

Social Astronomy: Cooperating with Local Community Networks

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Summary

The public — our public — has *structure*. Addressing outreach astronomy activities to the public through local community groups, associations and networks, may decisively enhance our communication efficiency. And, no less important, it may be a contributing factor in improving the quality of life of our districts and towns.

Introduction

Astronomy is interesting. Stargazing is fun. Whether for cultural, historical, aesthetic or scientific reasons, simple curiosity or a blend of all of them in varying proportions, few people remain indifferent to the latest releases of astonishing images of deep-sky objects or to contemplating the starry night sky with the naked eye. So we do have a public. In comparison with what happens in other fields of knowledge we can be considered fortunate: astronomy-related news finds its way pretty easily into the mass media and tends to reach respectable audience levels. A different issue is, of course, the extent to which excessive sensationalism, overstatements and other factors may jeopardise the credibility of a piece of communication (Nielsen, 2007).

There is a growing awareness of the role that outreach activities play in generating a wider social support for science. Not sur-

prisingly, a great deal of time and resources are presently being invested in reaching "The Public" through different communication programmes. Disseminating the latest scientific discoveries, underscoring their meaning for our understanding of the Universe and their significance for modern thought, and enjoying the aesthetic content of the night sky are key transversal contents present in most of these actions.

This paper deals with astronomy outreach activities addressed to the public at the local community level (town, district, quarter, neighbourhood...), outside the strict limits of the classroom. In practice these actions often tend to adopt what could be called the "individual citizen approach", that is, they address "The Public" as if it were an unstructured set of people. Many open lectures or sidewalk observations of the sky follow this standpoint to some extent, whose main features, in an admittedly oversimplified description, are:

1. The planning and development of the activities is mostly carried out by professional or amateur astronomers independently, perhaps with some organisational help from government and academic bodies (the City Council, universities...), but with little involvement from the local community itself.
2. The activities are generally announced through the media and targeted at the general public.
3. For the purposes of the activity the public is considered to be a set of individuals with little or no previous interaction with one another.
4. No special mechanisms are set up for keeping in touch with the attendees after the activity is over, although further involvement of the participants may reasonably be expected (e.g., acting as informed citizens regarding science



Figure 1. Flyer of the *Astronomía na beirarrúa* programme. Credit: *Astronomía na beirarrúa* and ESO.

issues, supporting science budget allocations, volunteering for forthcoming activities or perhaps joining a local astronomy club).

This is a sensible and useful approach and of course there is nothing wrong with it; this kind of activity, addressed to a general public, is very often of central importance for any successful science communication programme. However, if we limit ourselves to addressing people only at the individual level we risk missing out on the additional synergies and multiplicative effects that local community groups and their social networks may contribute to our actions. There is much to be gained if the social structure of "The Public" is taken into account when planning and developing astronomy outreach activities.

People live everyday life within socially structured frameworks. Organisational forms may vary, depending on historical, economic and cultural factors, but grouping and social networking is a constant in all human societies. A particularly interesting subset of these groups and networks are those arising within local communities at the level of city districts, quarters, neighbourhoods, villages and towns. They span a wide range of interests, degree of formalisation, social influence, lobbying capability and permanence in time. In the particular context from which this article is written (Galicia, Spain) people tend to interact relatively strongly with each other at the local community level, and in any town there is generally a wealth of small and medium-sized entities of very different kinds, ranging from friendship groups to more structured neighbourhood associa-

tions, consumer groups, gender-oriented groups, local sports teams, cultural commissions, business owners' associations, street party organisers and even gastronomy aficionados, to mention but a few. Despite the seemingly endless variety, all these groups share a common feature: the neighbourhood or quarter are, for them, not only a place to live, but also a territorial and relational reference framework. They make up a part of the local community. Most of them are actively involved in it. And, very often, they are connected to each other, forming the nodes of different social networks.

What do astronomy outreach activities have to do with all that? In short, local community groups and their networks can be a valuable resource to help enlarge and enhance the impact and social significance of our public outreach actions. And, conversely, astronomy activities planned and developed in collaboration with these groups can be useful in strengthening these same communities, allowing for a better overall quality of life. Exploring ways of cooperation between astronomy communicators and local community groups, including their social networks, seems to be a worthwhile effort.

A win-win approach for cooperation

Why should a local group, say a neighbours' association or a small football team, be at all interested in organising astronomy outreach activities with us, such as, for example, a poster session with the latest key discoveries and an open public observation of the night sky with telescopes at a suitable place somewhere in the neighbourhood streets? The answer is straightforward: they can get a valuable return from it. Most of our neighbours enjoy watching the skies and are really grateful if some telescopes are available on the sidewalk, together with some competent advice as to what to observe and how to use them. Astronomy is socially perceived as a prestigious activity, and so are those who are involved in it. Astronomy outreach activities, besides accomplishing their immediate and most obvious goals from a local community group viewpoint (e.g., offering their neighbours a pleasant experience at a street party within the framework of a district's seasonal activities programme), have the additional advantage that they enhance the public image of the local groups associated with their planning and implementation. Astronomy activities are appealing, help to connect people and, given their content, are neither particularly contentious nor conflictive, and so may even help to enhance contacts and

relationships between diverse local civic groups, contributing in the medium term to creating a confidence-building environment. All of this returns direct benefits for these groups and for their communities: neighbourhoods with a rich associative life and strong networking tend to be better equipped for coping with new and old social needs; they are more stimulating places to live, and hence have a better overall quality of life.

The benefits that astronomy communicators receive in exchange for the non-negligible effort of contacting local groups and implementing participative processes in cooperation with them are apparent. When local community groups are truly involved in the planning and development of activities, these activities reach significantly more people, the impact is higher and attendance is not limited just to those few neighbours who are already interested in science. In addition, if these activities are perceived by the local community groups and their networks as interesting and useful from a socio-cultural standpoint, they can easily be incorporated into the groups' own agendas (see the case report below) and hence acquire a permanent or semi-permanent status, becoming an expected event at some dates throughout the year. Last, but not least, successful collaborations may also elicit public support for astronomy-related issues by relevant local social agents. An interesting example concerns light-pollution management: neighbourhoods who have become aware through first-hand experience of how much inefficient street-lighting is hindering our view of the night sky may become powerful allies, supporting the actions undertaken by the scientific community and other civic groups to ask local authorities for definite changes in public lighting policies.

Astronomía na beirarrúa: a case report

Astronomía na beirarrúa (AnB), literally Sidewalk Astronomy in Galician, is an established programme of astronomy outreach activities developed by lecturers and students at the Universidade de Santiago de Compostela (USC) and members of the Vega Amateur Astronomers Club. At the time of writing the programme runs under the sponsorship of the Vice-Rectorship for Cultural Affairs of the USC, in the framework of its Social Cooperation Programme. The main feature of AnB is that its actions are planned, organised and carried out as participative processes in joint cooperation with local community groups and associations in the peripheral districts and quarters of the city of Santiago de Compostela, in Galicia.

The programme started in the spring of 2006, and its main goals are:

- contributing to science dissemination in everyday life, through activities developed in streets, squares and other highly frequented public places;
- enjoying the night sky as a source of knowledge and aesthetic pleasure, recovering it as an essential part of our landscape and cultural heritage;
- raising public awareness about light pollution, its causes and consequences;
- helping to strengthen local community associations, and reinforcing their social networks in civic districts, quarters, local communities and neighbourhoods;
- crossing the boundaries between the University and its surrounding social environment; and
- giving institutional support to Galician associations of amateur astronomers, encouraging them to set up cooperation programmes with local civic groups.

From an external viewpoint, the most conspicuous activities of AnB are probably the public sidewalk sky observations (naked eye, as well as with telescopes and binoculars) held at street parties, fairs and other open air popular celebrations organised by the local community



Figure 2. Poster announcing the 2007 White Night street party with astronomy-related activities.
Credit: Comisión de Fiestas do Barrio de San Pedro, Compostela.

Three practical hints for organising outreach activities with neighbourhood associations and other civic groups

Get active in your local community

Almost everything is easier if proposed and developed in an everyday setting with rich personal interaction, and this also applies to astronomy outreach activities. Being active in your neighbourhood is the best way to get exposure and to help to establish confidence-building relationships. What "to be active" means in practice depends strongly on the cultural and social context where you live. Have a look around and decide for yourself.

Break through the "experts' wall"

Most people think that astronomy is difficult, that setting up a telescope is a complex task, and that some arcane knowledge is needed to enjoy this field. They may tend to look at you as somebody essentially "different" from them, a kind of priest of astronomy... if that does happen, the chance to establish a balanced relationship with your neighbours may be lost. We are experts, of course. But if we are to interact strongly with the people who live around us we should be careful that our expertise does not become a wall distancing us from them.

Adapt your rhythms

Participative processes involving your neighbours and their civic associations have their own rhythms. In some cases they may be much faster than you expect, making you feel dizzy, while in other cases their slowness may be exasperating... Adjusting to different rhythms is perhaps one of the most difficult tasks when organising truly participative activities (Beresford & Croft, 1993). However, the effort is worthwhile: when acting "in phase" with local community groups the results often surpass the best expectations (just as interference can be constructive... at least we were taught something like that in a basic optics course!).

associations in the quarters and districts. In the three years that have elapsed since the start of this programme there has been, on average, one such activity per month. Given the prevalent weather conditions in Galicia, a country of Atlantic climate with frequent overcast skies, mild temperatures and high rainfall, open air activities tend naturally to be concentrated in the period March–December.

There is, however, a great deal of work "behind the scenes" throughout the year, consisting of formal and informal meetings with organisations and people, looking for ways and opportunities to cooperate and set up joint action plans. These contacts help to identify suitable dates and places for public observations and the best ways of implementing them to help to reinforce the social dynamics of the district without unduly interfering with it. A joint public communication strategy is agreed whenever deemed suitable. In practice astronomy activities tend to become one of the most popular events at the night street parties and take a prominent place in the media coverage.

Some results of this programme are beginning to be visible. Among them:

1. Astronomy activities are now an integral part of the yearly planning of the civic associations of several districts of Santiago de Compostela, especially in the San Pedro and Ensanche quarters. These associations appreciate the role that these activities may play in energising the socio-cultural dynamic of their communities and ask the AnB for support. Many neighbours do expect that some public observation of the sky be organised at every district fair or street party and participate actively in them, sometimes contributing with their own telescopes. These activities have won a stable and permanent place in the social life of some neighbourhoods.

2. A consequence of the direct involvement of local associations in the planning and implementation of astronomy-related activities is that their spread and reach has grown noticeably. Local groups have very efficient means of social communication that do not necessarily depend on mass media coverage. Informal communication channels at the neighbourhood level (including word-of-mouth publicity) mean that news and announcements of activities can spread rapidly. These channels are also helpful in finding and



Figure 3. AnB stand at the Spring Fair 2007 organised by the A Xuntanza Neighbours Association and other local community groups in the San Pedro district, Santiago de Compostela. Credit: Salva Bará.

mobilising interested people and material resources.

3. Sidewalk observations with telescopes, binoculars and the naked eye have helped to raise public awareness on light pollution and its consequences. In those districts where the AnB activities take place throughout the year, there is growing popular support for changes in public outdoor lighting policies. An example of this was the claim made by several representative neighbourhood associations of Santiago de Compostela, who asked the City Council to take direct steps to improve and preserve the quality of the night sky. The touchstone of this new policy should be to attain skies dark enough as to allow the Milky Way to be visible every average clear night from the Obradoiro, the main square of Santiago de Compostela Old Town, which is itself a UNESCO World Heritage Site. The Milky Way has been known since the Middle Ages as "The way to Santiago" because of its symbolic relationship to this ancient European pilgrimage route. Not surprisingly, the City Council grasped the potential effect on tourism that such a proposal might have and contacted AnB and the USC to develop a joint programme of night guided tours across the Old Town, with the night sky as a central subject. It may be anticipated that this interest in getting reasonably dark skies will give an additional impetus to the established plans of the local government for a better outdoor lighting approach and for the reduction of the present excessive levels of light pollution in the town.

Besides these encouraging results, the development of the AnB action has also underscored several challenges that should be dealt with in the near future.

One of them concerns the organisational gap existing between the established amateur astronomers' associations and the many individuals who participate in astronomy-related activities as occasional observers. Some of these individuals are keenly interested in astronomy, own small telescopes and would probably like to have more opportunities to have a look at the skies, although they do not want to volunteer as active members of established astronomy clubs, which usually requires a relatively high engagement level. Some kind of intermediate scheme (for example, small amateur groups at the local community level, specific astronomy or science-oriented commissions within the local civic associations, and so on) would seem appropriate to fulfil those small-scale neighbourhood expectations and needs. Despite the great public success of AnB and its close ties with the civic associations of several districts, our action has not yet brought about the formation of groups organised at this intermediate level.

A second relevant challenge deals with the sustainability of AnB. This programme is presently run by fewer than 10 people, all of them students, lecturers or other professionals with a rather busy personal agenda, who work for AnB on a completely voluntary basis during their leisure time. Keeping in pace with the actual number of activities, and extending them to other city districts requires involving more people with some experience not only in astronomy, but also in the fundamentals of participative processes and social work. This in turn means that a suitable training scheme needs to be set up for those who want to volunteer for our programme. Preliminary steps in this direction are being done at the Universidade de Santiago de Compostela.

A third issue deals with keeping the civic orientation of the AnB project. AnB was born as a science outreach programme intended to reinforce and help to empower

local community associations and groups, working in cooperation with them from within their local communities. However, local community associations are not alone in the neighbourhood: the local governments and other public administration bodies are often also active agents in the socio-cultural playground. They have an overwhelming weight and a wealth of material and human resources, and tend to generate their own agenda of activities, not always phased and coordinated with those of the local associations. As such, AnB does not preclude working directly for the local City Council or other government bodies, and there have been very successful experiences in activities jointly organised with them. Those instances where local authorities and civil society groups agreed joint action programmes were particularly interesting. However, in practice it is impossible to say "yes" to every institutional demand, since this would jeopardise the main goals of the AnB programme. Keeping an adequate balance between answering the institutional and social calls for cooperation is a demanding challenge.

All in all, cooperation between the scientific community and different kinds of local associations and networks seems to be a promising approach for getting in touch with people and arousing their interest in astronomy. It is, at least, worth trying.

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Biography

Salva Bará is titular professor and researcher in Optics, at the Faculty of Physics of the Universidade de Santiago de Compostela, Galicia, Spain. His research interests include adaptive optical systems and their applications to high resolution imaging in astronomy and health sciences. He coordinates several astronomy outreach programmes, among them Astronomía na Beirarrúa.