

The scientific popularisation of environmental problems by the media. The case of the documentary *An Inconvenient Truth*

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■ *Environmental issues are of increasing interest and are becoming more prominent in the media these days. This is particularly true of audiovisual formats, which have been especially effective in popularising scientific and environmental subjects. Al Gore's documentary An Inconvenient Truth represents a substantial leap in raising awareness worldwide about the effects of global warming and the need for everyone to take action. This documentary was the starting point of a campaign that not only placed the subject in worldwide public opinion but also contributed to promoting a green 'wave' that has extended to other different areas of society.*

Keywords

Popularisation of science, media communication, audiovisual languages, scientific documentary, global warming.

Science and the media

Science and the media are two distinct areas with very different methodologies and procedures. The most obvious of these is speed. Scientific research is known for being slow, methodical and accurate. Its findings are unpredictable: no one knows when – or even *if* – results will happen. However, the media is ruled – excessively – by the clock: so much so, in fact, that new methods of communication have further limited the amount of time available, which risks distorting the entire communication process. This can have devastating consequences. With electronic formats, information and the framework that supports it are forever open, providing an unintermittent flow of information. This – now more than ever – is making the task of dealing with these two speeds even more complex.

Other problems relate to language: on the one hand, you have the technical language used by scientists and, on the other, the standards that journalists adopt, with an insistence on simplifying and adapting everything so it reaches as wide an audience as possible, rather than a more specialised one. This is ultimately the meaning of the term 'popularisation'.

Another of these obstacles concerns the objective nature of science. Scientific experiments have to be reproducible and the results, therefore, provable. The media, on the other hand, always approaches issues from a distinctly subjective viewpoint, in spite of long-maintained but false claims of objectivity. However, it's also true that popularisation, as it refers only to communication aimed at the public at large, underlies both these areas. Both science and the media therefore seem fated to understand each other.

There are also other questions, such as conditions of space and time imposed by the media, or, on the other hand, how scientists mistrust journalists to reliably represent

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their work. It is also well-known that some members of the scientific community are contemptuous of colleagues who have become media presenters. This happened with Carl Sagan, a scientist first and foremost who then became a presenter and was reproached for his lack of investigative agenda.

The popularisation of science and audiovisual language

If the relationship between science and the media is not an easy one, it is still less so with the audiovisual media. It is important to remember that science disseminates its findings through the written word, fundamentally through specialised magazines and books. This enables it to convey ideas in a structured and logical way (León, 2002). Audiovisual media would not seem the most suitable way of explaining concepts or abstractions (Sartori, 1998). As J. González Requena (1989) says, an image is not as effective at explaining or conceptualising, even though it may be a powerful tool for description.

Moreover, although science is based on reason, audiovisual communication resorts to rhetorical narrative devices to create programmes that effectively convey scientific information to the general public. Bienvenido León has distinguished between narrative, dramatic and plot techniques. While the first two have a poetic dimension, plot techniques are much more rhetorical in nature

A story is developed through the use of various devices to overcome such obstacles. Devices which, in the case of audiovisual genres, simplify the content, promote unusual or unforeseen facts, suppress controversy, reduce the size of the theme chosen or use elements that will contribute to the viewer's entertainment. The most profitable involves the use of dramatic techniques, which involve the viewer and provide emotional stimuli. But the more these types of techniques are used, the greater the danger of distorting reality. As B. León says, 'Some presenters resort to using narrative techniques that blur the accuracy of scientific information, giving precedence to matters of less importance because they will be of greater interest to the public. This dramatisation of science is more evident in audiovisual media, in which the demands of staging are clearer.' (1999, 47)

Popularising scientific documentaries

In spite of using these devices, the difficulties of reporting scientific issues in the daily press is well-known, with mini-stories often lasting no longer than a minute. It is especially difficult to make them digestible for the viewer in such a short space of time. Like other thematic areas, these areas can only be approached confidently if more extensive formats are used: discursive options that allow questions to be explored and deepened to make it possible to understand the subject in question. And all this without ignoring the other important aspects that make up these stories, such as diversity and originality, just to mention a few.

In audiovisual discourse, one genre has traditionally been associated with the popularisation of knowledge, particularly historical and scientific knowledge: the documentary. With its origins in cinema, and like other audiovisual formats, it quickly found its place in television where other methods had previously enjoyed a similarly strong development. Moreover, thanks to the dual existence of cinema and television, the documentary has been able to widen its base, giving it some stability in an age where audiovisual discourses are often subjected to constant redesigns and adaptations, according to new demands. We can even say that it has attained a certain prestige, given how documentaries, in recent years, have been offered a showcase at cinema festivals or specific contests. The number of movie makers who use this genre to explore certain subjects is also revealing. Michael Moore's *Bowling for Columbine* (2002) and *Fahrenheit 9/11* (2004); *Into Great Silence* (2005), by Philip Gröning; *The Basque Ball: Skin Against Stone* (2003), by Julio Medem, or *The Wings of Life* (2007), by Toni Canet are not mainstream but have caught the public's imagination. In some cases, the polemic nature of the subject, or of its main focus, has caused controversy. In others, the originality of the story or the intensity and sensitivity of its content has awakened the viewers' interest. For one reason or another, these projects have not gone unnoticed. This is the same with *An Inconvenient Truth*, Al Gore's documentary about climate change. Curiously, until now, condemnatory environmental documentaries have not been very commonplace in scientific popularisation. Traditionally, they have followed one of two possible approaches: either anthropological or nature documentaries. These two

types, taking the form of either a one-off episode or a series of programmes, have attracted high audience numbers and enjoyed great popularity, thanks to the cinematographic nature of the screen and/or television. You only have to think, for example, of David Attenborough's BBC series, or Jacques Cousteau and Félix Rodríguez de la Fuente or, more recently, the National Geographic Society. Certainly, nature documentaries have always generated great interest, first at the cinema, then on television, and now in domestic formats. This was the case with *Earth (The Film of Our Planet)* (2007), by Alastair Fothergill and Mark Linfield, which looked at the environmental issues threatening our planet; *Darwin's Nightmare* (2004), by Hubert Sauper, which examined the problems caused by the introduction of the Nile Perch, a predator that caused real ecological disaster for biodiversity when it was introduced into Lake Victoria. Or, closer to home, Luis Miguel Domínguez's film *Korubo, To Die Killing* (2005), an unedited account of the life of the Korubo tribe in the Amazons.

The case of *An Inconvenient Truth*

But the most paradigmatic work is the documentary *An Inconvenient Truth*. Starring the former vice-president of the United States and former presidential candidate, Al Gore, and directed by television director Davis Guggenheim, the idea behind *An Inconvenient Truth* was to draw attention to the consequences of global warming and to provide some suggestions on how to approach it.

Shown for the first time in North America in May 2006, the film quickly became a box-office hit. In only a few months, it collected 23 million dollars, making it the third highest-grossing documentary at the US box office. Awards soon started flooding in: named best documentary by the National Board of Review, by the New York Film Critics Online and by the Los Angeles and Chicago Film Critics Association Award. It also won two Oscars: one for best documentary and the other for best song. Al Gore won personal acclaim for his role, including the Prince of Asturias Award for

International Cooperation, and the Nobel Peace Prize, together with the United Nations Environment Programme's (UNEP) Intergovernmental Panel on Climate Change (IPCC) for 'their efforts to build up and disseminate greater knowledge about man-made climate change, and to lay the foundations for the measures that are needed to counteract such change', according to the jury.

But the documentary was not a stand-alone venture. It was just the tip of a multimedia¹ iceberg, of a campaign that has included: a book of the same name (subtitled 'The Planetary Emergency of Global Warming and What We Can Do About It'), translated into 21 different languages; and a series of lectures by Al Gore, starting in 2005, in auditoriums throughout the USA and which, thanks to the documentary, have now gone worldwide. Indeed, the origin of *An Inconvenient Truth* can be found in these lectures, where the famous environmental activist Laurie David and the cinema producer Lawrence Bender verified Al Gore's powers of persuasion. From there on, contact between Scott Z. Burns, director of a creative agency, and Jeff Skoll, a producer with Participant Productions, who has been behind such films as *Good Night and Good Luck* and *Syriana*, made the project possible.

Al Gore's international series of lectures became more intense after the documentary was launched and this is somehow reminiscent of the process undergone by candidates in the North American electoral system, something Al Gore experienced firsthand as a Democrat candidate in 2000. The words he uses in the documentary precisely reveal his understanding of what constitutes effective communication: 'I gave myself an objective: to get my message across as clearly as possible. The only way to do so is from city to city, person to person, family to family. I have faith that, very soon, we will have changed enough minds to say we have crossed the threshold.'

The documentary takes the same form of one of these lectures, complemented by the use of all available resources to achieve the most spectacular staging possible, in the purest 'Hollywood' style. Starting with the lighting and continuing with the scene-setting and presentation of

¹ This project was first realised as a computer presentation to illustrate a conference. Afterwards, it was made into a documentary, the soundtrack was published, as well as a book and a website.

statistical figures using Keynote, the Apple² program, with which the lecture's computer presentation is elaborated. The elevating platform he uses to reach the point of the forecast CO2 concentration levels in the atmosphere for the next few years is a good example of this treatment. And all this used by an omnipresent Al Gore. As B. León (2002) points out, personification is an effective way of building a good story with dramatic potential. *An Inconvenient Truth* is a good example of this.

The piece is organised into two interweaving narrative threads. In the first, Al Gore acts as spokesman for the scientific community. To make himself credible, he repeatedly reminds us that his interest in this topic is nothing new. He talks about when he was a student at Harvard, where he attended natural sciences professor Roger Revelle's classes, one of the first people to draw attention to the worrying levels of CO2 absorption into the atmosphere and the oceans, and of the consequences for the world's climate. Later, when he arrived at Congress in the middle of the 1970s, and afterwards in the Senate, he spearheaded several initiatives related to global warming. In 1992 he published the book *Earth in the Balance: Ecology and the Human Spirit*. And when he became vice-president of the United States, from 1993 to 2001, he tried to – unsuccessfully – convince the Senate to ratify the Kyoto Treaty, among other initiatives. However, conversely, he has no pretensions of being either a scientist or a scientific pre-senter like Carl Sagan, whom he regards as a 'friend'. We also see him flying over the Amazon and travelling to the Arctic in a nuclear submarine to see for himself the effects of global warming in situ. All this, reinforced with flawlessly executed images, both for the scenes of the lecture as well as the images he uses to illustrate the scientific arguments and in the use of graphs and animation.

In the other narrative thread, Al Gore adopts a more personal, even intimate tone. This discursive thread is the reconstruction of a personal journey during which he keeps insisting on the need to consider environmental questions. Biographical episodes are included, such as memories of his father and the family farm in Tennessee and especially

of other, more relevant, events such as his six-year-old son's near-fatal accident in 1989, or his older sister Nancy's transplant, caused by lung cancer, all the while remembering the family's leaf tobacco farm. This gives the documentary a biographical tone, similar to a biographical film. What we cannot know with any certainty is whether this is only a dramatic strategy typical of the genre or, instead, if there is an intention to project a certain image of the film's 'star into the public arena, with the aim of revealing a new side of him as a person, the purpose of which are as yet unknown. Whatever the case, this is reflected in the treatment of image, with the use of close-up, static photos and black and image images. At this point, his allusion to his defeat by George W Bush in the presidential race to the White House in 2000 is particularly revealing: 'It was a very hard blow, but... what could I do? Learn a lesson. This helped me see – very clearly – the mission I had started many years before [...]'.³

Throughout the documentary, Al Gore adopts a catastrophic rhetoric. For this reason, many viewers of the film, some of them members of the scientific community, think that the documentary contains more arguing and shouting than facts and forecasts, portraying the most catastrophic outcome possible. This approach is based on the idea, associated with the effects and the consequences of global warming, that there is a 'problem'. From this point on, he builds a rhetorical argument that aims to 'understand the problem', first, and to 'face up to the problem', afterwards. A kind of semantic crescendo occurs as the story continues, with such expressions as 'warning signs', 'very alarming symptoms', 'horrible consequences', 'danger', 'conflict', 'tragedy', 'fight', 'pressure', 'absolute devastation', 'obstacles', 'solutions' or 'determination'. Gore used a similar technique when he accepted the Nobel Peace Prize, as columnist Andrés Ortega remembers, "Unfortunately because, perhaps to persuade the American public, he used expressions typical of nuclear deterrent during the Cold War, such as 'mutually assured destruction', and he talked of a 'universal threat' and of 'mobilising as if to war'.³ This talk of environmental catastrophe also appears in the

2 Al Gore is a member of the board of directors at Apple Computers.

3 "Guerra contra la tierra". *El País*, 17 December, 2007.

documentary. However, it is necessary to comment on the didactic tone, with the use of such techniques as comparison, emphasis, irony and humour, as well as cruelty on a few occasions. Visually, and in an eagerness to appeal to many viewers, the work also includes cartoons, such as a scene from *Futurama*, by Matt Groening, creator of *The Simpsons*, and computer animations.

In spite of everything, or perhaps because of it, *An Inconvenient Truth* managed to move concern about global warming into the public arena. The documentary's success in bringing the subject matter into the spotlight and highlighting the need to take immediate measures seems undeniable. An example of the success of *An Inconvenient Truth* could be seen when the Spanish Ministry of the Environment acquired, through the Biodiversity Foundation, 30,000 copies of the documentary with the aim of distributing it in all state schools. In this way, and with an approximate cost of 600,000 euros, the Spanish government wished to make the youngest members of society aware of the devastating effects of climate change. More recently, we have been able to observe that, in the *Environmental Atlas*, edited by *Le Monde Diplomatique* in the first quarter of 2008, references to the international success of Al Gore's work have been reiterated. In the introduction, Ignacio Ramonet, referring to the impact of work like *An Inconvenient Truth*, writes: "These reports seem to have brought about a healthy collective impact in recent years. Especially Al Gore's documentary, *An Inconvenient Truth*." In a different passage from the same volume, Dominique Vidal affirms that "The international success of *An Inconvenient Truth*, Al Gore's film, reflects – and at the same time accentuates – people's growing realisation of the ways in which the environment is changing, the causes and the solutions". Another important issue raised concerns the scientific argument employed in the documentary.⁴ This aside, the documentary, alongside Al Gore's high-profile activity, has

been useful in keeping the subject at the top of the media agenda. Naturally, the documentary and everything associated with it has appeared at a time when the ground was already well prepared. Warning voices about this and other environmental issues were not new. In any case, the virtue of *An Inconvenient Truth* has been one of helping to raise awareness of the potential problems of global warming and the need to adopt measures immediately, and globally. One only has to look at the reverence with which Al Gore is received in China. However, he particularly targets his North American audience, one of the most polluting countries of the planet and with such weak commitment to the environment that it has not even ratified the Kyoto treaty yet. In this sense, the references made to the North American Declaration of Independence and to the fathers of the Nation, and the messages with which he finishes the documentary are revealing, almost like advertising. And all this without damaging his own reputation; Al Gore offers up a flawless oration⁵ so that, with *An Inconvenient Truth*, he rises like a phoenix from the electoral ashes after his political defeat of 2000. Let's not forget that, as he himself has suggested, *An Inconvenient Truth* is now his political platform. However, is it merely his way of doing politics now, or will this give him a shortcut into the political race, in the classic sense? The film's biographical narrative, previously discussed, certainly does seem disturbing. As are the following words, added into the documentary's credits: "Vote for leaders who promise to save us from this crisis". It is also true that, as a counterforce, Al Gore, his talent for communication, and the narrative treatment, all act as a hook for viewers. If, instead of the former North American vice-president, we'd had Wangari Maathai, the creator of the Green Belt movement, an organisation of Kenyan women that planted 30 million trees in 2004 and who was also rewarded with the Nobel Peace Prize, the impact would probably not have been the same.

4 As a result of the appearance of *An Inconvenient Truth*, Channel 4 produced the 2007 documentary *The Great Global Warning Swindle*, by Martin Durkin, which was like the other side of the coin to Al Gore's documentary.

5 One shouldn't lose sight here of Al Gore's considerable knowledge and experience of the media. After graduating in public administration from Harvard and enrolling in the Army, he was an Army reporter in Vietnam. His first proper experience in this area of work took place when he returned from the war to work as a journalist on *The Nashville Tennessean*. It's also worth remembering his time as a congress-man and his experience as vice-president of the United States of America.

A green wave

Environmental questions are worrying and, therefore, of interest to public opinion. It is not surprising that, for the first time, the CIS barometer for November 2007 included some environmental questions. The result confirms this trend: 75% of those polled are interested in these subjects. Of them, a third follows them with 'a lot' of interest, while the other two-thirds (50% of the total) admit 'quite a lot' of interest. 25% of the polled population follow these types of subjects with 'little or no' interest.

Beyond these appraisals, it seems unquestionable that *An Inconvenient Truth* has opened up a path. A path that leads in several directions, one of which we have previously discussed: it has placed the debate surrounding global warming on the media's agenda and, therefore, high up in public opinion. On the rebound, it has also boosted a format that was not new but which, in this case, has brought benefits for scientific and environmental documentaries. You only have to look at the recent productions following in the footsteps of *An Inconvenient Truth*. For example, movie star Leonardo Di Caprio – acting as producer, scriptwriter and narrator – released *The 11th Hour*, a documentary about the effects of global warming and other interventions by man-kind, in which he gave voice to 51 scientists, thinkers and opinion leaders. Moreover, musician Neil Young starred in *LincVolt*, a documentary which saw him travelling across North America in his 1959 Lincoln Continental, swapping its engine for a less polluting, electrical hybrid biodiesel one to raise people's awareness. One of the latest National Geo-graphic productions is *Six Degrees Could Change the World*, another documentary about the consequences of global warming. And, more generally, *The March of the Penguins*, a film that follows the life of the emperor penguin, which won an Oscar.

Moreover, and on a global perspective, we are riding a green wave that, like an octopus, is gradually spreading its tentacles into different parts of society. You don't have to

look far to see that increasing numbers of different sectors have joined in. It is well-known just how quickly production systems can adapt to the latest trend in industry and business. People are even talking about a spiritual dimension: an ecological spirituality. In this sense, Al Gore's discursive strategy is a good example of this trend. Especially when he gives it the feeling of a mission, in which he seems to have assumed the role of prophet. We are left with the image at the beginning and end of *An Inconvenient Truth*, in which he walks along a corridor towards the stage, his silhouette backlit like some sort of rock star or TV preacher with Messiah pretensions. Moreover, since the summer of 2006, Al Gore has promoted *The Climate Project*, to spread the word about the crisis of global warming. Currently, it has more than two thousand volunteers worldwide who, before giving their presentation, ask their audience for 'a spiritual connection'.⁶ This approach, argues biologist Miguel Delibes de Castro, "is almost religious".⁷ Perhaps it's worth remembering that Al Gore is not only deeply religious but, as well as graduating from Harvard, also studied, law, theology and philosophy at the University of Vanderbilt (Tennessee).

All of this forms part of the emotional message behind *An Inconvenient Truth*. It has none of science's rational approach and perhaps this explains the documentary's success, and of the campaign behind it. Although, as we have seen, other things play a part. And some of these are certainly disturbing.

6 For more about the activities of Al Gore's *The Climate Project* to create an 'army of opinion leaders' who will spread the word about climate change from *An Inconvenient Truth*, see the website <<http://www.theclimateprojectspain.org/>>

7 PÉREZ-LANZAC, Carmen. "Cambio climático: ¿la nueva religión?". *El País*, 14 February, 2008

Bibliography

GONZÁLEZ REQUENA, J. *El espectáculo informativo*. Madrid: Akal, 1989. ISBN 84-7600-368-4

LEÓN, B. *El documental de divulgación científica*. Barcelona: Paidós, 1999. ISBN 84-493-0727-9

LEÓN, B. "Divulgar la ciencia en televisión: problemas y oportunidades". In: DE FAÇEIRA, M. J. (ed.). *A divulgação científica nos média-contributo*. Edições Cine-clube de Avanca. 2002, p. 73-79

RAMONET, I. "El espanto y el lucro". In: *Atlas del medio ambiente. Lo que amenaza al planeta y las soluciones para salvarlo. Le Monde diplomatique*, Spanish edition. Cybermonde S.L. 2008.

SARTORI, G. *Homo videns. La sociedad teledirigida*. Madrid: Taurus, 1989. ISBN 84-306-0273-9

VIDAL, D. "¿Qué hace falta leer?". In: *Atlas del medio ambiente. Lo que amenaza al planeta y las soluciones para salvarlo. Le Monde diplomatique*, Spanish edition. Cybermonde S.L.,. 2008. ISBN 978-84-95798-11-4