

Astronomy in my shopping cart — Today I bought some asteroids, hundreds of black holes and three Solar Systems!

Caterina Boccato & Elena Lazzaretto

INAF National Institute for Astrophysics — Astronomical Observatory of Padua
(caterina.boccato@oapd.inaf.it, elena.lazzaretto@oapd.inaf.it)

Abstract

Here we will present a pilot project that will be tested and developed throughout 2007/08 in advance of the International Year of Astronomy. Why “putting astronomy in the shopping cart”? The aim of the project is to publicise astrophysics at a popular level, choosing a place that best matches the meaning of the word “popular”: the shopping mall. With this project we want to arouse consumer interest in science, making use of the supermarket inside any shopping mall: a place people are familiar with and where they find common consumer goods. The final purpose is to give our science consumer the chance to bring home shopping bags filled not only with consumer goods, but also with a piece of knowledge about astronomy, astrophysics and the way astronomers work and think to understand the Universe and its phenomena.

Introduction

The authors work at the Astronomical Observatory of Padua, one of the 19 Institutes that make up the Italian National Institute for Astrophysics — INAF — which promotes and coordinates research activities in astrophysics in Italy. Our observatory benefits from the substantial experience of our working group in astrophysics education, information and outreach gained in the last 10 years of work in these fields. *Astronomy in my shopping cart* is a project about a new method of communicating science to the public at large. The aim of this project is to bring astrophysics to real people at a popular level, choosing a place that best matches the meaning of the word “popular”: supermarkets inside shopping malls. We will try to describe why we have chosen these types of places; i.e. what considerations led us to choose places like supermarkets and shopping malls and how we want to pass on our science in places like these. In particular, we would like this to be an initial pilot project; to test it in one chosen shopping mall in order to collect feedback so that we can develop it further throughout 2008. We would then be able to propose it, with a well-structured format and over a wider area, for 2009 under the aegis of the International Year of Astronomy. The shopping mall in which our pilot project will take place is located near Padua and had about 6,200,000 visitors in 2006: hence we expect to have a very large number of potential “science consumers”!

Shopping malls as real breeding grounds of “science consumers”

Thanks to our experience over many years, we understand that if we want to bring science to the public, and not vice versa, we have to follow the public first!

But where does the public go? To answer this question we have considered several different kinds of studies and researches, from our own or the direct experience of other communicators in the field, to recent statistical studies about the public perception of science. The first thing to point out is that “the activity’s location in space is truly as important as its format”, Riise (2005). The second point, as has recently been demonstrated, again by Riise (2005), is that “shopping mall-goers” match closely with local demographic profiles. When we say “location”, we obviously mean a shopping mall and, in particular, the supermarket placed inside it. It is important to explain that Italians are only just beginning to appreciate the shopping mall experience in large numbers and so we apply the golden rule: follow the public! Moreover, we can clearly say that today we have overcome the negative idea that arose 15 years ago, when shopping malls first arrived in Italy. This idea was expressed for the first time by the French anthropologist Marc Augé (1995), who saw shopping malls as no-places (Augé himself coined this word), that is, places that do not hold enough significance to be regarded as “places”. Today, our sociologists and anthropologists assert that these new peripheral spaces are becoming, at least in Italy, a sort of favoured “meeting point” for all kinds of people: shopping malls are drastically changing their social roles and assuming a high enrolment, communication and experience value, Musaro (2007). Indeed, it was in Athens that the first market in the world, the *Agorà*, was founded. It is perhaps relevant that Herodotus, the Greek “Father of History”, considered this marketplace as the defining sign of civilisation. A last, but not least, point is that, according to the 2005 Eurobarometer Research of the European Commission¹, Italians much prefer public meetings and street events about science than visits to museums or science centres.

The project

We have briefly described the considerations that led us to choose shopping malls and supermarkets; in the following we will describe how we intend to apply these ideas in these popular places.

Astronomy in my shopping cart consists of two steps:

- firstly inside the supermarket, in the fruit & vegetables section;
- secondly at a stand outside the supermarket, in the shopping mall’s gallery.

Keeping in mind that malls in different countries different have different layouts, it is necessary to stress the fact that inside almost every Italian shopping mall you can find a supermarket, positioned in a big closed space. As well as the supermarket, you come across a lot of different shops while just wandering around in the so-called gallery. The first of the steps mentioned above is the most important because it really enables us to reach everybody, even people who do not care at all about science in general. At this level we want to “sell” some astrophysical concepts by positioning them among the fruit and vegetables. We want to take advantage of the supermarket’s wares to perform comparisons and to offer visual explanations. Fruit and vegetables belong to everyday life: people are used to choosing, touching and buying them. That is why we chose them: to drive people’s interest toward unfamiliar concepts using familiar items! The approach is innovative: we catch the consumer’s attention using “commercial language” but our “spots” are

¹ http://ec.europa.eu/research/rtdinfo/pdf/rtdspecial_euro_en.pdf

not empty at all. They deliver information, they arouse curiosity and they contain a message. The message is simple: astronomy exists and it is an active science.

Furthermore, showing simple astrophysical concepts, we will demonstrate that to develop astronomy it is necessary to have a scientific method, which enables us to understand objects that are too distant from us and from our senses. We want to show that it is POSSIBLE to understand the Universe despite the fact it is NOT POSSIBLE for us to reach the objects directly. But, to do this it is necessary to really make the effort. In other words: we would like to bring people to think about the fact the we can deduce a lot about the Universe even though we have not direct access to it.

At this point, the message and related remarks could appear obvious but they are not at all! We have to keep in mind both the context in which we are going to present them and, more importantly, the fact that we are the ones who have followed the public and not vice versa as it usually happens in performing outreach activities. We are really bringing astrophysics to people who did not ask to know about it.

Astronomy in my shopping cart is an ongoing project: we are going to try it out in a supermarket by the end of the year. At the moment we are planning the astrophysical concepts we are going to “sell”. Here we want to show two examples of what we think we could write down on the cards to be positioned among the fruit and vegetables.

On one card we will put an image of the Hubble Deep Field showing galaxies and, right over this image, we will write down something like this: *Stop here and look at them, the Universe is like a supermarket! There's a lot of stuff! But the difference is that you have to understand celestial objects without reaching them! Astronomers have to invent a lot of tricks to get at the information.* This card can be positioned somewhere in the fruit and vegetables section and the comparison is between the variety of the supermarket items that one can reach and touch, and the variety of the Universe's objects (i.e. galaxies) which one cannot reach by any means. Another card, showing how Saturn and the Earth differ in dimensions, could be positioned near oranges or cherries.



Figure 1 – One example of card with the Hubble Deep Field



Figure 2 – A second example of Card with a comparison between Saturn and Earth

All figures courtesy of the authors

Written upon it, a short sentence like this: *Saturn and the Earth: think of them as a big orange and a cherry. Astronomers can obtain this kind of information just by observing and using the laws of physics, it's not necessary to go to Saturn to measure it!*

Once the “tour” in the supermarket is finished, the consumer will find a stand in the shopping mall’s gallery where two astronomers will answer their questions and distribute information. Obviously people who have not even entered the supermarket can stop at the stand and find substantial information. But this is a normal outreach activity. Our project’s originality can be found in the first step when we are actually inside the supermarket. At the astronomy stand we expect to see a sort of “natural selection”: not all consumers will choose to stop there, only the “science consumers” will. The science consumer will be the one who has read our “astronomy facts” inside the supermarket and, as a consequence, has had his curiosity excited. He wants to learn more, to ask questions.

At this point, our project’s conceptual path can be summarised in four basic points:

1. Astronomy exists and it is an active science.
2. You CAN understand the Universe despite the fact you CAN’T reach and touch its objects, but you have to really make the effort (this is our main message, and once absorbed by someone it allows a deeper understanding of this science).
3. This effort leads to a better understanding of natural laws and improving technology.
4. Better understanding means an enrichment of human knowledge, and improving technology means an improvement in everyday life.

Summarising further, we can say that the philosophy of our project is to present astronomy in everyday life! The ultimate aim is to give our science consumer the chance to bring home shopping bags filled not only with consumer goods but also with a piece of knowledge about astrophysics and the way astronomers understand the Universe and its phenomena.

References

- Augé M. (translated by John Howe) (1995), *Non-places: Introduction to an anthropology of supermodernity*. Verso, London & New York. First published (1992) as *Non-Lieux, Introduction à une anthropologie de la supermodernité*
- Musarò P. (2007). È l'uomo chef a il luogo, non viceversa. Luoghi e non luoghi del consumo. In: *L'esperienza negli spazi di consumo*. FrancoAngeli, Milano, pp. 57-71
- Riise J. (2005), When the place has a role. In: *At the human scale. International practices in science communication*. Metcalfe J. et al, Beijing, P.R. China; pp 83-91