

ORGANIZATION

**Sulabh International Social Service
Organisation**

CAUSE

Toilets • Social Inequality



Of
HUMAN
WASTE
and
WASTED
HUMANS



Pathak visiting the Sulabh Public School in New Delhi, India.



Pathak explaining how his two-pit pour-flush compost toilet works.



About a million untouchables are manual scavengers.

With his aspirations to become a university lecturer, the last thing on 20-year old Bindeshwar Pathak's mind was a career in sanitation. Yet, 30 years later, providing decent toilets and improving the plight of manual scavengers have become his steadfast calling.

Needless to say, his decision to pursue this path in life did not go down well with his high-status Brahmin family. But Pathak persevered, having made the leap from impassive voyeur to ardent activist after witnessing the plight of the scavengers.

His journey has been riddled with challenges: from dealing with bureaucracy and the lack of sustained funding, to tackling resistance to paradigm shifts in deep-seated societal values.

The outcome of his untiring work so far includes an innovative two-pit pour-flush compost toilet that has a seat in the sanitation hall of fame, and a suite of innovative approaches to tackle the issue of stubborn social discrimination in India.



OUT-CASTE

Excrement and human scavengers¹ have one thing in common—few people in India will voluntarily touch them.

Excrement, which is bodily waste, is repugnant to most people—whether because of the smell, taste, touch, or even the sight of it. Rarely would anyone want to be in contact with it. The same can be said about the treatment of the human scavengers, often referred to as the “untouchables,” who sit on the lowest rung of the Indian caste system.

Curiously, for Bindeshwar Pathak, these two elements would repeatedly weave together and leave indelible marks on his life.

When he was just seven years old, Pathak did what was considered unthinkable in Indian society—he touched an untouchable. On the advice of a priest, cow dung, cow urine, and Ganges water were forced down young Pathak’s throat to “purify him.”

A few years later, at the age of 25, Pathak found himself supervising a group of untouchables in manual scavenging.² It was a job that his Brahmin³ family strongly opposed but the sociologist⁴ in him persevered, spurred by the challenge of understanding the social environment of these untouchables.

A turning point came several weeks into the job. At a busy marketplace in the Indian town of Bettiah, Pathak was having tea with friends when he saw a runaway bull charging directly at a young boy. Within seconds, the boy was lying on the ground, injured. At first, several men rushed forward to help.⁵ Among them was Pathak.

Amidst the commotion and bravado, someone shouted, “Stop! The boy is an untouchable!” Instantly, the crowd dispersed, leaving the boy to fend for himself.

However, Pathak continued running forward, not caring that the boy was an untouchable. But he was too late. The badly injured boy died on the way to the hospital.

After that incident, Pathak went through a period of deep contemplation about the meaning of life. It was the beginning

of a call, an awakening that would cement his work with the untouchables and, in particular, in sanitation.

CALL OF NATURE

As a young man, Pathak led a relatively comfortable life as a Brahmin, the elite class of Indian society. He was, however, uncertain about his career path. After graduating with an honors degree in Sociology, he dabbled in odd jobs. He became a school-teacher and later helped out with his family's Ayurvedic⁶ business. Still, he was not content. In a status-conscious society like India, he did not feel valued because he believed that businessmen were not respected.

So Pathak decided to work towards becoming a lecturer, since academics are highly esteemed in India. He applied to study criminology at the Sagar University in Madhya Pradesh, India.

He was accepted into the course, and was all set to board his train to Sagar when a chance meeting with his cousin and a lawyer friend at the train station changed the course of his life.⁷ They persuaded Pathak to go and seek work at the Bihar Gandhi Birth Centenary Celebration Committee instead.⁸ After working for four months there as a translator, Pathak took charge of publicity at the Committee. However, he did not quite get along with his supervisor who then assigned him a task that most of his colleagues would have avoided: managing sanitation at the Scavenger's Liberation Cell⁹ and working with the untouchables disposing of human waste.

Sanitation was definitely not then in Pathak's area of focus. Nevertheless, making the best of the situation and piqued by his interest as a sociologist, he decided to stay with the scavenging community for three months to better understand their circumstances and their needs.

He also spent two days cleaning human feces manually to experience what it was like. "It defies description," he said. "My

whole body was covered with human excreta and its smell was oozing from my body.”

But it was the treatment of the untouchables that shook Pathak’s faith in the goodness of human beings. The death of the scavenger boy in the marketplace in Bettiah was one. Another was the story of a young Dalit bride who, upon marriage, was forced by her husband’s family to clean toilets and remove the feces with her bare hands. Despite the bride’s quiet protest and Pathak’s intervention, the ill-treatment continued. “If she doesn’t clean bucket toilets, which is our profession, what will she do from tomorrow? Even if she sells vegetables, who will buy from her hands?” her mother-in-law had asked. Pathak had no answer to that. Such is the culture that straps the untouchables to their position in life.

Witnessing these situations, Pathak concluded that “manual scavenging should have no place in modern society.” He vowed to relieve the scavengers “from their subhuman and health hazardous occupation of cleaning and carrying human excreta manually.”

To realize his calling, he adopted a two-pronged approach that sought to reform not just India’s toilet system but also the caste system that supports it.

CASTE—AN (IN)HUMAN INVENTION

Caste is a form of social structure that divides people on the basis of inherited social status. It is often characterized by endogamy (marrying within the same social class) and lifestyles that include designated occupations, class hierarchies, customary social interactions and exclusions of lower level classes.

Inherent within caste systems is a strict rigidity that prevents those from the lower castes from climbing up the social ladder to realize their full human potential. It results in social inequities and restricts the country’s economic progress.

Caste and caste-like systems exist in many traditional societies around the world. Nepal, Pakistan, Sri Lanka, and Bali all have caste

systems that are very similar to that in India. There are also castes in Asian countries such as Myanmar, Japan, and Korea. Outside Asia, there are caste systems in Yemen, Africa, and Latin America.

Among these, India has, perhaps, the most studied and elaborate example of a stratified social hierarchy. Its caste system has four main classes (also called Varnas) based originally on personality, profession, and birth. In descending order, they are:

- Brahmana or Brahmin: The elite class identified with priests and academics.
- Kshatriya: The ruler and warrior class identified with those in public service, including administration, maintenance of law and order, and defence.
- Vaishya: The merchant class for those engaged in commercial activity.
- Shudra: The laborer class consisting of semi-skilled and unskilled laborers who serve the Brahmins, Kshatriyas, and Vaishyas.

Below these four classes are the Dalits, which comprise the impure and the untouchables. The untouchables were not even deigned a class until Mahatma Gandhi¹⁰ called them Harijan (“Children of God”).¹¹ The untouchables are the social outcasts, ostracized and relegated to the most denigrating menial jobs in society.

The social ordering does not stop there. There are further subdivisions amongst the untouchables. The lowest rung is occupied by the Bhangis, who are known for their manual scavenging work.¹² This group, the untouchable of the untouchables, would be critical partners in Pathak’s work in sanitation.

About a million¹³ untouchables are manual scavengers, collecting human excrement from public and private latrines. Lowly educated and armed with little more than a broom, a tin plate, and a basket, they carry human waste to dumping grounds to earn a living. Manual scavengers suffer from daily exposure to harmful gases such as methane and hydrogen sulfide that can cause hepatitis, skin and respiratory system problems.

The practice of manual scavenging continues in most Indian states even though the plight of the untouchables has received public attention and affirmative action has been legislated, in particular since Mahatma Gandhi took up their cause. For instance, the Constitution of India has accorded the untouchables special status due to their vulnerable position. Legislation has also been passed outlawing manual fecal scavenging work. Yet, manual scavenging as an occupation still exists, driven, in part, by demand and also by the scavengers' need to hold on to their only source of income.

The reality is that about 56 percent of India still rely on such rudimentary (unimproved or open defecation) forms of toilets. So long as this persists, there will always be a demand for manual scavenging work.

TOILETS—A HUMAN INNOVATION

Most people living in developed countries will be familiar with, if not take for granted, the modern flush toilet and its accompanying sewerage pipe system.

In modern urban settings, the toilet is a small room housing a sanitation fixture, typically a vitreous, ceramic bowl with water and plumbing that flushes human excrement and urine into a sewerage pipe. The water and waste from all these toilets and other sources are then piped into larger pipes to a more distant centralized sewerage treatment plant.

The modern flush toilet and sewerage system have evolved over centuries¹⁴ from a range of earlier toilet types including chamber pots, close stools, pit toilets, dry toilets, and septic tanks.¹⁵

Yet, the flush toilet and sewerage solution is not fully environmentally friendly. As Jack Sim, founder of the World Toilet Organization, puts it: “God went through the trouble of designing our bodies so that the liquids and solids are separated into two different channels. And what do we do? As soon as they leave our body, we put them back together into one single receptacle!

To make matters worse, we combine them with kitchen and bath water. We then create an expensive sewerage system to transport the mix over vast distances. And finally, at the end of the line, we expend a lot of energy and resources to—lo and behold—reparate the liquids and the solids.”¹⁶

Thus, alternative toilet solutions are continually being looked into. One environmentally sustainable version is the Urine Diversion toilet which has two compartments: one for urine and the other for feces. This allows for the separate and cost-efficient collection and treatment of the two different types of human waste.¹⁷

Nevertheless, it is hard to beat consumer preferences for the familiar “flush and forget” modern toilet and sewerage solution. It is convenient and spares people the indignity and health hazards of having to clear the human waste manually. In many cities with high-density population, this is the system of choice where it is practical.

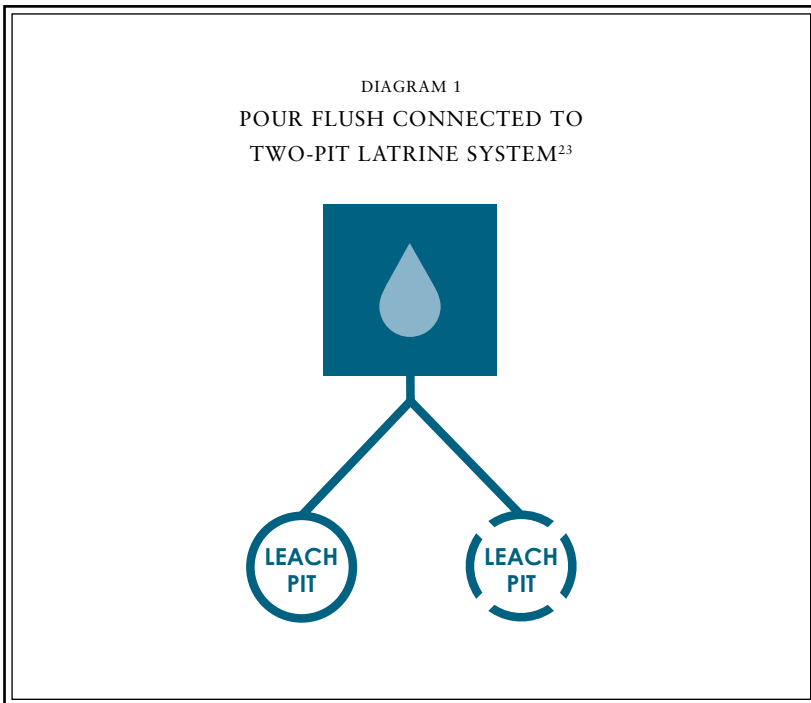
In India, where more than half of the population defecates in the open or use dry latrine toilets,¹⁸ hygienic and cost-effective toilet solutions are critical. While the modern flush toilet and sewerage solution would be theoretically ideal for high-density urban areas, they are not always practical in India. Historically, for budgetary reasons, less than 10 percent of all towns have put in a sewerage infrastructure. It would now be much more cost-prohibitive to build such an infrastructure.¹⁹

As Pathak pondered the problem, he looked at the existing alternatives. None was fully satisfactory. Dry latrine toilets were neither practical nor hygienic in high-density areas. Pour or flush systems together with septic tanks were costly and consumed a great deal of water.²⁰ Moreover, many of these required manual scavenging, which he wanted to avoid.

Finally, Pathak concluded that he would need to design a different kind of toilet system that could be low-cost, and require

little water and no manual scavenging.²¹ His idea was a two-pit latrine system connected to a pour-flush toilet (Diagram 1). The human waste and cleaning water are collected in the (alternating) pits and allowed to slowly infiltrate into the surrounding soil. When one pit is full, it is put to rest while the other is activated to fill up with excrement and cleansing water. With time, the solids in the resting pit are sufficiently dewatered and can be manually removed with a shovel. The dried fecal matter is not toxic, can be transported safely, and can also be used to produce biogas or fertilizers.

The system requires minimal water: typically, 1 to 1.5 liters²² for each use, which is between 15 and 20 percent of what septic tanks or sewerage pipes would consume. In addition, as the double pits are used alternately, the life of the system is virtually unlimited, unlike that of septic tanks.



START OF SULABH

For Pathak, his idea could not have come at a more critical time. The lack of progress while working with the Committee had affected him personally and he had started to question the effectiveness of the existing sanitation project.²⁴

Pathak introduced his idea of the two-pit pour-flush compost toilet to his colleagues. However, they did not share his enthusiasm nor did they give him the support he needed to implement it. Disappointed, he resigned from the Committee.

In 1970, Pathak rallied a few like-minded friends to set up a voluntary welfare organization to implement his toilet model. Today, the organization is known as Sulabh International Social Service Organisation or simply Sulabh.²⁵

In the early years, Pathak had big plans to provide sanitation solutions to the rural poor who needed it most. He targeted to work with the government to achieve nation-wide implementations that would benefit the masses. But Pathak soon realized that working with the government and obtaining grants for his work was not as smooth sailing as he had hoped. Despite initial approvals by authorities at the national, state, and ministerial levels, the implementation was repeatedly stalled due to indecisions and changes in the officers in charge.²⁶

With his savings dwindling, Pathak made many personal sacrifices. He skipped meals. He slept at railway stations when he travelled. He took out a US\$1,000 loan and sold his ancestral land. He went as far as to ask his wife to pawn her jewelry, but the money from that did not help for long. As a last resort, Pathak went back to selling medicine in order to survive.

In August 1973 and on the brink of financial ruin, Pathak went to see Ramakant Mishra, Executive Officer of the Arrah Municipality, a small town in the Indian state of Bihar. The visit paid off as Pathak was rewarded with the first order of the Sulabh two-pit, pour-flush compost toilet. Shortly after, one of

the municipal councilors, Suresh Prasad Singh asked Pathak to convert two of his existing toilets to the Sulabh model. This started a rush by others in Arrah to convert their bucket latrines to Sulabh toilets.

The successes in Arrah led officials in the neighboring town of Buxar to adopt the Sulabh toilet. Nearby Patna City and other towns in Bihar followed suit.

Another watershed moment occurred in 1974 when Pathak was tasked with the near-impossible challenge of constructing a public toilet near the Reserve Bank of India in Patna City within 24 hours. What's more, he agreed not to be paid by the government to maintain the toilet; he would instead recover his costs through a "pay and use" system,²⁷ which involved setting up urinal and bath facilities, and providing soap powder to wash hands, an unheard-of innovation. These measures led to the acceptance of "pay and use" and the signing of more contracts with officials in Bihar to convert public bucket toilets into Sulabh toilets.

Within four years, Sulabh was finally taking off. By 1977, 40,000 two-pit latrines had been installed in individual homes and pay-and-use Sulabh public toilets had sprung up all over Bihar. This was a good, modest start for Sulabh, but Pathak had his work cut out for him. The next few years would be just as arduous as the organization took on the challenge of cleaning up excrement beyond India's borders.

A DIRTY WORLD

About 1.1 billion people, or 15 percent of the world's population, defecate in the open. They do so in fields and bushes, and by rivers, ditches or railway tracks.²⁸ Another billion or so defecate using unsafe holes²⁹ in the ground (where there are no sewerage facilities or septic tanks to properly handle the waste) or use shared facilities.³⁰

The problem is particularly acute in India where 50 percent of the population practices open defecation.³¹ In this regard,

India is behind only 11 countries, most of which are in Sub-Saharan Africa.³²

The lack of proper toilets creates serious health issues. Feces left in the open eventually contaminate various water supplies that can spread illnesses when the water is consumed. For example, diarrhea caused by such contaminated water kills around 800 children below the age of five every day in India,³³ while diseases such as typhoid and cholera have been linked to the absence of sanitation.

Women especially suffer from lack of access to toilet facilities. They fall victim to health complications like urinary tract infections because they need to hold their bladders and bowels till nighttime when they can find a secluded spot to urinate or defecate. They are vulnerable to physical and sexual assaults as they may have to travel some distance to relieve themselves. And as long as proper toilet facilities are not available in schools, parents hesitate to send their daughters there and, as a direct result, limit their daughters' future earning capacity.³⁴

The lack of sanitation does not just reflect poverty, it also adds to the poverty problem significantly.³⁵ In India alone, lack of sanitation costs the country INR2.4 trillion (US\$39 billion).³⁶ This means an equivalent of 6.4 percent of India's GDP goes towards treating problems caused by an unhygienic environment.³⁷ For instance, inadequate sanitation leads to diseases that drain limited financial resources on medical treatments and possibly hampers children's development and women's empowerment.³⁸

Improved sanitation³⁹ has been a key United Nations Millennium Development Goal.⁴⁰ It is deemed a basic human right. However, progress towards improved sanitation has been slow.⁴¹

After all, sanitation is but one of many competing demands for a developing country's limited resources. Given other pressing needs such as health and education, sanitation receives, in general, much less in GDP allocation.⁴²

According to Water Aid,⁴³ off-track countries in Sub-Saharan Africa and South Asia are spending much less than the recommended one percent of GDP on sanitation. Meanwhile, global aid for WASH (water, sanitation and hygiene) falls short of \$US10 billion per year in the run-up to 2015 and beyond. To make matters worse, most help exists in the form of loans instead of grants, and this is making sanitation efforts unaffordable at the state, country and community levels.⁴⁴

While many do not deny the health impact of poor sanitation, there is a lack of awareness of how bad it can be. For instance, many do not realize that low development in sanitation holds back progress in health and education, despite increased spending in those areas. As a result, these countries continue to be locked in a vicious circle of repeat needs since resources cannot be freed up to address other emerging issues.⁴⁵

Deep disgust towards excreta is also another reason why there is a lack of effort and support for sanitation work. For example, in Africa, the Americas, and Europe, excreta use is generally regarded as culturally unacceptable. At best, it is treated with indifference. A possible explanation could be the strongly held view that human excreta are repugnant and best kept out of sight. Products fertilized with raw excreta are frowned upon.⁴⁶

Despite the stigma, hundreds of noteworthy organizations (run by governments, nonprofit organizations, and businesses) have sprung up in different corners of the world to lend their weight to solving the problem.

There are organizations whose impact is limited in geography but expansive in terms of breadth and depth. Gram Vikas,⁴⁷ for example, focuses on multi-pronged development of rural families in West Bengal, India. One of its programs mobilizes, educates and trains communities to construct, manage and maintain their own toilets with clean piped water from a community-constructed water tank.⁴⁸

Then there are organizations that exert international influence across a broad range of activities. Examples include Water Aid and Water for People,⁴⁹ which are NGOs with UK and US origins respectively. These provide humanitarian help to developing countries and are associated with the water utilities and industry players in these countries. They complement the work of UN agencies such as UNICEF.⁵⁰

Much of the sanitation work is, however, largely disconnected. Several international multi-party platforms have been formed to coordinate sanitation work in the areas of research, financing, and software and hardware implementation.⁵¹ These include:

- The IRC International Water and Sanitation Centre, which focuses on research and consultation with local stakeholders in Sub-Saharan Africa and South India.⁵²
- The Water Supply and Sanitation Collaborative Council, which focuses on implementation amongst its members across countries in Africa, Asia, Latin America, and the Pacific.⁵³
- The Water and Sanitation Program, a trust fund administered by the World Bank.⁵⁴

India benefits from these interventions, along with the sectoral help provided by local nonprofit organizations. Odisha, Gandhi Gram and Tamil Nadu contribute in the areas of toilets, while Harijan Sevak Sangh and Gandhi Smarak Nidhi contribute in the area of social reform.

In addition, the Indian government organizes campaigns and provides the legal impetus to ensure sanitation standards⁵⁵ while businesses lend sponsorship or provide sanitation technology.

Sulabh seeks to embrace the international outlook of Water Aid, inculcate the local commitment of Gram Vikas, and pioneer new sanitation technologies of businesses. And its contributions have not gone unnoticed. It is the only local organization to receive the UN's General Consultative status, which is generally reserved for large international NGOs with broad geographical

reach and whose area of work is on the agenda of ECOSOC and its subsidiary bodies.⁵⁶

According to Pathak, as long as Africa, Asia and Latin America depend on their current sewerage systems, the journey to improved sanitation will be slow due to the high construction and maintenance costs and huge water requirements of this infrastructure. While alternative technologies exist to reduce such reliance, they are covered by patents, which make them out of reach of poor consumers. Pathak is intent on using Sulabh and his toilet invention as a vehicle to overcome this.

CASTE-ING AWAY PREJUDICES

From the start, Pathak was aware that his brilliant toilet invention could be a bane for the manual scavengers as it would lead to a loss of their jobs.

From as early as 1980, Pathak lobbied the Indian government to provide alternative employment to liberated scavengers. He persuaded the Ministry of Home Affairs and the Ministry of Welfare to implement the Protection of Civil Rights Act.⁵⁷ In 1985, he secured government help to start a rehabilitation and training program for the scavengers in different trades, which included driving, masonry work, and shorthand. The program has spread nationwide and is now structured to provide training on a regular basis.⁵⁸

But providing only alternative jobs for former scavengers is not sufficient. Widespread discrimination against Dalits limits their jobs, their physical and social mobility. Caste-based discrimination needs to be neutralized, as does the attitude of society.

Thus, in 1990, Sulabh launched a movement to socially upgrade the status of scavengers in India. High-status families were asked to each “socially adopt” a scavenger family where they commit to maintaining social interactions and links with these people. So far, 10,000 scavenger families have been “adopted”

by high-status people, including judges, advocates, journalists, ministers, and planners.⁵⁹

The work on mindset change and social integration continues with other initiatives. In 1992, Sulabh set up the Sulabh Public School, an English medium school in New Delhi for the sons and daughters of scavengers with a special focus on vocational education.⁶⁰ In this case, Sulabh did the unthinkable: it made sure the scavenging children studied alongside children of non-scavenging families, all to make the point that there is no difference between them. This approach was well received. Thus far, the school has managed to attract non-scavenging families whose children make up 40 percent of the school population.

In 2003, Sulabh started a center called Nai Disha in Alwar district in the Indian state of Rajasthan to provide liberated scavengers with education and vocational training in trades such as embroidery, beauty care, and food products so that they can be self-employed.⁶¹ The goods are bought by the local people whose toilets they used to clean. Further vocational training institutes were opened in Patna, Jambhol, and New Delhi.

Women benefit the most from Sulabh's social reform initiatives as they make up more than 70 percent of the manual scavenging community. Beyond liberation from their previous jobs and a return of their dignity, Sulabh has given them stature by creating opportunities to meet with the elite of society, such as the President and the Prime Minister of India. In 2008, the liberated scavengers of Alwar visited and addressed the United Nations in New York and graced the fashion runway of a special cultural event alongside prominent international models.⁶²

To date, some 120,000 scavengers have been liberated from, what Pathak calls, "the subhuman, demeaning and humiliating profession of cleaning dry privies and physically carrying human excreta of others, to make a living for their families."⁶³ More importantly, they have been provided with alternative jobs. They

have been socially integrating into an India that is becoming more open to this discriminated group even though, of course, discrimination still exists in the private sphere.

CHALLENGES AND CONTROVERSIES

For all its success and achievement, Sulabh has had its share of challenges and controversies.

In 2000, the *Times of India* reported the blacklisting of Sulabh by the Uttar Pradesh government⁶⁴ but Sulabh was able to provide a letter by the government that proved otherwise.

Then in 2004 and 2010, the *Hindu* and United News of India respectively reported that the Municipal Corporation of Delhi (MCD) councilors had alleged that the toilet complexes under Sulabh were in a bad shape, a claim that Pathak refutes as a baseless allegation.⁶⁵ Pathak countered that the toilets that Sulabh had been assigned to construct and maintain under the Yamuna Action Plan were well executed, contrary to the toilets maintained by other NGOs. In fact, the latter were eventually assigned to Sulabh for maintenance.

In 2007, the *Hindustan Times* reported infighting between Sulabh's top management and its volunteers, Yashwant Kumar and Heeranand Jan, apparently over the INR100,000 (US\$1,860) daily revenue that its 167 complexes earned.⁶⁶ It was reported that management had decided to centralize control of the complexes because of the large amount of money involved, to the unhappiness of the volunteers. This report came as a surprise to Pathak who had never heard about such an incident.

Initially, Pathak challenged the reports; he filed defamation suits against five newspapers and periodicals for publishing incorrect news. All of them withdrew and expressed regrets except one, Hindi weekly magazine *Blitz*, which received a small fine and is now wound up. After these five cases were settled, Pathak decided that the defamation suits were not worth the distraction and he chose not to respond to rumormongers.

TOILET HARDWARE AND HEARTWARE

Sulabh has come a long way.

To date, 1.3 million Sulabh pour-flush toilets and more than 8,000 public toilet-cum-bath complexes have been built in India, raking in an annual revenue of at least INR 550 million⁶⁷ (US\$9 million).

It has built what may be the world's biggest toilet-cum-bath at Shirdi, Maharashtra.⁶⁸ Boasting facilities that include 120 water closets, 108 bathing cubicles, 28 special toilets, and 5,000 lockers, the complex is capable of serving approximately 30,000 users daily. With such capacity, the building is able to meet the needs of the Shri Sai Baba Sansthan, a religious organization that hosts millions of visitors at its holy shrine every year.

Sulabh does not just stop at fecal collection and removal through its toilets; it is also a pioneer in the treatment and reuse of human excreta to generate useful biogas from public toilet complexes. For this purpose, Sulabh has built 200 biogas plants.

Given its niche invention and scale of intervention, it made sense for Sulabh to set up an international sanitation academy in 2005.⁶⁹ It was then able to spread technical and procedural knowledge accumulated over the years to other nonprofit organizations, health officers and government officers. Countries that have benefited from Sulabh's model include Afghanistan, South Africa, Bhutan, Nepal, Laos, Ethiopia, and ten other African countries.⁷⁰

Augmenting its large hardware footprint, Sulabh is a massive organization of 50,000 volunteers, researchers and sociologists. In addition, 10,000 scavenger families have been adopted by well-known personalities in India.⁷¹ Its vocational training institutes have thus far provided training, and opened up new job opportunities, for 120,000 manual scavengers.

The lighter side of Sulabh also informs and teases the public on toilet education. The Sulabh International Museum of Toilets in Delhi, the first of its kind in the world, uses artefacts, posters

and materials to tell the story of the development of toilets through the ages. A visitor will be informed and entertained by the various creations of men, some bizarre and others intricate, in their quest to answer the call of nature.

Pathak's work has not gone unnoticed, to say the least. To date, Sulabh has accumulated 51 awards, including prestigious international awards such as the UN Habitat's Scroll of Honour in 2003, the International Human Rights' Award in 2006, and Legende De La Planete Congress Fondateur Jeux Ecologiques at UNESCO, Paris in 2013.

LOOKING TO THE FUTURE

Indeed, Pathak believes that the strength of Sulabh lies in its software (ideology and spirit) that, in turn, helps drive the hardware (technology and business). He sees Sulabh as a social movement that can never be clearly defined because it evolves with opportunities and momentum. With this momentum, he foresees publishing an encyclopedia on sanitation and setting up a sanitation university in the near future.

Pathak recalls Mahatma Gandhi's words: "I may not be born again, but if it happens, I would like to be born in a family of scavengers, so that I may relieve them of the inhuman, unhealthy, and hateful practice of carrying night-soil."

As he continues in his efforts to bring basic sanitation to rural India, Pathak also persists in his hopes for the scavenger community and dreams of one day lifting the lives of these wasted humans, once and for all, from out of the dregs of human waste. ■

BRIEF FACTS

BINDESHWAR PATHAK

- 1943 Born in village of Rampur in Bihar, India, to Dr Rama Kant Pathak and Mrs Maya Devi, both of the Brahmin Caste
- 1964 Graduated with a Bachelor of Arts with Honors in Sociology, Bihar National College, Patna
- 1965 Married Amola Pathak
- 1968 Joined the Bihar Gandhi Centenary Celebration Committee
- 1970 Founded Sulabh Shauchalaya Sansthan (now known as Sulabh International Social Service Organisation)
- 1973 Put up the first two Sulabh Shauchalayas for demonstration in the compound of the Arrah Municipality
- 1974 Piloted the pay-and-use concept for public baths and community toilets in India
- 1978 Sulabh methodology and technology received approval from agencies like WHO, UNICEF, World Bank, and several state governments in India
- 1994 Started Sulabh International Museum of Toilets
- 2003 Started Sulabh University

AWARDS & RECOGNITION

- 1984 K. P. Goenka Memorial Award
- 1991 Padma Bushan Award
- 1992 The International Saint Francis Prize for the Environment “Canticle of All Creatures”
- 2000 UNCHS’ Dubai International Award for “Best Practices for Improving the Living Environment”
- 2003 UN-Habitat’s Scroll of Honour
UNEP’s Global 500 Roll of Honour Award
Indira Gandhi Paryavaran Puraskar
- 2008 Energy Globe’s National Energy Globe Award
World Toilet Organization’s Hall of Fame Award

2009 Stockholm Water Prize Laureate

2013 Legend of Planet Award

INDIA AT A GLANCE

LAND AREA	2,973,193 sq km or 1,147,956 sq miles
POPULATION	1.2 billion
GDP	US\$2.067 trillion or US\$1,630 per capita
ETHNIC GROUPS	Indo-Aryan 72%, Dravidian 25%, Mongoloid and Others 3%
CASTES⁷²	Brahmin 5%, Others (Buddhists or Christians) 9%, Muslims 10%, Scheduled tribes (other oppressed groups) 13%, Scheduled castes (Dalits and others) 13%, Other upper castes (warrior or merchant castes or others) 21%, Other backward castes (groups that are economically behind) 28%
RELIGIONS	Hindu 79.8%, Muslim 14.2%, Christian 2.3%, Sikh 1.7%, Others and unspecified 2%
LANGUAGES	Hindi, Bengali, Telugu, Marathi, Tamil, Urdu, Gujarati, Kannada, Malayalam, Oriya, Punjabi, Assamese, Maithili, Others
GOVERNMENT	Constitutional republic, Federal republic, Parliamentary system
CAPITAL	New Delhi

ENDNOTES

- 1 The human scavengers are those who remove human waste. They are also called “untouchables” and form one part of the Dalits, the lowest group in the Hindu caste system.

The impure (normally farmers who cultivate the fields, grow grains, feed cattle etc.) form the other part. The impure are acceptable to members of the upper caste who can touch them while working with them or come into contact with them, but they will not drink water from their hands and will not eat with them.

On the other hand, the human scavengers are regarded as totally untouchable—they cannot be touched at all by members of the upper caste. These social practices still continue despite laws that ban this discrimination.

- 2 Manual scavenging refers to the removal of animal or human waste using brooms, tin plates and baskets from dry latrines and carrying them to disposal grounds.
- 3 Brahmins are the highest level in the Indian caste system while the Dalits are at the lowest level. The Indian caste system is further explained in the section: “Caste—An (In)human Invention.”
- 4 According to his biography, Pathak graduated with a degree in Sociology.
- 5 Locals remember this place as one where the young Mahatma Gandhi, the founder of modern India, had initiated the iconic non-violent civil disobedience, or Satyagraha, against the planters of Indigo.
- 6 Ayurvedic medicine is a system of traditional medicine native to Indian subcontinent. It is a form of alternative medicine.
- 7 The cousin was Chandra Mohan Jha, who now works in Sulabh, and the family friend, a lawyer, was the late Dhruv Narayan Singh. They had initially persuaded him to take on the job of secretary at the Gandhi Museum that would supposedly pay more than working as a lecturer, but the job did not materialise, and Pathak joined the Bihar Gandhi Birth Centenary Celebration Committee, the office of which was in the same building as the Gandhi Museum.
- 8 A group dedicated to celebrating the birthday of Mahatma Gandhi and promoting a more just and integrated society.
- 9 Also known as the Balmiki Mukti Cell, this unit was part of the Bihar Gandhi Birth Centenary Celebration Committee. This committee was led by eminent leaders of the state in memory of Mahatma Gandhi, founder of the Indian nation and was implemented in every state. The committee drives four programs: (1) Gandhi Sandesh Prachar (propagation of the ideals of Mahatma Gandhi), (2) Bhangi Mukti Upsamittee (liberation and rehabilitation of scavengers), (3) Mahila Avam Bal Kalyan Upsamittee (welfare of woman and child), and (4) Tarun Shanti Sena (youth peace force).

- 10 Mahatma Gandhi (1869-1948) was the preeminent leader of Indian nationalism. He fought for and won independence for India from the British on the basis of a non-violent civil rights movement. One of Gandhi's causes was the untouchables. He made the eradication of untouchability one of his goals in the national movement. He even tried to integrate them into the National Indian Congress and the freedom movement. He stayed with them in their colonies, sharing meals, and performing all the tasks of cleaning with them.
- 11 The terms Harijans and Dalits were coined by Mohandas Gandhi and B R Ambedkar respectively to reflect changed attitudes in the broader political environment, <http://www.letindiadevelop.org/irochtc/Dalit%20or%20Harijan.pdf>. There are now many references to SC and ST in India, in newspapers, government notifications, etc. These initials refer to Scheduled Castes and Scheduled Tribes—scheduled is what Harijan is translated into today. There are 59 scheduled castes according to The Constitution (Scheduled Castes) Order, 1950 1 (C.O.19) Part XV. <http://lawmin.nic.in/ld/subord/rule3a.htm>.
- 12 Manual scavengers exist under different caste names throughout the country, such as the Bhangis in Gujarat, the Pakhis in Andhra Pradesh, and the Sikkaliars in Tamil Nadu.
- 13 The official number of untouchables varies. A figure of 700,000 was given in Census 2011 and reported in “Draft Bill Against Manual Scavenging with Stricter Provisions in Monsoon Session,” *Daily News*, July 16, 2012. A figure of one million untouchables was reported in 2002 in the 27th session of the UN Working Group on Contemporary Forms of Slavery, Sub-Commission on the Promotion and Protection of Human Rights, the United Nations Commission on Human Rights, <http://www.mailamukti.org/Finle%20-%20Material/12/United%20Nations%20Commission%20on%20Human%20Rights,%20Geneva.pdf>. There are other unofficial estimates of higher numbers.
- 14 The modern flush toilet and sewerage system is the fruit of cumulative innovations in sanitation technology, from as early as 1000 BC in the Bahrain Island where the remains of flush-type toilets have been found. The invention of the water closet in the 16th century by John Harrington and its subsequent developments in the 18th century made indoor toilets possible. Efforts were made to suppress the odors, to perfect the flush technology, reduce the amount of water used and channel water so that the surrounding areas remained clean and hygienic.
- 15 Different toilet types include:
 - a. The chamber pot, which is a bowl-shaped container with a handle, and often a lid, kept in the bedroom under or beside a bed for use as a toilet at night.
 - b. The close stool, used from the sixteenth century until the introduction of indoor plumbing, which was an enclosed cabinet or box at sitting height with an opening in the top and a chamber pot below to receive the feces when the user sat on it to evacuate.
 - c. The pit toilet, which collects the human excrement in a large container

- or trench (which ranges from a simple slit trench to more elaborate systems with ventilation).
- d. The dry toilet, which uses limited or no water for flushing and ranges from a pit toilet (hole in the ground and using soil to cover the waste), a composting toilet (mixes excrement with decomposition materials), to an incinerating toilet (burns the increment). It uses soil instead of water to cover the waste.
 - e. The septic tank, which is part of a small-scale sewage treatment system where there typically is no connection to main sewerage pipes. The tank allows feces to decompose using the already present microorganisms.
- More on the evolution of toilet technology can be found in Sulabh International Museum website, <http://www.sulabh toiletmuseum.org/pg02.htm>.
- 16 Willie Cheng, "Profits for Nonprofits," in *Doing Good Well: What Does (and Does not) Make Sense in the Nonprofit World* (Singapore: John Wiley & Sons, 2009).
 - 17 Urine is nearly sterile and low in pathogens, and can be readily used as a fertilizer or discharged with less risk to the community. Human feces, which are high in pathogens, can be either composted or dried and burned as biofuel.
 - 18 814 million people in India do not have access to improved sanitation and this number includes those who use flush toilets that are not connected to sewer systems or pit latrines. This number makes up more than half of the 1.205 billion population in India (about two-thirds). See UNICEF and World Health Organization, *Progress on Drinking Water and Sanitation: 2012 Update* (New York, NY: UNICEF and World Health Organization, 2012), http://www.wateraidamerica.org/includes/documents/cm_docs/2008/t/tacking_the_silent_killer_the_case_for_sanitation_1.pdf.
 - 19 The sewerage system was introduced in India in the 1870s but the high capital cost of construction exhausted the five-year budget allocated and barely 232 out of 4800 towns and cities had pipes built. See S. P. Singh, *Sulabh Sanitation Movement: Vision-2000 Plus* (New Delhi: Sulabh International Social Service Organisation, 2005).
 - 20 For example, as much as 150,000 litres of water was needed to transport just 250 litres of excrement for a family of five. See S. P. Singh, *Sulabh Sanitation Movement*.
 - 21 Pathak said that he received two valuable resources that were to form the foundation of his ideas on sanitation. One was a book by Edmund G. Wagner and J. N. Lanoix, *Excreta Disposal in Rural Areas and Small Communities*, (World Health Organization, Monograph Series No. 39, 1958) and the other, Rajendra Das, *Sulabh Swachch Shaulchalya* (Rajendra Lal Das, 1968).
 - 22 According to Pathak, other toilets typically consume 10–14 liters. See S. P. Singh, "Sulabh Sanitation and 'Two-Pit System,'" Sulabh International Social Service Organisation, <http://www.sulabhinternational.org/content/two-pit-system>.

- 23 Adapted from “Two-Pit System,” Sulabh International Social Service Organisation, <http://jacquelinecieslak.com/sulabhintl/content/two-pit-system>
- 24 Between 1967 and 1970, the Committee directed all local bodies in Bihar to convert their bucket privies into hand flush latrines and to connect them either to sewer-lines or leaching pits. The government provided a 50 percent subsidy and a 50 percent loan for households that wanted to embark on this project while the Committee propagated, facilitated and oversaw the implementation. Despite these efforts, Pathak still could not see visible impact.
- 25 The organization was first set up as “Sulabh Shauchalaya Sansthan” which, in Hindi, means “Institute for easy access to sanitation.” It was later renamed “Sulabh International” and then “Sulabh International Social Service Organisation.” Its website is at <http://www.sulabhinternational.org>.
- 26 Then Congress MLA, Mr Bhagdeo Singh Yogi, a friend of Pathak, had written a letter to then Prime Minister Indira Gandhi informing her of Sulabh’s sanitation idea that could remove scavenging and better utilize government funds. Within ten days, Indira Gandhi had directed the Chief Minister of Bihar to take a personal interest in this matter. Pathak moved from municipality to municipality with his idea and managed to convince two local officers in Patna to build 200 Sulabh toilets.
- 27 The challenge of building a public toilet in 24 hours and recovering the cost of operation through “pay and use” (the construction cost was paid by the government) was posed by Mr Rajdeo Narain Singh, the administrator of the Patna Municipal Corporation in Bihar.
- 28 “Africa: 15 Percent of World’s Population Practice Open Defecation,” *Ghanaian Chronicle*, January 24, 2013.
- 29 “Experts Say Millions of People Defecate in the Open,” *Modern Ghana*, October 6, 2011, <http://www.modernghana.com/news/354651/1/experts-say-millions-of-people-defecate-in-the-ope.html>.
- 30 By the end of 2011, there were 2.5 billion people who lacked access to an improved sanitation facility. Of these, 761 million used public or shared sanitation facilities and another 693 million used facilities that did not meet minimum standards of hygiene (unimproved sanitation facilities). The remaining 1 billion (15 percent of the world population) still practice open defecation. From *Progress on Sanitation and Drinking Water: 2013 Update* (New York, NY: UNICEF and World Health Organization, 2013), http://apps.who.int/iris/bitstream/10665/81245/1/9789241505390_eng.pdf.
- 31 *Progress on Sanitation and Drinking Water: 2013 Update*.
- 32 Benin 54%; Burkina Faso 58%; Cambodia 58%; Chad 65%; Mauritania 51%; Namibia 52%; Niger 78%; Sao Tome and Principe 55%; Somalia 52%; South Sudan 77%; Togo 54%.

- 33 Payal Gwalani, "India Tops the World in Open Defecation," *Times of India*, February 24, 2012, http://articles.timesofindia.indiatimes.com/2012-02-24/nagpur/31095007_1_open-defecation-contamination-water-technology-and-management.
- 34 In 2012, approximately 80 percent of schools visited had separate provision for girls' toilets. Of schools that had this separate provision, close to half had useable girls' toilets. See ASER Centre, Annual Status of Education Report (ASER) 2012 Rural: Facilitated by Pratham (New Delhi: ASER Centre, 2013), <http://www.pratham.org/file/ASER-2012report.pdf>. Completing its 8th year, ASER is the largest annual household survey of children in rural India that focuses on the status of schooling and basic learning. In each rural district, ASER is facilitated by Pratham and conducted by local organizations, institutions and concerned citizens. ASER 2012 reached 567 districts, more than 16,000 villages, nearly 330,000 households and about 600,000 children between the ages of three and 16.
- 35 *Tackling the Silent Killer: Case for Sanitation* (London: Water Aid, 2008), http://www.wateraidamerica.org/includes/documents/cm_docs/2008/t/tacking_the_silent_killer_the_case_for_sanitation_1.pdf.
- 36 *Squatting Rights: Access to Toilets in Urban India* (Mumbai: Dasra & Forbes Marshall, 2012).
- 37 *Water and Sanitation Programme, Economic Impacts of Inadequate Sanitation in India* (New Delhi: Water and Sanitation Programme, 2011), <http://www.wsp.org/sites/wsp.org/files/publications/WSP-esi-india.pdf>.
- 38 *Squatting Rights: Access to Toilets in Urban India* (Mumbai: Dasra & Forbes Marshall, 2012).
- 39 An improved sanitation is defined by the UN as one that hygienically separates human excrement from improper human contact. The following are considered "improved sanitation": flush toilets with connection to a sewerage systems or septic tanks, composting toilets, and the Sulabh toilets. Those that are not considered "improved" are public or shared latrines, pit latrines without slabs, open pit latrines, bucket latrine, and no facilities.
- 40 The Millennium Development Goals (MDG) are eight goals that 189 UN member states have agreed to achieve by the year 2015. The goals are aimed at reducing poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women, <http://www.millenniumproject.org>. The MDG related to sanitation is Goal 7C: to halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation (which requires increasing the proportion of urban population with access to improved sanitation).
- 41 2.5 billion people in the world still lack sanitation with India being the biggest of any country followed by China. One in two in India (or close to 600 million people) still does not have access to toilet facilities. Sekhar Bonu and Hon Kim, "Sanitation in India: Progress, Differences, Correlates

and Challenges,” *India Occasional Paper Series 2*, (Manila: Asian Development Bank, 2009).

- 42 For example, India allocates less than one percent of its GDP to sanitation as compared to five percent to education. The disparity in allocation can be seen in other countries as well. Refer to John Garret and Tom Slaymaker, “Off-Track, Off-Target: Why Investment in Water, Sanitation and Hygiene is Not Reaching Those Who Need It Most” (New York, NY: Water Aid, 2011).
- 43 WaterAid (<http://www.wateraid.org>) was first set up as a response to the UN International Drinking Water & Sanitation decade (1981–1990). It now works in 27 countries worldwide.
- 44 Garret and Slaymaker.
- 45 Ibid.
- 46 These views are less rigid in the case of using excreta for agriculture. For more, refer to “10 Things You Need to Know About Water,” UN Water, <http://www.unwater.org/wwd08/docs/10Things.pdf>.
- 47 What started as a voluntary work project in post-disaster Orissa has evolved into a 279 man-strong nonprofit organization that addresses community health, education, livelihoods, renewable energy, and sanitation.
- 48 A core fund (also called corpus) plans for the future growth of the community by collecting an average of Rs.1000 per household, which is invested into the future expansion of the sanitation system to deliver water and sanitation services to new households in the village.
- 49 Water for People (<http://www.waterforpeople.org>) was founded in 1991 by the American Water Works Association to support the development of locally sustainable drinking water resources, sanitation facilities and health and hygiene education programs in developing countries.
- 50 The United Nations Children’s Fund (<http://www.unicef.org>) works in more than 90 countries to improve water supplies and sanitation facilities in schools and communities, and to promote hygiene using a mix of implementation, partnership, and funding.
- 51 Software encompasses activities that focus on the hygiene and/or sanitation promotional activities, policy development, training, monitoring and evaluation. In short, everything that allows a program, project or intervention to take place. Hardware includes provision of facilities and services in the safe disposal of human urine and feces.
- 52 The IRC International Water and Sanitation Centre (<http://www.irc.nl>) is the oldest known platform and was initiated by the World Health Organization and the Dutch government in 1968 before transitioning to become an independent nonprofit organization serving Sub-Saharan Africa and South India.

- 53 The Water Supply and Sanitation Collaborative Council (<http://www.wsscc.org>) is an international coordinating body to enhance collaboration in the water supply, sanitation and hygiene sectors, specifically in order to attain universal coverage for poor people around the world.
- 54 The Water and Sanitation Program (<http://www.wsp.org>) was initially started as a UNDP-World Bank Low-Cost Water Supply and Sanitation Project in 1978. It is now a multi-donor partnership administered by the World Bank to enable poor people to access basic and affordable sanitation structure.
- 55 The government outlawed manual scavenging more than 20 years ago and continues its efforts to provide sanitation to the vast country. It is committed to co-fund and co-deliver sanitation services. It outlawed manual scavenging in 1993 and in a historic ruling by the Supreme Court in 2009, government-appointed District Collectors would be held responsible if this practice persists. “Manual Scavenging,” International Dalit Solidarity Network, <http://idsn.org/caste-discrimination/key-issues/manual-scavenging/>. In a bid to clean the country's streets, roads and infrastructure, the government has been launching campaigns aiming for total sanitation in the country, the latest of which is known as Swachh Bharat Abhiyan or Clean India Mission. The components of this campaign includes the construction of dry pit latrines at a heavily subsidised rate for the low-income households and setting up of sanitary marts. Refer to Government of India's Ministry of Urban Development, “Swachh Bharat Mission,” <http://moud.gov.in/SwachchBharat>.
- 56 “India's Sulabh Gets Top UN Consultative Status,” Indo-Asian News Service, November 3, 2011.
- 57 The program initially started with a whole-of-town approach and then moved on to the state government level.
- 58 These were implemented with help from the Ministry of Welfare of the Government of India, the Welfare Department of the Government of Bihar, and the Bihar State Scheduled Castes Development Corporation.
- 59 Among them were the then Union Deputy Commerce Minister, Mr Salman Khurshid, Planning Commission member Ms Chitra Naik, *Times of India* Editor, Mr Dilip Padgaonkar, and the former Prime Minister, Mr I. K. Gujral.
- 60 The school provided general and theoretical education, compulsory vocational education (knowledge of office management, shorthand, typing and computer training), and optional vocational education (intensive training in specific vocations). The school website is at: <http://sulabhpublicschool.com>.
- 61 “Nai Disha” means “New Directions.” Further information on the centre is at “Rehabilitation and Alternate Livelihood of Scavenger Women” at Sulabh's website, <http://sulabhinternational.org/?q=content/nai-disha>.

- 62 In 2008, the United Nations Department of Economic and Social Affairs invited Sulabh International Social Service Organisation to host “Mission Sanitation,” a cultural event to raise awareness and accelerate the progress towards improved sanitation worldwide. A fashion show was organized where rehabilitated women scavengers, accompanied by prominent models wearing Indian garments embroidered by them, walked the ramp in the United Nations with great pride and grace. The liberated women scavengers also visited the Statue of Liberty in New York to declare their liberation from manual scavenging. See “Timeline of Sulabh History,” Sulabh International Social Service Organisation, <http://www.sulabhinternational.org/content/timeline-sulabh-history-0>.
- 63 The quote is from Sulabh collaterals and first used in the context of the 2008 New York visit by the scavengers women of Alwar. Ibid.
- 64 “Government Blacklists Sulabh,” *Times of India* News Service, December 15, 2000. It was reported that financial rules had been flouted in the allotment of the contract to Sulabh. Sources alleged that most of the money allocated for the construction was deposited in banks and the work undertaken was with the interest earned.
- 65 “Sulabh Open to CBI Probe,” *Hindu*, July 25, 2004; “Sulabh Turns Down MCD’s Offer to Build Toilets in Delhi,” *United News of India*, March 15, 2010.
- 66 “Sulabh in the Eye of the Storm,” *Hindustan Times*, June 28, 2007.
- 67 See “Sulabh International Social Service Organisation,” Presentation transcript available at <http://www.slideshare.net/gopalbagra/sulabh-international-social-service-organization>.
- 68 See “World’s Biggest Toilet-cum-Bath Complex,” Sulabh International Social Service Organisation, <http://www.sulabhinternational.org/content/worlds-biggest-toilet-cum-bath-complex>.
- 69 The Sulabh International Institute of Technical Research and Training was set up in 1985 as a wing of Sulabh International Social Service Organisation. In 1993 it was registered as Sulabh International Academy of Environmental Sanitation & Public Health. Later on in 2005 the name was changed to International Academy of Environmental Sanitation & Public Health).
- 70 “Sulabh to Launch Sanitation Project in Uganda,” *Indo-Asian News Services*, January 16, 2012.
- 71 See “Liberation of Scavengers,” Sulabh International Social Service Organisation, <http://sulabhinternational.org/content/liberation-scavengers>.
- 72 More precise figures are not available since they are gotten from a secondary source Eric Bellman, “Reversal of Fortune Isolates India’s Brahmins,” *Wall Street Journal*, December 29, 2007. Source data is from the Center for the Study of Developing Societies, 2004 National Election Study.