

interacting with other people are considered in their groups rather than individually. Among the 98 groups of visitors who shared in the use of an exhibit in some way, at least one member of the group was judged to have used the exhibit successfully in 63% of cases. This apparently higher success rate suggests an obvious question for further research: does successful exhibit use by one member of a group translate into appreciation and/or understanding of the exhibit by other group members, and if so, how does this compare with the impact of using the exhibit by themselves?

Another question being explored is the extent of age and/or gender based variation in exhibit usage. Preliminary analysis suggests that in general, higher proportions of males used exhibits successfully, with the exception of elementary school aged children where the proportions of successful users were very similar for girls and boys.

Further analysis will look at patterns of exhibit use other than successful use; any behavior differences related to exhibit type; whether, in group situations, males or females dominate the actual exhibit use; whether group composition affects the pattern of exhibit use and/or the pattern of interactions among group members; whether age or gender or group size correlates with longer or shorter times spent at an exhibit; the impact of interaction among visitors on successful use of an exhibit and understanding of its content.

In the longer term, it is hoped that data collected for the 1996 exhibit evaluation project will lead to insights into visitor behavior and provide information on exhibit use patterns which can be explored in greater depth using other research methods, perhaps casting new light on questions relating to how and what visitors gain from their science centre experience, and leading to useful lessons for exhibit developers.

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Sportex: Not a Hall of Fame

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The Australian Institute of Sport (AIS) is a national institution with its headquarters in Canberra, the national capital. In 1994 the AIS planned to build a new multi-function Visitor Centre which would provide a gateway to the range of site facilities available to the general public and also act as a hosting centre for visitors. The AIS attracts two main types of visitors: those who use the facilities or attend events are mostly local people, whereas those who come to look around the site and learn what happens at the AIS are mostly out of town visitors. The concept for the proposed Visitor Centre included an exhibition area.

Early in the planning process, some members of the management team were attracted to the idea of an exhibition which would use the latest technology to give visitors the experience of really being at major sporting events. This would be an exhibition which would break new ground. The concept tapped into the excitement in the press at the time concerning the roll-out of Sega Centres across Australia.

However, some members of the management team had strong reservations about the viability and appeal of this concept. The team decided that it needed more information about market expectations and demand in order to direct its decision-making. Environmetrics was commissioned to conduct visitor research. We carried out focus group discussions and on-site interviews amongst visitors.

As well as providing a useful demographic profile of the potential audience, the research showed quite clearly that visitors wanted a much broader experience from an exhibition at the AIS than the hi-tech concept being proposed. The following table sets out the interest expressed in possible exhibition components.

Table 1. Interest in topics

Topic	Interest (%)
Hall of Fame	60
Visitors test own performance	54
Meet the athletes	51
History of Australia at the Olympic Games	48
Sports medicine	47
Latest training techniques at AIS	47
Story of work behind achievements	44
Hi-tech exhibition which gives feeling of really being at major sports events	44
Achievements of older athletes	37

It was clear that visitors wanted a multi-faceted experience which focused on Australian sport at the national level, on sporting heroes and on the AIS itself.

The qualitative research emphasised that recognition of underlying values would be fundamental to the success of the exhibition. The following values were identified as critical:

Achievement	Pride
Elite/quality	Excellence
Fair play	Inclusiveness of diversity

This research provided a clear direction for the development of an exhibition brief. The National Museum of Australia won the contract to develop and maintain the exhibition. A few months after opening in 1996 they commissioned Environmetrics to evaluate the effectiveness of the exhibition in meeting its communication aims and to highlight weak areas which needed improvement.

We conducted exit interviews and systematic observation which involved tracking visitors, timing and counting as well as observing for interactions, use and safety.

The overall finding from the evaluation was that the exhibition did an excellent job of meeting the expectations of visitors. The following table presents visitor ratings for Sportex along with other National Museum exhibitions for comparison.

Table 2. Overall rating of Sportex (percentages)

Exhibition	Exc	Good	Avg	Poor
Sportex	74	23	3	-
Rubbery	74	21	5	1
Figures				
Women with	46	33	19	2
Attitude				
Tolerance	15	64	17	4

As well as noting aspects which needed refinement, the research outlined the following principles which underpinned the success of the Sportex exhibition.

The exhibition reflected the values of the institution by celebrating achievement and effort as well as by acknowledging diversity in a high-quality exhibition which was colourful, active, stylish and ingenious in its presentation.

The exhibition met and surpassed the content expectations of the audience by going beyond the high profile stars and well-known facts to surprise and interest with audience with details that were intriguing and sometimes quirky.

The exhibition provided a good mix of 'look and learn' along with 'do and learn' activities to cater for different learning styles.

The exhibition made excellent use of exhibits which were structured for social participation, so that onlookers as well as more active participants were often deeply engaged with activities within the exhibition space.

The evaluation was important in verifying the importance of the mix of exhibits in creating a very successful exhibition which had strong appeal to a very wide general audience.

It is likely that these principles are applicable to a wide range of exhibitions which seek to interest a general audience.

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Reading the Readers: The Role of Semiotics in Visitor Research

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A visitor walking through an exhibition is bombarded with a multitude of messages delivered through different media. As they walk through the space they infer meanings, both personal and institutional, from the way the objects are displayed, labeled and arranged, from the labels, the lighting, the sound and from the way others are interacting with the displays.

When the exhibition teams assess the effectiveness of an exhibition, they attempt to gauge whether the meanings that visitors take away with them match the communicative goals they had in planning the exhibition. Essential to this evaluative process is a practical and sound understanding of just what communication is. I would like to argue that semiotics, the systematic study of meaning making, can provide another perspective that can further refine the evaluation work performed by more the traditional methodologies of questionnaires, tracking surveys and focus groups.

The semiotic model of communication asserts that messages are not pure products that are transmitted from one person to another, but are joint constructions between Senders and Receivers. That is to say, communication isn't about transmitting the curatorial message to visitors who fail or succeed in understanding curatorial intent, it's about production and exchange of meaning that occurs between museums and their visitors.

How we produce meanings however is socially constrained. We need to understand that the meanings that we make aren't products of our own free will and good intentions but are produced through social and cultural contexts which vary according to who is speaking, writing, organizing space etc and who is being addressed and what meaning structures they are familiar with.

Semiotics focuses on the way in which we understand meanings systematically by their relationships and differences to other meanings. It can do this on a local level by considering relationships within and between texts.

Consider the following example. In a recent temporary exhibition at the Australian Museum about biodiversity called *Kaleidoscope of Life*, a light box carried images of three species of animals that were introduced to Australia by European 'settlers.' The light box was part of a series of images that show environmental degradation to the continent of Australia. These images of rabbits, foxes and buffaloes each had the word 'immigrant' overlaid on the image in the