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For advertising and inserts contact:

Marketing Department
Biochemical Society
Charles Darwin House
12 Roger Street
London WC1N 2JU
tel.: +44 (0) 20 7685 2411; fax: +44 (0) 20 7685 2469
email: marketing@biochemistry.org

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Charles Darwin House
12 Roger Street
London WC1N 2JU
tel.: 020 7685 2410; fax: 020 7685 2469
email: biochemist@biochemistry.org
website: <http://www.biochemist.org>
Registered charity no. 253894

Subscriptions

email: licensing@portlandpress.com

Science Editor: Freddie Theodoulou (Rothamsted)

Editorial Panel: John Lagnado (Book Reviews Editor),
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Science on screen: what's the drama about accuracy?

by Freddie Theodoulou, Science Editor



Have you seen *The Martian* yet? A box office and critical hit, the film has delighted academics by celebrating science and technology, despite (or arguably because of) introducing the grammatically dubious verb “to science” into the English language. Many column inches have been devoted to discussing the film’s plausibility,

with astrophysicists pitching in both to praise and pick holes in the plot. Although Andy Weir, on whose novel the film is based, strove hard for scientific accuracy, he admitted allowing himself “some leeway” with a critical plot point: Mars’ thin atmosphere means that the wind storm which forced the Ares 3 crew to abandon their mission - and poor old Mark Watney - would be too weak in reality to be felt as more than a light breeze.

Why is it that we can’t help finding fault with science on screen? Isn’t entertainment the important factor? And what makes us happily suspend disbelief for the demonstrably impossible yet tear our hair in frustration over laboratory howlers? Anne Simon, science adviser to *The X-files* confesses herself amused that Dana Scully’s 3 hour Southern blot was deemed ridiculous by an audience which calmly accepted a psychic disembodied head. Perhaps the crux is to what extent the science being portrayed is true fiction? That’s where I draw the line: plausibility can go out of the window for time travel in *Dr Who* or teleportation in *Star Trek* (frankly, the split infinitive offends me more) but I don’t want to see Benedict Cumberbatch’s *Sherlock* confidently identifying sucrose by looking down a microscope. When the science is based in fact, then we’d like the facts right, please- we are scientists, after all.

Do film-makers have a responsibility to portray accurate science? Arguably not; their job is to entertain. But the emergence of organisations such as the US National Academy’s Science & Entertainment Exchange and increasing use of scientific advisors to the movie and TV industries suggest that drama benefits from good science. Clearly science can benefit from good drama: entertainment media provide a powerful route by which non-scientists are exposed to science and can do wonders for the profession, for example, as CSI did for recruitment to forensics degrees. However, bad science and bad characters reinforce negative stereotypes. Brent Spiner’s dysfunctional *Independence Day* scientist caused me to wail in anguish in the cinema (and receive a sharp poke in the ribs from my then boyfriend). In contrast, *The Martian* not only gives us a much needed “kick-ass botany hero” in Matt Damon’s Mark Watney but also shows the scientific process at its most extreme and in an engaging way. Herein lies an opportunity: we’re seeing stronger scientific characters onscreen but we need more and especially more diversity. The SciFens, a group of female actors promoting science literacy through social media put it very simply: “If young women can see women scientists on the big screen, they can see themselves in those roles in real life”. Next time, maybe leave a woman on Mars?

<http://time.com/4055413/martian-movie-review-science-accuracy-matt-damon/> ■