

The promise and peril of space: viewing space through the media

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I'd also like to acknowledge that we're on Gadigal country. When you work in the business of science storytelling, science is pretty broad. There's a lot to cover. But there are a couple of topic areas that feel like big-ticket items, that seem to have really broad appeal and to cut through with a wide variety of people. One of them is dinosaurs, and the other one is space.¹

We're going to leave dinosaurs to one side today and I would like to try and ask what it is that makes space so appealing for people, from my perspective of our audience, looking at a couple of the stories that have cut through and why, based on some of the coverage and content making that I've seen happen at the ABC in the last year or so. The three kind of themes that I think are part of that appeal are, first, *mystery and danger*; second, the thrill of *exploration*; and, third, flat-out, good old *wonder*.

Mystery and danger

Starting with mystery and with danger, it doesn't get much more mysterious than black holes. I'd be very surprised if you haven't already seen the picture, of a black hole (Figure 1), because it was pretty inescapable at the end of April, 2019, when it was revealed by the Event Horizon Telescope. It was our first actual image of the

Event Horizon of a black hole. I actually covered the Event Horizon Telescope back in 2015 for the BBC and they said then that the picture would be out in 2017, so it was another two years after that. We knew it was coming, but it was 11:30 p.m. when the story actually broke. I was in the newsroom helping to get it up on the website and go home. It actually broke just before midnight, got about 50,000 views even before midnight and then next day's news agenda got a bit of a shake-up. But the next morning Scott Morrison called the election.

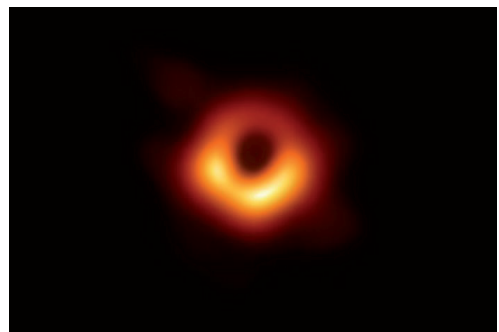


Figure 1

Our news site published eight or nine different stories about the election that Thursday, we did two stories on the black hole, unusual for a science story. We're not normally called upon to do a follow up, we just do one and get it out there. You can guess who won in the page views. Nine or ten stories about the election, two about this iconic brand new image of a black hole and that's where

¹ This is an edited version of the transcript of Dr Webb's talk.

all the attention was, it wasn't even a contest. And it wasn't a slow news day either. Julian Assange was arrested that day and Geoffrey Rush won his defamation court case as well. Sorry Julian, sorry Geoffrey, you were third and fourth place respectively. I think that speaks to something because there is not really a more mysterious frontier than the Event Horizon and suddenly we were looking at it and no one could look anywhere else. In fact one of my colleagues on the news desk, Riley, observed that it was pretty obvious looking at the results from the website, that Australians would rather stare into the void than think about another Federal election.

There's also a bit of a sense from black holes of danger. We all know that if you fall across that horizon, you're not coming back, and there is this sense of peril as well. Another aspect of the appeal of space actually usually plays out through a different type of story: the often feared and discussed asteroid impact, usually illustrated with varying degrees of verisimilitude.

I don't know if anyone saw an asteroid story in the *Daily Express* recently, I don't even know what's going on in that one. I might need an asteroid physicist to explain to me if that's even possible. But there's definitely an appeal or an attraction, a hook in that sense of danger. And in fact, arguably I would think there's something to that, it's not unreasonable. Because even when you present stories about asteroid impacts in a fairly reasonable, sensible straightforward manner they really do connect. We did a three-part series on science fiction, our program and podcast at ABC Radio National, earlier in 2019. There were three different types of apocalypse but it was the second, about the possibility of an asteroid impact,

that really seemed to connect with people the most. So people are genuinely, and I think justifiably, intrigued by this idea of space rocks that may be out there and do occasionally come quite close by and what are we going to do about them. And the podcast interviewed someone whose actual job title is Planetary Defence Officer at NASA, who talked about the fact that there are not enough eyes on the sky in the Southern Hemisphere, and so there's a bit of a blind spot in terms of asteroids coming at us.

Exploration

Apart from mystery and danger, there's a very different type of engagement as well, which is a bit more relevant to some of the other themes of the Forum, and that's of exploration. In 2019 there was the anniversary of the Apollo 11 landing and everyone generated content about the first Moon landing. Program stories, the works, but actually nothing that we did, at least in my unit, got quite as much traction as the black hole image. I think everyone knew what was happening because it was on every single outlet and website and so on, but I think it's the newer frontiers that make people even more excited and they were really interested in the Apollo landings. But there was no single piece of content that totally blew everyone away because I guess we were retelling the story for people like me who weren't alive when it happened. I loved it. I got to feel really up close to those events for the first time.

When we start crossing those frontiers again, going back to the Moon and the first time anyone sets foot on Mars, that will be an unmissable story that will blow whatever election is being called that day completely out of the water.

But the other aspect of the thrill of exploration or even engaging with space that I think really gets people's attention — apart from the progress, the boot prints on the Moon — is the actual mechanics. The practical aspects of how we do it, because the scale is not like anything else that we really try to do. This is a story I've wanted to tell for a really long time: I got to ride on a ridiculous piece of equipment, which is the Stratospheric Observatory for Infrared Astronomy. It's a telescope on a plane that NASA was planning and building for a long time. They now run it together with the German space agency, DLR, and it does astronomy at about 40,000 feet through an open door. It was a real privilege to tell that story and I wrote up their observation of an occultation, a particular type of eclipse, and people loved it. We got comments that that radio program was half an hour of radio that felt like five minutes. We got people writing in saying, "That's the best news story I've ever read on the ABC website," and I was pretty pleased with the job that we've done of it, but the credit I don't think belongs to me. Because what they were engaging with was the fact that NASA has a telescope on a plane and they use it to chase shadows, which is ridiculous. I think those mind-boggling aspects of the actual technology and the mechanics of the way that we either explore or do science about space are actually a significant hook for people.

Wonder

Finally, though, I mentioned above that just old-fashioned, flat-out wonder is another really important, appealing thing about space that we shouldn't forget. Several months of daily web traffic to all of the science content that my team puts up on the

website at the ABC through 2018 show there are some days that are a bit higher than others where we put out more stories or whatever, but there's one big spike, sort of towers over the others, and we only put one story up that day. Can anyone remember what happened towards the end of July in 2018? There was an eclipse. No new findings. It wasn't the black hole image (which was also a very big spike along those lines), but this was actually the longest lunar eclipse that we'll get this century. And earlier in the year we had changed stat systems so I can't put it in the same graph. There was another spike that was even bigger and that was for when we actually had two eclipses in the same year; most of that traffic comes from search. It comes from people typing into Google the fact that there's an eclipse happening and they want to know where it is, how they can see it and what's going on.

These are big events for people, and it's news to me as someone who thinks of himself as a hard-nosed news journalist by training, used to getting a bit sniffy about eclipses because they happen all the time and they're not that interesting for scientists. But people really do care about them, and look for them online, and if we can give them the information that they need, it works for us.

Another thing I thought was going to be a little bit naff was when we worked with Brad Tucker at the ANU to do a big stunt during a live star-gazing TV show, where we hoped to get as many people as possible all looking at the sky at once. Sure enough, despite my reservations, we smashed the world record and people turned out in their thousands to just get a telescope out and they weren't looking at an unusual event, they were just looking at the Moon. But we

had more people looking at the same object than had ever happened before, as clocked by the Guinness Book of Records. There's something about that straightforward sense of wonder that you can also share with people because people were doing this with their families and their kids, and that really, really resonates. So old fashioned wonder that you can share, I think, is an important thing not to neglect.

Finally, we tried to sum up that sense of wonder, where you feel small and kind of dizzy just from the scale of the universe compared to yourself. We called it Cosmic Vertigo and we created a podcast of the same name which tries to tap into that sense of wonder, and we got possibly my favourite piece of feedback that we've ever received

in the science unit from someone who had listened to this and was moved enough to write in. What Matthew said was this, "Thank you very much for the great work. I've just gone and bought a telescope and I'm going to use it to look at the stars with my son, who's currently so small that all he can do is chew on the handles." That speaks to that straightforward sense of wonder and the ability to share that we get from the sheer scale of space. I'll finish by referring back. I heard Annie say that space is there for humanity, but I think part of the really popular appeal of space is this sense of complete kind of Cosmic Vertigo, as we dubbed it, which is actually that, from the perspective of space, humanity is something of an afterthought.

