



Cultures of Creativity


The Centennial Exhibition of the Nobel Prize

VITM, Bangalore, India

May 29 - Aug 31, 2006

Come, be a part of it.

ERICSSON 

 Visvesvaraya Industrial &
Technological Museum

 Nobel Museum

The Creative Spirit

As inscribed in our Purans, in the hymns of Rigveda:

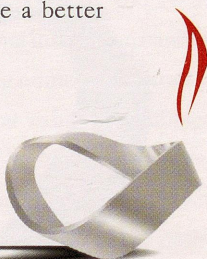
“Asatoma Sadgamaya
Tamasoma Jyotirgamaya
Mrityorma Amritamgamaya”

*Lead us from darkness to light
From ignorance to truth
And from death to eternity
Let peace prevail everywhere*

The concept of creativity and its ability to change the human condition is deeply ingrained within the philosophy of the Nobel Prize. It was an integral part of Alfred Nobel's life, and he was able to grasp it and create an institution of it.

The Nobel Prize recognizes creativity of individuals as well as institutions. It celebrates those 'leaps of faith' when people look or an environment looks beyond its constraints and attempts to create a better future. The brilliance of these individuals and the creative cultures they lived in, lives on through the relevance of their work today...

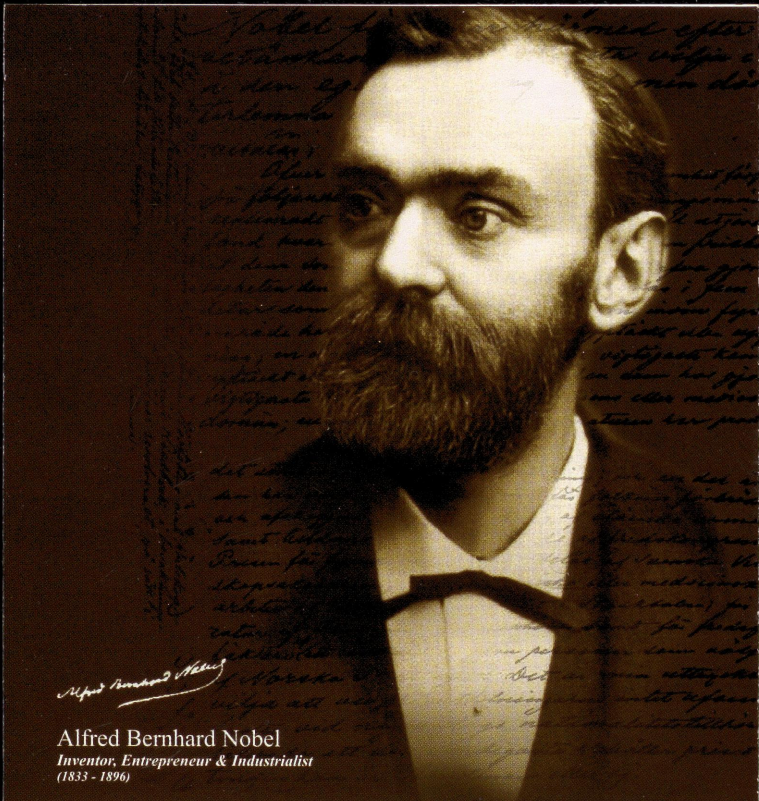
Interestingly depicted in its pictorial representation comprising the imagery of Mobius strip and furling flame. The Mobius strip is very unique in the sense that though it has only one surface, we experience that it has two. It is the symbol of



The Möbius Strip

The Möbius Strip has only one surface, though we experience that it has two. Wole Soyinka writes that the Möbius Strip "is a very simple figure of aesthetic and scientific truths and contradictions. In this sense, it is a symbol of Ogun in particular, and an evolution from the self-devouring snake which he sometimes hangs around his neck and which symbolizes the doom of repetition". A section of Soyinka's poem "Idanre" reads:

Evolution of the self-devouring snake to spatial New in symbol, banked loop of the 'Möbius Strip' And interlock of re-creative rings, one surface yet full comb of angles, uniplane, yet sensuous with Complexities of mind and motion.

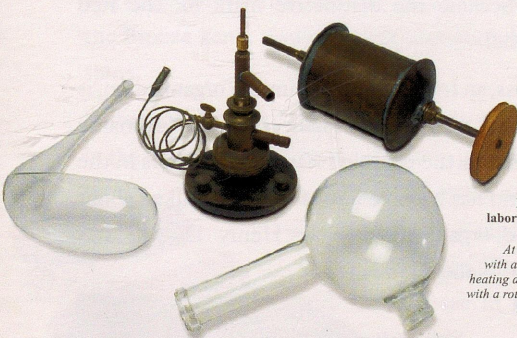


Alfred Bernhard Nobel
Inventor, Entrepreneur & Industrialist
(1833 - 1896)

Ogun African culture, built around the interlock of two re-creative rings symbolizing mind and motion.



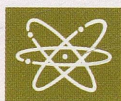
Dynamite and fuse
Dynamite became the most successful of Alfred Nobel's inventions.



Instruments from the laboratory of Alfred Nobel

At the center is a branch with a valve. At the right is a heating and a drying apparatus with a rotating pulley. The glass items are for distilling.

Cultures of Creativity celebrates the saga of the Nobel Prize, exploring in depth the life and message of Nobel Laureates and more. From Albert Einstein and C. V. Raman to Alexander Fleming and R. N. Tagore, visitors will discover the fascinating facts that illuminate the path of these luminaries while hatching the grounds for Nobel Prize, and the impact that winners have had on our everyday lives in some cases without us even realizing it. From the X-ray and the identification of the DNA strand to the bicycle and powerful, enduring literature. These incredible stories are brought to life through posters, newspaper, film, sound recordings and interactives.



Physics



Chemistry



**Physiology
or Medicine**



Literature



Peace



Economics

The Nobel Prize is given for significant contributions in six specific fields.

The Peace Prize is awarded annually in Oslo, the capital of Norway, unlike the prizes in Physics, Chemistry, Physiology or Medicine and Literature, which are awarded in Stockholm, Sweden.

Books from
Alfred Nobel's library



Interesting Trivia:

758 individuals and 18 organizations have been awarded the Nobel Prize. Some Laureates and organizations have been awarded more than one time.

33 Nobel Prize Winners are women and 725 are men.

The Red Cross is the only institution to have won the Nobel Prize thrice in 1917, 1944 and 1963 for its relief work and other humanitarian activities.

At 25, Lawrence Bragg, became the youngest recipient of the Nobel Prize when he received the Physics Prize with his father in 1915 for the use of X-rays to study crystal structure.

At 88, Raymond Davis Jr. became the oldest recipient of the Nobel Prize. He received the Physics Prize in 2002 for pioneering contributions to astrophysics along with Masatoshi Koshiba and Riccardo Giacconi.

Jean-Paul Sartre, awarded the 1964 Nobel Prize in Literature and Le Duc Tho, awarded the 1973 Nobel Peace Prize jointly with ex-US Secretary of State Henry Kissinger. All of them declined their respective prizes.

Linus Pauling is the only person to have been awarded two unshared Nobel Prizes - the 1954 Nobel Prize in Chemistry and the 1962 Nobel Peace Prize.

Marie Curie's entire family (father, mother and husband), have received the Nobel Prize. Marie Curie has been awarded the Nobel Prize for both, Physics and Chemistry.

Indian Laureates:

Literature

Rabindranath Tagore

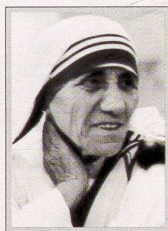
Fondly called 'Gurudev', he was awarded the Nobel Prize for Literature in 1913 for *Gitanjali*, a collection of 103 poems. In 1901, Tagore began his school in Shantiniketan, West Bengal, named 'Brahmacharya Ashram'. Tagore also wrote the Indian national anthem, 'Jana gana mana'.



Peace

Mother Teresa

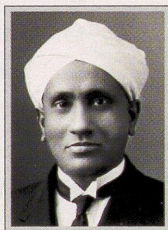
Founder of the organization, the Missionaries of Charity, she dedicated her life to the service of the 'poorest of the poor'. Among the homes she established include...Nirmal Hriday for the dying destitutes, Nirmal Shishu Bhavan for the orphaned and abandoned child, Prem Nivas for the lepers, etc. Her selfless service to suffered mankind brought her the Nobel Peace Prize in 1979.



Physics

Dr C.V. Raman

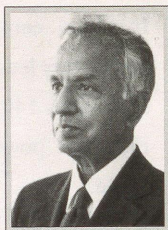
Possibly the greatest physicist India has ever produced. Dr. Chandrashekhara Venkata Raman performed pioneering research on the molecular scattering of light that won him the Nobel Prize for Physics in 1930. He is best remembered for 'Raman Lines' and the 'Raman Effect'. He also did some outstanding research on vibrations and sound, and on the theory of musical instrument.



Physics

Subrahmanyam Chandrashekar

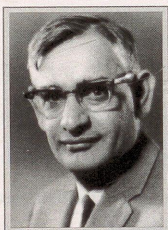
The genius who stunned the world by the depth and scope of his discoveries, Subrahmanyam Chandrashekar received the Nobel Prize for Physics in 1983 for developing a mathematical theory on white dwarf stars which have masses within a prescribed limit.



Distinguished for his technical brilliance he made fundamental contributions across the range of mathematical astrophysics. He also had a passion for teaching.

Physiology or Medicine

Dr. Hargobind Khorana

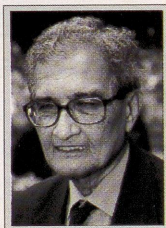


The brain behind the first artificial gene, Dr. Hargobind Khorana, shared the Nobel Prize for Physiology or Medicine with M. W. Nirenberg and R. W. Holley in 1968. Independently all three made contributions to the understanding of the genetic code and how it works in the cell. The unraveling of the genetic code has opened the way to whole new branch of science called 'Genetic Engineering'.

Economics

Prof. Amartya Sen

The economist-philosopher Prof. Amartya Sen is the first Asian economist to get the Nobel Prize in Economics in 1998. Prof. Sen's work on poverty and famine under welfare economics led to the drawing of the 'poverty line', a measure widely used by the UN and other agencies to determine the level of poverty in a particular country.



ERICSSON

Ericsson is shaping the future of Mobile and Broadband Internet communications through its continuous technology leadership. Providing innovative solutions in more than 140 countries, Ericsson is helping to create the most powerful communication companies in the world.

Visvesvaraya Industrial & Technological Museum

Visvesvaraya Industrial and Technological Museum, Bangalore is one of the premier Science Museums of India and is a unit of the National Council of Science Museums under the Ministry of Culture, Govt. of India.

Nobel Museum

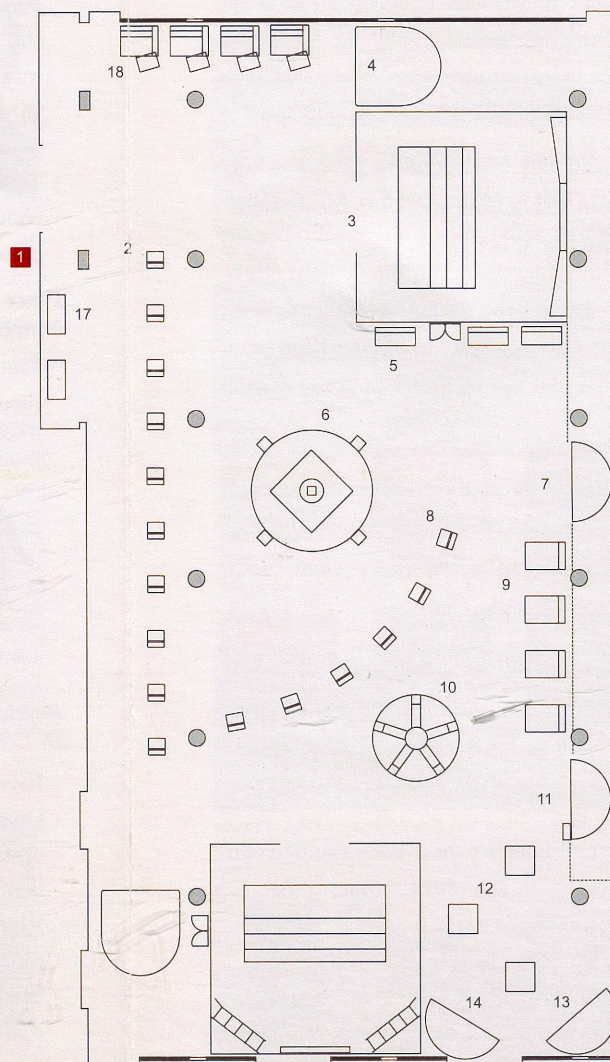
The Nobel Museum, founded in 1998 by the Nobel Foundation, is an established cultural institution based in Stockholm which attracts a growing number of visitors to both Sweden and its international exhibitions abroad. The first traveling exhibition - The Nobel Centennial Exhibition "Cultures of Creativity" - was launched in 2001 in commemoration of the centennial of the Nobel Prize and has visited such prominent sites, among others, as the National Science Museum in Tokyo (2002), the Rodin Gallery in Seoul (2002), the Chicago Museum of Science and Industry (2003), the National Science Center in Kuala Lumpur (2004), the New York Hall of Science (2005), and the British Library in London (2006).

Exhibition Layout

The Centennial Exhibition of the Nobel Prize

VITM, Bangalore, India
3rd Floor

- 1 Exhibition Plan
- 2 A Century of Nobel Prizes
- 3 Creative Milieus
- 4 "Object Theater"
- 5 Nobel and His Time
- 6 The Nobel Banquet
- 7 The Will
- 8 Nobel Laureates 2005
- 9 The Nobel System
- 10 The Audio Pavilion
- 11 Global Pavilion
- 12 Discovery Tables
- 13 The Women's Pavilion
- 14 The Cambridge Pavilion
- 15 Individuals
- 16 "Object Theater"
- 17 Medals and Diplomas
- 18 Nobel e-Museum



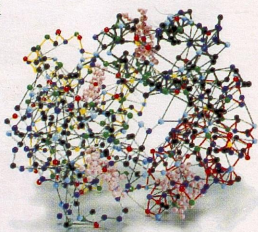
Map is not up to scale.

Exhibits at the exhibition

Hemoglobin Molecule

In total, the hemoglobin molecule consists of around ten thousand atoms. In this model each ball represents an amino acid. The molecule consists of four chains of amino acids. There is one heme group associated with each chain. The heme groups are represented by pink balls in the model. At the heme group, clefts are formed. These clefts enable the hemoglobin in the blood to transport the energizing oxygen to the muscles of the body.

Using X-ray crystallography Max Perutz built a three dimensional image of the molecular structure of hemoglobin and was awarded the Nobel Prize in Chemistry in 1962.



Mobile Genetic Elements

Maize ears carrying the transposable elements "Ac" (activator) and "Spm" (suppressor-mutator). The ear at the top carries a2-ml, a Spm-induced mutation in a color gene. Spm is also segregating, resulting in some spotted and some non-spotted kernels. The ear below carries Ac at the Bronze gene, resulting in bronze kernels with purple spots.

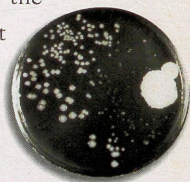
Barbara McClintock discovered mobile genetic elements in the maize. The discovery of mobile genetic elements is of profound importance for our understanding of organization and function of genes. She was awarded the Nobel Prize in Physiology or Medicine in 1983.



Penicillin

The dish in which Alexander Fleming's culture was attacked by mold. This ultimately led to the discovery of penicillin that has curative effect in various infectious diseases.

Alexander Fleming was awarded the Nobel Prize in Physiology or Medicine in 1945.



X-ray

The first heart catheterization was performed in 1929 by Werner Forssmann on himself.

He developed a technique for the catheterization of the heart by inserting catheter into his own arm, through which he passed the catheter and then took X-ray photographs of catheter positioned in his right auricle. In 1956, he was awarded the Nobel Prize for Physiology or Medicine.



Red Cross

The sleeve badge with the red cross on a white background became the distinctive mark for the Red Cross personnel.

The Red Cross, an International volunteer organization, is the brain child of Henry Dunant that was primarily formed to dissolve the terrible suffering of soldiers in the battle field and has become one of the most talked about social service organization today. Henry Dunant was awarded the Nobel Prize for Peace in 1901.



NAVACHETANA

programme for prosperity creation in villages

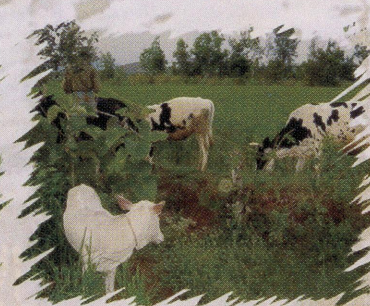
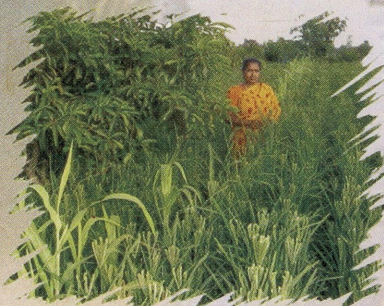
The Mission...

To create prosperity in villages through principles of trusteeship and concerted community action, enabling the rural families to achieve holistic development.

'Navachetana' will promote entrepreneurship through self-help and application of appropriate technologies for sustainable use of natural resources.



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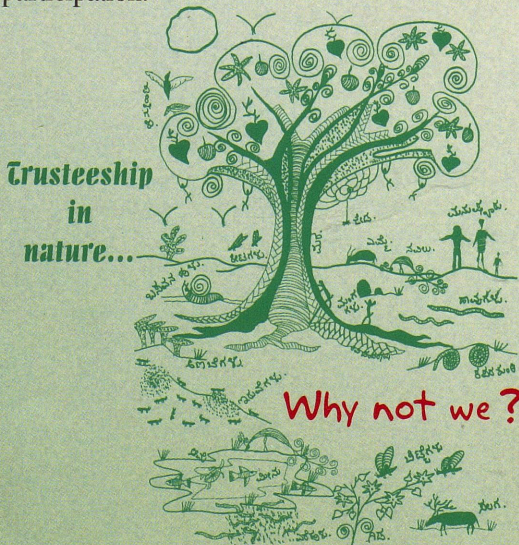


In Gandhian footsteps . . .

Dr. Manibhai Desai, a close disciple of Gandhiji founded BAIF in 1967 to translate the Gandhian ideals of rural development into programmes to be implemented across the country for bringing peace and prosperity to rural areas. With humble beginning at the nature cure ashram at Urulikanchan, Pune, BAIF could bring together a huge family of multidisciplinary workers and scientists to take the message of sustainable development all across the country.

BAIF initiated rural development programmes in Karnataka in 1980. BAIF Institute for Rural Development-Karnataka (BIRD-K) was established with Headquarters at Tiptur to carry forward the initiatives of Dr. Manibhai Desai. Presently BIRD-K is operating several rural development programmes in 1500 villages in 20 districts of Karnataka and 7 districts of Andhrapradesh.

Over the years BIRD-K could initiate several innovative development programmes and approaches for bringing about sustainable transformation of villages with better quality of life for the village community. BIRD-K specialises in bringing the fruits of science and technology for sustainable utilisation of natural resources and creation of wealth in rural areas with community participation.



Navachetana - the back drop . . .

The farming community in general and rural poor in particular are the most vulnerable sections of the society today. Farmers can neither fix price for their produce nor can have control over the market forces. Rural wage market is highly volatile resulting in exploitation of gullible labour force. In spite of growing economy and new opportunities opening up, the village poor tend to remain as they are or some times getting worse due to exploitative forces in the society and the economy.



People are forced to migrate to cities for want of opportunities for livelihood, education, employment, health care and infrastructure. The Indian cities are getting congested without sufficient place for living and without water and power. Poverty in both villages and cities is increasing, as an eyesore, in spite of the fact that there are also centers of affluence.

Induction of modern tools and techniques of production into villages can make the farming community remain at the forefront of development. However, bringing prosperity to villages can prove to be an up hill task given the state of illiteracy, lack of awareness, divisive forces like caste and politics plaguing the rural masses.

We dare to dream !

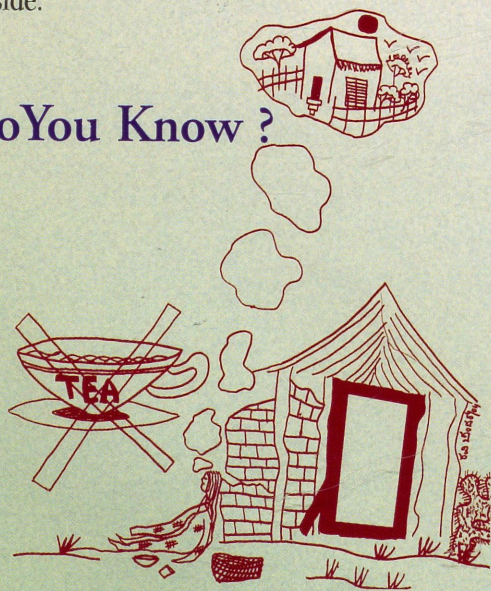
The new approach for bringing about prosperity creation and sustainable transformation of rural areas is based on the trusteeship principles where in the haves take care of the development needs of the have-nots. A very prosperous, nonviolent and harmonious society can be built only on the foundations of trusteeship as enunciated by Gandhiji.

Villages or hamlets, not covered under mainstream development programmes are identified and adopted for the programme. Well trained volunteers will be placed in villages and will be supported to take up the challenges of rural reconstruction in the form of technologies and skills for achieving optimum production in agriculture and related occupations in villages. They will also initiate activities for enhancing the quality of life in the villages through suitable training and capacity building programmes for men and women. Issues related to health, education, nutrition, sanitation etc will be taken up through peoples participation. The current expertise available in BIRD-K can meet this requirement quite adequately. However if need be, additional skills and talents can be sourced from outside.



This approach has been concretised based on the experience of BIRD-K for the last 3 decades. Currently, BIRD-K is operating various development programmes in 20 districts of Karnataka through a multidisciplinary team of professionals who stay and work in villages. This has resulted in perfection of very sound strategies for intervening in villages with time bound result oriented programmes such as tree based farming, sustainable agriculture, live stock development, community health and empowerment, promotion of peoples organisations, tribal development, watershed development, etc. Some of these innovations are already emulated by several organisations in the state and outside.

Do You Know ?



**If you can put aside the cost of
a cup of tea a day,
it is enough to create prosperity
for a poor family
in a remote village !**



Doctrine of Trusteeship...

" Supposing I come by a fair amount of wealth – either by way of legacy or by means of trade and in industry—I must know all that wealth does not belong to me. What belongs to me is the right to an honorable livelihood, no better than that enjoyed by millions of others. The rest of my wealth belongs to the community and must be used for the welfare of the community."

- Mahatma Gandhi

Some of the development approaches that can be packaged into situation specific interventions can be briefly summarised as below :

Intervention Strategies

Common Minimum Programmes for empowering the community

- Leadership development programmes in the villages through spiritual education and such other interventions to build an harmonious community.
- Improvement in quality of life in the villages with focus on village sanitation, immunisation, drinking water, nutrition and herbal gardens.
- Provision for setting up clean kitchens with ventilation, smokeless chulas and other amenities to make the family, especially women feel proud of their kitchens.
- Skill oriented training and exposures to well established development projects to bring about a positive shift in the mind sets.
- Setting up of village health funds and education funds etc., for promoting self reliance.
- Women's empowerment with education, drudgery reduction, health care and income generation programmes.
- Establish just social order without bonded labour and child labour.

Family specific development programmes to be supported through credit options

- Promotion of tree based farming systems, sustainable agriculture, organic farming, dry

land horticulture, water management and drip irrigation, dairy development, other livestock based enterprises and skill development etc.

- Provision of toilets, bath rooms and access to modern tools for drudgery reduction.
- Promotion of cottage industries.
- Marketing and entrepreneurship development.
- Food processing and value addition.
- Micro finance options to meet the investment needs of the poor families.

Support services in a cluster of villages

- A community or a local entrepreneur managed nursery for supply of planting materials.
- Health services managed by trained health guides.
- Health care and breeding services for livestock development.
- Education facilities focused on skill development for self employment and institutional mechanism for supporting higher education.
- Extension services for promotion of sustainable agriculture with specialized inputs in forestry, horticulture, animal husbandry, etc.
- Marketing and processing facilities.

Note : The details of these activities and the results expected can be made available on request.

A paradigm shift from poverty consciousness to prosperity consciousness – Doctrine of trusteeship in action.

Why talk of poverty eradication when prosperity creation is possible?

Prosperity is natural and obvious. Poverty in this country is sustained at enormous cost through defective socio-economic order. To counter this there were several historical initiatives including the trusteeship doctrine of Gandhiji that is relevant even today. Trusteeship is the foundation on which we can build a nonviolent, prosperous and harmonious society.

BIRD-K proposes to bring in a new vigour into rural economy by setting up **Village Prosperity Centers** as a fore runner for a new movement to take shape in future based on the doctrine of trusteeship. Each prosperity center will cover approximately 10 villages or 1500 families.



**Trusteeship in Action
for Prosperous, Nonviolent
and Harmonious Society**

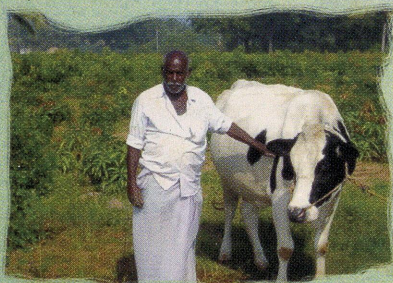
What can we do together ?

We need to build a huge family of concerned citizens who can contribute their might for creation of prosperity in the villages. The principles of trusteeship have to be adopted at all levels in the social order. The haves can contribute money or material. The poor can contribute their labour and hard earned wisdom gained in their struggle for surviving against all odds over generations.

The donations will be utilized for initiating the development programmes in selected villages. The donations are required only to catalyse the development process and for providing initial support services. Further development and growth can be achieved through **micro finance** options in addition to mobilizing the local resources.

Concept of prosperity units . . .

BIRD-K proposes to take several villages in various locations in backward regions of the state for which there is need for regular inflow of monetary and material support. The active support of the willing collaborators in this programme will determine the extent of programme that can be carried through. To facilitate this the concept of a **prosperity units** is conceived. For an individual contributor, for example, a prosperity unit will be equivalent to money required to **create prosperity for a single rural poor family** over a period of 3 to 4 years. This at the current rate works out to be Rs 250 per month for a period of 3 years. An individual can choose to contribute one or more prosperity units. For a corporate entity as a contributor, a prosperity unit will be equivalent to money required to assist a village of 100 families to achieve all round prosperity including basic infrastructure provisions in about 3 to 4 years. At the current this works out to be Rs 5 lakhs per year for a period of 3 years. Material contributions in terms of equipment for schools and hospitals etc is also welcome. Individuals who wish to contribute in terms of their skills and talents will also have major role in this programme.



How to contribute?

Individuals can request their bankers to deduct and pay this amount every month to an account created for the specific purpose. Corporate bodies can contribute either directly from the company account or facilitate to introduce a scheme of pay roll savings by their willing employees with an authorization to the company to deduct a fixed sum every month from their salaries and remit it to the designated account. Similarly any other group of individuals can devise a mechanism of regular contributions. For example, the residents of an apartment block together may decide to adopt a hamlet. People who can afford can make lumpsum contributions. Donations from corporate bodies for creating a corpus are also welcome.

Cash contributions towards this programme may kindly be remitted to **BIRD-K fund for Development Research A/C**, payable at SBI, Tiptur.

All the contributions to this account will be eligible for tax deductions under sec 80G of income tax act. In addition these contributions will also be eligible for deductions under sec 35(1)(ii) of income tax act wherein tax concessions will be eligible for deductions from the taxable income upto 125% of the contributions.

Your involvement beyond contributions...

Every participating family and corporate entity may choose to visit periodically and stay for a few days with the village community to have a first hand knowledge of the programme. They may choose to participate in the village festivals. This will also provide an opportunity for educating the city bred children in social service and gain first hand knowledge about the village life. They can also provide market for the village produce through a direct marketing initiative where ever convenient.

Our address for correspondence...

Navachetana Programme

BAIF Institute for Rural Development - Karnataka

P. B. No. 3, Sharadanagara, Tiptur 572202

Tel : 91-8134-250659 / 250658 / 254421

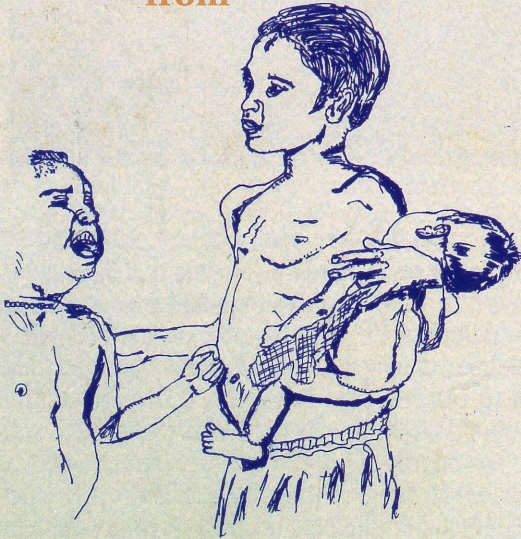
Tel fax : 91-8134-251337

Email: baif1@sancharnet.in / birdk@birdk.org

website: www.birdk.org

NAVACHETANA

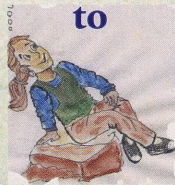
**moving
from**



poverty consciousness

*An invitation for Partnership
in Development...*

You are invited to participate in this unique venture and also introduce a friend or a relative to this programme. Any amount you can contribute towards this programme will be a contribution in realising the vision of prosperous, resurgent rural India.



prosperity consciousness

*Let us
join hands
in creation
of prosperity
all around.....*

to create a resurgent India!





patriotic &
people-oriented
science & technology foundation

PPST FOUNDATION

Dedicated to

- evolving the basis for a science and technology having its roots in the Indian scientific and technological traditions and oriented towards meeting the needs of the Indian people.
- evolving an outline of how a self-confident and functional Indian society with its distinct Indianness can emerge around a nucleus of concepts, techniques and structures drawn from the functional aspects of Indian culture and civilization.

Indian civilization has been one of the many that have been badly mauled during the last few centuries of European domination of the world. The experience of being trodden over seems to have so immobilised and atrophied India's mind and intellectual faculties that so far it has neither been able to grasp the meaning of this experience nor to comprehend the nature of modern European assumptions, institutions and structures with which it continues to stay saddled even after decades of political independence.

The foremost consequence of two centuries of European dominance and being prey to the current undigested modernity has been the utter disorderliness of Indian life and society and its continuing impoverishment to-day. India's ordinary people have been pushed to the very edge of survival, their community and social life forced into an impossible trap. Their tools and talents have been forced to rust and the effort has been to turn them from creative beings (as proficient peasants, craftsmen, members of social-cultural-administrative infrastructures) into members of labour-gangs, or into mere mechanical contraptions.

Even at the level of the fast growing modernised and the relatively well-to-do there is little which suggests human ingenuity, inventiveness, taste or discrimination. The

houses and public buildings are ill-designed shoddy, and uncomfortable ; the transport and communication system which hardly caters to more than 10% of India's people are in even worse state except for the most privileged ; most of the educational apparatus is in such a state that it will serve India better if it was folded up altogether ; most of us are unable to converse or write at any length in our own languages and are increasingly reading, listening to and using a new sort of pidgin dominated by English words and idioms ; we have lost touch with our past, and even the ancient Indian sciences, sastras and scriptures have to be understood through Western interpretation and scholarship.

* * * *

For a proper comprehension of the crisis facing Indian society today, it is necessary for us to comprehend the nature of 'Modernity'. What is known as modernity today is Western civilization in its modern form. Western civilization has long been governed by the concept of primacy of man over the rest of the natural world, and additionally by the underlying assumption that the primary role of the many is to serve the few. In some shape or the other, this relationship of the many being at the disposal of the few — for good to prevail over evil, or for the sake of order, or progress or whatever — has been a continuing attribute of the Western civilization

which has shaped the current Western modernity.

What symbolises Western modernity today more powerfully and awesomely than was done by the Western imperial and financial structures of earlier times, is its Science and Technology. A comprehension of the nature of this modern Science and Technology and its relation to the larger goals and seekings of the modern Western civilization will have to be achieved by other societies if they want to, or are compelled to, employ Western modernity to suit their particular needs. Since no such exercise has been undertaken in this country in any major way, it is no wonder that we derive little benefit from all our endeavors at modernisation, however intense these efforts may otherwise be.

It is not Western modernism alone which is to be held responsible for our coming wholly apart. It is generally the case that the assumptions and attributes of another civilization, when taken over without proper understanding and discrimination, normally destroy the borrower. And in our case, the folly seems to have been double in the sense that the transplant of modernity here is being attempted with little comprehension or regard for the ideas and principles that have all along governed the functioning of our own civilization. Accepting the Western interpretation of our history, we seem to have forgotten

that, till two centuries ago ours was a functioning and creative society with institutions, structures and a polity largely suited to the ethos and seekings of our people. The governing ideas and principles regarding man's relationship to other men and to the rest of the natural world had ensured a reasonable and dignified existence for most of our people. While everything was perhaps not rosy for all at all times, and various inequalities did prevail in different regions at different times, it seems undeniable that what prevails in India today as a continuation of two centuries of economic, political, cultural and spiritual dismemberment is unparalleled in our history.

* * * *

For India to come out of the current stagnancy and become functional and creative again, there has to be a fundamental restructuring of the various relationships existing in our society—between the rulers and the people, between the different localities and regions, etc. There must be a serious and all round re-examination and appreciation of the fundamental principles and notions that have, through the ages, governed all the institutions and structures of our society, with particular emphasis on the functional and material aspects. It must be recognised axiomatically that Indian society can be rebuilt and made functional once again only by a

creative use primarily of India's own civilizational experience. In this effort, it is of course likely that many things may have to be derived from modernity; but every such necessary adoption and assimilation of Western-modern concepts, frames and technologies will have to be arrived at not only after due deliberation, but also by the exercise of a sense which has the ability to discriminate between what will fit our needs and taste and what will not.

* * * *

The PPST Foundation, a body composed of Indian men and women belonging largely to the sphere of the sciences, technologies and other academic fields, is confident that this task can be accomplished within a generation. However, it requires the pooling of a large part of Indian talent, and the blessings and general support of all sections of the Indian people. It also requires the co-operation of those in position of authority who realise, however dimly, that the sooner India gets away from the current stagnancy, the better.

While making what contribution it can in the wider debate and in the examination of questions pertaining to theory and practice, the PPST Foundation particularly plans to focus on how to restructure our present day

efforts in the fields of Science and Technology so that it suits India's genius and the needs of the Indian people. The Foundation wishes to bring about an awareness that any functional society creates its own science and technology which in an essential way expresses the genius of the civilization and its seekings, taking account however of the world circumstances of its time. The Foundation recognises the urgent need for a critical examination and understanding of the biases, values and assumptions of modern Western Science and Technology before we attempt to use it any further to meet our needs. The PPST Foundation also believes that the sciences and technologies that were evolved in our society and were functional and dynamic till about two centuries ago (and many of which still survive albeit in attenuated and distorted forms), can play a major role in our present day efforts at evolving a viable Science and Technology suitable for our country.

Today, it is increasingly becoming clear that till about two hundred years ago, India had a viable and productive technology structure, particularly in areas like agriculture, water management, housing, textiles, medicine and health care etc. And same was the case with sciences like logic, mathematics, astronomy, chemistry etc. Even though the two centuries of Western dominance and rule has largely uprooted these indigenous sciences and technologies, it appears that any systematic

analysis, taking all factors into account, would still show the earlier indigenous technologies in a variety of spheres to be more productive, cost-effective and socially wholesome than the technologies that have replaced them. Holding this to be true of many other sciences, concepts, theories, organisational techniques etc, the PPST Foundation will try, with the co-operation of all interested in such an endeavor, to confirm the reality of this belief so that much of the present day technological and scientific endeavor is built on the foundation of indigenous experience and know-how.

* * * *

* Conduct studies on the sciences, technologies, social structures, educational, legal, political, religious and other systems of the West, and acquire an understanding of the philosophical and metaphysical basis of which such systems have evolved with a view to find ways of dealing with modernity without compromising the essential Indianness of India.

* Develop and promote technologies and practices which help our people to retain greater control over their lives and resources and which are at the same time environmentally sound and resource-conserving.

The following are some of the tasks that the PPST Foundation proposes to undertake :

- ★ Conduct detailed investigations on the traditional Indian sciences and technologies, social structures, educational, legal, political, religious and other systems, and acquire an understanding of the philosophical and metaphysical basis on which such systems have evolved.
- ★ Investigate the impact of modernisation on the traditional political, economic structures, sciences and technologies of India, and assess the potential of the traditional systems vis-a-vis the modern ones.
- ★ Conduct studies on the sciences, technologies, social structures, educational, legal, political, religious and other systems of the West, and acquire an understanding of the philosophical and metaphysical basis on which such systems have evolved, with a view to find ways of dealing with modernity without compromising the essential Indian-ness of India.
- ★ Develop and promote technologies and practices which help our people to retain greater control over their lives and resources and which are at the same time environmentally sound and resource-conserving.

THE PPST BULLETIN

Eight issues of this journal have appeared during the period 1981-85. Some of the major titles and the issues covered are the following :

- ★ *Indian Agriculture at the turn of the century. Green Revolution : An assessment. Indian architecture seventy years ago : Building of New Delhi. Modern architecture in India : Chandigarh.*
- ★ *Scientific forestry in India during British times. Modern forestry in India to-day.*
- A series of articles documenting the debate that accompanied the onslaught on Indian practices in various fields during British times. Also complimentary articles presenting in depth investigations of the efficiency of the traditional Indian techniques in these fields vis-a-vis modern techniques.
- ★ *Comparative study of the foundations of mathematics in India, China, Greece and the Modern West. Roots of Modern Science: Appraisal of the philosophy of Francis Bacon. Ancient Indian medicine.*
- A series of articles aimed at understanding the basic impulses and assumptions behind Western intellectual effort as also at discovering the main seekings of the non-Western efforts.
- ★ *Indian S & T in the eighteenth century. Indian indigenous education in early 19th century. Disruption and disorganisation of Indian society in the last two centuries.*
- A series of articles documenting the detailed features of Indian science, society and polity on the eve of British conquest and also the consequent degeneration and stagnation of our sciences, society and polity.

PPST FOUNDATION

President: DHARAMPAL

Director : M. D. SRINIVAS

Secretary : A. V. BALASUBRAMANIAN

Registered Office :

~~No. : 18~~
~~Sriram Nagar Main Road~~
~~(Near I.I.T. Main Gate)~~
~~Madras 600 113~~

P.P.S.T, FOUNDATION
No:6, II Cross Street
KARPAGAM GARDENS
ADYAR, MADRAS 600 020

Phone: 412885-

The PPST Foundation is registered as a trust. Donations to the Foundation are eligible for tax exemption under Section 80 G of the Income-Tax Act.

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WEIZMANN
INSTITUTE
OF SCIENCE

A PICTORIAL MAP

FACTS AND FIGURES

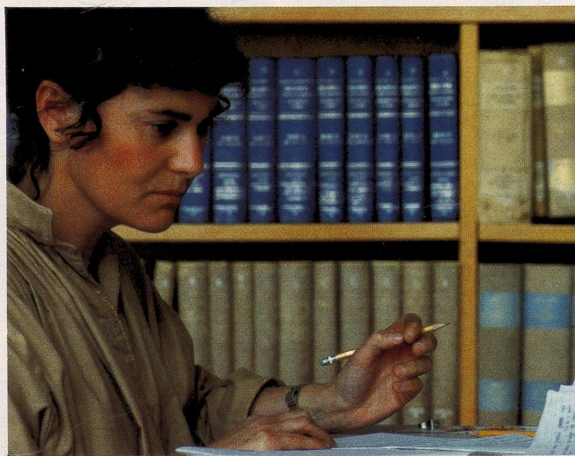
The Weizmann Institute of Science grew out of the Daniel Sieff Research Institute, founded in 1934 by Dr. Chaim Weizmann, the distinguished scientist and first President of Israel. The Sieff Institute was established in memory of Daniel Sieff by his parents, Israel and Rebecca Sieff. On November 2, 1949, the Weizmann Institute of Science was formally dedicated.

THE CAMPUS

Today's Weizmann Institute is devoted to research and teaching in the natural sciences. Its 250-acre campus of lawns and landscaped gardens is located in the town of Rehovot, 14 miles south of Tel Aviv and 35 miles west of Jerusalem.

THE FACULTIES

The Institute is grouped into five faculties — Biology, Biophysics-Biochemistry, Chemistry, Mathematics and Physics — together carrying out some 640 research projects — as well as the Feinberg Graduate School and the Science Teaching Department.



THE SCIENTIFIC COMMUNITY

The Institute community numbers some 2500, including 1800 researchers, engineers and technicians — among them 500 scientists-in-training pursuing M.Sc. and Ph.D. programs at the Feinberg Graduate School — and an average of 100 visiting scientists each year from more than 20 countries.

RESEARCH CENTERS

Twelve Research Centers have been established during the last decade. These Centers — intellectual rather than physical entities — have been designed to pro-

mote interdisciplinary collaboration and to stimulate research in frontier fields. To date, Centers have been created in industrial research, wheat science, agricultural and plant science, neurosciences and behavioral research, nutrition, structural biology, energy research, molecular genetics, theoretical physics, tropical diseases, photosynthesis and aging.

PROFESSORIAL & CAREER DEVELOPMENT CHAIRS

One hundred and ten Professorial Chairs have been established thus far to support tenured faculty working across the spectrum of Weizmann Institute research. In addition, a vigorous Career Development Chair program has been designed to provide support for gifted young scientists and already accounts for 50 such chairs.

CONTACTS WITH INDUSTRY

The Yeda Research and Development Company is responsible for registering patents on products and processes emerging from Weizmann Institute laboratories. It also seeks funds to finance projects of an applied nature from investors interested in using the



results of such research for the production and marketing of products. Yeda is a shareholder in Bio-Yeda and Inter-Yeda which are among the 30 firms located in Kiryat Weizmann, the nearby industrial park that the Institute was instrumental in establishing.

YAD CHAIM WEIZMANN

The grounds of Yad Chaim Weizmann, established in memory of Dr. Chaim Weizmann, include the Institute itself, the Weizmann House, and the Weizmann Archives that house Dr. Weizmann's letters and papers.

"The Institute is the fulfillment of a vision and the translation of a dream into reality. It can achieve much for the good of Israel and . . . when peace comes to the Middle East . . . for the good of our neighbors and the good of mankind."

Dr. Chaim Weizmann

THE WEIZMANN INSTITUTE OF SCIENCE IS CONCERNED WITH . . .

. . . CANCER

Among the promising recent developments in the battle against cancer: studies showing the possibility of transforming certain cancerous cells back into normal ones; fresh approaches to the problem of metastasis; production of antibody preparations for detecting certain cancer-associated antigens in the blood; design of new ways to stimulate the immune system to better recognize and destroy threatening tumor cells; and basic experiments to help explain how tumor viruses attack the cell's genetic apparatus and cause malignancy.



. . . THE ENVIRONMENT

Institute scientists investigate the country's hydrology and geology and advise on ever-more sophisticated ways of safeguarding precious water reserves. These experts trace ground water movement, study the Dead Sea waters, probe the paths by which precipitation reaches Israel and the changes that have taken place in Middle East climate over the millenia.

. . . IMMUNOLOGY

Rehovot immunologists seek to learn more about how antibodies are formed and how they fight the invasion

of disease-producing agents. Among the goals: solving the riddle of immunological rejection; developing precise immunological means of diagnosing and treating disease — including parasitic infections that ravage so much of the Third World; and realizing the dream of a synthetic vaccine to provide effective immunity against disease without recourse to killed or “weakened” viruses.

... PHYSICS

Working with some of the most advanced apparatus available today, including a powerful heavy-ion accelerator on campus and giant accelerators in Europe and the U.S., Rehovot theoretical and experimental physicists press on with investigations into the world of nuclear and subnuclear particles. Improving man’s understanding of the behavior of galaxies and quasars is the particular domain of the astrophysicists, while their colleagues in condensed matter and applied physics pursue fields such as phase transitions and onset of chaos, holography, fiber optics, microwave antennas, and image-processing technologies.



... AGING

Institute biologists explore the aging process in all its ramifications, on the systemic, organic, cellular and molecular levels. Special attention is paid to changes in the brain and nervous system as well as to immunological disorders leading to the increased vulnerability of older people to serious infections and disease.

... NEW MEDICINES

Rehovot scientists are in the forefront of the gene-recombination revolution, using the latest techniques in biotechnology to produce important biologicals

with medical applications. Nor is classical chemistry neglected. Institute-developed drugs to aid kidney sufferers and elderly victims of bone diseases are already on the market, and a synthetic peptide that strengthens immune system action is in the works. Elsewhere on campus, biologists study the reproductive system with the aim of designing new methods of birth control and treatments for infertility.

... THE NEUROSCIENCES

Scientists in various disciplines join forces to probe the processes involved in such commonplace but complex phenomena as remembering, forgetting and learning. They also look at the brain hormones, neurotransmitters and receptor proteins, and at the implications of these in drug addiction and pain, as well as in diseases of the nervous system.

... THE COMPUTER REVOLUTION

Having built Israel's first computing machine in the '50s, the Institute has gone on to play a leading role in the world computer scene. Institute computer scientists are developing more appropriate languages for



use in tomorrow's computers and providing novel cryptographic techniques for securing confidential data flow between computers. These experts also delve into the logic of programming and contribute to the exciting field of artificial intelligence.

... AGRICULTURE

Active programs in plant genetics aim at increasing the yields, protein content and drought resistance of standard wheats and barleys, thus helping to contribute to the world-wide fight against hunger, while Rehovot's hybrid cucumbers, melons and small grains

are widely cultivated in Israel and their seeds exported to other nations. Some Institute plant researchers pioneer in the development of new techniques for using tissue cultures to improve crops and others concentrate on commercial applications of salt water algae. Elsewhere on campus innovative projects are underway in crop protection, fertilizers and herbicides.

... HEART DISEASE

The structure of blood vessels, the flow properties of blood and their implications in clotting, thrombus formation and embolism are under intensive study by Weizmann Institute scientists. Biochemists and biotechnology experts also work on synthetic and genetically-engineered pharmaceuticals likely to provide coronary patients with better chances of recovery.

... AND SOLAR ENERGY

Israel — with more than 300 days of sunshine annually — understandably attaches great importance to the exploitation of solar energy for industrial and



domestic purposes. Studies in this area will soon be concentrated in the Canadian Institute for the Energies and Applied Research, an ultra-modern facility, unique in Israel and one of the few in operation anywhere in the world. It includes a 54-meter-high solar tower and a field of 64 mirrors — each one 56 sq. meters in area — to concentrate solar energy in large amounts and thus significantly aid in the development and testing of state-of-the art approaches to the exploitation of solar energy for ultimate use both in Israel and abroad.

WEIZMANN INSTITUTE SUPPORTING COMMITTEES

AUSTRALIA

Dr. Peter Schiff,
Australian Association for the
Weizmann Institute of Science,
Commonwealth Serum
Laboratories,
45 Poplar Road, Parkville,
Victoria 3052

AUSTRIA

Österreichische Gesellschaft der
Freunde des Weizmann
Institute of Science,
Schwarzenbergplatz 16,
A 1010 Wien

BELGIUM

Comité Belge pour l'Institut
Weizmann des Sciences,
77 Avenue des Villas, Boite 15,
1060 Bruxelles

CANADA

The Canadian Society for the
Weizmann Institute of Science,
345 Wilson Avenue, Suite 403,
Downsview, Ontario M3H 5W1

EUROPE

European Committee of the
Weizmann Institute of Science,
Hügelstrasse 6,
8002 Zürich, Switzerland

FRANCE

Comité Français de l'Institut
Weizmann des Sciences,
17 Rue Mesnil, 75116 Paris

GERMANY

Deutsche Gesellschaft der
Freunde des Weizmann
Institute of Science,
Prinzregentenstrasse 56,
8000 München 22

HOLLAND

Nederlands Comité van het
Weizmann Instituut van
Wetenschappen,
Postbus 71043,
1008 BA Amsterdam

ISRAEL

Association of Friends of the
Weizmann Institute of Science,
P.O.Box 26, Rehovot 76100

ITALY

Comitato Italiano per l'Istituto
Scientifico Weizmann,
Via Barberini 29,
00187 Roma

LATIN AMERICA

Representación General del
Instituto Científico Weizmann
para Iberoamérica, España
y Portugal,
Casilla de Correo 5058,
Sucursal 1,
Montevideo, Uruguay

MEXICO

Asociación Mexicana de Amigos
del Instituto Weizmann,
Av. de las Fuentes 35-2F.
Tecamachalco,
Edo. de Mexico 53950

SOUTH AFRICA

South African Society of the
Weizmann Institute of Science,
P.O.Box 1176,
Johannesburg 2000

SPAIN

Asociación Española
del Instituto Científico
Weizmann,
43, Calle General Diaz Porlier,
Madrid

SWEDEN

Swedish Committee for the
Weizmann Institute of Science,
Storgatan 59,
11523 Stockholm

SWITZERLAND

Swiss Society of Friends of the
Weizmann Institute of Science,
Hügelstrasse 6,
8002 Zürich

UNITED KINGDOM

Weizmann Institute Foundation,
14/15 Rodmarton Street,
London, W1H 3FW

U.S.A.

American Committee for the
Weizmann Institute of Science,
515 Park Avenue,
New York, N.Y. 10022

The Weizmann House and the Weizmann Archives are open to the public. In addition, an audio-visual program about the Weizmann Institute is screened twice daily in the Wix Auditorium. For further information, please call the Visitors Section of the Public Affairs Office, tel: 08-482-111, ext. 3597.

Further material and information may be obtained from any of the committees listed above, or from the Public Affairs Office, Weizmann Institute of Science, Rehovot 76100, Israel.

PICTORIAL MAP
OF THE
WEIZMANN INSTITUTE
OF SCIENCE



KEY

- | | | | | | | | |
|---|--|---|---|---|--|--|--|
| <p>1. Aviezer Gardens
2. Walworth Barbour Grove
3. Ernst David Bergmann Institute of Organic Chemistry
4. Canadian Institute for the Energies and Applied Research*
5. Max and Lillian Candiotti Institute for Hormone Research and Reproductive Biology
6. Centre Culturel et Scientifique Francais Hermann Mayer (including the Erwin and Claire Weiner Grove)
7. Nehemiah M. and N'chame Cohen Institute of Solid State Physics
8. Charles Clore International House</p> | <p>9. Conjunto Residencial Brasileiro Oswaldo Aranha — Adolpho Bloch Residences
10. Danciger Power Center
11. Amos de-Shalit Youth Center (including the Dr. Bessie F. Lawrence International Summer Science Institute)
12. Entrance to the Weizmann House and Estate
13. Europe House (Residence)
14. Feinberg Graduate School (including the Milton Petrie Computing Center)
15. Morlan and Lucille Fiterman Plant Growth Center
16. Leon and Gina Fromer Laboratory in Animal Pathology
17. Grave of Meyer W. Weisgal, President and first Chancellor of the Weizmann Institute</p> | <p>18. Graves of Dr. Chaim Weizmann and his wife, Dr. Vera Weizmann
19. Joseph and Caroline Gruss Building
20. Dannie N. Heineman Accelerator Laboratory
21. William B. and Esther A. Ingram Grove
22. Abraham Jaglom Institute for Biomedical Research
23. Gilbert Kitt Grove
24. Koffler Accelerator of the Canada Centre of Nuclear Physics (including the Max and Lena Sharp Gardens)
25. Anna R. Lazarus Students' Residence
26. Paula and Alexander de Leonescu Building*
27. Levine Institute of Applied Science</p> | <p>28. Charles W. and Tillie K. Lubin Building for Biological Sciences
29. Lunenfeld-Kunin Residences for Visiting Scientists
30. Main Entrance to the Weizmann Institute
31. Residence Adolf et Fani Marcus
32. Neveh Israel Matz Residences (including the Theodore R. Racoosin Apartment House and the Terence and Mathilda Marks Kennedy Residence Hall)
33. Arnold R. Meyer Institute of Biological Sciences
34. Perlman Institute of Chemical Sciences
35. Rothberg Precision Instrument and Engineering Center</p> | <p>36. George and Esther Sagan Students' Residence Hall
37. San Martin Faculty Clubhouse
38. Rowland and Sylvia Schaefer Solar Research Complex
39. Gerhard M. J. Schmidt Lecture Hall (including the Nathan and Esther Wagner Library of Chemical Sciences)
40. Charles and Elsa Schragar Laboratory
41. Meonot Shine (Residences)
42. Daniel Sieff Research Institute, the first building on campus
43. Stone Administration Building
44. Ullmann Institute of Life Sciences (including the Danciger-Frankel Molecular Biology Library)
45. Meyer W. Weisgal Science Square</p> | <p>46. Meyer W. and Shirley Weisgal Recreation Center (including Maslul Oren — Jogging and Gym Track)
47. K. B. Weissman Institute of Physical Sciences (including the Alan B. Weissman Auditorium and the Henry and Fanny Davidson Tower)
48. The Weizmann House (Israel's first Presidential Residence)
49. Weizmann Institute Animal Breeding Center
50. Weizmann Memorial Plaza
51. Edith and Abraham Wix Central Library and Weizmann Archives
52. Michael and Anna Wix Auditorium
53. Meonot Michael and Anna Wix (Residences)</p> | <p>54. Daniel Wolf Pilot Plant
55. Meonot Edith Wolfson (Residences)
56. Wolfson Institute of Experimental Biology (including the Wolfson Auditorium)
57. Jacob Ziskind Building (including the Wenner-Gren Computer Center and the Goldenberg Library for Periodicals)
* under construction</p> | <p>62. Holocaust Victims' Memorial by Dani Karavan
63. King and Queen by Sorel Etrog
64. Memorial to Segen Haim Holtzmann
65. Menorah by Eliahu Stav
66. Ritual by Bruno Giorgi
67. Spiral by Gideon Graetz
68. Swords into Plowshares by Shepherd Herman
69. Symbol of the Enduring Link between Science and Man's Pursuit of Progress by Nathan Rapoport
70. Tree of Life by Bernard Reder</p> |
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SCULPTURES

58. Ascent by Dina Recanati
59. Burning Bush Menorah by Beverly Pepper
60. Continuum by Menashe Kadishman
61. Ensemble by Marek Halter

