



Animation *An Eye of Sound* envisions how people with audiovisual synaesthesia see the world, winning it a top spot at the 2010 Imagine Science film festival.

## COMMUNICATION

# Learning to love science films

Carl Zimmer comes around to the idea that science and movies can enjoy a happy union.

For two years now I've judged science films for the Imagine Science Film Festival, a week-long celebration of the genre that runs each October in New York City. It's a peculiar job, I confess, because I'm often underwhelmed by science on the screen. But the more I watch, the more hopeful I feel.

My association with the festival came out of an argument with Alexis Gambis, then a graduate student at Rockefeller University in New York. Over a cup of coffee, Gambis explained that when he wasn't slaving over fruitfly cells, he made movies. He also runs the Imagine Science Film Festival (of which *Nature* is a sponsor). I thought the festival a wonderful idea, but feared it might end in failure. I explained to Gambis my deep suspicions about whether science and film can ever enjoy a happy union. He responded with an invitation to become a judge.

It is odd that science and films have such a complicated relationship, given that films were born out of science. The invention of photography in the nineteenth century made it possible to capture a series of images and use them to create an illusion of movement. With

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[go.nature.com/b8W3g6](http://go.nature.com/b8W3g6)

to the cinema, although not every change has resulted in artistic progress — witness *Smell-O-Vision* and *Piranha 3D*, for example.

For all that science and technology have delivered to Hollywood, scientists have received little back. Researchers portrayed in films bear scant resemblance to those in real labs. Some on-screen scientists are villains that must be destroyed by common-sense heroes. Others threaten nature with Promethean recklessness. Yet others are mavericks who find cures for cancer single-handedly in jungle tree-houses. And movies often distort science itself. Tornadoes, volcanoes, spaceships, viruses: all obey the laws of Hollywood, not the laws of Newton or Darwin.

Scientists have gnashed their popcorn buckets, wishing for something better. In 2008, the US National Academy of Sciences set up the Science and Entertainment

the development of faster cameras, movies began to seduce the world. Each technical advance has brought change

Exchange to bring scientists and Hollywood film-makers together for fruitful exchanges of ideas. Gambis's film festival serves a similar mission: its website announces that it "encourages a greater collaboration between scientists who dedicate their lives to studying the world we live in and film-makers who have the power to interpret and expose this knowledge, ultimately making science accessible and stimulating to a broader audience".

I'm not convinced such collaborations will achieve this goal often, or even whether they should. Exhibit A: Harrison Ford. Earlier this year, he played a biochemist searching for a cure for a genetic disorder in *Extraordinary Measures*, a fairly accurate story inspired by a book by reporter Geeta Anand. In 2008, Ford also played a scientist in *Indiana Jones and the Kingdom of the Crystal Skull*, a fairly accurate account of a comic-book fever dream. *Extraordinary Measures* earned a meagre US\$12 million, whereas *Indiana Jones and the Kingdom of the Crystal Skull* earned \$317 million. Hollywood is a place of business, not charity, and the marketplace

speaks clearly: people want their scientists with bullwhips, not pipettes.

Even if Hollywood directors dedicated themselves to achingly realistic biopics about Peter Medawar or Henri Poincaré, that might not be a good thing. Films should not be propaganda, bludgeoning us with messages about how valuable certain things or people are. At their best, films embody the conflicts in our societies, and give form to our inner lives in all their ragged glory. They can use real aspects of the world as their raw material, but holding them drearily to account is a mistake. *Citizen Kane* is about a newspaper editor; it would not have been a masterpiece if Orson Welles had kept asking himself “Does this make journalism accessible to a broader audience?”

### SAME OLD SCIENCE?

When I ask science-promoting friends about their favourite science-themed films, I hear the same titles: *Apollo 13*, an account of the near-fatal Moon mission; *GATTACA*, a dystopian look at genetics; and *Contact*, based on a novel about the search for alien life by Carl Sagan. *Apollo 13* is great fun and quite accurate, but is merely procedural. We learn more about the workings of a lunar capsule than the workings of an astronaut’s soul. *GATTACA* divulges the shocking revelation that technology can be used for ill. *Contact* is buoyed by Jodie Foster’s charismatic performance and scenes of astronomers at work. But it drowns in solemn television news reports and ponderous congressional testimony about how tiny and insignificant and precious we are. Film critic Anthony Lane summed up *Contact* perfectly in *The New Yorker*: “How a movie that began with the promise of such excitement can fritter itself away into these plaintive consolations, I have no idea.”

None of this can deny the pleasure of science-fiction films. But they’re even more pleasurable when science is a mere



Independent science films, such as the cryonics comedy *Cold and Dry*, go beyond Hollywood clichés.

jumping-off point for wonderfully non-scientific monsters and emotionally resonant metaphors. It doesn’t matter that the acid blood of *Alien* cutting through the floors of the spaceship *Nostromo* really ought to pierce the hull and kill everyone inside. It doesn’t matter that the neurologist in *Eternal Sunshine of the Spotless Mind* could never wipe out every memory of an old girlfriend from a dingy little office somewhere in Queens. Both fictions are delicious.

The Imagine Science Film Festival is not burdened by Hollywood’s bottom line, nor is it blessed with Hollywood’s bank account. These short films — lasting from a few minutes to just under an hour — have shoestring budgets, yet they exceed what you might find at the multiplex. The best of them go beyond lazy clichés, such as the researcher obsessed with science to fill some inner psychological void or the evil corporation using science to control the planet. They find something original to say, and use the storytelling power of film to say it beautifully. One of my favourites is *Cold and Dry*, a Norwegian cryonics comedy [*sic*]. In 11 sweet, sly minutes, the film forces us to think about the grotesque lengths to which we can take science even with the best of intentions.

Even the documentaries push the boundaries. Last year’s winner of the festival’s Nature Scientific Merit Award, *Magnetic Movie*, is a meditation on the magnetism that suffuses our world (see [go.nature.com/AGsPhy](http://go.nature.com/AGsPhy)). On the soundtrack, University of California scientists describe the nature of magnetic field lines, while we watch an empty laboratory come to life with hoops, knots and

dancing tapestries. *Tagged*, one of this year’s entries, follows the experiences of a man who implants himself with a radio-frequency identification chip to see what it is like to be part cyborg. And in another entry this year, *Meet the Elements*, the geek-idol band They Might Be Giants proves that chemistry can be the basis for an addictive music video (see [go.nature.com/IsPbOt](http://go.nature.com/IsPbOt)). I will be eternally grateful to them for causing my daughters to sing about the periodic table at the top of their lungs.

One of the biggest surprises for me is how effective a muse neuroscience can be. *Skhizein*, which won an honourable mention (see ‘Science Oscars’), uses sophisticated computer graphics to transform the world as its hero descends into schizophrenia.

The 2010 Nature Scientific Merit Award went to *An Eyeful of Sound*, which joyously imagines the world as it is seen by people with synaesthesia. It makes those of us with ordinary brains jealous of those who can’t help but mingle sight and sound. *Mario Borodine*, a short film about a young inventor, won the Nature People’s Choice Award as the audience’s favourite (see [go.nature.com/XvEwkh](http://go.nature.com/XvEwkh)).

As I finish another year’s judging, these surprises give me hope that I will ultimately lose my argument with Gambis. I will be happy to admit defeat and head out to the cinema. ■

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## SCIENCE OSCARS

### And the winner is ...

#### Nature Scientific Merit Award

*An Eyeful of Sound*

Directed by Samantha Moore

#### Nature People’s Choice Award

*Mario Borodine*

Directed by Emanuel Hoss-Desmarais

#### Honourable Mention

*Skhizein*

Directed by Jérémy Clapin

For more on the 2010 Imagine Science Film Festival: [go.nature.com/XvEwkh](http://go.nature.com/XvEwkh)