara, Christine, Donna, Elena, Flora, Gina, Hosia, Isaac, Jen and Konrad), often coupled with an acknowledgement that academic journals or conferences are not accessible beyond a narrow audience. Another parallel to Cerrato et al. (2018) was the storyteller group featuring comparatively many PhD and early career colleagues (10) compared with established academics (2). Audience members appreciated the opportunity to learn about diverse research in an informal, conducive, accessible format (Michael, Patricia, Riya, Teresa, Valfredo). Nadia and Patricia highlighted that listening to ten-minute storytelling was far more time-efficient than trying to read publications to learn about researchers' work. Both audience members and storytellers thus confirmed the expectation that research storytelling increases engagement from non-expert audiences (Dahlstrom, 2014). Moreover, as mainstream reports about the Global South predominantly feature negative narratives, for example, about poverty (Borum Chattoo and Feldman, 2017), telling personal research stories on themes ranging from tourism via avocado growing to urban living helped to challenge audiences' world views, existing knowledge and research expectations, as detailed further below. Among

those who completed a feedback questionnaire, 12 of 13 audience members agreed (6 strongly) that they had learnt something new that evening.

In terms of the 'how-to' of storytelling, the storytellers crafted their own organic story structures, rather than following prescribed narrative sequencing. Diverse philosophies exist about optimum narrative structures, including Randy Olson's (2015) 'And, But, Therefore' and Freytag's (1900) structure of 'Rising problem, Climax, Cooldown, Resolution', which will be familiar to many from Hollywood storytelling (Cormick, 2019). However, our group were encouraged to develop their narrative structure organically through iterative feedback from the interdisciplinary group, to suit both the audience's ability to follow and the specificities of story and storyteller. This flexibility in the ten-minute spoken format, seen as a positive by both storytellers Flora and Konrad and audience member Nadia, was a deliberate decision by storytelling coach Tim Ralphs, reflecting that traditional folk-tale narratives generally resist structure (Propp, 1928). Approaches included:

- retelling earlier experiences to frame research as part of their growth and life journey
- taking a long view of unfolding research over many years or decades in one or different locations
- discussing notable events or periods of research to explain the genesis of a research interest
- focusing on a particular commodity, resource or species, ranging from cocoa via oil to elephants

This lack of a uniform structure was welcomed by audience members Nadia, Sabrina and Teresa. The only structure which multiple audience members recalled across different stories was, in Nadia's words, 'a gentle introduction, and then a deeper bit, and then slowly going out of that with something to … stay with the audience', recalling a fundamental dramatisation structure of beginning, middle and end (Glaser et al., 2009).

A key difference from other types of storytelling was the degree of artistic licence which research storytellers saw as acceptable. In contrast to the fictionalisation idea of weaving fictional elements into storytelling (Glaser et al., 2009), our storytellers shared a strong sense that research storytelling crucially builds on the research and evidence identified: 'that's the main limitation to your artistic licence: you still want to tell stories … in ways that are truthful and respectful to … people and their experience' (Flora). Unlike storytelling such as fictional, mythical folk tales, it was considered essential to remain true, accurate and appropriate in relation to the evidence collected and research undertaken (Barbara, Christine, Donna, Elena, Flora, Isaac, Konrad), although licence can be taken in omitting details or restructuring to shape a compelling ten-minute arc. Where research storytelling and other storytelling types align are the purposes of sharing wisdom and knowledge, which is particularly strong in oral storytelling traditions (Donna and Isaac).

As personal elements in research storytelling can improve reception and recall (for example, Glaser et al., 2009; Michie et al., 2018), storytellers were encouraged to use personalisation strategies of heightening personal or comedic elements. This included sharing evocative descriptive details of sight, such as an impressive tree; taste, such as meals shared; smell, such as being near oil fields; feelings, such as fear or bewilderment; or the sounds of howling monkeys waking up a researcher every day:

> I got permission to stay in the natural protected area in a palapa with a forest ranger, and it was the best experience. I had the second floor of the palapa for my own, where I only had a hammock where I had to sleep, which was a challenge, because they told me I couldn't use my sleeping bag as it was dangerous because of the snakes. And during my stay, every morning, my neighbours, these howling monkeys, woke me up at 4.30 in the morning, with their shouts [audience laughter], so I was always prepared to see how the lagoon came alive around 6.30 when the people from the community began to arrive. (San Roman Pineda, 2020)

Other examples are discussing stereotypes around colonial or gendered experiences with reference to one's own life and research journey. Reflecting neuroscience and other storytelling research (Cormick, 2019; Graesser et al., 1980), audience members' recall of the stories was significant. Nadia refers to

two personal elements which diverse audience members' testimonies highlighted as important – visa difficulties which led to a researcher being 'imprisoned' in a jail of chairs in a Nigerian airport, and one researcher's own life journey being intertwined with Britain's colonial past and its implications:

> … both examples are not necessarily something that you would put in a paper …, but the storytelling event created an opportunity where you can give that little bit extra of yourself … I like that. And that kind of sticks better and for longer in my mind.

Other particularly evocative personal elements related to researchers' experiences of elephant migration, geographical or mystical landmarks, or food and beverages being consumed and cultivated. Audience members' testimonies highlighted that these personal elements helped them engage with, and mentally travel to, these contexts, of which they had no personal experience (Nadia and Riya), reflecting research which shows the importance of evoking empathy to increase engagement (Michie et al., 2018). This aspect of transportation, that is, becoming deeply immersed in a story's context (Green and Brock, 2000), has been found to be positively associated with knowledge (Murphy et al., 2011, 2013). This mode of sharing research findings thus favours more profound effects on listeners, which supports Glaser et al.'s (2009) finding that personalisation enhances audiences' engagement with the academic material shared.

Similarly, the use of humour was welcomed by audience members Michael, Nadia, Riya, Sabrina and Valfredo as an emotionalisation strategy to draw the audience in and improve retention of information:

> My research focuses on food waste. We are told that within the global supply chain, we waste 1.3 billion tonnes of food a year. In the UK, we waste almost 10 million tonnes of food a year. Actually, that is very bad. But as I can see from your faces, we are all tired of hearing about food waste [audience laughter]. (Cromwell, 2020)

While there are limits to humour's usefulness regarding profound issues, including global justice, it has been argued to be a risk worth taking within reason (Cameron, 2015). Humour – sharing uncomfortable circumstances, misunderstandings or personal journeys, rather than poking fun at anyone else – was considered useful by many of our storytellers and audience members (Donna, Flora, Gina, Michael, Nadia, Valfredo). Storytellers cited learning words in Indigenous languages, being inducted into very different cultural expectations of what is normal by participants, and research experiences which are funny in hindsight, but somewhat scary as they are happening, for example, around visa or research approvals. Fundamentally, the emotional component of humour thus helped increase audience engagement while demonstrating the importance of researchers being willing to learn and be challenged.

The inclusion of personal or emotional elements and difficulties thus served to humanise research and researchers. The explicit permission to be present in the story, granted by the professional storyteller in the first training workshop, also extended to sharing negative elements of research journeys. Failures and challenges are considered crucial elements to stories (Cormick, 2019; Segarra, 2018), yet some feel that they have not been discussed enough in research as illustrated by Teresa:

> Sometimes, when we think about talking about research, you think, OK, talking about results, the outcome of that study. But … after the event, I realised: OK, it's possible to communicate the challenges. By communicating the challenges, I am also communicating my research.

In sum, our findings confirm that storytelling can be more convincing than just data (Niemand, 2018), while facilitating the retention of information (Graesser et al., 1980). While dramatisation in terms of a beginning, middle and end are helpful (Glaser et al., 2009), listeners welcomed organically grown structures. Equally, sharing personal or self-deprecating humorous elements proved important, as this personalisation and emotionalisation (Glaser et al., 2009) enhanced audience engagement and recall. Fundamentally, these storytelling experiences thus raise broader questions about the most effective ways to share research

through all academic channels. While dramatisation, emotionalisation and personalisation were all helpful strategies, fictionalisation was unanimously considered unacceptable, so as to remain true to the evidence, as explored further below.

Ethical challenges of research storytelling

Unquestionably, engaging with research storytelling entails risks in terms of ethics. A first ethical risk perceived by diverse storytellers (Christine, Flora, Gina, Hosia, Jen) was maintaining confidentiality and keeping our research participants and research facilitators safe. Anonymisation and retaining certain levels of vagueness about place names and geographical specificities were key strategies. At the same time, there was a sense that research participants had entrusted us with their stories to make their situations known to a wider public. Important concerns were not overusing research participants' permission in terms of what stories could be told and how (Donna), while honouring and respecting their stories (Flora and Gina).

A second key challenge concerned avoiding misrepresentation. Pualani Louis (2007) emphasises a long history of Indigenous knowledges being misrepresented, misinterpreted, fragmented, mystified, commodified or simplified. At the same time, authentic associations with those sharing stories can significantly enhance engagement with, and educational benefits of, narratives (Murphy et al., 2013). The fear of speaking inappropriately for or about research participants and contexts was discussed both in formal workshops and informal conversations between storytellers, amplified by the university's choice to name the event 'Tales from the Global South'. Many storytellers were not from the countries which they were researching, which made it all the more important to avoid misrepresentation or 'speaking for' individuals from the Global South, who are perfectly capable of speaking for themselves, according to Flora, Gina and Jen. Christine and Elena emphasised that careful balancing, and running stories past our rehearsal groups for peer support, and colleagues familiar with the specific contexts, was important to avoid misrepresentations, reproduction of problematic stereotypes, or inappropriate discussion which may harm research participants or the researchers' relationships with them. Consequently, storytellers Elena, Flora, Gina, Hosia and Jen were all the more cognisant of avoiding misrepresentation or appropriation of stories, while striking a delicate balance with maintaining confidentiality:

> Most of us are not from the places where we did our research … most of us struggled a little bit with that positionality. … So, I think a lot of us presented in our stories who we are, and that made it clear that we were not speaking for the Global South; we were all just researchers who worked in those places, sharing our experiences. (Jen)

The storytelling trainer had granted explicit permission to be a character in the story, thus emphasising specific, positional viewpoints to avoid misrepresentation, misinterpretation or appropriation, which audience members Michael, Teresa and Valfredo described as being handled well. There was thus a conscious effort not to make audiences feel like the experience described was their own, which challenges arguments to facilitate full relatability in storytelling (Niemand, 2018).

In sum, in terms of Dahlstrom and Ho's (2012) three ethical questions around storytelling for science communication, storytellers answered their first question as to whether narratives should be used at all in the affirmative, seizing the narrative format to enhance audience engagement. Their second question concerns the risk of inaccurate extrapolation by the audience from a poorly chosen example, which was mitigated by emphasising these experiences as storytellers' own without extrapolating. In terms of Dahlstrom and Ho's (2012) third ethical question, about whether narratives are being used for comprehension or persuasion, this same ethos of communicating personal research experiences removed any suggestion of persuading, instead aiming to educate about research contexts of which many in the audience had no personal experience.

Costs of storytelling

A critical cost identified by virtually all storytellers was time (Burchell et al., 2017): the training and collaboration process involved two introductory workshops, attendance at a minimum of two out of four practice sessions, and a dress rehearsal, plus the time individual storytellers invested in preparing the stories. However, there was also recognition that myriad benefits, including networking, engagement and researcher empowerment, outweighed any costs incurred:

> I think it was mostly the time; I don't think there was any other academic cost. It was very useful because I also got a chance to engage with nice people and also got to meet other people that otherwise I would not know. (Donna)

Individual interviewees questioned whether this process might affect academic work. Flora was concerned about the degree to which anecdotes and stories could, or should, creep into academic writing, and whether this may affect acceptability by journals, reflecting an abiding scepticism of stories in some quarters (Dahlstrom, 2014). Ali emphasised the risk of storytelling, and public engagement more generally, leading to academic colleagues devaluing a storyteller's academic work through seeing them as the 'public engagement person', which echoes Burchell et al.'s (2017) finding that academic imperatives deprioritise public engagement. In a somewhat related way, Flora highlighted the difficulty of admitting ignorance and a need for new learning in a challenging industry. However, on balance, all storytellers agreed that the benefits were more significant than the costs of time and tensions with academic conventions.

Capacity-building benefits of storytelling: boosting confidence, generating outputs, and (un/re)learning (communication) certainties

A key capacity-building benefit was a self-confidence boost, according to Barbara, Christine, Donna, Elena, Hosia and Isaac. This was considered to be particularly beneficial by PhD researchers, but also by those with limited experience of teaching and public speaking. Factors cited included the positive feedback received from the storytelling coach and constructive interest from fellow storytellers through collaborative rehearsal sessions, as well as the boost from the public research storytelling showcase. This positive impression was reciprocated: diverse audience members emphasised that, while some nervousness could be detected according to Michael, the stories were well presented:

> I thought the performances were incredibly polished … And I think I went expecting there to be some car crashes … (Sabrina)

Generating accessible outputs was considered another key capacity-building benefit. Christine, Flora, Hosia, Isaac, Jen and Konrad appreciated the ten-minute videos (University of Sheffield, 2020) as an opportunity to broaden their portfolios as researchers and thinkers, as well as granting non-expert audiences short insights into their work:

> It was an opportunity to communicate some of my research and put it out there in a new way. (Jen)

Ten videos have been shared across platforms including Kaltura, Facebook and Twitter, prompting conversations also between storytellers and their families and friends:

> … a lot of my friends don't know what I'm doing at all. They just know that I'm doing a PhD, but when I shared this video on Facebook and such, I was so surprised to see … how many people actually listened to my story and said: You have done such a good job, that I was surprised like: Are you really interested to know what I'm doing, did you really look into my video? Did you listen to my story? That was really surprising. (Elena)

More broadly, learning, unlearning and relearning scholarly communication habits (Bauer and Jensen, 2011) was cited by storytellers as a key, somewhat unexpected, capacity-building benefit. First, all interviewees emphasised the benefits of learning how to communicate with non-expert audiences as a key motivation, but also a highly beneficial outcome:

> I thought as a learning process, for me, I wanted to see what it is to step outside the shoes of being an academic and do something. (Elena)

For some storytellers, this equally involved sharing insights which challenged Western knowledge systems, promoting plural ways of knowing, for example, about the usability of waterways or cultivation. Audience members reciprocated, citing the clarity and comprehensibility of research stories as key benefits of the stories:

> I'm interested in how science is communicated because as someone who does not have a science background, I have … sometimes difficulty understanding scientific terms or methods … And storytelling is an interesting way of making findings and research … understandable as a layperson. (Michael)

A related benefit for storytellers was the possibility of using storytelling skills in research and disseminating research. Gina and Hosia expressed a hope to use storytelling as a research method, including as a distancing tool for research participants to engage with sensitive subjects, such as witchcraft or violence. Second, a key benefit and motivation for Donna and Flora was learning how to communicate research objectives and findings, to get feedback and also feed back to non-academic audiences:

> I like the idea of being able to communicate research to the general audience, because I feel that academic language is very abstract and difficult to understand. And I heard that in the communities. Because there are some academics that are trying to work with them, but they don't really understand them. (Donna)

As discussed above, these dynamics further blur the supposedly clear distinction between storytelling as a research method and as a public engagement method. At the same time, in terms of promoting fairness in knowing, that is, conducting engaged, fair investigations and equitable, accessible knowledge production with historically oppressed communities (Holliman et al., 2022), our storytellers' reflections also reaffirm the potential usefulness of research storytelling.

This aspiration of communicating better with non-expert audiences also involved some necessary unlearning. Professional storyteller Tim Ralphs deliberately crafted exercises in early workshops to reveal and challenge pre-existing academic habits. This concerned the importance of starting from the audience's viewpoint, rather than from the researcher's viewpoint. Both iterative workshops with the professional storyteller and rehearsals with the interdisciplinary group served to simulate the heterogeneous audience, and thus to shift the focus from what researchers wanted to tell towards what the audience would be interested in, according to Donna, Elena, Flora, Gina, Hosia and Konrad. Christine, Donna and Flora stated that this concerned, first, questioning and eliminating the preponderance of academic jargon, deprioritising the use of words and phrases such as 'woody plant encroachment' or 'conviviality' in favour of less technical paraphrases. Second, it highlighted the importance of not overloading a ten-minute presentation, which Christine, Flora and Gina hope will also translate to other academic activities. In some ways, these techniques mirror key evolutionary processes in learning (Breslin and Jones, 2012): variation (acknowledging complexity and plurality), selection (highlighting the most engaging aspects) and retention (by both storytellers and listeners) as a precursor to consolidating all into a story:

> I think one of the things I learnt from the project is how we try and put too much into everything we write, or lectures and seminars and so on. (Gina)

In terms of focusing on and thinking from the audience's vantage point, a third key benefit was distilling research in terms of what key messages need to be foregrounded, both in academic and non-academic settings:

> It's also a criticism that's levelled at social sciences so much: it's just anecdotes. But when it's an oral format, these anecdotes … by the end, you know the ones that carry your message the best. (Christine)

> It helped me clarify my ideas, even to explain it in a better way to my supervisor. I hadn't been able to communicate that before as clear[ly] as it was with the story. (Donna)

Storytellers recognised that the collaborative group format and professional feedback were crucial in iterating clearer versions of individuals' stories, which emphasised the importance of working together also in non-public engagement settings, according to Christine. Konrad added that this reflects a wider benefit of storytelling in terms of bringing out 'what is the point', forcing researchers to take a step back to reflect on objectives, journeys and identities.

In sum, there was thus a helpful, but sometimes uncomfortable, learning process for the storytellers. It provided benefits, including confidence boosts, diverse outputs and positive collaboration with interdisciplinary colleagues. Equally, it challenged researchers to question academic conventions around sharing knowledge, to start from the audience's viewpoint when selecting language, and personal and comedic elements, as well as volume of material. This switching of publics is a crucial feature of engagement with non-expert audiences (Bauer and Jensen, 2011).

This learning by storytellers enabled audience members to have a positive experience, not only in terms of learning through the process, but also in terms of being challenged to reflect further (Michael, Nadia, Patricia, Sabrina, Valfredo). As stories generally involve something changing at the end (Storr, 2019), these research storytelling efforts achieved a change in audience members' thinking. Audience members particularly credited comedic or personal elements of researchers sharing their own learnings and shifting world views around gender, colonial pasts or the benefits of profit-oriented economics with challenging them to think and to want to know more. This was equally reflected by 12 of 13 audience members who completed a feedback questionnaire agreeing that they were inspired to learn more about the topics discussed through storytelling:

> So from the beginning, I knew what was … the main thing about the talk. … And at the end, I felt that the closing was not really … closing? It was more like opening a door for people. (Teresa)

This quotation, and similar statements by other audience members, embodies what Lewis (2011) called the space being created through storytelling, that is, stories coming to life through being told, but also developing lives of their own through the story, the storyteller and the sharing of stories. The unique advantage of stories, as emphasised by Benjamin (2007), is thus their ability to be remembered even after a long time, in dialogue with the listener and their interests.

In sum, our study thus demonstrated diverse benefits of spoken-word research storytelling for storytellers and audience, but also some challenges. First, sharing knowledge and learning in an accessible way for storytellers and audience members, respectively, were crucial motivations for both academics and attendees. The 'how-to' of storytelling required some (un/re)learning from a professional storyteller, for example, around organic storytelling structures and using personal elements, humour and failures to humanise researchers and research. Ethical challenges involved confidentiality and concerns around misrepresentation. Costs of storytelling included time and tensions with academic imperatives, while benefits centred around self-confidence, interdisciplinary engagement, producing accessible outputs and opportunities for honing communication skills, such as starting from the audience's vantage point (see Table 1).

Table 1. Summary of motivations, costs and benefits of research storytelling according to storytellers and audience members (Source: Authors, 2022)

Key points	Storytellers	Audience reflections
Why? Motivation	– Sharing knowledge beyond academia	– Learning in an accessible way
How to	– Organic structure, although dramatisation (beginning, middle, end) is helpful – Use of personal, emotional aspects such as humour to humanise research – Professional and peer support	– Good not to have prescribed structure – Personal/comedic elements helpful
Ethical challenges	– Misrepresenting, for example, Global South research participants, 'speaking for' – Unacceptable to fictionalise; must stay true to research	– Mastered well
Costs of storytelling	– Time – Not rewarded/prioritised by academia	N/A
Benefits of storytelling	– Self-confidence, collaboration – Accessible outputs – New learning (scholarly communication skills): deprioritise jargon, think from audience's viewpoint	– Well-presented performances – Social setting – Being challenged

Lessons for research storytelling as public engagement

Embrace professional training to face an unfamiliar task

- Support and training from professional storyteller Tim Ralphs was described by storytellers as very useful (Barbara, Christine, Donna, Elena, Flora, Gina, Hosia, Jen).
- This helped in understanding the differences between storytelling and more conventional modes of knowledge dissemination, appreciating how to structure and frame a story for a non-expert audience, and, crucially, selecting what to tell.
- This professional training, coupled with an iterative, group-based approach simulating a heterogeneous audience through the training and rehearsal sessions, helped embrace and overcome the challenge of facing an unfamiliar task.
- The diverse disciplines present helped to navigate ethical as well as content questions.
- Dramatisation (having beginning, middle and end) and emotionalisation, for example, through humour and personalisation (such as sharing failures) were crucial; fictionalisation (that is, introducing fictional elements) was considered unacceptable so as to stay true to the research.

Create a conducive environment

- Audience members emphasised the importance of a non-university, social setting in enhancing their desire to attend, their willingness to engage and their ability to learn (Michael, Nadia, Patricia, Riya, Sabrina, Teresa, Valfredo).
- The cafe venue created a novel, creative space to engage with new, unfamiliar ideas collectively, and encouraged conversations between storytellers and audience before and after the event.
- Nevertheless, some members of the public may also consider a cafe to be a deterrent, so a sensitive approach is required.

Enjoy the opportunity to be challenged

- Various aspects of research storytelling in this ten-minute performance format were unfamiliar and uncomfortable for storytellers initially (Donna, Elena, Flora, Gina, Hosia, Jen), including standing up in front of a diverse, non-expert audience, only relying on words, and having it recorded on video.
- However, embracing these challenges entailed benefits which outweighed the costs: (un/re)learning communication skills created transferable benefits also for other writing and academic work, while the group-based, collaborative process boosted self-confidence, and crystallised arguments and research questions.

Conclusion

In this paper, we have answered the research question: What lessons emerge from an interdisciplinary group of researchers engaging with research storytelling for public engagement? In scrutinising storyteller and audience perspectives related to one specific training process and performance of research storytelling, we have argued that it can be highly beneficial for both researchers and listeners, although professional guidance, peer support and ethical sensitivity are vital. We aimed to fill several gaps in the literature by focusing on interdisciplinary research storytelling, reflecting systematically on research storytelling as ten-minute spoken performances from both storytellers' and audience members' viewpoints, and offering some practical recommendations to researchers and public engagement professionals.

After highlighting some key texts on research storytelling, we introduced empirical findings from engaging with storytellers and audience members. The observations centred around the why and how-to of research storytelling; ethical challenges, including confidentiality or misrepresenting individuals and groups from the Global South; and the costs and benefits of research storytelling. Despite costs such as time and competing academic priorities, there was consensus that these were outweighed by benefits, including accessible outputs, (un/re)learning research communication, boosted self-confidence and public speaking training, and crystallising key messages. Finally, we reflected on lessons for engaging with storytelling as public engagement, highlighting the importance of embracing professional training and peer support, creating a conducive setting, and embracing an unfamiliar challenge.

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Declarations and conflicts of interest

Research ethics statement

The authors declare that research ethics approval for this article was provided by the University of Sheffield's ethics board.

Consent for publication statement

The authors declare that research participants' informed consent to publication of findings – including photos, videos and any personal or identifiable information – was secured prior to publication.

Conflicts of interest statement

The authors declare no conflicts of interest with this work. All efforts to sufficiently anonymise the authors during peer review of this article have been made. The authors declare no further conflicts with this article.

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