

and drama have in fact an enunciation capacity, which in the one case is visible and in the other not; although, in drama the audience tends to forget that someone has previously selected the events that are presented. With respect to science documentaries, as we shall see later, a particular combination of narrative and dramatic forms is used with the aim of presenting to the audience a faithful rendering of reality.

The aim of the narrative, dramatic and argumentative resources that are used is to make the audience interested in the programme and to help them understand it. For this reason, some of the techniques used have the common feature of trying to bring the facts and ideas that they wish to communicate closer to the sphere of interest of the audience.

3.1 Reaching out to the audience's interests

At this point it is worthwhile pausing to analyse some of the key aspects of interest to the general public in scientific information. With regard to scientific communication, the audience can approach the discourse with different motives. Roqueplo (1983: 87–88) makes the following distinctions:

1. A real desire to understand “what it’s about” or “how it works”. However, it seems that this curiosity is not strong enough to become a “will to learn”.
2. An attempt to acquire a cultural code that can establish social position: this is, in fact, a means of social promotion.
3. A need to “orientate one’s life”. “What meaning it can have for me, to orientate my life”.
4. An interest which focuses on the problems of origin: the origin of the world (cosmogony), of the Earth, of man in general, of the individual, etc.

Even though these may be the reasons why the general public listens to, watches and reads scientific broadcasts and publications, the media do not always respond to these expectations. According to García-Noblejas (1900: 46), the media associate what is interesting with what is useful and, in this way, highlight

superficiality, because the truths which are closest to the roots of mankind, such as philosophical and religious truths, cannot be easily approached or dealt with.

Muñoz Torres (1991: 205–207) expresses a similar concern when he discusses the exemplary effect of the media. The media, because it gives examples of behaviour, acts as a reference point when taking decisions. According to Muñoz, capturing the interest of the public means trying to make the public feel involved in what is being communicated. Therefore, actions become more interesting the more they affect life.

These approaches seem to explain the fact that the public is often not interested in science itself, but in its applications and in the way in which scientific discoveries can affect their lives. So it is not surprising that some broadcasters and publishers believe that, in general, people are interested in that which affects their way of life, from an everyday point of view.

However, to better understand why the audience is drawn to the communicative discourse, it would be advisable to pause, although only briefly, to consider the concept of “news value”. According to Muñoz Torres, (1996: 249).

News value (...) can be described as that quality belonging to journalistic discourse that produces in the reader or viewer a certain degree of involvement, thus entailing a need to know about that which is communicated.

As a last resort, the involvement of the audience in the journalistic discourse, Muñoz Torres goes on to say, depends on the fact that they can capture the “essential meaning” of the discourse. Given that journalistic discourse represents different types of free human actions, and in view of the fact that the life of man is a constant taking of decisions in search of happiness, then the messages in narrative journalistic discourse “become paradigms of behaviour which act as a reference point for the reader or viewer with regard to what should be done or avoided in any given situation”.

Some documentaries deal with the subject of human behaviour because, in principle, the public finds them interesting. This seems to be the case, for example, in documentaries with an anthropological content, which deal with issues concerning human nature and the life of man in society. On the other hand, it can be assumed that other documentaries such as those which deal with nature are less interesting as they do not touch specifically on man. Yet the audience figures for these documentaries in various countries show that nature programmes occupy the top rating positions within this genre. How can this interest be explained, bearing in mind that, in principle, the subjects which are dealt with do not seem to refer directly to central issues of human life, or to phenomena which can be easily applied, by the public, to everyday life? According to David Attenborough (1997), there are various reasons which explain the success of this type of documentary.

First of all they deal with living beings, like us. Secondly, these programs do not set out to sell anything. Another reason is that they don't tell us anything horrible about ourselves, but what they do tell us is true; it is the real world, and it is something we can identify with. It is always surprising; nobody knows everything about natural history and it is nearly always beautiful. And these are rare qualities in a television programme. Furthermore, they are serious issues; people do not watch things that lack substance. And, finally, they are timeless, and go to the very heart of things.

The first point which Attenborough makes can be considered in the light of the idea discussed earlier (section 1.3), according to which journalistic discourse acts as a reference point for the behaviour of the public, given that, deep down, it deals with the subject of living beings like man.

In general, of the many factors that make facts interesting Carl Warren (1959: 15) selects eight: "timeliness, proximity, prominence, rareness, conflict, suspense, emotion and consequence". According to Warren, underlying these factors is the fact that the public is drawn to the media to save time, make money, gain

popularity, make progress, be more comfortable and enjoy their free time. To this list, Professor Enrique de Aguinaga (1987: 262) adds a further five factors: "sex, progress, money, usefulness and entertainment".

Other authors throughout history have highlighted these same factors. Muñoz Torres (1996: 97–113) puts the most significant contributions into six categories: spatial; temporal, personal appeal, and public notoriety; the unusual, strange, or unexpected; that which is conflictive and negative; and finally, formal interest.

3.1.1 The Spatial Factor

Generally speaking, a fact is more interesting the closer it is to the realm of the audience. Muñoz Torres distinguishes between the interest derived from physical proximity and that derived from cultural or mental proximity. With regard to the former, science documentaries usually present facts which are taken from anywhere in the world, which at first sight would therefore not be a factor which generates interest. However, it should be remembered that many of these programmes are set in exotic locations, as has been the case since the start of the genre. This preference for the exotic is directly related to another factor of interest, the unusual, which will be discussed in section 3.1.2.

The interest in certain science documentaries, especially those dealing with nature, has increased significantly in the last few decades, coinciding with the growth of ecological-conservationist movements which have contributed to highlighting issues dealing with global problems, all over the world. The dissemination of the idea that the Earth is in danger seems to have also prompted a raised awareness that the planet, as a whole, is the habitat which man should take care of, for his own interest and so it becomes a place which is mentally near.

Warren (1959:18) states that: "for any human being, the most interesting thing is him or herself, and after oneself those things which are closest to oneself, closer mentally and physically: work, health, money, home and family, friends and partners

(...)”. In some science documentaries there is a prevailing aim to bring reality closer to the human experience. Those that deal with animals and plants usually attribute them with human characteristics or attitudes in such a way that life in nature appears to be very similar to human activity; even to life in society.

The work of David Attenborough offers some examples of this aim to draw the subject closer to man. In the series *The Trials of Life* (episode 7, sequence 7), which deals with the life of parasites, the narrator brings together both realities by saying “We ourselves can become infected with ticks”. A similar example can be found in *The Private Life of Plants* (episode 3, sequence 1). This program, about flowers, starts with a shot of the presenter, Attenborough, sneezing while he explains how he suffers from hay fever produced by pollen. The programme goes on to deal with pollen and its function in the life cycle of plants. In this case, the reference to a common ailment allows the everyday concerns of the public to draw them closer to a reality which, in principle, might seem distant.

As Calvo Hernando (1977: 189) points out, there are times when the identification of two elements takes on the form of metaphor, establishing a bridge that is characteristic of scientific discourse, which unites “two realities, one known by the reader and another unknown, one enlightening the other”. This rhetorical figure is valuable in science documentaries as can be seen in the following examples taken from the work of David Attenborough. In one sequence in which all the different parasites that live on a buffalo are mentioned (*The Trials of Life*, episode 7, sequence 20), the narrator concludes by saying that this animal “is a walking zoo”. In this way, a familiar reality, “the zoo”, substitutes another reality of greater cultural proximity to the viewer, a “colony of parasites”. Another similar example can be found at another point in the same program (episode 6, sequence 4). After showing the underground tunnels where some animals live and explaining how they keep the temperature cool, the narrator says, with a sense of humour: “The prairie dog has an air-conditioned home”.

Nature documentaries do not usually include scenes that have a direct impact on the everyday life of viewers. Instead it seems that the viewer is looking for entertainment or satisfaction in the search for knowledge. However, some authors believe that nature programmes can play an important educational role within the family, because they show models of behaviour which are natural and, to a degree, transferable to human life. According to this line of reasoning, these types of programmes facilitate the discussion within the family of issues related to human behaviour. Crowther (1994) has suggested that, for some families, nature programmes offer "the opportunity to discuss sexual matters, (...) using the examples of the animals that appear on the screen, thus allowing allusions to be made, so that nobody need feel personally involved".

However, although these documentaries may lead to discussions of this type, it should not be forgotten that animal behaviour is mainly instinctive, whereas human behaviour is mediated by both intelligence and will, in addition to drives and feelings.

3.1.2 The Unusual, Strange or Unexpected

The science documentary frequently uses subjects that try to attract the interest of viewer by presenting the unusual, the strange or the unexpected. This is not surprising given that, in general, the working method in the media seems to follow the criteria Charles Dana (quoted in Warren, 1959: 21) expressed in his now famous phrase: "When a dog bites a man it is not news; but if a man bites a dog, that's news"

Some script writing manuals for television recommend the unusual, or the extreme, as good raw material on which to base news programmes. Science documentaries have also incorporated the interest factor into the narrative. Edwin Slosson, director of the Scientific News Agency *Science Service*, thought that for science to reach the general public it had to adapt itself to the taste of the majority. Slosson reached the following conclusion (in Nelkin, 1990: 92):

It is not the rule but the exception that attracts the public's attention. The people we aim to reach through the daily press are the same people who, in a fairground, crowd around stalls to see three-headed cows and women with beards, but don't go near the stalls to see the wild animals.

Science is not specifically aimed towards the search for the extraordinary. The results of scientific research are always presented by their authors as provisional, not definitive, at least until the findings have been verified by the scientific community and the body of knowledge is accepted, and is, therefore, no longer extraordinary. Yet, as Tratchman (1981: 10–15) has pointed out, science journalists, in their attempt to entertain the audience, look for the infrequent and even the anomalous.

This search for the unusual puts scientific journalism in permanent danger of falling into sensationalism. Although it seems justifiable for the popularisation discourse to appeal to the audience's taste for the extraordinary, an excessive use of this element could lead to the loss of scientific rigour. However, it does seem that the use of the anomalous, in just measure, can be a useful element in the communication process and the fact that it is used does not necessarily devalue the content of what is being communicated. For Calvo Hernando (1977: 192) there is a certain "sensationalism" that can be understood as "an enriching and positive ingredient in the transmission of science". On the other hand, other authors consider that this recourse should be completely eliminated. Ángel Martín Municio (1986: 6), president of the Spanish Academy of Pure Sciences, criticises the anecdotal approach used by journalists and broadcasters. In his opinion, if science is something serious and profound, scientific articles should not be humorous and superficial.

This tendency within journalism and broadcasting to deal with issues in a superficial way is related, ultimately, to the fact that this type of discourse is generally aimed at satisfying the immediate curiosity of the public, for which reason it is not necessary to maintain the same degree of attention as is needed in science.

And these attitudes on the part of the audience are, in turn, related to the distinction between *studiositas* (studiousness) and *curiositas* (curiosity). According to Pieper (1988: 288–293), these two concepts represent the diametrically opposed poles of cognitive desire and the difference between the two is marked by moderation or the absence of moderation in the perception of the world. In this sense, *curiositas* is the attitude of the person who is content with a superficial knowledge of reality and one which hardly requires any attention, while *studiositas*, requires sustained attention and seeks depth of knowledge. From this perspective it is possible to see in the work of some good journalists and broadcasters a desire to transmit a certain depth of knowledge. This attitude determines the difference between journalism or broadcasting which manages to communicate scientific knowledge, and that which limits itself to a mere compilation of anecdotes.

David Attenborough (1994) believes that the inclusion of examples of strange behaviour does not in any way invalidate the scientific rigor of his programmes. Quite the contrary, in his opinion, one of the things that serves to verify the truth of a scientific proposition is the search for a really strange case and to see how this fits in. Furthermore, he believes that such criticism is unfounded if the programme in question has a clear story line and uses strange cases in order to attract interest:

If something is not very usual it will be interesting. And I have nothing against something which is interesting. It may become dangerous if an element is introduced only because it is strange without relating it in any way to the central theme being dealt with, or if outstanding things are only featured without ever placing them within the solid theoretical structure which is present.

3.2 Narrative Techniques

Having considered some of the elements of news interest which are particularly important to be able to understand the way in which film makers create documentaries, we shall now turn to