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EDITORIAL

A DOUBLE REVOLUTION

An explorer who happens to switch on the TV or pick up the papers after a faraway journey of several months might well wonder whether he (or she) has not just landed on another planet. Here we have Newsweek pondering over the imminence of a planetary economic catastrophe. To back up its arguments, the American weekly goes as far as citing heretic n° 1, Karl Marx. Meanwhile, Business Week reports that “countries are pulling out of the market in reaction to one of the largest destructions of wealth ever known.” For its part, the Washington Post summed up the general state of disarray that the world media has been chronicling from all sides by affirming that “the rules we thought we had understood no longer apply.” In short, everyone—or just about—is casting doubt over yesterday’s dogmas. The media are simply reacting to the tone given by anxious business and political circles and are now marching in step to the same chorus, and a doubly revolutionary one at that: “It’s time to act.”

The rules we thought we had understood no longer apply.

The slogan might seem a far cry from the neo-conservative creed of sacrosanct “deregulation” that has reigned since the late 1970s. At best, to act was to abolish rules and break down barriers, in other words, to lift any obstacles standing in the way of the “friction-free capitalism” cherished by Bill Gates. Revolution No. 2: Who is to act and play the role of “policeman” as a French economic weekly appealed for in its headlines? The answer: governments, public institutions, hence the “political” in the broadest sense of the term, the most representative instance of the general interest. For the past 20 years, we’d been told the less governments got involved in the economy, the better, and this, for the benefit of the greatest number in a shorter space of time.

UNESCO can take credit for having gone along with a radically different score, far away from the above concert: if it has a dogma, it might be called “the moral and intellectual solidarity of humanity”. In its name, for instance, the last Medium-Term Strategy (1996-2000) calls upon the UN system to “take both emergency and long-term action” in a world that is “in search of new points of reference and stability, and above all, new methods of regulation.” It would be senseless to pat one-self on the back about this. But nothing can remove the deep sense of indignation before the amount of damage generated by this blindness: if only they had been even slightly coordinated and channelled, the forces that led to so much progress would not have, in the same instance, rejected so many on the roadside. Yesterday, today and unfortunately, even more tomorrow.

René Lefort

A chain reaction?

- Consumption spending worldwide doubled between 1975 and 1998. And yet, 20% of people in high-income countries account for 86% of total private consumption expenditure, while the poorest 20% represent a minuscule 1.3% share.

- The three wealthiest persons in the world have a fortune above the combined GDP of the 48 poorest developing countries. It would take less than 4% of the combined fortune of the 225 wealthiest persons to give all the world’s population access to basic needs and social services (health, education, food).

- Close to one hundred developing countries or ones going through an economic transition have a per inhabitant revenue below what it was 10 years ago.

Museums are redefining their role with active input from the community at large. As such, they become reflections of diversity, and often, places of cultural reconciliation.

THE AGE OF LIVING MUSEUMS

Peop[le] are more important than things.” Such was the title of a recently published article in Museum National, an Australian publication, by Aboriginal consultant Trevor Pearce. In and of itself, it sums up the tectonic change that has marked the transformation in relations between museums and indigenous communities over the past 25 years.

To deal with living communities rather than contained collections, to address issues of future partnerships as opposed to past orthodoxies; such are the orientations guiding the practice of many museums across the globe, not the least in Australasia. The journey to equitable relationships between museums and indigenous communities is a long one, and across the world, alternative models for such cultural work are being developed.

In New Zealand, the principle of “biculturalism”, reflecting a partnership between Maori and Pakeha (of European descent), has driven the development of the recently opened Te Papa Tongarewa (see following page), while in the United States, the National Museum of the American Indian is being developed within the Smithsonian Institution. In Australia too, new partnerships are being created. Years of intense, and at times bitter debate in the 1980s over the repatriation of skeletal remains held by museums and the growing voices of indigenous peoples within museum institutions culminated in 1993 in the publication by the Council of Australian Museums Association of a seminal policy on relations between Australian museums, Aborigines and Torres Strait Islanders, entitled Previous Possessions, New Obligations. Its intent was best summarized early in the document: “Museums can no longer function on the basis that they alone can determine what use is made of cultural material. The continuing responsibility of museums to respond to the concerns of Indigenous people is a moral imperative.”

Happily, there has been progress on these issues. Currently, two national programmes running in partnership with state and federal museums seek to provide detailed information and create further opportunities to access museum collections of skeletal remains and secret/sacred material. It is intended that these programmes will provide a negotiated context for the future of such significant cultural material.

Such initiatives reflect fundamental changes in the relationship between...
indigenous communities and Australian museums. Significantly, this process in recent years has relied less upon legislative action and more upon emerging partnerships between museums and particular communities. As Chris Anderson, director of the South Australian Museum has observed, “We have started to think of the collections from the users’ point of view instead of only from our own fairly narrow institutional perspective.”

The Australian shares common threads with initiatives being taken in a number of countries where indigenous cultures were marginalized for centuries. Firstly, they share the common perspective of representing living cultures — people in dialogue with other people set in the context of a living museum. Contemporary issues and future ambitions coexist with past histories but do so in a context of re-examining old beliefs and seeking to forge new understandings of indigenous cultures and people. Secondly, such work involves cultural partnerships and a degree of mutual accord seldom equalled in past museum practice. Such cultural partnerships are not confined solely to relations between museums and indigenous peoples. As a nation with a public commitment to multiculturalism, the cultural and social diversity of Australia is represented in the growing number of community and migration museums that has been established in the past decade or so.

Finally, such initiatives involve many voices speaking and being heard; this is a time when communities, whether as representatives of indigenous peoples, ethnic communities or immigrant groups can tell their own stories, can represent and interpret their culture and heritage, and can do so in concert with established museums or through their own institutions. The director of the National Museum of Australia, Dr Bill Jonas, recently commented on the benefits of increasingly well-trained indigenous personnel in museums: “As we move from the employment of basically untrained Aboriginal liaison officers to people with formal qualifications in museology, the influence of Indigenous people in decision-making positions is spreading. When trained Indigenous people are concerned about doing their jobs well as professional people, increased debate about Indigenous priorities and resource allocation to meet these is an inevitable consequence.”

The influence of such changes is too sustained internationally for them to be dismissed as of marginal significance or as a passing trend. In Australia, such commitment will offer further opportunities: museums will inevitably form part of the process of reconciliation that remains a national imperative. Museums are now irrevocably committed to partnership, to dialogue and to providing a forum for alternative and at times differing interpretations of history and society.

Andrew Reeves
Executive Director, Western Australian Museum

New Zealand:
A bicultural meeting place

Prime Minister Jenny Shipley hailed it as symbolizing “the unique mosaic of culture that is New Zealand” when she opened the $US160 million treasure house that we have come to know as Te Papa or ‘Our Place’ in February this year. Te Papa Tongarewa is a Maori approximation of ‘Museum of New Zealand’.

New Zealanders take some pride in the deeply-rooted biculturalism which gives the country its identity. Over recent years, the government has been committed to honouring the fine print of the Treaty of Waitangi, which Queen Victoria’s colonial representatives signed with the various Maori chiefs in 1840. As a result of this, there has been a good deal of land restitution and financial compensation to various Maori tribes (Maoris make up 14.5% of the population). The Maori
language, once forbidden in schools, is now heard on radio and television. Government documents are issued in bilingual form. As much as Te Papa may be seen as a coming of age for all New Zealanders, it also represents a real recognition of the renaissance in Maori culture.

From its inception, in 1990, the year which marked the bicentenary of Captain Cook’s discovery of this country, the new museum was to reflect this biculturalism. A competition was held for architects to create our new cultural storehouse, and it was stipulated that three central factors be acknowledged: Papatuanuku (the land), the Tangata Whenua (the Maori people, ‘people of the earth’) and the Tangata Tiriti (the Europeans, ‘people of the treaty’). Local architects Pete Bossley, Ivan Mercep and Pip Cheshire won the commission with a building they claimed would “respond to the openness, strength and power of our physical environment”.

The result is impressive. The Maori and the European areas of the museum have different and symbolic orientations: the former overlooks the harbour, the latter looks towards the capital city, Wellington. Each has its specific areas. An innovative touch in the Maori section is the inclusion of a modern marae, or spiritual meeting place, a "marae for all New Zealanders" as the museum would have it. This forum is dominated by Cliff Whiting’s wharenui or meeting house, fashioned in customwood and painted in a startling mix of apricot, turquoise, orange and purple, a marked departure from the traditional Maori black and red. Almost 16,000 taonga or treasures (from cultural heirlooms to domestic items) are housed here. The governance of Maori in the development of the exhibit means it speaks with authority for the people and not from the ‘other’ perspective. The museum’s exhibits also pay homage to the cultures of Polynesia and Fiji, and others that form the cultural landscape.

**Looking and doing**

Central to the philosophy of the institution is the area devoted to the Treaty of Waitangi. It is a place of contemplation where the clarity and simplicity of the actual text, in both Maori and English on the walls, express a vision of coexistence. Audio and visual supports help bring the treaty to life for visitors. This is the heart of Te Papa.

Ken Gorbey, director of Museum Projects promised Te Papa would be a “museum relevant for everyone regardless of culture, education or financial standing” (entrance is free). A sense of humour is to be found in many of the exhibits. Sheep jokes aside, “On the Sheep’s Back” connects the lives of New Zealanders to the wool industry in an often witty and surprising manner. In “The Time Warp” you can shear a sheep in virtual reality in addition to experiencing a range of quintessential New Zealand experiences, such as bungy-jumping, wind-surfing, whale-riding – all in 3D.

In many exhibits the notion of ‘culture’ and our perceived ‘value’ of objects is challenged. One of the opening shows, “Parade” drew criticism for juxtaposing New Zealand artist Colin McCahon’s famous 1958 Northland Panels painting with a locally manufactured Kelvinator “Foodarama 7” refrigerator.

The country’s strong relationship to nature carries into a number of exhibits through interactive technology. In “Bush City”, children can scale a lava flow and examine the fine, layered ash falls from the central North Island volcanoes. An enormous wall of rock is a backdrop to the oldest exhibits at Te Papa. These colourful rocks, some dating back 600 million years, can be climbed on and embraced. The museum is also home to extensive botany and entomology collections. It keeps 62,000 bird specimens, 60% are extinct subfossil species like moa.

Elaine Heumann Gurian of the Cranbrook Institute of Science, who has been involved with many explorative museum projects, has praised Te Papa for breaking new ground, and for its “relevance”.

In this quiet revolution, Te Papa has shown the museum is no longer about putting objects behind glass cases. It reflects the culture that makes New Zealanders what they are. Attracting more than one million visitors in just over six months of operation (10% Maori) proves that it is making a mark.

William Dart
Editor-in-chief, Art New Zealand
Botswana: the Zebra on Wheels

When it was announced that Zebra on Wheels was coming, it sounded like a dream because we rural people never expected to see the Museum in our area. The way the displays were introduced was marvelous,” recalls the headteacher of Masokola School, located in Serowe, in the centre of the country.

Famed across Botswana, Zebra on Wheels (Pitse ya Naga) refers to the Mobile Education Service of the National Museum. Since its creation in 1979, the programme’s four-wheel drives have traveled throughout this vast country to give primary school children in rural areas the chance to discover cultural artefacts. Its logo — the zebra — is the reproduction of a cave painting from Tsodilo, a site on the World Heritage List.

“In Botswana, as in the rest of Africa, museums are something relatively new. The first one only opened in 1968. After that, the big question was how to make people come through its doors,” recalls Phodiso Tube, head of the Museum’s educational department. When it started out with one truck in 1979, the service covered a radius of 80 kilometers around the capital city, Gaborone. Now, 87,000 primary school students are reached every year, and the service prides itself on having visited every rural primary school in this country of 600,000 km².

A team of three, including one of the museum’s curators, sets off for three weeks at a time, with suitcases and artefacts packed in back of their four-wheel drive. “The objects we present are everyday things.

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African art is very functional. It’s not art for art’s sake. The programme teaches about culture and the environment as the two are intertwined. The approach used is to study different aspects of a particular ethnic group - their traditional dress, food, family, lineage, economic activities, social and political organization and so on,” explains Miss Tube. “Botswana’s ethnic groups are totally different from one another and most villages are only familiar with one or two groups.”

The artefacts — copies are made in the case of rare pieces — are displayed all day long in a classroom, commented upon during a lecture, and an educational film shown in the evening. Parents and the community at large are invited to take part in the activities, and the day often ends with music and dance performances. “Including the parents has improved our working relationship with the community,” says Stanley Ntihatho, the headteacher of Tsamaya School in the northeast region.

**Tapping local knowledge**

“The project reminds people about their own culture and also teaches us about other ones,” says Maria Siyangaphi, the headteacher of Mpani School. “It is a big help to teachers because they don’t always know about cultures and customs from other areas of the country.” Leaza Fergus, a 10-year-old from Mathswane School keeps a vivid memory of the museum’s passage: “They showed us a movie about the Sar going off to kill a giraffe and sharing the meat out with all the village. We’d never seen this before.”

Sometimes, the Zebra on Wheels crew show the children how a bowl is sculpted or a basket woven. “Learning about the history of a people, their crafts and culture creates a feeling of respect for them. For example the Basarwa and Bakgalagadi are looked down upon, yet they deserve respect for being the first people to live in the country. The crafts shown by the museum should also inspire our people not to despise manual work, as is often the case,” comments K. Keatimilwe, headteacher of Manonnye School in Serowe.

When the visit focuses on an ethnic group that is predominant in the school concerned, the community’s knowledge is tapped. “Sometimes children or their parents actually correct us. We are learning from them just as much as they are from us,” says Miss Tube.

Thanks to these contacts, curators can also enhance their own knowledge. Artefacts are sometimes donated to the museum or identified for future acquisition and oral traditions are brought to the attention of the museum’s ethnologists. “Now, when we go to a village, people will come and tell us about a rock painting, a sacred area or an old tree that has played an important role in a village,” explains Miss Tube. In 1991, prehistoric wall paintings were thus discovered in Mapoka during a Zebra on Wheels visit while the following year, an old iron mine in Dagwi, in the northeast, was brought to the programme’s attention. “In Africa, we ended believing that our culture was inferior. Now parents feel that their culture has a chance of staying alive after all.”

The programme has been replicated in several countries. Now, Zebra on Wheels is to serve as the model for a project launched by UNESCO for the 1998-2001 period entitled “Museum Education Project of Africa” and implemented by ICOM (International Council on Museums). As the Zebra on Wheels newsletter explains, “a museum in a developing country must contribute to that country’s development. In Botswana, we aim to bring people knowledge about themselves, their culture, their history, their environment and most important of all, to teach that their country is a multicultural nation, and that cultural tolerance should be the guideline for encouraging an attitude of give-and-take. This will set the pace for the birth of a national culture in Botswana.”

Nadia Khouri-Dagher

"In Africa, we ended believing that our culture was inferior."
Barcelona:
Rethinking the city

City museums, too long modelled on their national counterparts, are starting to take a fresh look at their mandate. As faithful reflections of a city's unfolding history, these museums have had to learn to move closer to their communities and cast a more analytical eye on them. The first step came in the 1960s, when changes in the urban landscape obliged city museums to reflect the various conflicts taking place within cities and alterations in the environment that went along with them. Recently, they have been grappling with the social changes brought about by globalization as well as the emergence of new cultural identities. So city museums are expanding their range of interests and no longer aim to be just a mirror of a country or an environment. They seek to present a complex arrangement in which the citizens themselves have a key role to play. Museum collections and the content of exhibitions are being substantially changed, because museums are now concerning themselves with all aspects of heritage, be it buildings, furniture, interiors, the tangible and the intangible. In other words, they are dealing not only with urban policies and the physical environment — the history of the city — but also with the culture, or rather cultures (the human communities) they are made up of.

In Barcelona, the City History Museum has undergone a deep-seated transformation. It has been completely remodelled, the presentations rethought and the methods of preserving the collections improved. The museum aims to put the items it holds — an archeology section and a collection of medieval pieces — back into their original context and to present the modern period through temporary exhibitions which will give a dynamic view of the city's history.

The museum recently opened an audiovisual multimedia show which gives visitors an overview of the city's history. The display highlights the different cultural traditions which have contributed to the changes in the city since its foundation. It starts out with the notion that "a city's best museum is the city itself." This is also why museum officials are involved in all decisions relating to the preservation of the city's physical and architectural heritage.

Experiencing history

The Barcelona museum has two other projects on the go. One, an exhibit scheduled for April 1999, is about reappropriating the city's collective memory. Taking the period running from the end of the Spanish Civil War in 1939 to the outbreak of the Second World War, it will seek to show the impact of the fascist regime in all its aspects — the repression, the intolerance, the replacement of governing bodies, the stamping out of all dissent. A former shelter will give visitors a chance to visualize the structures erected by the civilian population — one of the first to experience systematic bombing — and which were a model used later by other European cities. The exhibition, backed by the Barcelona city government and several local organizations, will try to contribute to the ongoing reflection on violence in a city, democracy and tolerance.

The second project, planned for the year 2000, is an exhibition about emigration. Using demographic and anthropological studies, it will show that the city is made up of different groups of people who coexist or clash in the course of its history. The end result of this interaction is the cultural diversity of Barcelona, depicted as a richness rather than any sapping of a so-called "cultural authenticity." This exhibition is designed to break down clichés and encourage a broad debate about the city as a multicultural place.

By spearheading these different initiatives, we are seeking to tackle present-day problems, not only from the classical museum angle, but in an attempt to turn our city museum into a place for discussion and the exchange of ideas.

Antoni Nicolau i Martí
Director of Barcelona's City History Museum

Festivities are all part of the urban heritage.
A bountiful flow of satellite signals carrying information about the Earth’s surface will deluge receiving stations around the globe in the next century. But the big question, particularly for many developing nations, is whether the technical know-how exists that allows these signals to be turned into useful information for resource management and monitoring, as well as disaster relief planning.

From their bird’s eye view – satellites have long been informally referred to as birds – remote-sensing satellites can discern much about conditions on Earth. They can show sedimentation extending out to sea from an estuary, study crop health, map pollution, chart deforestation, penetrate cloud cover to observe the consequences of floods, or monitor events such as El Niño which have climatic consequences.

Extracting such information from remote-sensing satellites is no easy task. As they move through their orbit, satellites collect a huge stream of numbers representing radiation intensity emitted from the Earth over a range of frequencies. It is this data that scientists have to decode in order to reconstruct information about the Earth’s features and particular phenomena.

The potential of remote-sensing satellites is further enhanced by the emergence of geographical information systems (GIS), essentially a combination of a database and a computerized map. Information about crops, urban development or the topography of a given area – to give just a few examples – is stored in a database along with its geographical coordinates. A valuable tool for resource management, the system can be queried for maps showing a combination of features, such as crop health or landcover in a particular region. Remote-sensing satellites, which cross every area on the globe repeatedly, are well-suited to the task of collecting timely data for such systems from regions of the Earth that would otherwise be difficult to reach.

In addition to the fleet of earth-observation satellites currently operating, some 30 satellites – both government-funded and commercial enterprises – are currently at various stages of planning and preparation for launch. Some of the remote-sensing satellites of particular significance which are scheduled for launch next year are the US’s Landsat 7 and Earth-Observing satellite-1, Europe’s Envisat and a joint Chinese and Brazilian satellite.

Landsat 7 will provide continuity for the long-running Landsat satellites which have produced an ongoing record of the Earth’s land surface since 1972, thus providing a valuable archive that enables scientists to put current observations in context. Brazil was the first country outside the US to erect a Landsat receiving station, and its joint venture with China is visible proof of the extent to which the country has benefited from the know-how gained as a consequence. These countries follow India, which has developed highly sophisticated remote-sensing satellites to aid natural resource management.

If however, remote-sensing data is to be of widespread use, all the agencies with satellites aloft will need to help transfer technical know-how. “Currently, technology transfer is
limited, and often it is of the wrong kind,” says Maurizio Fea, of the European Space Agency’s remote-sensing centre in Frascati, Italy. Once a particular cooperative venture between a national group and a particular space agency ends, the local knowledge may cease to be exploited.

Both NASA and ESA have schemes for promoting remote-sensing. Within 24 hours of receipt of Landsat 7 data at the primary receiving station in the US, for example, users will be able to browse the Internet for low-resolution images showing location and giving a sense of the image content. The detailed dataset of a particular image will then be available for no more than the cost of fulfilling the request. However, the US Geological Survey, which will manage the data, will only have processed the satellite signals to a limited extent. To extract useful information, users will either have to manipulate the data themselves or employ one of the commercial companies specialized in extracting information from data, known as value-added companies.

Erecting receiving stations, providing data for free or at low cost, and giving technical advice are all ways in which space agencies are attempting to transfer technology to developing countries. In addition, US and European governments aim to use market mechanisms to build up a strong-value-added business sector. The general thinking is that market conditions will, in the long term, enable indigenous value-added companies to spring up in developing countries and for the global remote-sensing sector to flourish.

It is a sector where technology is developing at a rapid pace. Future satellites will have improved spatial resolution, while others, known as hyperspectral satellites, will have the capacity to provide a much finer observation of the Earth. Just as greater resolution in a telescope enables more astral bodies to be seen, so these hyperspectral instruments will reveal more information about the Earth’s surface. How well all of this technology is utilized will depend on the policy decisions on the part of governments and space agencies to promote technology transfer as well as on the development of a healthy commercial sector.

Helen Gavaghan
Author of “Something New under the Sun”

Currently, technology transfer is limited, and often it is of the wrong kind.

Landslides seen with new eyes

From northern Colombia down to Patagonia, landslides in the Andes are such a common event that they are frequently not reported to the world at large. Yet, whether they are triggered by volcanic activity, earthquakes or heavy rains, these rivers of mud, rock and debris often crush everything in their wake. The first cost is human. Storms in Ecuador earlier this year caused a mud avalanche that buried five adobe houses with 17 people inside. An earthquake-triggered landslide just over a decade ago, in northern Ecuador, killed more than a thousand people and ruptured pipelines, delaying oil exports for months and substantially reducing government income. In Colombia, the 1985 eruption of Nevado del Ruiz wiped out the city of Armero, killing 25,000 people.

It is small wonder then, that Latin American scientists vetoed an initial UNESCO research proposal on the use of satellite data for the geological studies in the Amazon, in favour of exploring ways to use satellite images in detecting landslides. The choice made a virtue of necessity. After 10 years of ground-breaking research effort, the project has produced a cost-effective way of pinpointing potential landslide areas in the Andean region. It is a technique that has important ramifications for planning decisions such as the building of roads, railway lines and housing. If landslide zones can
UNESCO and the Outer Space

UNESCO is gearing up for the UN Conference on Space Technology in July 1999. Its main concerns: to ensure equitable access to satellite images, promote the training of scientists in developing countries and enhance technology transfer.

On the educational front, the Organization offers postgraduate courses in remote sensing, while in the research field, UNESCO is working on several projects incorporating the use of satellite images and geographical information systems.

UNESCO is developing a remote-sensing user network in Africa, an activity linked to the Pan-African Network for a GIS, which groups 33 African member countries. It aims to organize existing geological information in a user-friendly form to assist in the sustainable management of natural resources.

A Southeast Asian Network for a GIS is also being set up with UNESCO’s backing. The aim: to coordinate national geological inventories using international standards for bibliographic data and to promote the exchange of expertise.

UNESCO is working with several European bodies on space techniques for major risk management.

be detected, planners can avoid them, saving lives and infrastructure.

Early on, Colombia’s Chicamocha valley was picked as one of several pilot areas because debris from landslides threatened the town of Paz del Rio and the railway lines that transport the coal and iron extracted in the region. Sending a photographer up in a plane had, until a few years ago, provided the only information on the topography of this territory - an expensive undertaking. “For the Colombian government,” explains Robert Missotten, from UNESCO’s Division of Earth Sciences, “It was crucial to establish whether the landslides in this area were caused by mining or seismic activity.”

Principal Investigator

With the launching of the study, under the auspices of the Geological Application of Remote Sensing (GARS) programme, run by UNESCO and the International Union for Geological Sciences, satellite images were to be provided for researchers free of charge. But it was a year before the American Landsat satellite produced a vertical image of the Chicamocha valley. Two side-views of the valley, taken from opposing angles by the French first generation Spot satellite were expected but only one image was made available because persistent cloud cover prevented the acquisition of a second. The scientists, who had hoped to be able to construct a computer model of the valley from the three images, then had to calculate the missing side-view of the area in an attempt to “rebuild” it. The work was the first of its kind undertaken anywhere in the world.

“It was on the basis of this work that we applied for and won the status of ‘principal investigator’ for the project from the European and Japanese space agencies when they launched their remote-sensing satellites at the beginning of the decade,” says Missotten. The ‘principal investigator’ process is used by the various space agencies as a quality control measure for research projects and ensures that maximum use will be made of satellite images provided free of charge. In this instance, UNESCO acted as federator for the various agencies involved in the project and helped obtain $240,000 from the European Union for a specific training programme in the Andean countries.

During its development, the project had to keep pace with the demands of new technologies. For example, the Ecuadorian ground-receiving station (the only one within range of Colombia) that the scientists were relying upon had to be specially adapted in order for it to accept the new, more complex radar satellite images. However, once it arrived, this ‘radarsat’ information provided a breakthrough. Radar satellites have the advantage of being able to see through clouds which gave the possibility of tracking landslides through the rainy season and learning more about their behaviour. The images look quite different from those produced by classical satellites and need to be interpreted separately. “We had to learn how to identify the landslides in these images,” Missotten points out. The next challenge for the scientists collaborating on the Colombian project was to merge the different sets of data, and in so doing, create software on the mapping of landslide vulnerability.

As “principal investigator”, UNESCO organized a series of workshops in Bogota for earth scientists from several Andean countries. In all, about 100 were trained in applying the methodology which requires the digitalization and harmonization of information provided by satellite, aerial photography and ground studies to create a map of landslide vulnerability.

Demand driven

The International Institute for Aerospace Surveys and Earth Sciences in the Netherlands and UNESCO produced a training pack including the specially adapted software. About 250 have been sold to countries and agencies throughout the world. The method has created the foundation for ongoing research using satellite information for the study of volcanoes in Peru and the Philippines, where UNESCO has been negotiating access to satellite images as

Rivers of mud crush everything in their wake.

The Nevado del Ruiz eruption left a devastated landscape.
Kenya: 3-D mapping to the rescue of park diplomacy

The 15,000 nature lovers who visit Kenya’s Amboseli National Park every month might not be aware of the sharp competition going on between cattle and wildlife roaming these lands for such vital resources as water and grass.

Experts are however, and they are taking measures to improve management of this biosphere reserve stretching out at the foot of Mount Kilimanjaro, and formed by a core zone — the national park itself — and buffer and transition areas owned by the local Masai pastoralists.

To assist the Kenya Wildlife Service in this multi-faceted task, UNESCO and the International Institute of Aerospace Survey and Earth Sciences (ITC) in the Netherlands set up a geographic information system (GIS) at Amboseli between 1990-1995. This included the provision of computers and training in GIS methodology, which involves the merging of data from different sources to create a 3-D map. Once modelled, the map provides a key management tool that can be used to simulate the effect of hypothetical decisions: the building of a highway, the construction of water holes, the extension of agricultural lands.

Satellite information on Amboseli’s vegetation cover was just one of the elements built into the GIS. “This kind of approach can tell you so much more than a few old maps and statistics,” says the ITC’s Bert Toxopeus. “It can pinpoint the location and extent of problem areas, so that people get a kind of three-dimensional view.

Seasonal patterns

That was the first of our aims: to let the park managers see that they could achieve an overview by using this technique. Normally they would have a lot of documents on the table relating to different areas, but no overall context.” For Joseph Mburiugu, the project coordinator from the Kenyan Wildlife Service (KWS) in Nairobi, the expense of the satellite input is worth it. “The park managers now have several images to work with and the GIS technique is still in use. We are now sharing this information..."
with Uganda, Tanzania, Nigeria and Ghana.” The GIS system also enables park managers to better understand seasonal patterns. During the rainy season, wildlife from the park disperses into the much vaster buffer zone, helping to maintain wildlife numbers in tourist-pleasing proportions. Without this dispersal, the total number of wildlife in the core on a permanent sustainable basis would be much lower. On the other hand, because water and food are hard to come by during the dry months, the Masai often cross over into the core area of the park to let their cattle graze there, reducing the carrying capacity for wildlife and creating tensions between conservationists and the pastoralists.

"Using the GIS, you can see which areas are overgrazed, or estimate for example, if the dry season is longer than usual, the kind of impact this will have on livestock," continues Toxopeus. "You can also extend the growth in agriculture to simulate the effect it will have on wildlife and livestock." The modelling system enables ecosystem management to be approached from a variety of perspectives. For example, if overstocking of cattle is showing up in a specified area, then Masai herding strategies can be adapted by moving cattle accordingly. The project considered the Masai part of the management process and, according to Robert Missotten, of UNESCO’s division of Earth Sciences, the satellite images, cross-referenced with ground surveys were “a neutral starting point” for fostering a better relationship between conservationists and the local community.

The KWS continues to liaise with the Masai pastoralists, who traditionally graze cattle and more recently, have started to practice agriculture in the buffer area. Experts are especially concerned by a government policy of dividing group ranches into individual properties, meaning that plots can be sold, fences erected and agriculture practiced. “The increase in agricultural activity in this zone is a serious problem,” explains Bert Toxopeus. “Because it is a semi-arid land, it is very difficult to cultivate crops, so inhabitants are using irrigation techniques to grow their maize, beans and onions. This is not good for the ground-water table. Fences are another issue. Places where livestock or migrating wildlife might drink are being fenced. Elephants walk over the fences and eat the maize, the farmers get upset and harass the wildlife. The Kenyan Wildlife Service provides compensation but even so, conflicts emerge. Talks with the local community have however, helped to raise understanding of the situation.”

### Balancing the Ecosystem

In one area the consultative approach, backed by GIS research, seems to be working. “People have started reducing livestock to a sustainable level, and it’s acknowledged that you can sell cattle for better prices when they are healthy as opposed to when they are walking bones,” claims Toxopeus. “Under an agreement with the KWS,” he continues, “a certain percentage of park revenue goes back to the locals. When the park is doing well, they are too and so they are starting to see the benefits of wildlife.”

The continued monitoring of park resources such as water, flora and fauna by satellite, subsequent updating of the GIS and continued consultation with the Masai are all vital to maintaining Amboseli’s ecosystem in balance.

A.-L.M.

### Satellite - facts and figures

- From 1985 to end 1997, 78 dedicated earth observation satellites were launched into space (excluding explorer, military and astromony operations).

**Source:** *Matra Marconi Space*

- By September, 1997, the number of satellites (all services) in space was close to 1,000. The combined number of satellites in orbit is expected to at least double by the year 2007.

**Source:** *International Telecommunications Union (ITU)*

- Due to commercial demand, the number of telecommunications satellites far outweighs the number of earth observation units.

- An example of costs: The National Aeronautics and Space Administration (NASA) launched the SUS70 million, 600lb, Lewis earth observation satellite in August 1997. Data applications included monitoring forest health, toxic waste dumping and exploring for minerals from space. Although Lewis was designed for a three year shelf life, it spun out of control and burned up weeks later.

**Source:** *New York Times, Matra Marconi Space*

- According to Matra Marconi at least 350 satellites in space are no longer in use. Some are parked further out from their original position in ‘graveyard orbits’.

- According to the French National Centre for Space Study (CNES) there are 170,000 debris (pieces of satellite and other spacecraft) in space. Those of more than 1kg will burn up as they re-enter the earth’s atmosphere.
Prevention is better than cure

For Badaoui Rouhban, chief of UNESCO’s Unit for Disaster Reduction, space technology can be of service in preventing natural disasters, but on several conditions.

To what extent is space technology being used in preventing natural disasters?
B.R.: Space applications are a tool used in the overall cycle of disaster prevention: they help us to monitor hazards and understand a phenomenon before the disaster, they help us during the disaster for the rescue and relief operations and afterwards, for the rehabilitation and reconstruction. What’s more difficult is to assess how much it is applied. This argument holds for developed countries: they have these tools and can decide to use them. But developing countries, which are more vulnerable to disasters, don’t. Even if you have the tools to assess risk, they will be of little use if you can’t act upon the information obtained. What’s the use if your adviser tells you that in one city, we can expect an earthquake of such and such a magnitude if you’re not able to use this information and take appropriate preparation measures?

What kind of measures can fill these gaps?
B.R.: In developed countries like the United States — which is subject to earthquakes, floods and hurricanes — policy-makers obviously get the message coming from scientists and know that even if protection measures are long-term ones and don’t pay off now, they have to be taken. In California, they take measures. In China, maybe less. In some cases, policy-makers don’t get the message of scientists because it may involve taking unpopular measures that don’t pay off in the short-term.

In the final analysis, even when you have scientific and technological tools, the issue of disaster prevention is not so much an issue of science, it’s first and foremost an issue of public policy choice. We have enough scientific and technological knowledge to significantly reduce natural disasters. Yet in spite of all this, disasters are increasing: policy-makers are not getting the message.

With what message can policy-makers be better reached?
B.R.: One of the ways we should keep trying is to say that disasters will increase, not because hazards will, but because of demographic trends, increasing urbanization and infrastructure development. This is making us more vulnerable. We have to encourage decision-makers to invest before the crisis, which involves thinking in the long term. If you invest $1 before the crisis, you save $10 to $15 in losses.

In what for example?
B.R.: Invest in protecting the buildings, good land-use planning, information and education of the population. It means, for example, understanding the danger of settling near a river, or in Bangladesh, foreseeing a building which is elevated where the community can go in case of a flood. It also means investing in good information systems. In 1991, when the Pinatubo erupted in the Philippines, there was no loss of life because an organized evacuation planning system was in place.

The International Decade for Natural Disaster Reduction (1990-2000) calls for countries to draw up comprehensive risk assessment programmes by 2000. Is this happening?
B.R.: Although the decade set overambitious goals, it has been able to get across the message in many countries that prevention is better than cure. It has enabled the issue of natural disaster reduction to not only become an issue concerning civil defense and army departments, but to be put on the agenda of line ministries concerned with development. This is an important change.

Interviewed by Cynthia Guttman
WATER: IN CITIES...

The Moroccan town of Essaouira was chosen as a case study for UNESCO’s “Urban Development and Freshwater Resources: Small Coastal Cities” programme launched in 1996. The town played host to an international seminar on the theme last November, of which the proceedings and recommendations have just been published. Hydrologists, oceanographers, sociologists, economists and urban planners took part in the three-day meeting along with representatives from towns and cities with similar profiles to Essaouira such as the thousand-year-old Odense in Denmark and the ancient Phoenician port of Saïda, in Lebanon. The seminar covered such topics as water-resource management, the impact of coastal erosion, the revitalization of the historical urban fabric, tourism and alternative socio-economic activities.

...and in arid regions

What are the best ways of coping with the acute water scarcity in Arab countries? More than 150 specialists gathered in Hourghada (Egypt) August 26-28 to discuss possible responses. Experts underlined that realistic water management should include “political, economic and environmental lobbies at local level in order to correct unsustainable current practices.” They advocated more systematic evaluation of alternative water development strategies and underlined the importance of institutional aspects, notably agreements between riparian countries. Participants also emphasized the need to involve local populations in the making and application of decisions on water management.

Science for all

The Latin American prize for popularizing science and technology, organized by the “Red-POP” network under the auspices of UNESCO, aims to reward actions deemed remarkable for their “creativity, originality, discipline and outreach”. The $3,000 prize will go to a centre, a programme, or team in Latin America and the Caribbean for outstanding achievement in this field. Submissions must be in by February 28, 1999.

Hermitage: a cooperative project

The State Hermitage Museum in Saint Petersburg (Russia) and the Government of Flanders (Belgium) have announced a cooperative project to renovate the Hermitage’s Rubens gallery, home to one of the most renowned Rubens collections in the world. The Government of Flanders will contribute $220,000 towards the renewal of the gallery’s floors and walls, the restoration of its ornate ceilings, and new lighting. This initiative falls under the Hermitage/UNESCO project, an effort launched in 1993 which has already raised $3 million in donations and in-kind service from governments, individuals, industry and foundations for the renewal of one of the world’s most beautiful museums.

WHO SAID WORLD HERITAGE?

The ancient Greeks already designated the marvels of the Mediterranean region as the Seven Wonders of the World. Today, the World Heritage List comprises 552 cultural, natural and mixed sites, from the pyramids of Egypt to the Grand Canyon in Colorado. A new brochure on World Heritage provides a guide to understanding the World Heritage Convention, why a site goes on the List in Danger, along with other key facts on selection, funding and measures to protect humanity’s treasures.
HUMAN RIGHTS

UNIVERSAL REFERENCE

Conventions, pacts, protocols, declarations and especially the text of the Universal Declaration of Human Rights, adopted by the UN General Assembly in December 1948, are all grouped in a bilingual brochure recently published by UNESCO to mark the Declaration's 50th anniversary. The booklet is a complete reference for all instruments relating to human rights which have been created since 1948 and adopted by the UN and regional organizations - Council of Europe, Organization of African Unity, Organization of American States. Instruments concerning specific issues cover the prevention of discrimination, war crimes and crimes against humanity, workers' rights and the protection of specific groups such as aliens, refugees, women, children, migrant workers and prisoners.

For more information:
The Division of Human Rights, Democracy and Peace.

Commemorations

The International Day for the Remembrance of the Slave Trade and its Abolition was celebrated for the first time this year, with various activities organized in Haiti, August 14 - 23. The inaugural commemoration was held on this island for clear historic reasons: the Bois-Cayman Insurrection in August 1791 stands as a symbol and decisive factor that set off the process toward abolishing slavery. In addition to Haiti's key role in the fight against slavery, it was through its initiative, and jointly with African nations that the "Slave Route" project was adopted by UNESCO. Activities held in Haiti included a series of conferences on the slave trade and slavery, exhibitions of historical documents, a film festival, concerts and parades. Historians, researchers and teachers also met there to explore ways of reinforcing knowledge about the extent of slavery and its impact in school programmes.

In Ottawa (Canada), August 18, UNESCO's Representation in Canada and the African Diplomatic Corps organized a round table to inform and raise awareness at all levels concerning "a very poorly known period of the history of humanity and purposely ignored for a long time."

COMMUNICATION

The "web" prize

The first annual UNESCO Web Prize was awarded September 9 to the team behind the Brazilian site on the Kamayura and Urubu-Kaapor tribes (http://www.cosmo.com.br/pro vedor/unesco) and led by the 24-year-old Silvia Lunazzi. For the jury, the site provides "an extensive look into the history, localization, myths, arts and music of two Brazilian tribes. The text is greatly enhanced by the beautifully designed, innovative presentation which is of high artistic quality... The site contributes to strengthening multi-cultural content on the Internet."

The $5,000 prize goes to artists, designers and programmers creating Web sites in UNESCO's fields of competence, namely education, science, culture and communication.

For more information:

The Division of Human Rights, Democracy and Peace.

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“God was on my side, the world was on my side and history was on my side," declared Nigerian journalist Christine Anyanwu, on receiving the 1998 UNESCO/Guillermo Cano World Press Freedom Prize at UNESCO on September 2. Ms. Anyanwu, publisher and editor-in-chief of the now-defunct "The Sunday Magazine" in Lagos, Nigeria was jailed for 15 years in 1995 following an article on an attempted coup (see Sources, no. 100). She was freed in January this year by the new government. She called the prize a "salute to the entire Nigerian press. No group in Nigeria has fought harder and longer nor has any suffered more for a better society," ending her speech by repeating the appeal on behalf of the imprisoned journalists Gao Yu (China) and Pius Njawe (Cameroon).

“The peaceful resolution of conflicts, the dialogue between cultures and religions, and the promotion of tolerance are, inter alia, key factors for giving a solid foundation to all endogenous development efforts, ensuring the participation of all," affirmed the Statement on Peace in Southeast Asia on the Eve of the Third Millenium. The document was adopted by representatives from nine countries in the region, who gathered in Jakarta (Indonesia), September 11 - 12 for a symposium organized by UNESCO and the Association of Southeast Asian Nations (ASEAN). The Statement calls for "strategies for attenuating the effects of the current problems on the poorest sectors of the population, in particular in the fields of education, health, nutrition, and productive employment."

No. 105 - October 1998 sources
BOOKS

**Syrian Orthodox Church**

*Anthology of Traditional Music*


Price: 120FF.

The Syrian Church is one of the oldest Christian Churches of the Middle East. Its liturgical language, Syriac, is a further development of Aramaic, the language spoken by Jesus Christ. Originally, five traditions of Syrian Chant existed: those of Amid (Diyarbaker), Edessa (Urfa), Mardin, Tur Abdin, and Tagrit.

Today there remain only those of Mardin, Tagrit and Tur Abdin, the latter being the tradition of chanting heard on this record. It is based on eight qinto or modes, which are governed by rules concerning the alternate use of each in certain weeks. The recording begins with a mass in the first mode sung by boys choir, deacons and monks of Deyruzafaran Monastery, and priests from Mardin and Diyarbaker in East Turkey. Chants in the eighth and sixth modes follow performed by priests and monks in Midyat and Tur Abdin in the same region.

**The Descendants of Cain**

by Hwang Sun-won

M.E. Sharpe/UNESCO Publishing 1997. 181pp., 120FF.

Born in 1915 while Korea was under Japanese colonial rule, Hwang Sun-won for years lived and wrote in hiding, to avoid being pressed into forced labour in Japanese mines or war supply factories. The stories he wrote in those days are among the best-loved classics of modern Korean literature. After liberation, Hwang was engulfed in the whirlwind of terror created by communist rule in the north. His experiences as a landlord’s son form the basis of this novel.

The main character belongs to the Korean landowning class and finds himself helpless against the brute force experienced in the violent end to the traditional Korean way of life. The Descendants of Cain is at once a portrait of the human character and of a society in turmoil.

**Education Reform in the South in the 1990s**

edited by Lene Buchert  
UNESCO Publishing 1998. 415 pp., 120FF.

The book covers a large area both geographically and in its treatment of the subject. Case studies include the 'Escuela Nueva', a reform that has affected some 20,000 rural schools in Colombia. The teacher is trained to help beginners learn how to read while the rest of the class is organized in self-learning groups, the idea being to “learn by doing instead of listening to lectures”. Reforms in Chile, South Africa and Zimbabwe are also examined. “Education in the framework of structural adjustment” is discussed in a chapter by Anders Narman from the University of Gothenburg in Sweden. “Education seems once again to be reduced to a basic human right and not a factor to improve productive capacity,” he writes. Other topics include decentralization covering Southern Africa and Mexico, curriculum reform focused on Asia, and the role of research in reforming educational practice, with a case study of community-based schools in Mongolia. The professors and researchers contributing to this work are from a wide variety of institutions and backgrounds, addressing an audience of policy-makers, administrators, scholars and students.

**Memories of Altagracia**

by Salvador Garmendia  
Peter Owen/UNESCO Publishing 1998. 206 pp., 170FF.

Salvador Garmendia is considered one of Venezuela’s best contemporary authors, known for his short stories, film scripts and essays as well as his novels. Translated from Spanish, this popular work is part of the UNESCO Collection of Representative Works. It is a story told through the eyes of a young boy invited by the crippled Marinferinfero to join him on a voyage over the rooftops of Altagracia, a small provincial town near the Venezuelan savannah.

Hopping on his crutches, the man takes the boy on an adventure in which they explore a magical mix of fantasy and reality. It is a world of colourful characters, “...I got to know a witch, who was later the only funny witch who could ever have existed,” and vivid dialogue, “...’I’m wringing my hands! I’m weeping! My heart is tearing itself asunder! Read, read quick!’.” Yet, it is a world that becomes increasingly harsh as childhood slips by.

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LATIN AMERICA AND THE CARIBBEAN
Produced by the UNESCO regional office for education in Latin America and the Caribbean, this book covers a decade of action to 1997. “The fact is that the Latin America and Caribbean region is plagued with income distribution that is among the most unequal and regressive in the world,” writes UNESCO Director-General Federico Mayor in the introduction. The book emphasizes education as a “task for all”, and notes in the title to one chapter that “regional integration with the framework of globalization and respect for self-identity demands education that respects diversity.” Early childhood education through to higher education and education for adults are all covered with comprehensive notes and background for each sector. The book also includes an analysis of education-related themes on which agreement has been reached at world regional meetings plus a list of all UNESCO publications and articles on education in the region.

NATURE AND RESOURCES
“No new opportunity can arise without some unavoidable level of risk; no risk can be blindly accepted before building up some measures of security.” Such is the axiom Francesco di Castri (biologist and director at the French National Centre for Scientific Research) applies vis-à-vis the risk inherent to technological innovation and the application of any scientific research result. His article “Environment in a global information society” appears in Nature and Resources, volume 34, number 2. Di Castri sets out twelve “emerging opportunities” in this new landscape, against an equal number of “emerging problems”. It is against this backdrop that the Scientific Committee on Problems of the Environment (SCOPE) has launched a project investigating the issues at stake in cooperation with UNESCO. As Di Castri notes, “the project will be implemented through electronic dialogue, as the most non-bureaucratic and executive way to carry out international scientific co-operation in an information society.” Other issues include “mapping the world’s population distribution” and “climatic change, Nile floods and civilization”.

Copyright Bulletin
“Electronic transmissions and copyright” is the title of this April - June 1998 issue. The booklet sets out the new World Intellectual Property Organization (WIPO) treaties on Copyright and on performances and phonograms adopted in 1996 with the goal of “modernizing” the Berne Convention for the Protection of Literary and Artistic Works and the International Convention for the Protection of Performers, Producers of Phonograms and Broadcasting Organizations, known as the Rome Convention. Specialist A. Kerever writes: “the fact that the Diplomatic Conference managed to arrive at imperfect, but acceptable texts demonstrates the capacity of WIPO to continue to be the ‘laboratory’ in which copyright and neighbouring rights are worked out.” Other themes explored include “Cyberspace as an area of law”, “The need for shared liability on the Internet”, and “Librarians: a special case for treatment”.

THE UNESCO COURIER
The continuing struggle for human rights is the central theme of October’s Courier. “The fiftieth anniversary of the Universal Declaration on 10 December 1998 affords a new opportunity to consider the gains made and to renew the pledge of the international community and citizens in the enormous task before us,” writes Francisco Soberon, President of the Human Rights Organization of Peru, Vice-President of the International Federation of Human Rights. Emma Bonino, the European Commissioner for humanitarian affairs points to the tribunals on war crimes in the former Yugoslavia and in Rwanda. “We must draw strength,” she says, “from these achievements so we can prove wrong those who favour a short-sighted realpolitik. I am convinced there is no other way forward.” Other contributors to the coverage include Rony Brauman from Doctors Without Borders, who examines our collective disassociation from “other people’s wars” and questions the role of technology (the media) in undermining “our capacity for indignation”. October’s Courier closes on an interview with Catelan author Manuel Vazquez Montalbán.

PERIODICALS

Human rights - the struggle continues
Climate change - the debate heats up - Drug surveillance or punishment?

*N BRIEF* compiled by: Christine Mouillère
SCIENCE: BETWEEN BASICS AND BUSINESS

The new edition of the World Science Report expresses concern over the effect of economic liberalism on research and the scientific future of poor countries.

The biennial Report, which looks at international and regional developments on the scientific stage, expresses concern about the consequences of cutbacks in State support observed nearly everywhere. In the industrialized countries, where technical innovation has become the key to world competition, this retreat is accompanied by growing participation of the private sector in research and development (R&D). In the United States, the world leader in science and technology, 59% of research is financed by big companies which devote half of their profits to the endeavour. Japan and the other Asian countries owe their prosperity to a genius for finding technological applications of discoveries made elsewhere (e.g. the laser), while at the same time, they invest very little in basic research elsewhere.

Moreover, public research institutions are subjected to increasingly strict criteria for the allocation of funds, and encouraged to find outside sources themselves. The "alliances" they form with the private sector have thus become, according to the Report, a key tool of scientific activity, industry seeing in it a cheap means of sub-contracting its efforts towards technological innovation: "carrying out applied research for industrial clients has become a key activity of universities in most industrially developed countries."

Science is thus becoming "more context-oriented and focused on the research problems articulated by the private sector," a trend detrimental to the advancement of knowledge. There has been a shift in emphasis from basic research to technological innovation." In this new paradigm, secrecy is no longer a taboo. Scientists only make their research results or findings public after "scrutinizing certain critical elements of direct commercial value." The Report states that "scientific communities have reoriented research away from 'advancing knowledge' and towards the 'creation of wealth,' an important ideological shift."

This evolution is indirectly reinforced by public opinion, which has taken on a stronger voice in the scientific debate, expressing more and more "impatience" with science for not coming up fast enough with remedies to concrete problems like AIDS. At the same time, "a profound ignorance" towards science on the part of the general public leads it to under-estimate the importance of basic research. "Who is going to carry out research into climate, something which requires many decades of work?" asks Howard Moore, editor of the Report.

Basic research, even if it does not produce results in the short term, is the condition sine qua non of technical progress. A study completed in 1997 on 400,000 US patents indicated, for example, that three-quarters of the references to scientific literature found in the patents were to papers written at public institutions. Many studies cited in the Report establish a link between training in basic research and a capacity to innovate. Thus in Japan an effort has been made since 1996 to intensify basic research with an aim to encouraging scientific innovation – and not only application.

Above all, the decline in state support is harmful for developing countries and those in transition, where traditionally, 80% of research was government-funded. In these countries, private industry has not yet built the infrastructure necessary to be capable of substituting itself to government support, and basic research is now held to be a "luxury."

MOUNTING PRESSURE

The Report denounces the closing down of certain national scientific research facilities in Brazil and Mexico, the suppression of research departments in privatized industries of Eastern Europe, the decrease of public funds allocated to science in the Arab countries, the pressure imposed on the Centre for Scientific and Industrial Research (CSIR) in India to find external private sources for 50% of its budget, or the dependence of Africa on foreign private and donor funding. For example, 64% of research in Kenya, 68% in Tanzania, and 98% in Uganda is financed by foreign loans and grants.

This decrease in public funds aggravates the brain

MEETING BASIC NEEDS

Science is, by nature, optimistic: the hope of advancing, of finding solutions, is the very motor of research. In two chapters devoted to food and to water, the Report underlines the role played by science since the beginning of the century to meet our two most essential needs. Thus, thanks to the development of high-yielding varieties, rice production has been multiplied ten fold since 1900, attaining 10 tons/ha today. In the same way, modern techniques for water treatment, such as the recycling of waste water or desalination, whose cost is constantly decreasing, make for ever more sophisticated use of available resources. Even if satisfying the needs of the world population is not yet ensured, the Report recalls that “science has helped to make us healthy and wealthy to a degree that could not have been imagined some centuries ago,” and “there is no reason to believe that the end of this process is in sight.”

sources
In Uruguay, a project working with marginalized mothers and children shunted to the outskirts of the capital reaps one of the four UNESCO Literacy prizes.

BREAKING OUT

The factory was their world, the place where they made a meagre living and their children played – at least when not working in the streets of Montevideo, the capital of Uruguay. In all, this universe counted some 1,000 souls living well below the poverty line. A few educators came to the factory to make contact with the children, until the day everything changed... for the worse.

Forced out of the city centre for political motives, the poor were shunted towards the periphery where they were parked in small shacks leaning one against the other. No one, at the time, showed much concern about the effects of this forced displacement. “We call these settlements ‘pockets of poverty’,” explained Adriana Briozzo, coordinator of the El Abrojo Institute for People’s Education, which was awarded UNESCO’s $15,000 Noma Literacy Prize (1998) for its non-formal pilot literacy project. “The very fact that these poor people are herded together in suburban ghettos generates among them a strong sense of exclusion,” she said. This is why El Abrojo decided, four years ago, to work with one such community in the peri-urban zone of Casavalles, on the outskirts of the capital.

RISING COSTS

The “science gap” between rich and poor countries thus risks being further widened, UNESCO warns, all the more so because the cost of scientific research is constantly on the rise. Western Europe, North America, Japan and the newly industrialized countries already account for 90% of world expenditure on research, while Latin America accounts for 1.9% and Africa 0.5%. The US and Canada devoted $178 billion to research in 1994, whereas at the end of the 1980s, Nigeria invested only $20 million.

Developing countries face a double bind. As many struggle to establish viable research capacities, the Report warns globalization will threaten local research bases if they are not strong enough to compete in fields that make intensive use of new technologies (particularly in biology, agricultural and chemical sciences).

The Report exhorts governments in the North and in the South to support basic research, recalling that the development of a vaccine for dengue fever in Venezuela or for leprosy in India was the result of 30 years of advanced research in biology. And it insists that “rejection of the view of science as a public good in favour of market-oriented science is likely to have dangerous consequences for the developing countries.”

Nadia Khouri-Dagher
In Casavalles, children add a creative touch to their world.

“Most of the time the mothers don’t enroll their children in school,” said Briozzo, “so we really had to provide close support”. The project, costing no more than an annual $35,000, is financed in part by the NGO Terre des Hommes (Switzerland and the Netherlands) and CODICEN (Direct Central Council), a state body.

First of all, the children had to be approached: in the street, in their homes, during their free time, when they returned from the city after having picked up a few pennies doing odd jobs like selling stamps in buses or washing windshields. Three educators set up fun-filled activities: corporal exercises inspired by the arts of the circus, but also “survival-style” workshops where the children were taught, for example, to design vegetable gardens they could plant near their homes.

“El Abrojo’s main task, however is to get the children into school. “The school, even though it’s theoretically accessible to all, excluded them because it imposes codes of conduct different from those to which they were accustomed,” said Briozzo, “so we had to make them want to learn how to read and write by proving to them that this was one way to avoid exclusion.” By becoming integrated into school, they make contact with society, meet other children, are confronted with other cultures, and thus break out of the ghetto and self-isolation.

MOTHERS FIRST

When asked how they manage to interest and motivate the kids, Briozzo spells out the project’s strategy. “Through mothers, because they are the ones who instill cultural values and codes and teach their children a mother tongue. Since the mothers are generally functionally illiterate, we also have to convince

SEVERAL VOICES, ONE CAUSE

Gathered at UNESCO Headquarters on International Literacy Day (September 8), anthropologists, NGO representatives, education specialists and experts on poverty issues each came with their own vision, culled from their distinct experiences in South Africa, Argentina, the Netherlands, Pakistan and the United States. First of all, the children had to be approached: in the street, in their homes, during their free time, when they returned from the city after having picked up a few pennies doing odd jobs like selling stamps in buses or washing windshields. Three educators set up fun-filled activities: corporal exercises inspired by the arts of the circus, but also “survival-style” workshops where the children were taught, for example, to design vegetable gardens they could plant near their homes. “El Abrojo’s main task, however is to get the children into school. “The school, even though it’s theoretically accessible to all, excluded them because it imposes codes of conduct different from those to which they were accustomed,” said Briozzo, “so we had to make them want to learn how to read and write by proving to them that this was one way to avoid exclusion.” By becoming integrated into school, they make contact with society, meet other children, are confronted with other cultures, and thus break out of the ghetto and self-isolation.

MOTHERS FIRST

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sources
MOVES TO CURB RELIC SMUGGLING

During a UNESCO-sponsored seminar last June — the first of its kind to take place in China — foreign and Chinese experts discussed ways to strengthen legislation and awareness of illicit trafficking. Lyndel Prott of UNESCO’s Cultural Heritage Division suggested that China’s Cultural Relics Protection Law, passed in 1982, should be clarified and simplified, and offered assistance in the matter. As another step to providing national authorities with better guidelines, UNESCO’s resource handbook for the implementation of the 1970 Convention on Preventing the Illicit Traffic in Cultural Property has just been published in Chinese.

China is up against a sizeable problem stretching beyond its borders. In 1997, Chinese customs dealt with 600 cases of illicit traffic of cultural objects involving 11,200 pieces. In the first four months of 1998, customs seized 200 smuggled cultural relics, including items from the Warring States Period (547-221 BC). “Most of the relics that were stolen or illegally excavated or bought have been smuggled overseas,” said Pan Fengxiang, of the Ministry of Public Security. He said that the robbers collude with smugglers and clients in Korea, Japan, the US, Britain, France, Macao, Taiwan and Hong Kong. Relics tend to be smuggled in containerized traffic and through postal services rather than in passengers’ luggage.

Examples of smuggling are rife: just two days before US President Bill Clinton’s China’s tour in June, the Chinese police recovered a 12th-century head of stone sent by the US Government. The “head” belonged to a statue standing in front of Emperor Zhenzong’s tomb (960-1127) in Gongyi, Henan province. Stolen in November 1996, the head fell into the hands of a Hong Kong dealer in February 1997 and was to be put up for auction in San Francisco. Withheld by US customs under notification from INTERPOL, the “head” is among the very few stolen stone carvings that China has retrieved.

Although China has taken legal measures to protect cultural relics since the 1950s, legislation became much stricter in 1982 with the passing of a criminal law. Since 1989, the country has also shown its willingness to conform to international standards by joining conventions on preventing the illicit traffic in cultural property. A Sino-US agreement on the issue — the first bilateral one in this regard — is also in the works.

To help customs implement the laws, the National Administration of Cultural Heritage (NACH) has been holding regular training courses since 1986 for customs staff on appraising cultural relics, including ceramics, Chinese paintings and calligraphy, jade and bronzes. Efforts have also been made to raise awareness among police forces, through national teleconferences on ways to crack down on the illicit trade of stone carvings. In some areas, special police agencies have been set up to deal with relic-related crimes. “There appears to be good collaboration between customs, police and the cultural relics administration,” observed Lyndel Prott.

But there is much more to be done. During last June’s seminar, Interpol representative Jean-Pierre Jouanny pointed out that very few requests were made to the organization for recovering lost antiquities. But providing such requests is difficult in itself. Some museums don’t have a full register of their collections, let alone relics in the open air or buried underground — and many smuggled objects precisely come from illegal excavations.

Cristina L’Homme

RELIC SMUGGLING

Reacting to a sharp increase in the illicit trafficking of art works, Chinese authorities step up efforts to protect the country’s heritage.
next month’s issue:

**TOWARDS A NEW SOCIAL CONTRACT?**

**SACRED SITES**

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**on UNESCO’s calendar**

- **from 16 to 27 November**  
  **SEA LEVEL STUDY**  
  In Capetown (South Africa), 15 African scientists will be trained in the Global Sea Level Observation System.

- **from 21 to 25 November**  
  **SEX AND STATISTICS**  
  In Amman (Jordan), a sub-regional seminar on gender breakdowns in education statistics.

- **from 23 to 25 November**  
  **COASTAL CLIMATES**  
  In Cotonou (Benin), 30 West African scientists meet to study the impact of climate change on coastal zones.

- **from 30 November to 5 December**  
  **WORLD HERITAGE**  
  In Tokyo (Japan), the Bureau of the World Heritage Committee gathers to examine the nomination of new sites to the List.

- **from 2 to 4 December**  
  **BIOETHICS**  
  In Noordwijk (Netherlands), the fifth session of the International Bioethics Committee. On the agenda: bioethics and women’s rights, ethics and preventive medicine.

- **from 4 to 6 December**  
  **LOCAL LANGUAGES**  
  In Ouagadougou (Burkina Faso), a seminar to mark the launch of Linguapax in Africa.

- **from 7 to 11 December**  
  **BIOSPHERE**  
  At Headquarters, 15th session of the Man and the Biosphere (MAB) International Co-ordinating Council and a bureau meeting to consider biosphere reserve proposals.

- **from 7 to 8 December**  
  **HUMAN RIGHTS**  
  At Headquarters, the commemoration for the 50th anniversary of the Universal Declaration of Human Rights.