

Performance Approaches for Exploring Responsible Research and Innovation

PERFORM brought together early career researchers (ECRs), performers, teachers and secondary school students to develop performance-based activities that explored Responsible Research and Innovation (RRI) and the human dimension of science. Performance methods, including the use of tools such as narrative and character, can be effective for opening up discussion on complex ethical issues in an engaging manner. This section explores the rationale for these approaches and proposes a straightforward performance activity for you to use, taken from the PERFORM project.



Creative Approaches to Public Engagement

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Narrative and ethics

Storytelling and drama are powerful ways of helping people understand the societal and ethical implications of science and to explore what that means for them on a personal level. Humans have always used stories, narrative and character as a means of exploring scientific advancements, as well as how we might feel about the changes and societal and ethical issues that they might bring. Creating stories with the public is a powerful way for scientists to explore the implications of the work that they are doing.

Narrative, I argue, is at the heart of ethical life and learning. We live and learn by virtue of the stories we tell and the stories that are told to us. This is possible not only because these stories present us with vivid ethical content, but also because successful engagement with and enjoyment of these narratives requires the exercise of capacities that also help us lead good lives. Narrative is central, in two respects, to learning how to live a good life and living it: it is both source and a method of ethical knowledge and understanding.

Robinson, G. (2014). *You Live and Learn: Narrative in Ethical Enquiry with Children*. *Childhood & Philosophy* 10 (20), 305-330.

PERFORM researcher reflection

“ Performance is a particular type of art that connects you with yourself and with the audience in a very human way. Performing is all about expressing emotions and expressing them to the audience in order to trigger emotions in them as well. Ethical issues are called “issues” precisely because they generate a struggle inside us. As human beings, this makes us emotional. This is exactly the link between performing arts and ethics. When you are a performer preparing for a show, you usually ask these questions: “how does my character feel?”, “why?”, “what is their context?”, “what actions should they take to solve their issues?”. In the show, the performer places those same questions in the audience’s mind. All the people involved (both the performers and the audience) connect with the topic on an emotional level. ”

The PERFORM performance approaches

PERFORM brought together early career researchers (ECRs), performers, teachers and young people to develop performance-based activities that explored Responsible Research and Innovation (RRI) and the human dimension of science. Partners in Spain, France and UK used different performance approaches; in Spain young people developed stand-up comedy monologues, in France they explored improvisation and clowning, and in the UK young people created science busks.

Science monologues (The Big Van Theory, Spain)

Science monologues share enthusiasm about science through humorous performances, which may take place in places that normally hold scientific events (e.g. schools, museums, festivals) but also in places that are usually out of the scientific circuit (e.g. theatres, pubs, or discos). This approach has proven to be an effective way to engage people with STEM (Science, Technology, Engineering and Maths) topics as part of their general culture, to inspire the next generation of scientists and engineers, and to strengthen the connection between researchers and the public.

Improvisation and clowning (TRACES, France)

The clown character brings a new perspective on science and the traditional science demonstration. By using the clown character and improvisation theatre (the spirit of the clown is in the art of improvisation), the audience and the participants can develop their creativity and imagination, in order to step into science in a different way than in more formal contexts.

Science busking (Science Made Simple, UK)

Science busking uses portable science demonstrations alongside theatre skills to attract, hold and inspire a passing audience with science. Busking harnesses the spirit of play to engage young and old alike with a fascination for and enjoyment of science. Busking is adaptable: it can work with small or large audiences, and can be made into a show of defined duration or developed as a drop-in experience for passing audience traffic.

Activities

Hot-seat a researcher

This activity is adapted from the PERFORM project. It is a role-play activity that helps explore a dilemma faced by an imaginary character, in this case a science researcher. It uses common ethical dilemmas that face researchers as the starting point and as such, can be useful for allowing researchers distance and anonymity to explore the kinds of challenges they may face, whilst considering their personal response to such problems.

1. Select one person to be in the hot-seat. They should sit in a chair at the front of the group.
2. Select one of the starting points (listed below) and present it to the group.
3. The person in the hot-seat acts as an imaginary scientific researcher in the starting point scenario, rather than as themselves (though they can draw upon their own experience if appropriate).
4. Invite the rest of the group to ask the hot-seated person questions to help build up the story, for example, "How did you get into this situation?" "What are you going to do now?" "How do you feel about it?"

Starting points:

These starting points leave out many important details so that these can be created during the role-play.

- The latest findings of your research have been exaggerated in the media and you are now being interviewed by a news channel.
- You are under pressure from your supervisor to publish.
- You are concerned that your research could be used for a harmful application in the future.

This activity could also be adapted as part of a public engagement project with young people. In this case, your own research area or personal story could be used as the scenario.

Plan a public engagement project

Working in small groups, follow the steps below to develop a plan for a public engagement project:

1. Invite each person to consider and share their response to the following questions:
 - What are the ethical or human-centred aspects of your work that you think it is important for people to think about?
 - Who are the groups who are likely to be affected by your research, now or in the future?
 - Outside of academic networks, who might be interested to find out more about your work and why?
2. From these answers, invite each participant to outline a public engagement proposal. For example, 'engaging with fire fighters on the potential application of swarm robotics for search and rescue missions in burning buildings.'
3. Select one person's ideas to develop further.

continued >>

Activities continued

1. Collectively discuss the following questions to build up a public engagement plan for the idea you have selected:

How might the proposed project benefit the group you want to engage with and your research?

- How is the issue relevant to the group you would like to engage with?
- Why would they want to engage with you?
- What would they gain from the collaboration?
- What do you hope to learn from engaging with this group of people?
- What expertise can they share with you that will enrich your work?

Could you incorporate creative approaches?

- Is there an ethical, societal or personal dimension that you want to explore that might be effectively explored through creative expression? For example, if you want to explore a personal viewpoint, who would the characters be and what would happen to them? How could you most effectively tell that story?
- Which creative practitioners could you collaborate with to develop these ideas further? In PERFORM we used performance, however there are many types of creative approaches that can be used, that will be more or less relevant to your chosen audience and your research topic.

Consider expertise

- What expertise will you need within your project team?
 - If you want to collaborate with creative partners, who could you seek out with an art practice that inspires you? If you want to work with schools, who could you work with who has experience of school contexts? If you are new to public engagement, is there a public engagement team within your institution ready to offer support?
5. Remember, it is best to start with a small and manageable project and give yourself time and space to explore how collaborations of this kind work.
 6. If you decide to pursue your public engagement plan, consider whether you will require funding, and if so, where you could apply. Then, decide what the first steps are in making your plan happen!

References and additional resources

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- Invincible - a participatory theatre production produced by Kilter Theatre in partnership with researchers from University of Bristol SynBio (funded by Synenergene EC FP7): <https://goo.gl/HZtHjk>



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