

ESA ON RAINEWS24

A Case Study of Television Communication

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ABSTRACT

In May 2000, ESRIN, the Italian establishment of the European Space Agency (ESA), started a collaboration with the television channel Rainews24. Rainews24 is the “all-news” channel of Italian public television (RAI) and is now about 10 years old. It transmits 24 hours a day and is the most watched all-news satellite channel in Italy. Each Thursday an ESA representative (Stefano Sandrelli) is interviewed by a professional RAI journalist in a 5-6 minute long slot that follows the 5 pm news bulletin. The broadcast is repeated late at night or in the early hours of Thursday and Friday. Interviews are strictly linked to the weekly news and are prepared on the morning of the same day by the ESA representative in collaboration with a RAI journalist. The subject is chosen from the most topical news items of the week: video, images and animations are provided by the ESA television service and by press agencies (Reuters etc.). The interviews are largely informal and resemble a dialogue rather than an academic discussion “from space”. Even though they focus on ESA activities, they are not advertisements: space science and research is dealt with as a human activity, so both the positive and negative aspects of space exploration and exploitation may emerge. Although this outreach activity began as an experiment, the ESA interviews have become a fixed feature. As a result of five years of uninterrupted collaboration, over 200 interviews have been recorded, with about 30% of the interviews dedicated to pure astronomy. A welcome positive feature is that the interviews are seen by Rainews24 as an open source of daily news.

ESA: A TOTAL ECLIPSE OF COMMUNICATION

The European Space Agency (ESA) has 16 Member States, namely Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom. Luxembourg is expected to join ESA in 2005, while Canada, Hungary and the Czech Republic participate in some projects under cooperation agreements—for an official presentation of ESA, see www.esa.int/esaCP/SEM8CXLDMD_index_0.html.

ESA is an organisation of international standing and importance that was founded in 1975. However it neglected communications with the citizens of its member states in its early years. The purpose of the Agency is “to provide for and to promote, for exclusively peaceful purposes, cooperation among European States in space research

and technology and their space applications, with a view to their being used for scientific purposes and for operational space applications systems” [http://esamulti-media.esa.int/docs/SP1271En_final.pdf]. In the mid-seventies these issues were among the top three in the field of mass communication as a result of the recent success of the Apollo missions. However, as a consequence of the political weakness of the newly formed European Union, and in striking contrast to NASA’s communication policy, ESA’s communication efforts were directed mainly at the scientific community and at European politicians.

The big sleep came to an end at the end of the 90’s, when a broad-based survey [Sandrelli, S., Talevi, M, “ESA: un nuovo orizzonte per la comunicazione scientifica”, *Giornale di Astronomia*, 2000] was conducted in the countries that were then ESA members, aimed at investigating ESA awareness among Europe’s general public. The survey was conducted in June and July 1998 by telephone calls from a market research company with native speaking interviewers in all 14 ESA member states (Portugal joined ESA in 2000 and Greece in 2005). Altogether 8,350 interviews were recorded, which made a percentage confidence level of around 1.1% of the total sample possible.

The results were clear but chilling. Although 42% of the general public showed some interest in space exploration (very interested 7%; 35% interested; 35% not so interested; 25% not at all), only 12% of the general public knew of ESA spontaneously, while 54% of the same sample knew of NASA spontaneously. What is more, 63% of the sample thought that European Space Programme was important and almost the same percentage (64%) wished that “Government would continue to support European Space exploration programmes financially”.

The implication was obvious: ESA was not a forgotten agency. People were simply not aware of it! Also, individual interest in space was much higher than the rate of ESA awareness might suggest. ESA’s low profile was clearly due to a total lack of communication on its part.

As a consequence of the poor results from the survey, a Science Programme Communication Service was set up and the ESA portal was launched within a couple of years, in October 2000 [ESA’s gateway to space, in *ESA Today* n.8]. Interestingly enough, the second published web story is dedicated to the Hubble Space Telescope [A unique test for Hubble’s new solar arrays, 19.10.2000, www.esa.int/esaCP/GGG97TVTGEIndex_0.html], in which European participation was (and partly still is) largely ignored. The communication strategy underlying the portal was clear: information was target-driven. Five main themes were selected so that non-specialists,

ESA ON RAINEWS24: THE CONTEXT

students, and any other curious people would be able to find what they were interested in: Life in Space, Expanding Frontiers, Improving Daily Life, Protecting the Environment, Benefits for Europe.

Besides the main site, there are also national sites with translations, original web stories and local news. As part of the effort to increase ESA awareness in Italy, the opportunity for a strict collaboration with RAINews24, a young digital channel launched by the Italian public TV broadcaster presented itself in the first few months of 2000. The first ESA interview was broadcast as early as 18 May 2000—a chat about the European astronauts. The second broadcast (1 June) was dedicated to a difficult mission—XMM-Newton, the ESA X-ray telescope [www.esa.int/esaCP/ESA-PORGBCLC_Italy_0.html (Italian), 1.06.2000]. Interviews are broadcast live at 5:12 pm each Thursday and re-broadcast late at night or in the early hours of Thursday or Friday.

Right from the beginning, it was clear that the interview should not be an academic harangue from on high, but more a warm and friendly dialogue between a curious but decidedly not space-oriented journalist and an ESA expert, who was basically talking to an interested friend. However, the ESA representative was an official member of the Agency, so he should be compatible with the image of the Agency itself. This had a certain impact on the way he was supposed to dress, move and talk.

WHAT IS RAINews24?

RaiNews24 (Director: Roberto Morrione) is the first Italian all-news channel [www.rainews24.rai.it] and the most technologically advanced division of RAI TV (Italian public TV broadcaster). It broadcasts digitally 24 hours a day, 7 days a week, via satellite on the Internet and on digital terrestrial television (Multiplex 2 Rai). Besides satellite transmission, it takes part in the Rai 3 nightly schedule from Monday to Friday. It covers all of Europe, part of North Africa and the Middle East and it is totally free. As suggested by its name, RaiNews24 is an all-news channel. It has a very simple but challenging editorial strategy: putting news in the spotlight. The editorial framework is made up of half-hour modules, consisting of news (10 minutes), weather forecasts and traffic conditions (2-3 minutes), in depth analyses of top stories (5 minutes) and a magazine (10 minutes), which is a daily or weekly programme on various issues, from sports to entertainment, from geopolitics to music, from education to foreign affairs (see figure 1). Thanks to its staff and the many experts who take part to the in depth analyses, RaiNews24 is an authoritative and reliable source of information.

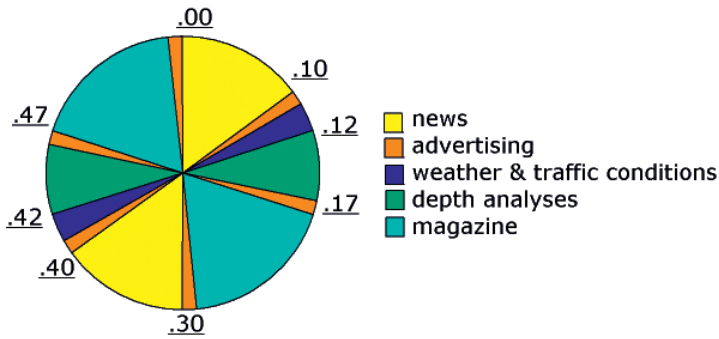


Figure 1. The clock-timing of RaiNews24. ESA is classified as an in depth analysis of a weekly story.

Recent independent surveys (Eurisko-Audistar [www.eurisko.it/english/english/euris2inglese/index.htm] and Auditel, [www.auditel.it/html/index.html]) confirm that RaiNews24 is the Italian leader among satellite news channels (Data Eurisko-Audistar, 2004; Data Auditel, 2004). The same surveys identify the audience as predominantly male (both young and adults) and of medium to high cultural level. This feature is also linked to the sophisticated multiscreen interface of the channel (figure 2).



Figure 2. The multiscreen feature of RaiNews24 selects an audience with a high cultural background. There are several independent areas: as well as the main and the secondary areas, there are banners with the main news from the last few hours, financial information, internet links related to the main news and, finally, the date and time.

ESA ON RAINNEWS24: HOW DOES IT WORK?

As the clock-timing shows, everything revolves around the primary function of the channel: news.

Although one might expect the ESA interviews to be part of a weekly magazine, RaiNews24's editorial board decided to consider them as in depth analyses of weekly news items from the start. This is a key point in understanding the role of ESA in the context of RaiNews24, given that it is not a science channel.

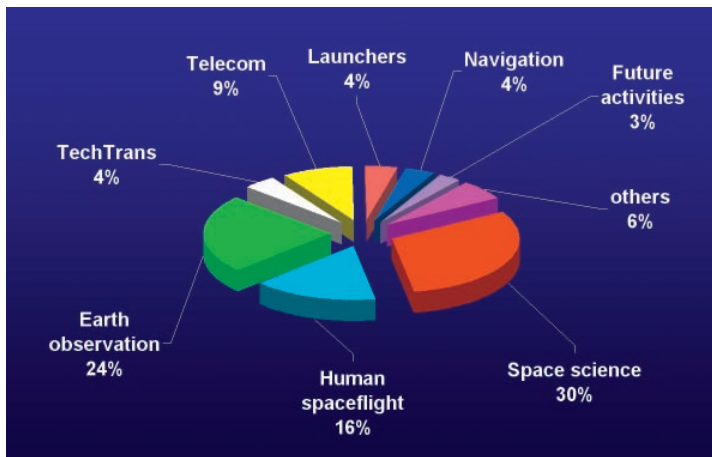
At the beginning of each month, the ESA representative (S. Sandrelli), together with ESRIN's Public and Institutional Relations Office (Desk Office), plans the topics to be covered by the broadcasts, taking into account the Agency's priorities, e.g. an upcoming satellite launch, a wide-interest science workshop, an expected scientific release and so on. The ESA representative is based at INAF-Osservatorio Astronomico di Brera, in Milan. ESRIN Desk Office is located in Frascati, Rome.

For every subject, one or more of ESA's expert staff are interviewed by phone to collect the necessary information, while ESRIN's Desk Office selects suitable video clips from ESA television services, recording satellite transmission or by ordering beta tapes from the ESA television centre in ESTEC. Taking into account items in the weekly news, the final subject is chosen on Thursday mornings by the ESA representative and the RaiNews24 journalist. A beta tape covering the subject is sent by car from ESRIN (Frascati, Rome) to the RAI TV studios, in Saxa Rubra (Rome). The ESA representative prepares the Italian text of the interview (questions and answers) and submits both to the ESRIN Desk Office and the RaiNews24 journalist, who chooses the sequence of images to illustrate the subject. At 5:12 pm, the live interview is performed as a video conference, with the journalist in Rome RAI studios (Saxa Rubra) and the ESA representative in the Milan RAI studios. On Friday the text of the interview is then published on the Italian webpage of the ESA portal. As well as the interviews, the ESA representative has been supporting the Italian webpage by writing additional web stories or press releases, producing translations from English into Italian and checking the Italian translations made by others since 2005. This guarantees a consistent quality of the outreach service of the Italian webpage.

Last but not least, it is worth stressing that the ESA representative works in Milan, while the main studios of RaiNews24 and the ESRIN Desk Office are located in Rome. The work is mainly carried out by email and internet exchanges, supplemented by additional face-to-face meetings four or five times a year.

An impressive total of 196 different interviews were broadcast between May 2000 and June 2005, each typically repeated twice, giving an estimated total broadcast time of over 3000 minutes and an estimated total broadcasting mean time of 15-20 minutes per week throughout this collaboration.

Although ESA manages a large number of different activities (from telecommunications to satellite navigation, from technology transfer to human spaceflight, from space science to launchers, from Earth Observation to enterprises support programmes), space science accounts for a significant 31% of the interviews broadcast (figure 3), which means it ranks first in the “top-of-the-pops” of topics, followed by Earth Observation (23%) and Human Spaceflight (16%). Telecommunications account for 9%, mainly thanks to Artemis’s troubles in finding the right orbit in 2001 and, above all, to various telemedicine activities. Let us look at the topic distribution within Space Science in closer detail.



Deep space accounts for a significant 9% of the total, thanks to the Hubble Space Telescope and the ESA’s high energy telescopes, XMM-Newton and Integral—launched in 2002. The violent collisions between galaxies or the odd behaviour of black holes or neutron stars are very well known, widely requested astronomical themes, even if they require non-optical astronomy concepts.

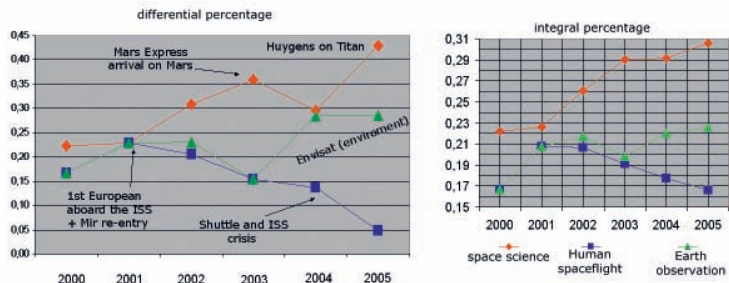
FACTS AND FIGURES OF 5 YEARS

Figure 3. Percentage distribution of the 196 ESA interviews broadcast by RaiNews24 in the years 2000-2005.

The overall leader of this “television space tour” is Solar System exploration, which accounts for 22.4% of the total. Mars Express, Cassini/Huygens, Rosetta and even the technological mission Smart-1 awakened significant interest in the media. While it is not surprising that the astonishing images coming from Mars and the Saturn system (both from ESA and NASA) make frontpage news, it is interesting to observe that both the Rosetta and Artemis stories arose from the technical troubles of these missions and how scientists fought against these problems until they succeeded in solving them. Smart-1, for its part, was interesting because it linked together a technological challenge and a scientific return in terms of moon images, which awakens interest in the amateur astronomy community primarily rather than in the general public. The launch of the Aurora programme is aimed at a manned expedition to Mars and catches even more interest, despite being a vision of the future.

Figure 4. Interest in Space Science is increasing because of several successful projects, including Mars Express' arrival on Mars, Rosetta's launch, the excellent results from XMM-Newton, the continually astonishing data from HST, the Huygens probe's descent onto Titan, the Smart-1 insertion into a Moon orbit. As an increasing differential percentage of Space Science, the integral percentage increases steadily too.

Figure 4 shows the differential and integral evolution in the percentages of the three main interview topics: as is evident, increases and decreases are caused by specific events such as Mars Express' arrival on Mars or the descent of the Huygens probe on Titan. However the drop in the interviews about human spaceflight is due to the perceived stagnation of the project, even though the number of European astronauts is actually increasing mission by mission. The increasing relevance of the Earth Observation projects and the GMES Programme is also evident in the growth of environmental themes selected for our TV chat.



WHAT IS AN ASTRONOMICAL NEWS ITEM?

RaiNews24 is a non-scientific all-news channel. So the question is: why is the discovery of a hot spot on a neutron star a relevant news item?

To a science communicator, the question of the intrinsic nature of a news item is very similar to the famous fundamental question about "Life, the Universe and Everything" [Adams, D.: The Hitchhiker's Guide to the Galaxy, 1979]. As "42" is clearly not a satisfactory answer, the original question has to be restated. Obvious cases such as a satellite launch or a new astonishing image from Mars suggesting that water was present on the planet hundreds of millions of years ago can be discounted.

As far as RaiNews24 is concerned, as wide a definition as possible of exactly what is newsworthy has been used: an astronomical news item about a phenomenon or object is anything that changes (be it a little or a lot!) the common perception of that phenomenon or object.

It does not matter if the news is related to a small visual phenomenon or if there are no spectacular images or videos. It is important to start from the general public's accepted understanding of that phenomenon or object (usually a misconception) and then to move on and illustrate that scientific understanding is a fluid entity that changes as our knowledge develops.

The key is to stress that science is a human activity that evolves continuously. The ESA representative can share his surprise for the new aspects of a phenomenon with the audience. This does not mean that scientists are at a loss, but that they may still feel that a changing vision can be confusing or even moving.

The aim is to help people understand that scientists are often as surprised (or confused or moved) as non-scientists are when facing a new aspect of a phenomenon. In a sense, the broadcasts allow people to tread gingerly along the most recent path taken by scientists, by modifying their original more naïve view of the phenomenon and adding a new scientific element. The most obvious criticism is that people are so full of misconceptions that trying to correct them all within a 5 minute interview is a “mission impossible”. That is completely true, of course. On the other hand, a 5-minute interview is enough to arouse doubts about pre-existing ideas and to let people try and imagine something different. It is a challenge to common perceptions. To be successful the piece of information should be broken up into 2-3 fundamental new concepts, since it is not politically correct to crush TV viewers!

Let's see how it works with an example: the case of Integral looking for gold in space (see Space delivers the Philosopher's Stone: <http://sci.esa.int/science-e/www/object/index.cfm?fobjectid=30256>, 11.07.2002 for the ESA original story about Integral and the gold, and La corsa all'oro nello spazio, www.esa.int/esaCP/ESA4FA-THN6D_Italy_0.html, 12.09.2002 for the interview, a couple of months later). When someone thinks of a stellar explosion, they understand and think something primarily about the explosion itself. If they have a basic scientific background, they also know that a stellar explosion produces chemical elements by nucleosynthesis (“we are all made of stars”, says Moby metaphorically in a recent song). But it is rare to find someone who actually knows which elements are created in the explosion. In this case, the possible creation of gold is the news element that has a good chance of catching people's imagination and stirring up their curiosity. Linking a stellar death to the birth of one of the most precious metals on Earth underlines that the explosion is simply one mechanism of evolution in the Universe.

This success of this approach relies on the collaboration with RaiNews24 journalists, who are willing to take the risk that some minutes may be wasted talking about objects which seem far from reality. However, it is now an established fact that astronomy and space as a whole are seen by Rainews24 as a possible source of daily news, with the Solar System in particular as a window onto outer space.

It is far beyond the scope of this contribution, but anyone who wishes to read something about the subject in the context of radio may enjoy the recent article of Jer-

LOOK AND LANGUAGE

govic [Jergovic, B., Choices that Make Radio Science Stories, in JCOM 3 (4), 2004, jcom.sissa.it].

Science programmes are still extremely underrepresented on Italian television, despite the astonishing materials that are produced day after day by the major international scientific institutions. Notable exceptions are the traditional weekly programme Superquark (RAI1), which is strictly associated with the journalist Piero Angela, a veteran of science television programmes [www.superquark.rai.it/HPprogramma/0,4520,76,00.html], Gaia (RAI3), a weekly programme on environmental issues presented by a CNR (Italian Research Council) researcher, Mario Tozzi [www.gaia.rai.it/R3_popup_articolofoglia/0,6844,44%5E942,00.html], and TG Leonardo (RAI3), a daily science magazine [www.leonardo.rai.it/tgr/HP_TGR/0,8248,22,00.html].

Reflecting this situation, it is hardly surprising that a thorough analysis of the format and style of television programmes seems to be lacking. The only fixed rule is that one can speak about science only in well-defined niches: this puts science in a dead end, since it isolates it from other cultural activities. On the other hand, recent surveys [Brandi, M., C, Cerbara, L., Misiti, M., Valente, A., Youth and Science in Italy: between enthusiasm and indifference, jekyll.com, 2004] show that the interest in scientific subjects is high, especially among people between the ages of 18 and 29. The traditional approach seems to be a waste of resources: it should be possible to feed interested young people a scientific news item directly given so many TV channels.

Moreover, an old, but still prevalent idea is that scientists know the truth, so that a modern version of the principle of authority emerges in that very field of human knowledge where it was rejected in Galilean times. The situation is rather different as regards the radio, since Italian radio science programmes are very modern both in spirit and approach, thanks especially to the pioneering work carried out by Sylvie Coyaud, who is now at Radio24. Moreover, serious analyses of interactions among scientists, science journalists and the public are conducted [Merzagora, M, Coyaud, S.: Conversations between scientists and the public in radio PHONE-INS: an experimental approach to analyse public perception of science, jekyll.com, 2002]. I will just quote a conclusion that should be widely shared: "it clearly emerged that the arrogance of science (and of ourselves, the science journalists) is largely responsible for the poor success in fighting the spread of irrational fears".

The collaboration between ESA and RaiNews24 allows us to push science to the core of human activities, since it is regarded as one in depth analysis of the news among many others during the day. On the other hand, it is one of the very few

fixed programmes on the channel, so that the ESA representative's face has become somewhat familiar to the audience.

This overview gives a sense of our communication strategy, which has been modified over the years after some initial communication mistakes. The ESA representative is a spokesperson of the Agency: if a mission is in trouble, he is usually well informed, but any comments he may or may not make on the issue are strictly limited by the official version decided on by Headquarters. He must also take into account the image of the Agency itself, the communication plan which is usually prepared by ESA officials, the priority of some specific messages that ESA wishes to transmit and so on.

On the other hand, I also believe that: a) interviews must be largely informal, that is, the ESA representative should not simply be a spokesperson, strictly associated with official correctness; b) the ESA representative must be allowed to have his own vision about space; c) the ESA representative must not necessarily be the top authority in any given field, but he must be highly reliable and well informed; d) the journalist need not be an expert, merely interested; e) the language used should be simple, but rich and correct.

The interviews are necessarily a balance between what an ESA representative should be according to the Agency and what a good science communicator really is. This ambiguous sentence means that the last five years have been a kind of revolution for us. As an example, look at figure 5. In the top left corner the second broadcast of 1 June 2000, on XMM-Newton; all the other images refer to the first few months of 2005. The evolution of the look is evident, going from a formal tie-dominated look to a shirt-dominated one.

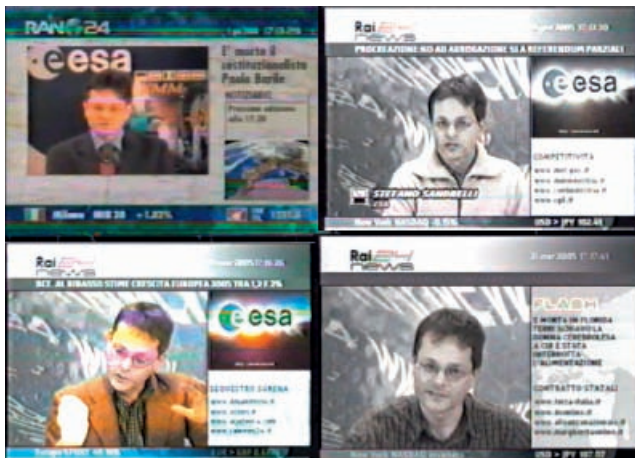


Figure 5. Compare and contrast the upper left image with the others. Where is the red tie?

PROBLEMS AND LIMITS OF THE COLLABORATION

RAINEWS24 is a dedicated news channel, with a very well-defined audience, selected both by the use of satellite technology (recent surveys indicate about 19 million dishes in Italy) and the use of a complicated interface.

The interview format is not changeable: the ESA representative must sit in front of a camera and talk: he cannot move around or show objects. The resulting interview format is too institutional and rigid: a more informal approach is needed. Besides, it is impossible to use any props during the interview, such as a scale model of a satellite. Whereas the text of the interviews is published on the Italian site of the portal, the video interviews are published neither on the ESA site nor on the RaiNews24 site. Finally, despite the successful collaboration with ESA, the ESA portal (www.esa.int) is not linked from Rainews24 channel website.

CONCLUSIONS

As far as astronomy is concerned, the main result of our activity is that space is now seen by Rainews24 as a possible source of daily and weekly news. Moreover, I wish to underline that from May 2000 to June 2005 about 60 interviews about astronomy were broadcast, giving an estimated total time of more than 1000 minutes dedicated to the field, with an estimated total broadcasting time of 5-7 minutes per week, with additional time given to repeats. Full texts are published on the ESA Italian site, which is now a repository of about 200 style-homogeneous interviews about space activity, together with other contributions.

As regards the communication of astronomy, ESA seems to be moving towards a less formal, modern and up-to-date communication style. ESRIN, in particular, recognizes and promotes the professionalism of a scientific communicator, not only as a communication consultant but as a selected ESA representative.

In a well-known comic strip, Felix the Cat grabs the Moon and uses it as a cradle to calm a crying baby: is Felix an astronomer, a poet or just a guy who has succeeded in understanding what culture means?

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