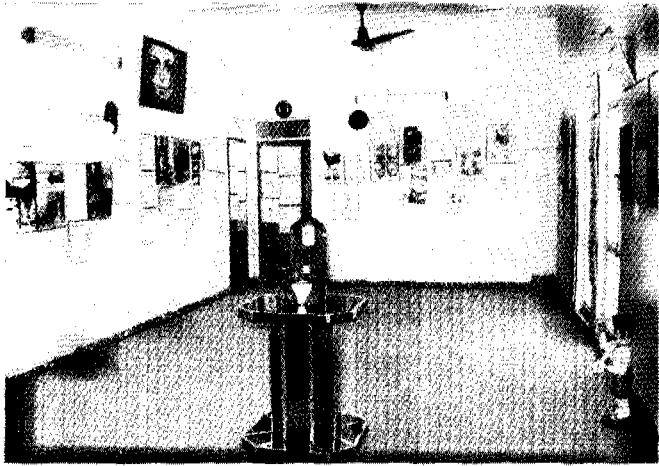


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A view of Sulabh International Museum of Toilets, New Delhi



Britons in ancient time created fantasies in stoneware toilets and bath. A MODEL

SULABH INTERNATIONAL MUSEUM OF TOILETS

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Sulabh International Museum of Toilets New Delhi

Ever wondered what a museum dedicated entirely to the history of toilets would be like? If that peculiar question ever crossed your mind-*seek professional help!* But if you really want to know, you can visit Sulabh in India. Or, you can save yourself the aeroplane fare and ask. Director-General Billy Cobbett.



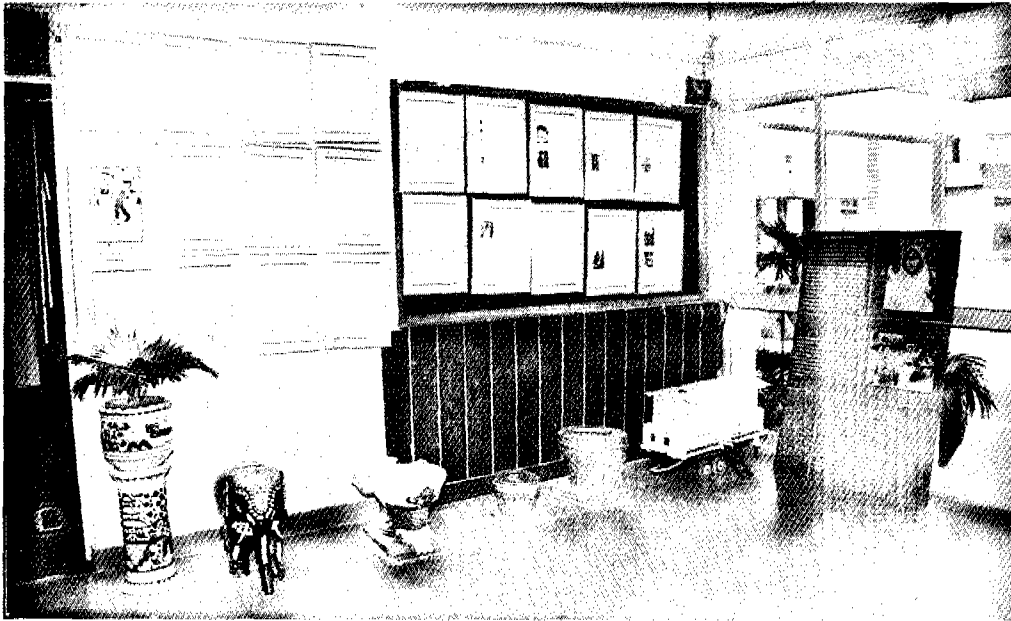
BILLY COBBETT
Director-General, Housing,
South Africa

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Sulabh International Museum of Toilets



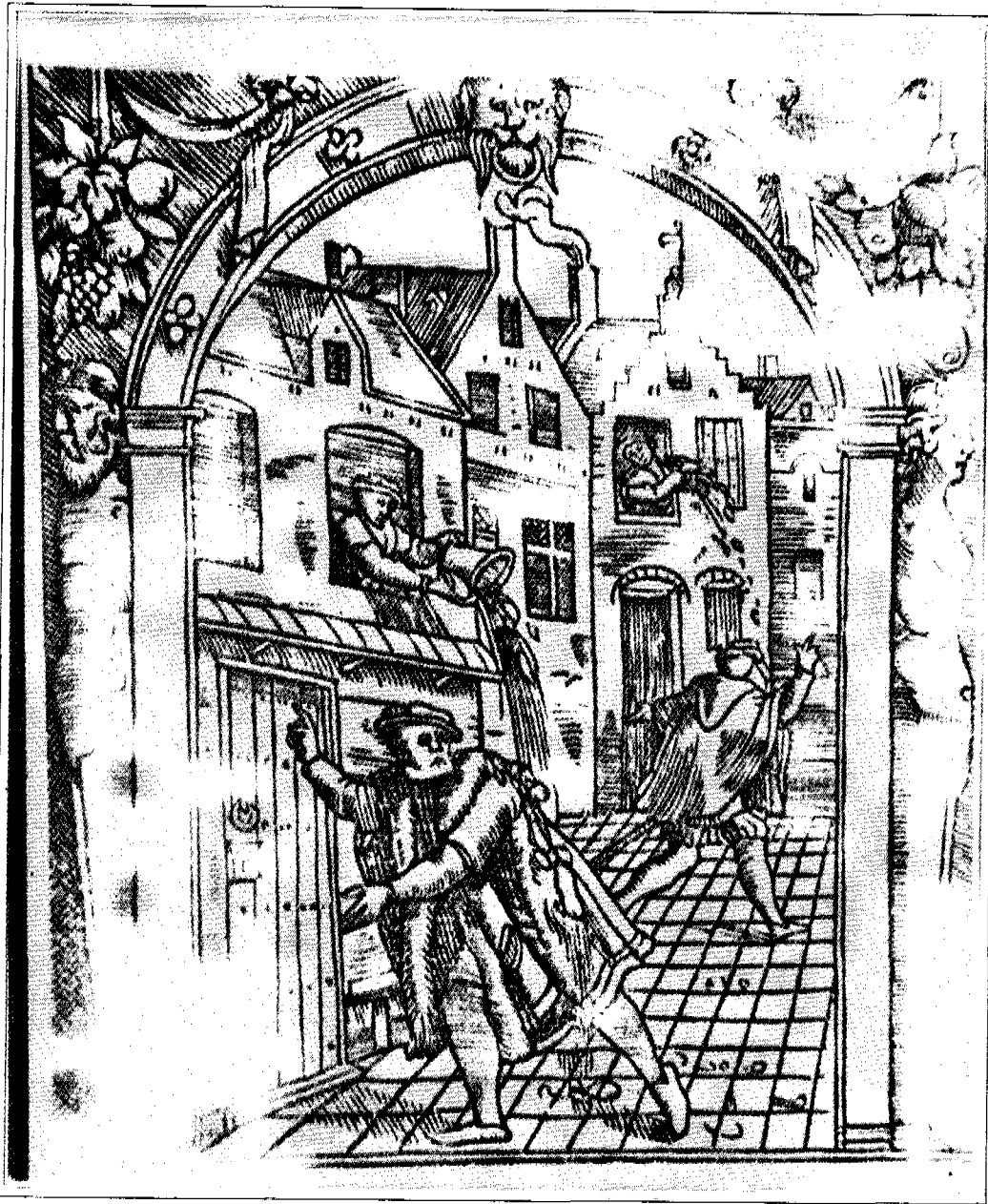
WCs with dolphin, lion and floral designs on display.

Museums as repositories for the preservation and exhibition of the objects of historical, scientific and cultural interest are found all over the world. But rare are the museums that display the evolution of toilets and their various designs.

Until recently there was one small museum of toilets in Austria. Dr. Bindeshwar Pathak, the Founder of Sulabh International Social Service Organisation, a pioneering non-profit voluntary organisation (NGO) in the field of sanitation in India, envisioned the need for the setting up a museum of toilets in the sprawling campus of his central office at Mahavir Enclave, Palam Dabri Road in New Delhi, India. The idea engaged his mind for long, eventually leading him to make hectic world-wide search for minutest details of the evolution of toilets, as also of various toilet designs used in different countries at different

points of time. He contacted more than 100 Embassies and High Commissions of different countries based in New Delhi. He wrote letters to each of them with a request to furnish information on the subject and also to provide details/photographs of various toilet designs used in their respective countries. More than 60 Embassies and High Commissions responded to Dr. Pathak's request and sent valuable information. Some of the important letters have found place in this booklet. Sulabh got some encouraging letters from various countries including the USA, and the UK. The Austrian Embassy in New Delhi played an extremely significant role in helping Dr. Pathak to materialise his intention. The embassy sent him some valuable information. Several other embassies also sent pictures and some of them supplied the relevant literature.

Sulabh International is grateful to all those



In Middle Ages, people used to throw excreta from their houses on the roads below

who helped it in the collection the materials for display at the Museum. In particular the support provided by Dr. Fritz Iischka, Austria, Sphinx, Maastricht, The Netherland and Ifo, Sanitar Ontario. Sulabh is also indebted to the following for encouragement and the necessary support: Mr. Mohammed El Manhawi, Egypt; Mr. Daniel E. Amigo, Argentina; Mr. David W. Evans, Australia; Mr. Suder T. Vachani, Benin; Mr. S. Peltrov, Bulgaria; Mr. Lhundoo Dorji, Bhutan; Mr.

Phillippe Falisse, Belgium; Mr. Yin Yino, Burma; Mr. Octavio Rainho Neves, Brazil; Mr. Barbra Victor, Canada; Mr. Ruben D. Parra, Columbia; Mr. Victor R. Pena, Cuba; Mr. Adolf Kapic, Czech and Slovak Republic; Mr. B'Jorn Kalmar Hansen, Denmark; Embassy of the People's Republic of Ethiopia; Dr. Regis Ballestracci, France; Mr. Laura Kakko, Finland; Dr. Werner Hilgers, Germany; Mr. K.A. Tabi, Ghana; Dr. Hans G. Wieck, Germany; Mr. G. Avgoustis Greece; Mr. Elemer Rudan, Hungary;

Mr. Ravi Chatwal, Iceland; Mr. Giusto Sciarabba, Italy; Mr. Damien Boyle, Ireland; Mr. Maruli Tua Sagola, Indonesia; Mr. Mah'd A. Kaba Jordan and Mr. K.N. Vitisia; Kenya, Mr. M.M.Lal, Luxembourg; Mr. Chanpheng Siha Phom, Laos; Mr. S. Rajendran, Malaysia; Mr. Luis Enrique Franco, Mexico; Mr. J.W. de Waal, The Netherlands; Mr. Chakra P. Bastola, Nepal; Mr. K.S. Bhalla, Naura; Mr. Rhys Greensill, New Zealand; Mr. J.A. Dada, Nigeria; Mr. Aslaug Marie Haga, Norway; Mr. Luis A. Ponce, Panama; Mr. Rolando B. Herico, Phillipines; Mr. Zamir Akram, Pakistan; Prof. M.K. Byrski, Poland; Italy; Mr. R.P. Samuel, Sweden; Mr. M. Zaarour, Syria; and Mr. J.T. Albinana, Spain.

Dr. Pathak himself searched vigorously for literature and photographs of historical significance. In each of his visits to several countries around the globe, he made it a point to collect information bit by bit from anyone and any institution that had in its possession the material Dr. Pathak was looking forward to obtain for this purpose. This intense search resulted in the accumulation of a significant reservoir of information on the subject. All this information, (books, pamphlets, photographs) has now been imaginatively arranged and displayed in the **Sulabh International Museum of Toilets**. It took Dr. Pathak over three years to fulfil his ambition to establish



Mrs. Maneka Gandhi, former Union Minister of India, inaugurating the Sulabh International Museum of Toilets

the museum.

The Museum was inaugurated on March 19, 1994 by Mrs. Maneka Gandhi, former Minister of Environment, Government of India. Thousands of important persons have so far visited the museum and every day a large number of visitors come to see it (photos on page 12 onwards). These include parliamentarians, political leaders, bureaucrats, academics, social workers, judges and the advocates of the Supreme Court, teachers, students and the family members of scavengers (India's sanitarian workers). The museum, everybody remarks, is the first of its kind in the world. A small museum exists in Austria. Many of them hope that it has the prospects of becoming an institution of international standing.

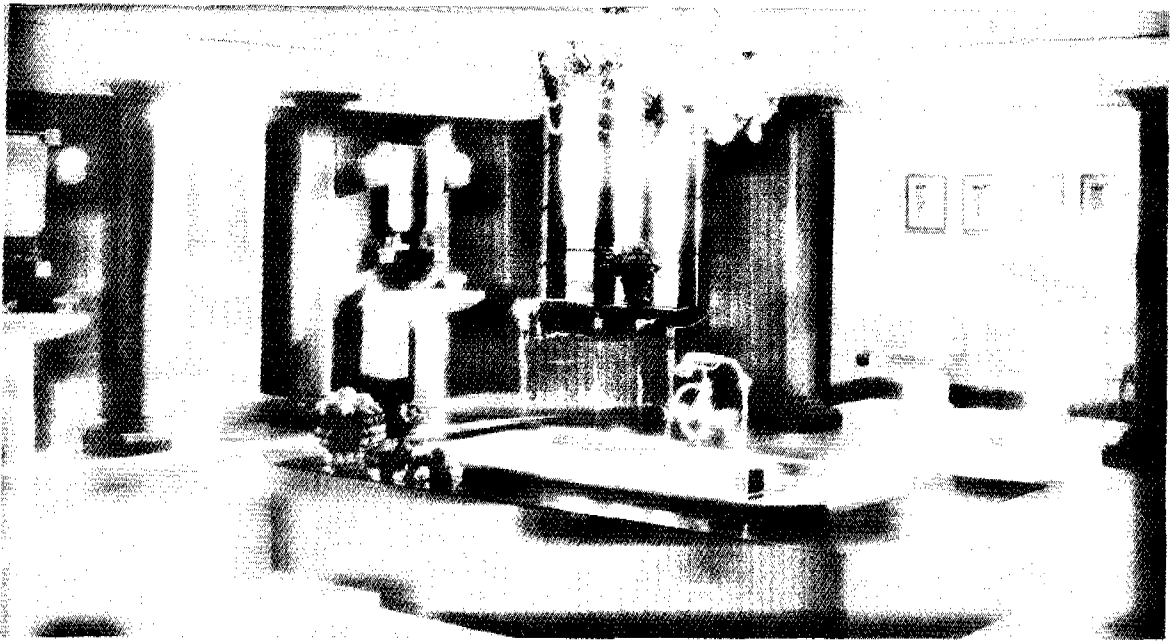
OBJECTIVES

The Museum has been established with the following objectives:-

- (i) to educate students about the historical trends in the development of toilets;
- (ii) to provide information to researchers about the design, materials, and technologies adopted in the past and those in use in the contemporary world;
- (iii) to help policy makers to understand the efforts made by predecessors in this field throughout the world;
- (iv) to help the manufacturers of toilet equipment and accessories in improving their products by functioning as a technology storehouse; and
- (v) to help sanitation experts learn from the past and solve problems in the sanitation sector.

THE MUSEUM

The Museum has a rare collection of facts, pictures and objects detailing the historic evolution of toilets from 2,500 BC to date. It gives a chronology of developments relating to technology, toilet related social customs, toilet etiquettes, the sanitary conditions and legislative efforts of the times. It has an extensive display of privies, chamber pots, toilet furniture, bidets and water closets in use

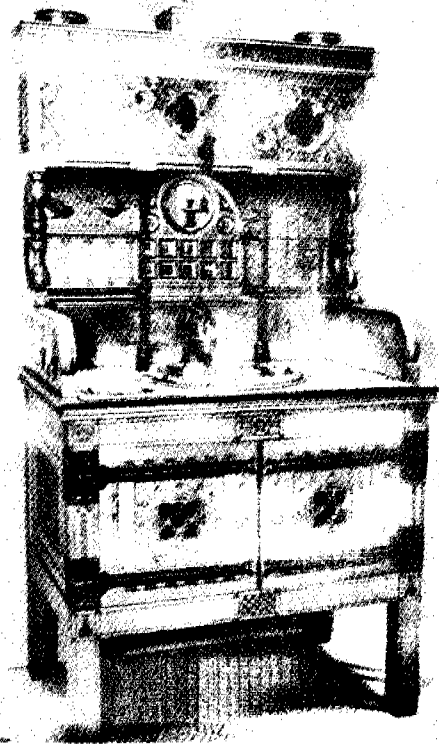


Auto Control Public Toilet - Paris

from 1145 AD to the modern times. It also has a rare collection of beautiful poems, some of which have been included in this booklet.

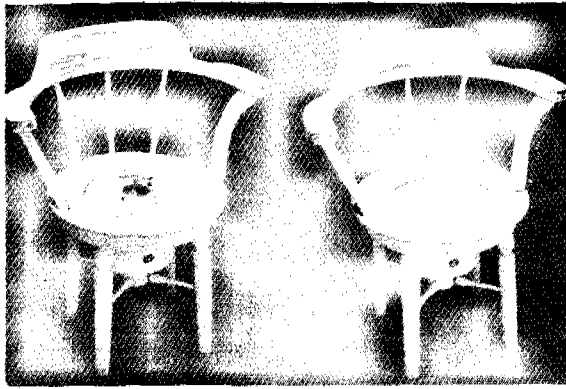
The pictures displayed at the Museum makes one aware of how the world looked like when societies did not have the benefit of water closets (W.C.) and the change that had been brought by its invention. Ornatly carved and painted urinals and commodes attract attention and are a source of amusement to many. The pictures of medieval commodes immediately are noteworthy. The picture of medieval mobile commodes in the shape of a treasure chest, whcih the English used while camping out for a hunt, is fascinating. The Museum also displays how the Roman empire used to have toilet pots made of gold and silver. The Museums has a rare record of the flush pot devised in 1596 by Sir John Harrington, a courtier in the reign of Queen Elizabeth I. The Muscum displays sewerage system of the *Mohenjo-Daro* and Harappan civilisation and maintains a detailed record of how modern toilet pans have emerged over a period of time.

The Museum offers a mincfield of interesting anecdotes associated with the development of toilets. Tracing the history of toilets from Indus Valley Civilisation, where a highly developed drainage system existed, 62 kms from



Early decorated stoneware bath - Britain

Ahmedabad in Lothar, in India, the Museum documents travel all over Europe where most of the early technological developments in the evolution of toilets took place. The national flags of different countries from where the pictures of toilets have been collected are also displayed.



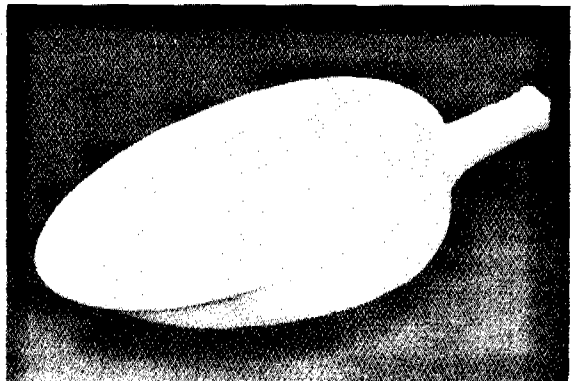
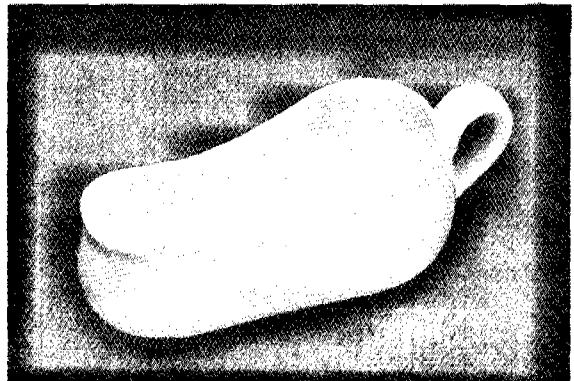
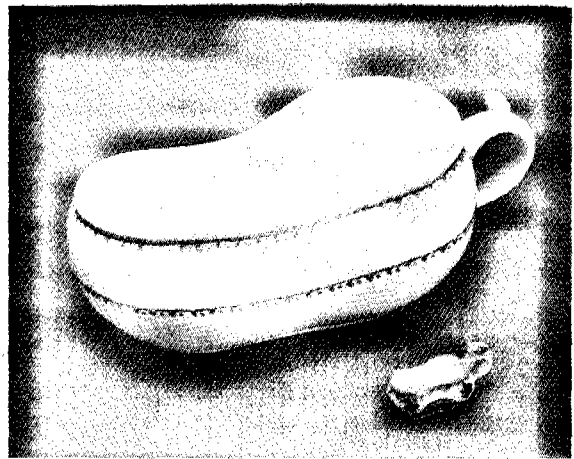
Toilet model of the period - 1905

The Museum receives a stream of visitors from India and abroad. Most of them have found the project inspiring and unique. Dr. Pathak is busy collecting more information from all over the countries. He desires to develop the Museum of an international standards.

HISTORICAL EVOLUTION

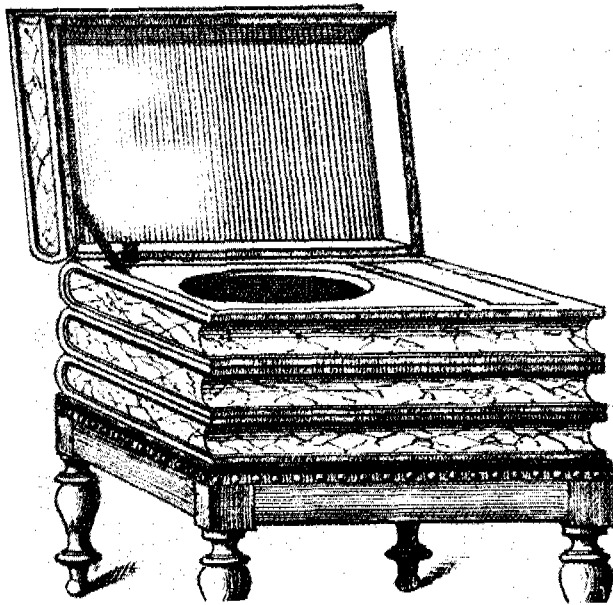
There is a story that the Indian Emperor Akbar the Great asked his "nine gems" (chosen courtiers) as to what was the happiest moment in one's life. Different courtiers answered differently; some said it was good food, merry-making, women etc. But Birbal said that the morning bowel movement was the happiest thing to happen in one's life. The Emperor became angry and threatened to punish Birbal for showing disrespect to the court. Birbal, clever as he was, asked for time to prove the point.

One day, Birbal arranged a huge sumptuous party on ferries floating on the river. The ferry party had everything - good food, dance and music. As the dawn neared, the Emperor asked Birbal to take the boat ashore so that he could ease himself. But Birbal said that when everything was available on the boat, what was the necessity for his Highness to go to the shore? The Emperor got Birbal's point and gave up, saying: "Birbal, you are right; a good morning bowel movement is the happiest moment in one's life".



Chamber pots for ladies; period 1794-1800 AD

King Louis the XII, actually had a commode under his throne, which prompted his court jester to remark that he found it a bit strange that while the king preferred to cat in privacy, he chose to ease himself in public. The replica of throne of Louis the XII is now on display at the Sulabh International Museum of Toilets.



Commode disguised as stool with books - French

The attempt to provide toilet facilities has a long history, possibly older than that of the Roman empire. *Mohenjo-Daro* excavations yielded the proof of common baths and private toilets in households. Public bath reached the highest point of development under the Romans, in second century BC when the baths became meeting places for people. Later, in Middle Ages, baths were little known, although there were some public baths in Spain during that time. But it was only after an outbreak of cholera in London in 1832 that the British authorities began a campaign for building public baths and "wash houses". In India, after 1940, public latrines were constructed sparsely in different towns but all became unuseable due to lack of good maintenance.

The 19th century can be truly called the "Century of Toilet" when patents were registered to help improve the quality of WC and attractive designs came in to the market. Unfortunately, since then the manufacturing of WC got industrialised and the design was streamlined to make its working fool-proof, but the touch of class in the design of toilets did not get the required attention. Lucinda Lambton in her book "Temples of Conveniences" aptly summarises the development in the last 100 years. He states: "Since the 1880s, WCs have changed neither their working nor their basic shape; the water closet was already being advertised in all the

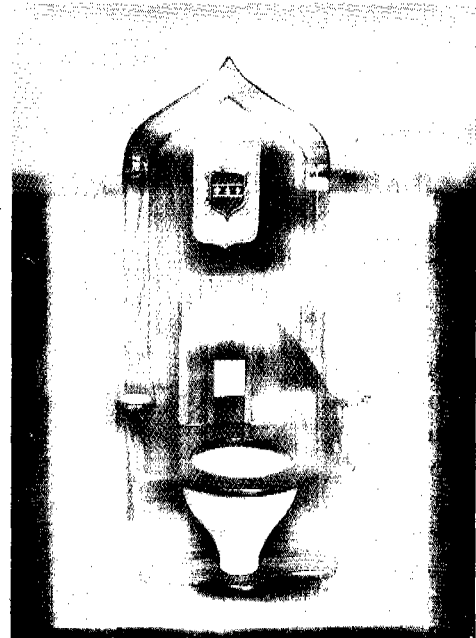
catalogues of the 1890s, and modernisation has simply meant the streamlining of what was once a rich, delightful and enjoyable form".

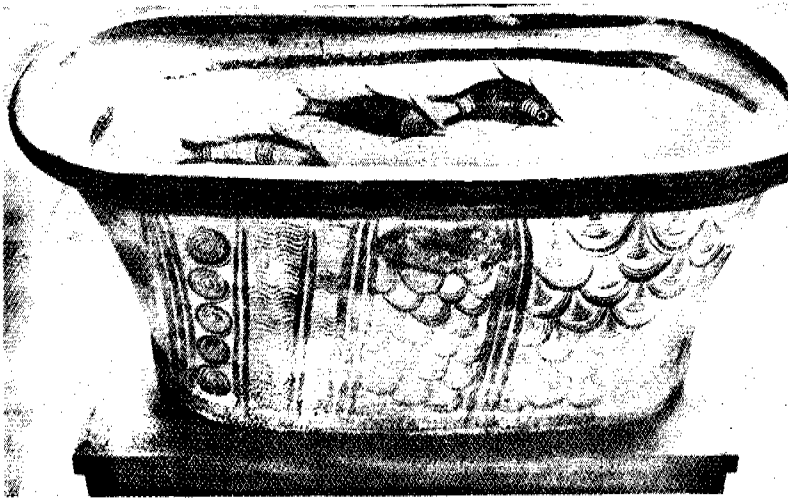
The museum has a rare collection of facts, pictures and objects detailing the historic evolution of toilets from 2,500 B.C. to 1980 AD. It gives a chronology of developments for the last 4,500 years or so relating to technology, social customs attached with toilets, toilet etiquettes, the sanitary conditions and legislative efforts of the times. It has an extensive display of privies, chamber pot, toilet furniture, from 1145 AD to modern times.

Ornately carved and painted urinals and commodes can be seen. Then there is the picture of a medieval mobile commode in the shape of a treasure chest, which the English used while camping out for a hunt. You could imagine the surprise of some unsuspecting highway robbers if they made away with such "treasure chests", thinking them to be something totally unprecedented inside.

Tracing the history of the evolution of toilets, it seems a bit ironical that India, where today most of the people defecate in the open (often near railway tracks), was one of the pioneers in this field. *Mohenjo-daro* had a highly developed drainage system where waste water from bathrooms as well as toilets in each

A replica of the throne of King Louis XII





Bathroom Palazzo
Pitti, Florence,
Italy

house went into the main sewer through a drain pipe passing under each house. In Mesopotamia, water being aplenty, flush-type toilets were developed as early as 1700 B.C. and by 700 B.C. the flush-type stool had appeared.

The importance of toilets in war was realised by the Persians when they met their "Water-loo" at the hands of the Greeks, during the 3rd Persian War in 480 B.C. The invading Persian army suffered from plague caused by their own excreta, as the Persians, who lived in an arid arca followed the practice of casing themselves on the sand.

"During the Pelloponesian war, Perciles called upon all the people to assemble in Athens, and in the absence of adequate sanitation facilities, an epidemic spread, killing thousands. This incidentally is the oldest record of a full-blown epidemic.

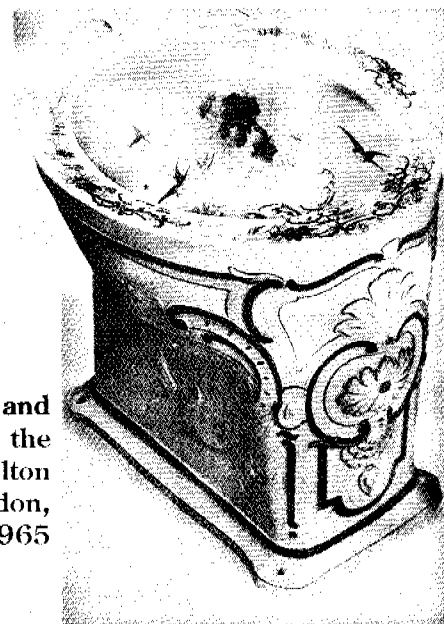
The Romans, learning the lessons from the Persian invasion of Greece, gave utmost importance to sanitation and in 312 BC an 16.5 km long Appia Waterway was completed. As a result water closets became popular as far as Egypt and Southern France.

In the Antoninus Public Bath (200 BC), there were 1600 holes for defecation and in the public toilets

in Rome, toilet seats with a hole in the middle were arranged in a semi-circular shape and water flowed underneath. In the Old Testament Moses admonishes his tribe from defecating in the open: "You should search for some other place and bury your excretion," he commands.

The old Testament also declares that "you fellows still do not realise, whatever you eat, goes into the toilet through your stomach."

In the "Fourth Book of Kings", it is regarded that the believers of Jehovah destroyed the shrine of the Pagan Baarr and constructed a toilet in its place.



The rise and
expansion of the
Royal Doulton
Potteries, London,
1965

Latorinas or private toilets having a water closet were widely used in Rome around 196 BC and some of these were decorated with mosaic and marble.

In 33 BC there were 170 public baths in Europe alone, and later their number increased suddenly to as many as 1000, they were so popular. It is believed that people used a sponge bar to clean themselves in place of paper.

The Romans' love of toilets was evident in the fact that Emperor Heliogabos was assassinated inside one in 222 AD (as was the English King James I).

By 960 AD the first recorded sewer line was constructed in England. In 1088 AD toilets in the Lochester Fort were constructed in the castle wall and human waste fell on the outer side of the wall through a hole. The first sewers were constructed in Paris around 1200 AD by Phillippe August.

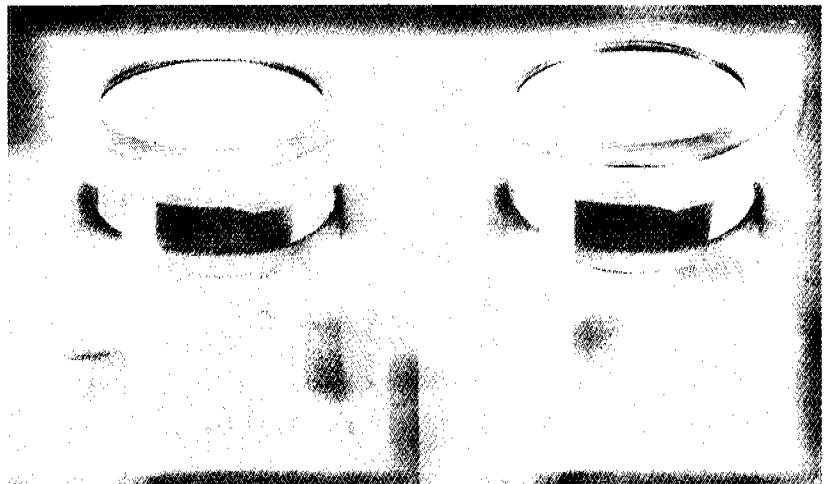
That essential convenience of modern living, the water closet, was probably invented about 1460, but the first person to do anything really practical with the idea seems to have been an Elizabethan courtier, Sir John Harrington banished from court for a while by his outraged monarch for translating and circulating among her ladies, a racy story by the Italian poet Ariosto. Harrington retired to his home near Bath.

There, besides translating some more Ariosto,

he worked on a design for a flush WC and duly installed the contrivance in his own home. Having won his way back into Elizabeth's good books, Harrington fitted a royal flush WC into the queen's palace at Richmond, Surrey. Unfortunately, he wrote a book about his device, called *The Metamorphosis of Ajax* - the title is a pun on the old name 'a jakes' for a privy. The book appeared in 1596, and its earthy humour led the incensed Elizabeth to banish Harrington from court once more.

An improved model of Harrington's WC, incorporating a stink trap, was patented by a London watchmaker, Alexander Cumming, in 1775. Further, improvements were made by a London cabinet-maker and inventor, Joseph Bramah, in 1778. These early WCs were connected straight to cesspits and, even after the invention of stink traps, the smell from them must have been pretty powerful. Not until the invention of a modern sewer system in Hamburg in the 1840s, with arrangements for flushing the pipes regularly with river water, was the general health of people sensibly improved. The finest of the nineteenth century sanitary engineers was Sir Joseph Bazalgette, who, in the 1850s, equipped London with an efficient system of sewers for which he invented automatic flood doors and new pipe sections which allowed a speedier flow of effluent, but the heights of glory for the toilet were reached when Louis XIII and Louis the XIV gave audience while using the toilet.

Different things were used for cleaning after use, such as linen, marino, thread waste,



Toilet model of the period - 1923

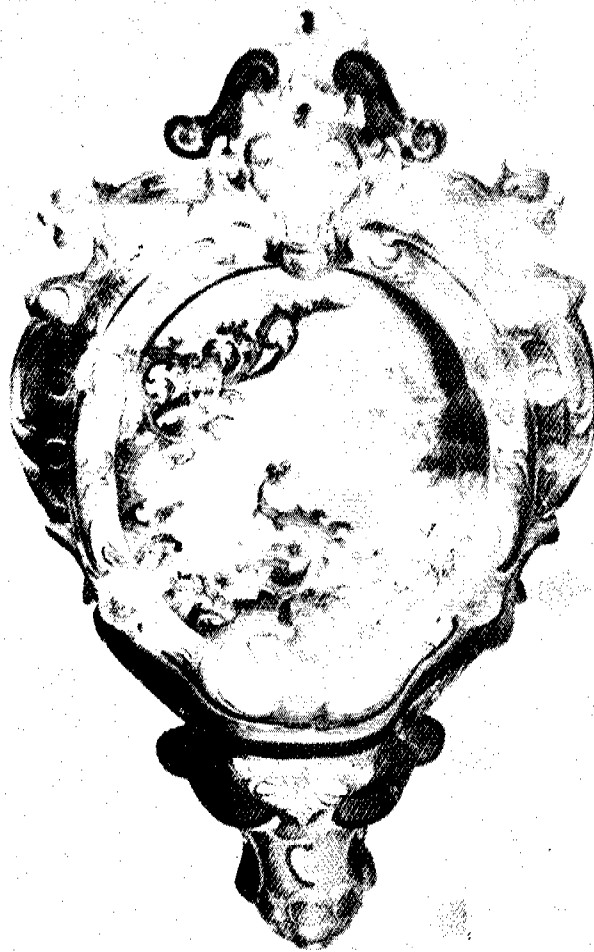
leaves, small stones, pages from books etc. The toilet of Queen Victoria was decorated with gold. The bidet made its first appearance in 1710, at Versailles, France.

In the 19th century patent after patent was registered to help improve the quality of the performing parts in the water closet. Beautiful WCs with dolphin, lion and floral designs were developed and manufactured on a mass scale, the pictures of which can be seen at the Sulabh Museum.

Septic tanks made their appearance in 1904 in Paris. Toilets today have come a long way since days of the the hole in the ground days.

As late as 1966, many inventors were still taking their thoughts to the WC. In that year, a Chicago hairdresser took out a patent for a novel toilet seat which embodied a buttock-stimulator for relieving constipation and for general massage. An electric motor set two separate halves of the seat moving backwards and forwards alternately. Both halves could also vibrate together at high speed.

To sum up, a 19th century quotation by Lucinda Lambton will not be out of place. "The lavatory is an intimate friend to us all, and we should honour it as such. It is undeniable that a glorious throne with a welcoming wooden seat makes us laugh with pleasure, why then do we minimise its importance, making it a mere receptacle, a necessary evil? But there is a ray of hope.... (with) architect's realising the



Beautifully decorated porcelene urinal

'sheer solid joy' that a well-designed lavatory and a capacious bath can give, (aren't they) are once again planning temples in which we can luxuriate". Akbar, would have concurred.

The chamber pot, from humble beginnings, offered scope for improvement. In Victorian times it became a veritable objet d'art and even in the 1900s appealed to inventors as a vessel that might be elaborated. In 1929, for instance, an American electrician, Elbert Stallworth, patented the first electric chamber pot for use on chilly nights. In a rubber and asbestos seat which ran round the upper edge were embedded metal bands enclosing resistance wires between the mica strips.

Highlights in the Evolution of Toilet System

- 2500 BC to 1980 AD -

- BC 2500 In *Mohenjo-daro*, there existed highly developed drainage system where waste water from each house flowed into the main sewer.
- BC 2000 In the tomb of King of Third Ur dynasty to the South - East of Temenos, toilet with a long drain was discovered.
- BC 1000 In the Bahrain Island in the Persian Gulf, flush type toilet was discovered.
- BC 480 As found in Agra Fort, in Persia too, a well was dug and the human waste was mixed with soil.
- BC 200 In the Antoninus Bath, there were 1600 holes for defecation. Water flowed underneath. In the "Fourth Book of Kings" it is recorded that the believers of Jehovah destroyed the shrine of the Pagam and constructed a toilet.
- AD 69 Vespasianus (Roman Empire) for the first time levied Tax on Toilets.
- 1088 AD Human waste was collected on the roads (Cambridge, Paris) and then taken out of the city.
- 1214 AD Construction for the first time of public toilets manned by scavengers in Europe.
- 1310-14AD Human waste was thrown at passer byes at the time of carnival, as a serenade ceremony.
- 1513 AD Edict in PARIS to make URINAL in houses compulsory - but could not be implemented.
- 1544 AD Poet Woosloque - de - Bolyu became famous for his poems on human waste
- 1596 AD John Harrington invents W.C.
- 1600 AD Kings give audience while using Toilets (Louis XIII, Louis XIV).
- 1641 AD Pigs let loose in cities to eat human waste
- 1666 AD Ladies wear overshoes as protection from human waste on the roads
- 1668 AD Edict issued by Police Commissioner Paris, construction of Toilets in all houses.
- 1700 AD Urinal in all houses made compulsory again in Paris.
- 1728 AD Architect J.F. Brondel argues that attached toilet is ideal.

- 1739 AD First separate toilet for men and women (Paris).
- 1771 AD Paid Toilets constructed for the first time in Europe.
- 1775 AD Patenting of improved W.Cs by Alexander Cummings, Joseph Blumer/Jameo Grease Thomas Proccer and Thamas Launtry.
- 1806 AD Further improvements by Architect Jillow, David Lease, John Athlay, Thomas Bin and William Law.
- 1824 AD First Public Toilet in Paris.
- 1842 AD Public Sanitation Law presented before Parliament by Edwin Chadwick.
- 1848 AD New Public Sanitation Law enacted in England. Ash Pit or W.C. in each house made obligatory.
- 1857 AD Daniel Bostal and Co (Britain) successfully manufactured the "Wash out closet" on commercial basis.
- 1859 AD Toilet of Queen Victoria is decorated with gold.
- 1869 AD Sewage water used as manure on experimental basis.
- 1870 AD J.R. Man developed the Siphon Type closet.
SS Hellier invented "Options" - an improvement on Blumer model.
- 1876 AD Beautifying the W.C. Lion, Dolphin, flower design were developed.
- 1883 AD First Ceramic Toilet by Thomas Turiferd for Queen Victoria.
- 1889 AD Sewage Treatment for the first time in the world.
- 1900 AD Jennings developed closet of the century" advantage of both valve and wash down type.
- 1904 AD Septic Tank manufactured (Paris).
- 1936 AD A new water flush system called spout (trompt) is developed.
- 1937 AD In the Paris Expo, Sanitation Hall was set up.
- 1959 AD All surface Toilets abandoned (Paris).
- 1980 AD Installation of Auto - Control Public Toilet.

THE SULABH INTERNATIONAL MUSEUM OF TOILETS RECEIVES A NUMBER OF VISITORS FROM INDIA AND ABROAD

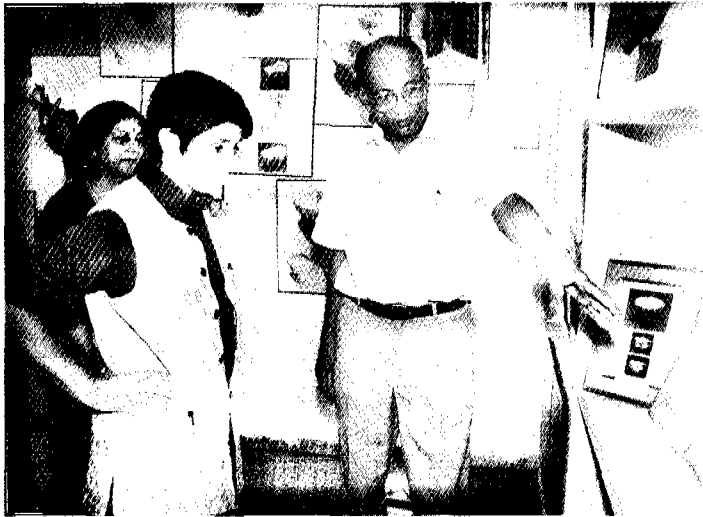
The history of toilets
being explained to
Excellency Mr. Juanito
P. Jarasa, Ambassador
of the Philippines, and
Mrs. Jarasa during their
visit to the *Sulabh
International Museum of
Toilets, New Delhi*



Sh. M. Victor Mendis, National Engineering
Research and Development from Srilanka



Mr. Bernard Soysa, Sri Lankan Minister of
Science and Technology, having a close
look at the photographs in the museum
alongwith Mr. M. Victor Mendis, National
Engineering Research and Development
Centre Sri Lanka.



Magsaysay Award winner Mrs. Kiran Bedi, IG Delhi Police and social activist, with Mr. Mulkh Raj, Chairman (Admn.) Sulabh International, in toilet museum

Mr. Mani Shankar Aiyer, MP, alongwith Dr. Pathak and others



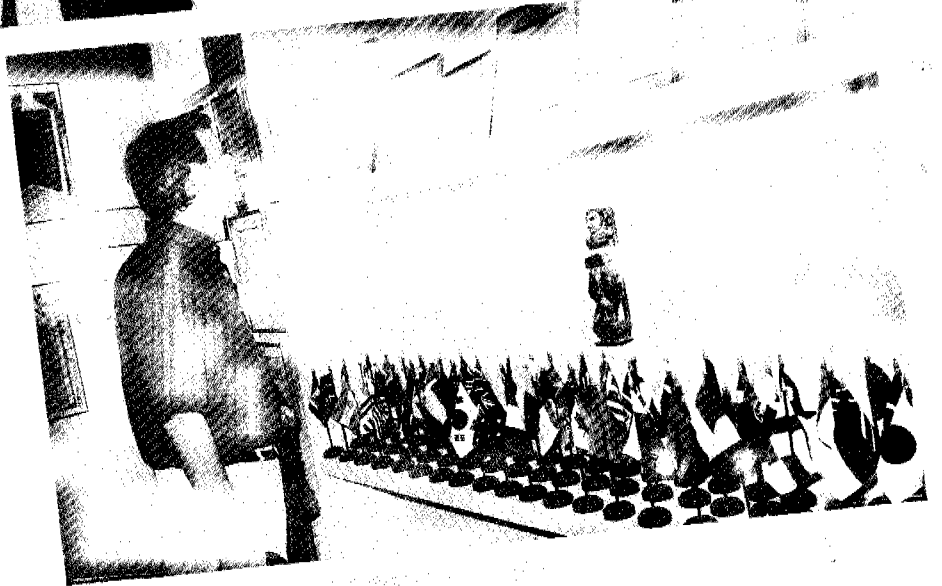
Mr. Yogesh Atal, Director, Sector for Social and Human Sciences, UNESCO, Paris



SOUTH AFRICAN DELEGATES: Team leader Mr. Beat van Rooyen, Coordinator Mr. Ken Finlayson, Sanitation Engineer, CSIR, and others.



Mr. William
Cobbett,
Director-
General,
Housing, South
Africa



Mr. Hamish
McDonald,
Correspondent, Far-
Eastern Economic
Review, Hong Kong



Dr. Wally
N'Dow,
Secretary
General
Habitat-II



Mr. D.C. Lakha,
IAS, Secretary,
Urban
Development,
Uttar
Pradesh.

Mr. Jacek
Harkawik from
Poland and Mr.
Ed-Maan from the
Netherlands.



Mr. Rama
Shankar Kaushik,
Minister of State
for Urban
Development,
Uttar
Pradesh.

Mr. Stefin Klein,
a foreign
correspondent.



Mr. John Stackhouse, Correspondent of the
Globe and Mail, Canada



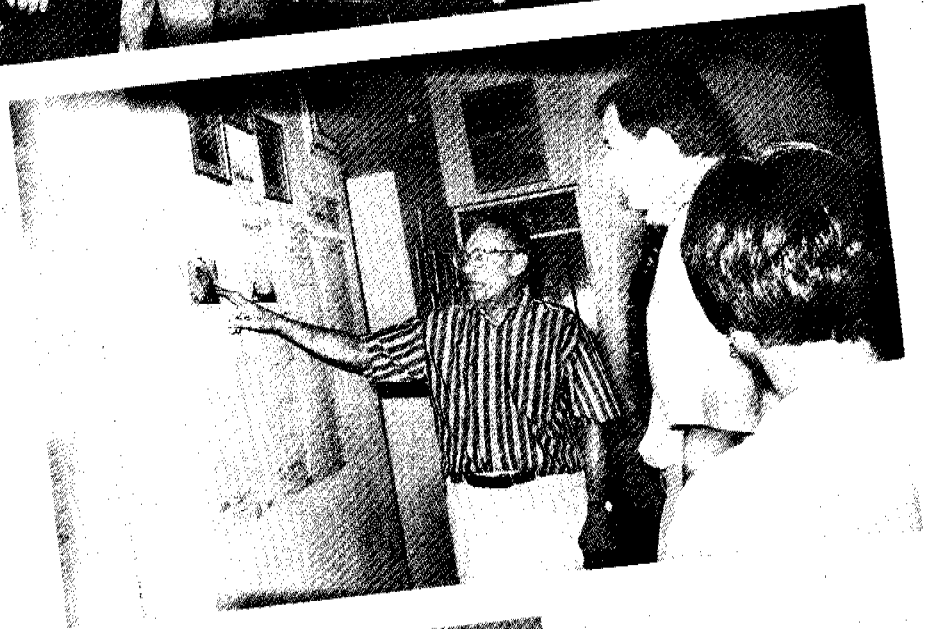
Mr. Chandan Mitra, Executive Editor, The
Hindustan Times, New Delhi



Mr. Philip Boffe, Dy.
Editor of the *New York
Times*, with
his wife.



**Dr. Earl Kessler,
RHUDO, USAID
visited Sulabh International
Museum of Toilet**



**Mr. Emily Tyen
and Peul Kreiner,
Germany**



**Mr. Roger
R. M. Bonner,
First Secretary,
British Council
Division**



Mr. Surendra Pal Ratawal, Minister of Social Welfare, Delhi Government,

Mr. Bishwa N. Tiwari, an economist, Tribhuvan University, Nepal, with Mr. Lekh Man Singh, sanitary engineer, Sainbu, Nepal and Mr. Prabhakar Man Singh, Deputy Manager, Nepal Water Supply.



A team of environmentalists



Dr. Harpal Singh, Asian Development Bank, Manila, the Philippines



Mr. Takashi Shinoda, Faculty of International Relations, Japan



Mr. Zhou Xiaogang, Mr. Che Guorong and Mr. Cao Xinhue, China.

Dr. Mulkh Raj Anand, eminent author and social activist, with Dr. Bindeshwar Pathak.



Mr. Bernard Fouilly, Agency for Environment Management, France.

**The paper presented by Dr. Bindeshwar Pathak, Ph.D., D.Litt.,
Founder, Sulabh Movement at Internatinal Symposium on Public Toilets
held in Hong Kong on May 25-27, 1995**

HISTORY OF TOILETS

UNLIKE body functions like dance, drama and songs, defecation is considered its very lowly. As a result very few scholars documented precisely the toilet habits of our predecessors. The Nobel Prize winner for Medicine (1913) Charles Richet attributes this silence to the disgust that arises from noxiousness and lack of usefulness of human waste. Others point out that as sex organs are the same or nearer to the organs of defecation, those who dared to write on toilet habits were dubbed either as erotic or as vulgar and, thus, despised in academic and social circles. It was true for example of Urdu poets in India, English poets in Britain and French poets in France. However, as the need to defecate is irrepressible, so were some writers who despite social as well as academic stigma wrote on the subject and gave us at least an idea in regard to toilet habits of human beings. Based on this rudimentary information, one can say that development in civilisation and sanitation have been co-terminus. The more developed was the society, the more sanitised it became and vice versa.

Toilet is part of history of human hygiene which is a critical chapter in the history of human civilisation and which cannot be isolated to be accorded unimportant position in history. Toilet is a critical link between order and disorder and between good and bad environment.

In my own country i.e. India, how can any one ignore the subject of toilet when the society is faced with human excretions of the order of 900 million litres of urine and 135 million kilogrammes of faecal matter per day with totally inadequate system of its collection and disposal. The society, thus, has a constant threat of health hazards and epidemics. As many as 600 out of 900 million people do open defecation. Sewerage facilities are available to no more than 30 per cent of population in urban areas and only 3 per cent of rural population has access to pour flush latrines.

Seeing this challenge, I think the subject of toilet is as important if not more than other social challenges like literacy, poverty, education and employment. Rather subject of toilet is more important because lack of excremental hygiene is a national health hazard while in other problems the implications are relatively closer to only those who

suffer from unemployment, illiteracy and poverty. I thus view a study of the history of toilet an important subject matter.

As long as man did not have an established abode, he did not have a toilet. He excreted wherever he felt like doing so. When he learnt to have a fixed house, he moved toilet to courtyard and then within his home. Once this was done, it became a challenge to deal with smell and the need was felt to have a toilet which can intake human wastes and dispose these of out of the house instantly and, thus, help maintain cleanliness. Man tried various ways to do so i.e. chamber pots, which were cleaned manually by the servants or slaves, toilets protruding out of the top floor of the house or the castle and disposal of wastes in the river below, or common toilets with holes on the top and flowing river or stream underneath or just enter the river or stream and dispose of the waste of the human body. While the rich used luxurious toilet chairs or cross stools the poor defecated on the roads, in the jungle or straight into the river.

It was only in the 16th century that a technological breakthrough came about and which helped the human beings to have clean toilets in houses. This breakthrough did not come about easily and human race had to live in insanitary conditions for thousands of years. For all to know the history of toilet we have established in New Delhi the Sulabh International Museum of Toilets with the help of curators like Mr. Fritz Rishuka from Austria and 80 to 90 other professionals around the world. The museum traces history of toilet for the last 4500 years.

Historical Evolution

The perusal of literature brings home the fact that we have only fragmentary information on the subject of toilet as a private secluded place to help the body relieve its waste. Sitting type toilets in human history appeared quite early. In the remains of Harappa civilisation in India, at a place called Lothar (62 Kilometers from the city of Ahmedabad in Western India) and in the year 2500 BC, the people had water borne toilets in each house and which was linked with drains covered with burnt clay bricks. To facilitate operations and maintenance, it had man-hole covers, chambers etc. It was the finest form of sanitary engineering. But with the decline of Indus valley civilisation, the science of sanitary engineering disappeared from India. From then on, the toilets in India remained primitive and open defecation became rampant.

The archaeological excavations confirm existence of sitting type toilets in Egypt (2100 BC) also. Though we have been able to mechanise the working of these toilets,

the form and basic format of the toilet system remains the same. In Rome, public bath-cum-toilets were also well developed. There were holes in the floor and beneath was a flowing water. When the Roman travelled they constructed the toilets for their use. The stools were key-hole type so that these could be used for defecation as well as urination. Excavations in Sri Lanka and Thailand too have brought out a contraption in which urine was separated and allowed to flow while the other portion was used at the same time for defecation.

Historical evidence exists that Greeks relieved themselves out of the houses. There was no shyness in use of toilet. It was frequent to see at dinner parties in Rome slaves bringing in urine pots made of silver; while members of the royalty used it but continued the play at the same time. Whatever little information is available about history of toilets in India, it was quite primitive. This practice of covering waste with earth continued till the Mughal era, where in the forts of Delhi and Agra one can see remnants of such methodologies to dispose off human waste.

It was also popular in those days to emphasise on the medicinal values of human waste. Urine was supposed to have many therapeutic values. Some quacks even claimed that by study of urine they could confidently say whether a young girl was virgin or not. Hiroshi Umino 1) reports that a Pharaoh got his eye cured by use of urine of a woman, to whom he latter married. It was also widely believed that the dung of a donkey mixed with nightsoil removes black pustules or urine of a eunich can help make women fertile. For oral care it was advised to relieve oneself on one's feet 2) because the divine liquid gives the required cure. 3) In the Indian scriptures there are stories about the strength of wrestlers, If a wrestler defecates too much, he is relatively week because he cannot digest all what he eats. Similarly, a perfect saint has no need to defecate, for he eats as much as he can digest or he is able to digest all that he eats. 4) So not to defecate was considered saintly while in other societies not to defecate was considered manly. Blown Bettelheim 5) states that men of Chaga tribe blocked their anus during the ceremony of attaining of manhood and pretended as if they did not defecate at all. This was also one way of establishing superiority over women. The ancient Greeks it is reported had similar beliefs. Swallowing something and not taking them out was considered as source of power and authority.

Between the period 500 to 1500 AD was a dark age from the point of view of human hygiene. It was an era of cess pools and human excreta all around. Rich man's housing and forts in India had protrusions in which defecation was done and the excrements fell into the open ground or the river below. The forts of Jaiselmer in

India and big houses on the banks of rivers bear testimony to this fact. In Europe it was an era of chamber pots, cess pools and cross stools. So were the toilets protruding out of the castles and the excrements from which fell into the river.

It was also an era of "liberty to pee" French poet Claude le Petit described Paris as 'Ridiculous Paris' and in the following words:

"My shoes my stockings, my overcoat
My collar, my glove, my hat
Have all been soiled by the same substance
and unless I say" it is me",
I would mistake myself rubbish"

There was lot of jest and humour relating to toilet habits and toilet appurtenances. Ballets were performed with basket of night soil in the form of hood, on the head or a tin plate commode moving around with toilet sounds. The clothes were spotted with accessories from the toilet. The actors were etronice (night soil) Sultan Prime of Foirince (i.e. diarrhoea) etc. There are stories given by Guerrand 6) which depict the mood of Europe at that time. A lady of noble birth requested a young man to hold his hand. The young man suddenly feels the urge to urinate. Forgetting that he is holding the hand of a lady of noble birth he relieves himself. At the end he says "excuse me Madam, there was lot of urine in my body and was causing great inconvenience", Similarly Maid of Honour Anne of Austria owing to excessive laughter, urinated in the bed of the queen. Joseph Pujol (hero extraordinary of French scatology) in his shows demonstrated many types of farts i.e. young girl, mother-in law, bride. He could even extinguish a candle 30 centimeters away through his farting.

Poetry on Nightsoil:

Irrepressible poets in many countries despite social stigma attached to their professional work were writing poetry on defecation habits, farting and heavenly qualities of night soil. Chakrian in India, Euslog de Beaulieo Gilles Corrozal and Piron in France, Swift in England were all enjoying themselves at the technological impasse which human beings were faced with in disposing off what they excreted.

Gilles Corrozel for example described the toilet in the following vein i.e.

"Recess of great comfort
Whether it is situated
in the fields or in the city

Recess in which no one dare enter
Except for cleaning his stomach
Recess of great dignity" 7

Or take the erotic French Poet Eustrog de Beaulieu and I dare to translate as follows:-

"When the cherries become ripe
Many black soils of strange shapes
will breed for many days and urgents
then will mature and become products of various colours and breaths" 8

French poet Piron called the faeces as 'Royal Nightsoil. Though ostracised by the academic community he wrote as follows:

"What am I seeing oh! God
It is night soil
What a wonderful substance it is
It is excreted by
the greatest of all Kings
Its odour speaks of majesty" 9

English poet called night soil as object of contemplation for the sage. According to him, midwives predicted the future of the child from examining the first excrement. In the province of Punjab in India and before independence Grandmothers ate the first excrement of the male child if he was born after a long period of marriage or after number of female births in the family.

The Urdu poet Chirkin 10) in India was not well recognised by his poet fraternity. Out of vengeance and to create embarrassment he wrote on human waste and farting. I venture to share with you the following English version translated from Urdu - the language in which he wrote.

"The asset which I will earn
now will all be invested in Toilet.
This time when I visit your home,
I will never 'pee' there."

Public Habits and Attitude

In the absence of proper toilet facilities, people perforce had to defecate and urinate wherever they could. Defecating on the road, open spaces, or just easing themselves in the river was very common.

While the authorities were educating people to have private places for defecating, and getting it cleaned, in actual practice there was total disorder. Squalor and filth abounded in cities. The social reformers advised people where to defecate, how to defecate in privacy and the need to control themselves when in company. Children were taught not to touch human waste. At the same time, there was no hesitation in letting loose pigs to eat human excreta.

Number of enactments, however, could not prevent people to defecate in the open. A delegation led by master weaver protested in front of the French Municipal Building and said "our fathers have defecated at the place where you prevent us to do. We have defecated here and now our children will defecate there".

The rich used wool or hemp for ablution while the poor used grass, stone or sand or water depending upon the country and weather conditions or social customs. Use of newspaper was also common. In Russia to the utter dislike of all, the subordinates even stamped the toilet paper with imperial arms for use of the Czar. But in was termed as sacrilege. The final solution to the problem of ablution was found when in 1857, Joseph Cayetty invented the toilet paper in USA. This invention has enabled human beings to have a tissue paper, which is convenient to use, is absorbent, as well as compact and within reach while defecating.

In India it is very common to use water for ablution. However, the hand one uses varies in various parts of India. While in South India, people use the right hand for eating food, it is considered disgusting to use the same hand for ablution with water. So left hand is used for sanitary purposes. In most part of the North India however no such sharp distinction exists.

Household hygiene habits of ordinary people left much to be desired. The dry latrines using bucket was cleaned by menials. These workers came to be known as 'Bucket Brigades'.

According to Hiroshi Umino, European culture blossomed forth after contact with Crusaders from the East. Washing hands for example before food also became popular. The social reformers admonished the people by saying "suck your fingers beast, do not wipe them on the wall". In colonial times in India, the British called big cities as "vast mass privy" due to defecation by people at all times and at all places. There were also no separate toilets for men and women, till a restaurant in Paris put up 'Men Toilet' and 'Women Toilet' at a dance party in 1739 AD.

It is also around this time that the urinal pot was introduced to enable men to relieve themselves. The facilities for women were niggardly and they were taught virtues of control. Despite technological breakthrough a lot needed to be accomplished to educate people to use the new technology appropriately, to ensure that the toilet drainage system is not misused by disposal of other household wastes. However, at city level the disposal of human waste still remained a problem.

Public Toilets and People

In each society from time to time the government felt the need to provide public toilet facilities to those who could not afford to have individual toilets. The public toilets have a long history in number of countries and most of which were constructed and managed by municipalities. But there was around disgust with their poor maintenance, vandalism and lack of basic facilities. The Mughal King Jehangir built a public toilet at Alwar, 120 kms away from Delhi for use of 100 families at a time in 1556 AD. Not much documentary evidence exists on the quality of its maintenance but one can well visualise that with rudimentary technology and with government to manage the O&M functions, it like others must be in very unsatisfactory condition. As hygienic conditions in public toilets were bad, people preferred to do open defecation. This was true in most of the countries. It was in 1872 that the municipalities in France asked the private companies to manage public toilets for a lease period of 20 years. The private companies were also offering even amounts to government as they felt confident to recover the same through user charges. Ground floor owners were also being requested to construct latrines for use of the passerbys. Previously known as Palais Royal Hotel in Paris, the owners started charging monthly fee from diners. Incidentally condoms were also sold as part of the facilities.

In India, when I founded Sulabh International in 1970 in a small village in Patna, people laughed at me when I proposed to introduce the pay-and-use toilets. But my approach has succeeded and today 10 million people use Sulabh facilities every day. Most of the public toilets are being given to us to construct and maintain on a 30 years base period at no charge to the State. At the beginning of the century most of the public toilets have gone underground in Europe, but in India these are still overground. Much more attention is being given to construct these toilets on pay and use basis in slum areas where men pay half a rupee per use, the females and children avail of these facilities free. The facilities available include toilet, bathing or washing of clothes and to change clothes. We are also setting up primary health care centre at these places. However, a lot of effort is required to get people's participation in efficient operation and maintenance of public toilets. This remains a big challenge

to be met by NGOs. Based on my experience of the last 25 years, I am also convinced that only cooperation between Government and NGOs can make the sanitation programme a success. Neither the NGOs nor the government can create an impact if they work in isolation.

Law and Citizens

In order to improve sanitary conditions, Governments in various countries also resorted to legal measures. Dirt by definition was considered as disorder, because it disrupts order of maintaining the environment.

In 1519 the provincial government of Normandy in France made provision of toilets compulsory in each house. The French government also passed a parliamentary decree to make cesspools in each house compulsory. Again a similar attempt was made in 1539. In Bordeaux in France, the government made construction of cesspools compulsory. It was tried again in 1668 when the Lieutenant of Police made construction of toilets compulsory. In England the first sanitation law was passed in 1848. In India the first sanitation bill was introduced in 1878. It tried to make construction of toilets compulsory even in huts of Calcutta - the capital of India at that time. The Bill even proposed construction of public toilets at the cost of neighbouring houses. The government of India enacted another Sanitation Act in 1993. Under this Act construction of dry latrine and its manual cleaning was made an offence. But despite these enactments open defecation is rampant. Proving that unless adequate social awareness is created in a developing country where instruments of state are weak and low family income, it is hard task to make significant progress in this area.

Toilet Technologies

Eighteenth century was a century of toilets. Despite invention of water closet by John Harrington in 1576 which was costing only 6 shillings and 8 pence this was not adopted on a large scale for almost 182 years. The delays in actual use of invention is common in human history which Toffler calls as "Cultural Gap". It was true for railway train, ball point pen and innumerable other inventions. During this period people used earth closet. In these toilets (11) instead of water earth was used. So the problem of cleaning remained. The world also saw development of Pan closets - which like cigarette ash tray threw the material at the bottom. This too required manual cleaning. At the same time chamber pots, cross stools, open defecation remained. In compared to this, Harrington's toilet under the name Angrez was being used in France, though not introduced on a long scale in England. In 1738 JF Brondel introduced the valve type flush toilet. Alexander Cunnings further improved the technology

and gave us a better device in 1775. In Cuning's design water was perennially there in the toilet so it suppressed odours. Still the working of the valve and fool-proof inlet of water needed further improvements. In 1777; Joseph Preiser provided the required improvement. Then John Blummer in 1778, substituted the slide valve with crank valve, It seemed then that the technology of pour flush was now perfected. No the world was yet to witness further technological developments. In 1870, SS Helior invented the flush type toilet, called optims - an improvement over Blummer's design.

From 1880 onwards, however, the emphasis was been more on aesthetics to make cisterns and bowls decorative. The bowls were so colourful that some suggested to use these as soup bowls. It was in 1880 that the toilet curtains made their appearance. The trend was called the age of "Bellepoque" in France and Edwardian (opulence) in England, during 1890 we had the first cantilever type of toilet. Since then the world has not witnessed any significant technical change except some change in shape of toilets and reduction in quantity of water per use.

It was around 1900 that the institution of bathroom came in vogue in Europe. In India the institution of *Gushalkhana* (bathroom) was established by the Mughal Kings 1556. Oppressed by the heat and dust the Kings constructed luxurious bathing and message facilities. But this was only for the rich. The ordinary citizens however lived in insanitary conditions.

Unlike in the past when latrines were tucked away in attics to keep it away from nose and eye of the family and the society. In contrast the twentieth century has given a pride of place to toilet in the home-rather these are more opulent, more spacious than anytime in the past. While the provision of toilet in the house solved household problem of cleanliness but the challenge remained as to how to dispose off human waste at city level. This was also solved when the sewerage system was introduced. Haussmann in 1858, describes beautifully the sewerage system. He said that "the underground galleries which are the organs of the big city will work in the same way as organs of the body, without being revealed.

The pure and fresh water, the heat and light will circulate like the various fluids whose movement and maintenance are necessary to ensure life. The secretions will not mysteriously like place there and maintain public health without disturbing the order of the city and spoiling its outer beauty". 12) Around the same time the sewerage system was introduced at Calcutta - capital of colonial India. However its extension in the country was and remains slow as it is capital intensive and beyond

the resource capacity of the economy even today.

In 1970, realising that sewerage facilities will remain out of the reach of the society at large, Sulabh International introduced a pioneer technology twin pourflush latrines and human excreta based Biogas plants. We have constructed in the last 25 years over 650,000 toilets, 2500 toilet cum bath complexes and 62 human excreta based biogas plants and are maintaining them. I believe this gives an appropriate solution to dispose off and recycle human waste into fertiliser, electricity and working gas.

Summing up

As sewerage based toilet remains and will remain out of the reach of the majority of population in India, the challenge is to propagate and ensure installation of toilets which are affordable, upgradable and easy to maintain. The Sulabh experiment is a success story and the technology is well established and has been successfully functioning for the last 25 years and is financially sustainable. At household level TPPF latrine based on Sulabh Model has also been a success and is in use in 650,000 households. It is however, now necessary in India to replicate it on a mass scale with public pay and use toilets with Biogas plants at neighbourhood level and Sulabh TPPF latrine at household level.

Though the challenge to provide toilet facilities have been totally overcome in rich countries, it has still to be met in developing countries like India. The journey of toilet has ended in Europe and North America but continues in the developing countries.

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1. Hiroshi Umino "Another Room - Hidden History of Toilets".
(Title translated from Japanese)
 2. Another room *ibid*
 3. Roger Henri Guerrand, *History of Toilets* (Title translated in English)
 4. Bluno Bettelhum, *Scars of sex.* quoted by Hiroshi Umino in *op. cit.*
 5. Roger Henri Guerrand *ibid*
 6. Roger Henri Guerrand *ibid*
 7. Translated in English from the original French
 8. Roger Henri Guerrand *ibid.*
 9. Translated in english from the original French
 10. Diwane - Charkiyan, 1970
 11. Mary Douglas, *Dirt and Taboo.*
 12. John Seamore, *Forgotten Domestic Techniques - Portrait of our Ancient life, 1987.*

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Mr.

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Padma Bhushan

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NEW DELHI-110045

I N D I A

Gmunden, Dec. 18, 1991

Ref.Nr.: SI/F-389/91

SUB: INTERNATIONAL MUSEUM OF TOILETS IN INDIA

Dear Sir,

First of all: My English is surely not as good as yours, but I hope you will accept it.

ÖSPAG-headquarter sent to me your letters and copies, being of opinion, that I should be qualified to answer, - at least to all questions concerning history of toilet and sanitary museum.

Presentation:

- 1.) ÖSPAG-company is producing sanitary- and dinnerware (porcelain) and is member of the world-wide ceramic-group LAUFEN, seat at Laufen, Switzerland.
- 2.) Myself: I am 71 years old and had been director of an ÖSPAG-sanitary plant here in Gmunden, a small town near Salzburg. Now I am retired as manager but not as "curator" of "Das kleine Sanitärmuseum", what means "The little Sanitary-Museum", (yours might be "The big Sanitary-Museum" but not the first in the world...).

This our collection was "founded" 1966 (just 25 years ago) more or less by chance in the way: I found an old decorated (relieved and blue-painted) WC, - thrown-away - on a heap of rubble (The SIMPLON, - Japanese book page 031 and 055). This was number one. - Now we have about 400 old pieces: WC, lavatories, bidets, urinals and so on. We took part on special exhibitions loaning to museums or fairs in Vienna (just now running a special exhibition concerning sanitary), further several times to Switzerland, Germany and each one time to New York, Sao Paulo and Tokyo.

In Tokyo is INAX-XSITE corp., our client (sanitary-ware) and they organized a big exhibition (Oct. - Nov.1988) with parts of our collection and they made a book exclusive of this collection, completed by historical backgrounds. This book is "quasi" our "Museum-catalogue" and shows from page 042 to page 112 about 80 % of our collection.

Why am I telling all this in great detail? First: to encourage you to come and see, to discuss and to hear much more details as it is possible to write, even in a longer letter. And second: simply because I am interested and - might be - one day we could exchange for instance an Austrian WC, nearly 100 years old, to an Indian-one.

Finally we have some literature, partly out of print. So far I am sending you ~~some~~ copies. You may keep "Water log" and the Japanese book "History of European toilet", - even when you cannot read it. It is well-done and a bit exotic. ÖSPAG is adding some samples of our current program.

I hope some of my informations will be germ for help

Yours sincerely

Fritz Lischka

Fritz Lischka

ps:

today's
By separate post (Express-service)
we send you the promised
books a.s.o.



Embassy of the United States of America

New Delhi

October 9, 1991

Dr. Bindeshwar Pathak
Sulabh International
Mahavir Enclave
Palam Dabri Marg
New Delhi 110 045

Dear Dr. Pathak,

Ambassador Clark has asked me to respond to your letter of September 24, 1991. Let me assure you first that both the Ambassador and I myself are very much aware of your organization and your successful work in support of scavengers and of better sanitation.

Your idea of setting up an international museum of toilets is certainly original. I do not believe anything like that has been undertaken elsewhere. While this Embassy cannot provide much help in the matter, I thought that you might wish to contact an American association of manufacturers of sanitation ware in the hope that they might be able to provide some information and assistance. I have noted an address of one such organization below. The idea of playing the national anthem of various nations as one approaches their toilet in the exhibit strikes me as something that many people might object to. A simple sign explaining the exhibit may be less controversial.

We wish you success with your endeavour. I remain, with my best regards,

Yours sincerely,

A handwritten signature in cursive script, appearing to read "Peter L.M. Heydemann".

Peter L.M. Heydemann
Counselor

Scientific and Technological Affairs

American Society of Sanitary Engineering
P.O. Box 40362
Bay Village OH 44140

cc:AMB/X



BRITISH HIGH COMMISSION
NEW DELHI, INDIA

11 November 1991

Dr Bindeshwar Pathak
Sulabh International
Mahavir Enclave
Palam Dabri Marg
NEW DELHI 110045

Dear Dr Pathak,

Many thanks for your letter of 24 September to the High Commissioner Sir David Goodall, who has now left India on retirement. Thank you also for the two books you enclosed about Sulabh International, which I have read with great interest. Something of the work of your organisation was already known to me and I have great admiration for what you are doing.

You asked for information which could be of value for the Museum you hope to set up in India. In this connection I enclose a small book on the work of Mr Thomas Crapper which I hope will be of assistance on the history of sanitation in Great Britain, together with a handbook on the latest design for women's public toilets which are now widely available throughout Britain.

Yours sincerely,

P J Fowler
Acting High Commissioner