LIFE AFTER PRESS:

The Role of the Picture Library in Communicating Astronomy to the Public

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ABSTRACT

Science communication is increasingly led by the image, providing opportunities for 'visual' disciplines such as astronomy to receive greater public exposure. In consequence, there is a huge demand for good and exciting images within the publishing media. The picture library is a conduit linking image makers of all kinds to image buyers of all kinds. The image maker benefits from the exposure of their pictures to the people who want to use them, with minimal time investment, and with the safeguards of effective rights management. The image buyer benefits from a wide choice of images available from a single point of contact, stored in a database that offers a choice between subject-based and conceptual searches. By forming this link between astronomer, professional or amateur, and the publishing media, the picture library helps to make the wonders of astronomy visible to a wider public audience.

COMMUNICATING THROUGH IMAGES

Mass communication is dominated by images. Wherever one looks, from advertising hoardings around town to television and the internet, carefully chosen imagery looks back to tell a story or sell a product. Although a cliché, the idea that a picture is worth a thousand words is a truism in the modern media. However, of more importance is that these virtual words are expressed and comprehended with astonishing rapidity, certainly compared with reading and comprehending a thousand words of newspaper text. This speed of appreciation is, perhaps, the vital characteristic of the supremacy of the picture.

Science can take advantage of this to communicate with the public, to help make the public aware of what is being done with their taxes. However, a distinction needs to be drawn between communication and education.

Education may be regarded as the 'coalition of the willing', in that it requires both parties—educator and student—to want to be involved in the process. However, the majority of the audience for mass communication does not wish to be educated during its leisure hours, it wishes to be entertained. Television viewing figures are dominated by continuing drama ('soap opera') or 'reality' shows such as *"Big Brother",* which suggests that there is little willingness on the greater part of the public to study.

The situation has not changed much in a century or more. At the end of the working week, most people a hundred years ago were more likely to visit a circus to gawp at the freak show than to attend a discourse on natural philosophy by one of the great scientists of the day. Science in general and astronomy in particular, needs to feed those of the 'coalition of the willing' who wish to learn, but not at the expense of the loose confederation of the bored that craves entertainment. In short, astronomy needs to be today's freak show.

People want to look in wonder, to be amused and astounded, but don't need to understand what they are seeing at any deep level, any more than our ancestors needed to understand developmental biology and genetic mutation when gazing at the bearded woman or the conjoined twins. The way to bring science into the public eye is to communicate through images. The science community needs to provide images to a diversity of media so that they may be seen by the widest possible audience. These images need to inspire the same 'wow' factor as the freak show.

Among all science disciplines, it is the 'visual' sciences that are in the best position to achieve this. A 'visual' science is one in which the primary science data are gathered by some imaging modality. Examples include Earth observation, medical diagnostics and, of course, astronomy. Images of the Universe have a fascination of their own, something quite literally 'other worldly'—freakish, even. This is reinforced by public awareness of space as something 'other'. Science fiction in books, film and television reinforces this perception. The astronomical community can take advantage of this fascination to let the public know that what it does is not science fiction, that what is being observed is not the imagination of some effects artist, but is real. This conversion from imagination to reality is a powerful creator of true wonder. What is needed is a comprehensive set of channels for feeding images into the view of the whole public.

THE ROUTE TO THE PUBLIC EYE

Pictures need to make a journey from the source, through one or more mediators, to the public eye. For the purposes of this discussion, the term astronomer is used to include the professional working at an observatory and the amateur 'backyard' observer. The latter may not do much 'hard' science, although many comets and NEOs are discovered by amateurs, but an increasing volume of excellent and inspiring imagery is coming from privately owned telescopes fitted with superb CCD detectors, high-quality filters and processed using modern desktop computers and software.

Outside of the existing outreach and education programmes set up by observatories and planetaria, the route by which images reach the public is dominated by the publishing and broadcast media. Connection to the media is generally through an inter-

mediary, referred to in the stock photo industry as the picture buyer. This is a person employed to find images to fulfil a publishing brief. This may be a magazine article, a textbook, a corporate awareness brochure, or any of a hundred other uses. The important point is that, broadly speaking, picture buyers are rarely employed solely on science-based projects. In fact, they are not particularly likely to be any more science literate than the demographic of the population as a whole.

The result of this is that, for the majority of media, there is little awareness of where to find good images of astronomical subjects. Of course, there are already a number of picture buyers who are conversant with astronomy sources, but most of these are working for specialist titles or publishers already. A link needs to be forged between the astronomer and the non-scientist picture buyer, and that link is the picture library.

BENEFITS OF THE PICTURE LIBRARY ROUTE

For a picture library to be a viable entity, it must meet the needs of its client picture buyers, but also in some way benefit its contributors.

For the picture buyer, the most important benefit is that the picture library is a 'one-stop shop'. Picture buyers rarely have either the time or the knowledge to trawl through lots of different web sites in search of the perfect image for their project. The project may involve a very large number of images; a single book project may require hundreds of images to be obtained, sometimes over a wide range of subjects. Even within the subject of astronomy, the client may want images of facilities and portraits of astronomers, not just images of sky objects. Often the search is conceptual rather than subject-based—for example, something spiral is wanted for the cover of a novel and the picture buyer might not have heard of spiral galaxies. Images in a picture library usually have some metadata attached, such as a caption and keywords, and a substantial investment in time is made to make these as comprehensive as possible.

Picture libraries also invest considerable resources into making the images accessible in digital form, the preferred medium for picture buyers. Many archive collections are in hard copy—print, film or even glass plate—and normally the picture library will provide scanning services to get these digitised.

A further commercial imperative for the picture buyer is being able to obtain rights clearance. Because the images in the library are either copyright-free or are subject to specific representation agreements, the buyer knows that they are able to obtain the required permissions to reproduce the image without the need to contact many image authors. There may be instances where specific rights clearances are needed.

Inclusion of an image in an advertisement might imply endorsement by the astronomer's institution of a product. Because the picture library maintains good contact with its contributors, it is best placed to facilitate and mediate the discussion.

Finally, something that is vital for the non-scientist picture buyer is that a specialist picture library provides a knowledge and advice centre. Some concepts can be difficult for non-scientists, such as the distinction between types of nebulae and thus their place in the stellar cycle.

For the astronomer, the first major benefit of working with a picture library is the huge increase in reach. Most astronomers publish through the internet, through specialist magazines and, in the observatories, through education and outreach programmes, CD-ROMs and so forth. However, the reach through a library is extended to all types of media across the world, some with which the astronomer may be less than familiar.

The picture library is also able to take some pressure from the understaffed outreach office, or from the shoulders of the individual astronomer, especially with fairly routine book requests for archived images. This can be, to a greater or lesser extent, as the astronomer wishes. Some prefer not to refer image requests, some are happy to offload as much as possible in order to free up staff resources for other projects.

As with the picture buyer, the astronomer benefits from effective rights management when collaborating with a picture library. The picture library takes on part of the role of rights policing, as it is in the interest of all parties to pursue possible unauthorised use of rights protected material.

Finally, there is an income stream available. This is of interest mainly to the individual astronomer, although some observatories are able to accept a commercial arrangement of this kind. No matter what the source, the picture library will make a charge for the supply of any image. Typically the reproduction fee charged by the library is split 50%-50% with the contributor.

CAVEAT DONATOR – LET THE GIVER BEWARE

Before entering into an agreement with a picture library, there are some issues that need to be resolved.

Copyright: This is by far the most important issue, and one that has to be clearly understood by all parties. The picture library must know for certain that one of the following is true:

- the contributor is the copyright owner, or
- has the right to act on behalf of the copyright owner, or
- that there is no copyright asserted in the images.

Without this information, no picture library will proceed with an agreement. Knowledge of the copyright status is central to the operation of any picture library, and these rights are strongly protected in domestic and international laws. Special care has to be taken by observatories, in that the data may have rights associated with them but that rights in an image derived from the data (with the data owner's permission) may reside with the image maker, not the original data owner. Likewise, it must be made clear whether derived images are covered by any agreements on the proprietary data embargo. These issues need to be clearly understood from the outset.

Commercial and ethical policies: Most institutional contributors will not allow their images to be used in any way that implies their endorsement of any product, service or activity. Other institutions may have more explicit ethical policies. Individual astronomers may not want their images used in conjunction with religion or astrology, for example. In any such case, it is important that concerns are raised with the picture library at the outset, so that timely action may be taken to prevent inappropriate use of the images. Generally, a notice to this effect will be displayed with the image on the picture library web site, and staff will be trained to look out for any possible commercial or ethical policy statements when negotiating rights clearances with a client.

Exclusivity: Many picture libraries will ask that you do not give the same or similar imagery as you supply to them to any other stock picture library. This is to prevent confusion or embarrassment should a client receive the same picture from two different sources, where conditions and fees may differ depending on various deals being offered. This doesn't reflect well on anyone. Some contributors, especially those working on Federal funding, may not be able to enter into such an agreement, in which case the clause will usually be dropped. This doesn't mean that you would be unable to enter into distribution agreements with any other company—several of our contributors have deals running with print and poster manufacturers, calendar companies and so forth.

Presentation: It is important that any picture library with which you choose to work presents your imagery in an attractive and accessible way, accompanied by clear, concise and accurate information. The contributor is automatically associated with the library in the mind of the client, and it is crucial that your work is presented to its best advantage.

CONCLUSION

The route to public awareness of astronomy doesn't have to include a public understanding of astronomy. While there are many opportunities for improving communication through education, there are many more potential outlets for communication through simple exposure to images produced by astronomers of all kinds. The picture library provides the scientist with a single point of contact through which images can reach the public, and provides the picture buyer with a single point of contact for accessing the images.

By making images of astronomy more widely available and published through more media, the aim is to increase familiarity with the images of astronomy and to encourage curiosity among the lay public, and eventually to increase the number of people willing to devote time to understanding astronomy through education and outreach programmes.