1930s, Rotha and others used angled shots and rapid editing — techniques pioneered by Russian film directors and cinematographers — to celebrate innovations such as aircraft, telephone networks, electricity and express railways. Enthusiasm for technology remains a strong driver of scientific film and television.

The Depression of the 1930s stimulated documentaries in which scientists identified social problems and proposed solutions. In 1936, *Enough to Eat?* relayed the shocking conclusion of nutritionist John Orr, in a study entitled *Food, Health and Income* for the UK Ministry of Agriculture, that half the population of the United Kingdom was too poor to maintain a healthy diet.

In the exhibition, film and television clips are projected onto a screen, and hundreds of other clips from 38 films can be accessed interactively though two computer stations. Pieces of film-making equipment are also on show: a Moy and Bastie cine camera made to

Urban's design; a Zeiss microscope of the type used by Smith; a Marconi IV studio television camera used in the 1960s; a Moviola editing machine; and a 1930s Newman Sinclair cine camera.

Chief curator of the Science Museum, Timothy Boon, has written a well-researched book that provides background detail for historians of UK science film-making during this period. Other researchers are tackling French, Russian and US depictions of science on film and television, plundering those nations' archives with equal diligence. Once these studies are complete, it would be valuable to combine them into a global account of science on screen.

"My ambition for the show," says Boon, "is that by seeing different types of science films, people will become more informed consumers of science television now." Hopefully, greater knowledge of how science programming developed will guide decisions about its future. ■

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unusual elegance and beauty. A 1997 green and turquoise gown by Thierry Mugler, for example, seems to be destined for a creature that is part bird, part crustacean; long-sleeved with a flowing train, it consists almost entirely of feathers, its middle a segmented carapace. Spider-Man stirs skiwear designer Spyder, whose web-patterned race suits are on display, as well as Giorgio Armani, whose offerings include a 1990 beige evening dress sheathed in a delicate web of insect-adorned netting.

Body armour also enthralles avant-garde fashionistas. The shield of superheroes such as Iron Man — played in this spring's blockbuster by Robert Downey Jr, whose LED-eyed fibreglass costume is on show here — finds new forms in such ensembles as Gareth Pugh's 2007 leather-and-synthetic dress. With sleeves formed of shiny, triangular black panels, it resembles a solar-powered bat. Speaking of bats, the show does a nice sideline on stylish dominatrix wear, as epitomized by Michelle Pfeiffer in stilettos and clawed black gloves in the 1992 film *Batman Returns*, whose Catwoman costume spawned slinky offshoots by Gianni Versace.

Superheroes can also inspire real-world science. The Flash, created in 1940, possessed the power of super speed, as symbolized by his sleek scarlet bodysuit. Several outfits on display may increase the speed of the wearer. The outer texture of Speedo's Fastskin FS-Pro swimsuit mimics shark skin, which the company claims reduces drag by around 4%. More impressive is Dava Newman's body-hugging, flexible BioSuit, a space suit that relies on the mechanical counter-pressure provided by tight layers of material to protect the wearer from the vacuum of space. Newman, a professor of aeronautics and astronautics at the Massachusetts Institute of Technology, intends the BioSuit to replace bulkier, gas-pressurized space suits.

Most impressive are the wing suits developed by Atair Aerospace. A pilot strapped to the rigid wing suit — two polyethylene wings filled with jet fuel, powering turbines that provide almost 500 newtons of thrust — can fly at speeds of up to 350 kilometres per hour. Because the wing suit's wearer cannot be detected by radar, the company is now developing a military model with which spies could jump out of an aeroplane in one country and fly to another. Inventor Daniel Preston, the founder of Atair, says he has sky-dived hundreds of times in either the rigid wing suit or a non-fuelled soft suit, which has fabric webbing between the legs and arms. No other experience so exactly captures life as a superhero, Preston says. "It's as close as you can get to being a bird." ■

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Super clothes with special powers

Superheroes: Fashion and Fantasy

The Metropolitan Museum of Art,
New York

Until 1 September 2008.

Shazam! With a bolt of lightning, 12-year-old Billy Batson turns into Captain Marvel, a superhero with the wisdom of Solomon, the strength of Hercules, the stamina of Atlas, the power of Zeus, the courage of Achilles and the speed of Mercury — legendary heroes whose initials spell the magic command that gives Marvel his superhuman powers. With a similar spell, the Metropolitan Museum of Art in New York has transformed one of its galleries into a shrine to modern mythical titans. Its new exhibition, *Superheroes: Fashion and Fantasy*, is craftily planted in the midst of its Greek and Roman art collection. Marble statues of Hercules, Diana and Perseus along with amphorae depicting muscular runners and wrestlers surround their fantastic descendants: Superman, Wonder Woman, Iron Man and The Incredible Hulk.

Extending our fascination with extremes of strength, endurance, speed and courage, the exhibition shows how the exaggerated forms of superheroes are mirrored in *haute couture*. It also demonstrates how inventors have incorporated aspects of superheroism — elasticity, rigidity and aerodynamic grace — into more practical kinds of clothing, such as

Sky-dive like a superhero in Atair's soft wing suit.

swimsuits, space suits and wing suits.

Superheroes might be mutants, armoured men, shape-shifters or gadgeteers; fashion designers draw inspiration from them all. Mutants — usually the result of a lab accident, genetic mishap or nuclear bomb blast — often appear in near-monstrous forms, such as The Incredible Hulk. Designers have transmuted these creations into garments of