

Reverse Think Tank



Responsible Research Innovation & Public engagement is a key part of delivering and doing research. This note describes how to do this and use method that challenges the researcher's opinions and beliefs.

Background

The University of Bristol's Public Engagement team offered Early Career Researchers (ECRs) a unique opportunity to participate in a bespoke six-week training programme to explore Responsible Innovation (RI) themes in a creative way. Some of the questions we explored included: What futures do we want to create with our research? How does who I am affect the research I do? Who is represented in research and why is diversity important? How does my research day to day practice relate to global challenges like Climate Change and what actions can we take? The training was co-led by the Public Engagement Team and Kilter Theatre. Participants from this project were asked to work with the team on a Reverse Think Tank (RTT) project. The aim of this project was to pilot a new method, but also explore how to focus the conversations with the public around RI.

Box 1: Reverse Think Tank

- ❖ Traditional Think Tanks bring together diverse groups of experts to focus on resolving a particular problem by debating critical issues and introducing new ideas. The team have named this activity Reverse Think Tank (RTT) with the aim of challenging 'who is the expert'.
- ❖ Researchers created a five-minute video based on their research.
- ❖ The Public Engagement team held the Reverse Think Tank (without the researchers present) on the 13th July 2022. In total they had 11 young people aged 15-18 years old.

Box 2: Reverse Think Tank Methodology

- ❖ Activity 1: Young People asked to watch the video and make notes of the main words that stand out to them from the video
- ❖ Activity 2: Storify activity. Young People took part in collaborative storytelling. The Young person were asked to come up with a person in the future who might interact with this research in some way and then describe a day in that person's life where they have to talk to different people.
- ❖ Activity 3: [Disney Creative Strategy Activity: Dreamers, Spoilers and Realists](#). When Disney used to think up of new movie ideas, they often used a creative strategy activity that involved them exploring ideas using three different thinking stages. It meant that the team reaches a solid creative idea with an action plan of how to apply it. We replicated a similar activity, using the research/technology as the idea to be explored.

Reverse Think Tank outcomes

The young people's responses to ECRs including Matimba's research on nanoswarms (see the [SWARM study](#) for more details), based on the theme: Future thinking, were collated through a mixture of note taking and recording parts of the discussion.

Nanoswarms initial thoughts

The first thoughts were this is an exciting new technology but there are many things to think about including inequality, autonomy, necessity, risks versus the benefits, cost and long-term effects.

Nanoswarms best and worst case.

In a utopian world RTT thought nanoswarms could give us pregnancy information, enhance our senses, increase our memories, cure everything, be made of safe and digestible materials to not have an impact on climate change and be accompanied by an app so you have the choice to know where they are at every single moment.

In a dystopian world RTT thought nanoswarms could target the wrong cells, be hacked, change the nature of being human, encourage

unhealthy habits such as alcoholism or drug abuse, increase life expectancy therefore increasing population growth, take away people's choice to die and not be "fixed" and enhance physical appearance so perpetuate mental health issues surrounding beauty.

Nanoswarms recommendations

Balancing the dreamers world with the pessimists world view RTT came back with some realist views of what they would like to see this research become. RTT recommendations were:

- People should have a say but not when affecting others, so you can only choose it for you.
- Only to be used when REALLY needed. For example not for someone with a cold or for someone very old.
- Need to consider the impact outside of cancer treatment by looking at (i) the immunology e.g. if natural immunity would disappear (ii) the back-up plan e.g. what would happen if they malfunction (iii) choice of the individual e.g. for people that decide not to have them (because of personal beliefs or financial reasons) and (iv) society e.g. could this increase the danger of the disease for them as the illness/disease may mutate in response to the nanoswarms and become more powerful?
- Clinicians should have control of prescribing this treatment, however there should be transparency about how the decisions are being made.
- Benefits outweigh the risks
- Terminology is important to avoid confusion – what is a robot? If we reprogram a stem cell, does this make it a robot??

Tales of the future: a nanoswarm story

The young people took part in a collaborative storytelling activity. The story they created is about a fictional character, a man named Ralph who is a retiree in his late 50s living in an affluent area of Bristol. After Ralph's cancer diagnosis he was told about the nanoswarm treatment that he will receive in a week's time. Ralph is worried about side effects and dying from cancer as well as the prospect of having these activated particles in his body. He starts thinking about the possibility of this treatment being used as surveillance "are they putting chips in him?". Overall he is feeling hopeful his cancer will be treated. Ralph's wife is a 5G conspiracist and an antivaxxer, she worries

Ralph will be tracked and put the family at risk as well as the nanoswarm treatment taking over his thoughts and controlling him. Ralph is looking for validation so talks to his childhood friend Bob, who is very laid back. Ralph wants to see if Bob is also negative about the nanoswarm treatment, which he is not, in fact Bob sees this as Ralph's opportunity to become immortal.

Reflections

In this story we can see the person that has access to this new technology is from a demographic that is seen as having better access to care [1]. Though this type of inequality is not unique to nanomedicine it could intensify existing health inequalities if some people have access to a technology that is a much more targeted and personalised cancer treatment [2]. As we saw during the introduction of lockdowns and vaccines throughout the COVID-19 pandemic believing in conspiracy theories reduced adoption of containment health-related behaviours [3], [4]. Medical conspiracy theories are not new and could impact clinical decision-making and patient treatment [5].

It is unclear whether an advanced technology such as nanoswarm would be seen as a treatment or enhancement [2]. In this context I was unsure if this fictional character Bob is referring to immortality as extending life by living for a long time e.g. to 200 years old or having an eternal life. I also wondered if Bob was just trying to comfort Ralph after his cancer diagnosis and unintentionally gave him false-hope, which could be good or bad [6]. I am still reflecting on the results from the RTT.

Something that resonated with me was we conduct research that impacts the future of young people and yet their voices are often not included in this area of research [7], [8]. Engaging young people as peer reviewers of my research has been enriching and a chance to understand their thoughts and feelings about the technologies we are investigating that could impact their future. Thank you to the reverse think tank I greatly appreciate their time and generosity.

References

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