# Shit Happens

Contributed by Keith Farnish for Culture Change
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Where will you go when the sewers clog up? Where will you go when the porcelain finally cracks? Where will you go when the Toilet Duck quacks its last?

Let's go back to the beginning...

We all eat and drink without exception; the food is partially broken down by acids in the stomach then transferred to the small intestine where the moisture, along with that from what we drink, is squeezed out to be cleaned by the kidneys and washed around the body to perform all of the vital functions that it is required for.
When returned to the kidneys it is expelled via the urethra to the outside world. Solid materials are also used, except that only the useful food matter is absorbed into the body: anything not used -- excess fats, inert matter, fibers and a large weight of bacteria is passed through the gut and out of the body.

Piss and shit; that's what it’s about. It has to go somewhere, and throughout the history of humanity, different cultures have found different ways to deal with it. This story is about our tribal nomadic and village past; our civilized present; our self-determined future. It is not quite the story of shit, but a salutary lesson in how we must learn to treat something so fundamental to what we are.

## Before The Cities

Highlighting the hygiene aspects of shit (piss is pretty much sterile, containing a mixture of water, urea and salts, so is not so much of an issue) is very enlightening at this stage because, to be quite frank, non-civilized cultures had it pretty well sorted right from the start. This is not just a human thing: observe a field of cattle, and you will see one corner which is heavily used for defecation. Cows have toilets, as do most domesticated animals -- and not for no good reason; our instinct of disgust is deeply rooted in what we understand to be unhealthy. A pile of rotting meat, writhing with maggots, or a steaming pile of fresh shit are immediately offensive to most of us, whatever culture we live in.

The phrase: “Don’t shit in your own back yard” (or variations upon) is sound advice, if your back yard is anywhere near where you grow, pick or prepare food; wash yourself and your things or, and probably most importantly, draw water for drinking. Some tribal cultures are still nomadic, barely settling in any one location, making the issue of waste disposal of little consequence: a Bedouin will dig a hole in the ground and cover it up with sand or stones when ready to move on. Village life, on the other hand requires more thought, unless you have a very large river nearby, such as the Amazon or the Zambezi, in which case all the little fishies get a regular meal, and the water stays pretty much the same along its course, as long as there is only the occasional village.

Away from the flowing river (and believe me, rivers really are among the best things to live near to from a survival point of view) there comes the issue of standing waste: unlike the “ocean drop” toilets used by the Kuna Indians of Panama, if you live near to a even a decent sized lake it doesn’t take long for your local wash area to become contaminated with enterococci and other faecal bacteria. You certainly don’t want to be drinking anything from a lake that is used for shitting in. In fact, what is most typical is for tribal persons to simply leave the village, have a crap in a convenient bit of undergrowth (with accompanying leaf moist-wipes), and return much lighter. Something for the beetles to feast upon.

In this context, it is just waste to be disposed of; but in more settled cultures, especially those that practice food cropping of any scale, the concept of “humanure” becomes relevant. Joseph Jenkins, author of The Humanure Handbook  has the following to say about this most wonderful of substances:

“Human waste” is a term that has traditionally been used to refer to human excrements, particularly fecal material and urine, which are by-products of the human digestive system. When discarded, as they usually are, these materials are colloquially known as human waste, but when recycled for agricultural purposes, they’re known by various names, including night soil when applied raw to fields in Asia.

Humanure, unlike human waste, is not waste at all – it is an organic resource material rich in soil nutrients. Humanure originated from the soil and can be quite readily returned to the soil, especially if converted to humus through the composting process.

Anyone who grows vegetables on a regular basis will be comfortable with the idea of using horse manure as a soil conditioner, hence the old joke: “What do you put on your rhubarb?” “Horse shit.” “Really, I prefer custard.” It’s not that far a step from handling horse shit to handling human shit, albeit having given a bit more time for the bacteria and other micro-organisms to have done their work. Our cultural attitude to shit has played a significant part in shaping how we deal with it.

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It wasn’t that long ago that the most common type of toilet in the USA was the Outhouse. With their distinct crescent-moon door cut-outs, outhouses have carved themselves a unique furrow in the American cultural pantheon. Yes, some of them used and (where they still exist) still use cesspits, but such a large bacterial digester was a comparative luxury for most rural dwellers. Deep holes in the ground, covered by seats (a.k.a. “long drops”) were the norm, and still exist in vast numbers today throughout the Mid-West USA, Australia (traditionally called “Dunnys”) and, as a standard form of settled rural facility, in many less industrialised parts of the world.

In theory, given a large enough hole and not too many visitors, such a “primitive” facility can operate in perpetuity. But civilized cultures are based around cities, and so with the advent of cities a simple hole in the ground, bush outside the village or flowing river were no good at all.

Particularly the river.

The Civilized Way Of Going

It’s impossible to imagine the stench of an unsanitary city unless you are actually there. The heated slums of Mumbai and Manila still provide a modern testament to the past of Western cities, where everywhere that was not surrounded by sizeable gardens reeked with the stench of shit. King Edward II described fourteenth century London thus:

When passing along the water of Thames, we have beheld dung and lay stools and other filth accumulated in diverse places within the city, and have also perceived the fumes and other abominable stenches arising therefrom, from the corruption of which great peril to persons dwelling within the said city will, it is feared, ensue.

Quite frankly, millions of people needing to piss and shit in a densely populated place is an urban horror, rife with not just the smell, but diseases of many types, not least cholera and typhoid – the twin curses of mixing faeces with water and allowing to become fetid. For 500 years, the people of London somehow tolerated the filth; no doubt had you been born into that smell it would have been barely noticeable, and since there was little awareness of micro-organisms, why would anyone consider such a ubiquitous thing a serious cause of illness? Only when Jon Snow traced the source of a cholera outbreak to a water pump in Broad Street in 1854 and showed that through the simple act of removing the handle could a local epidemic be prevented, did authorities start to take sewerage seriously.

So began the great Victorian sewer systems of Joseph William Bazalgette; a model for all other industrial cities. Forward to the 21st century, and the streets of most cities stink only of diesel and gasoline, while the confluence of these cities' waste runs beneath in head-height pipes, to be treated in great settling pools many miles away. Sounds wonderful, doesn't it? The gleaming sewers of the West: something for all cities to aspire to.

Only it's not quite that simple. The rich cities can afford these systems, but even then many of them still discharge their "low grade" waste into the oceans, reaping a pathogenic soup in the waters close to the outfalls. The poor cities, in particular those that are growing at dizzying speed, can only imagine systems capable of dealing with the increasing volume of waste that pours into ditches, rivers and seas. And even with the finest of sewerage systems, things can go badly wrong, such as in 2004, when 600,000 tonnes of raw sewage was dumped into the Thames during a rainstorm.

That said, when those in the "developed" world poo and then flush, what they are usually left with is a pretty clean and pathogen free toilet; which is handy, not only to prevent disease, but because we have an astonishingly bad relationship with what comes out of our backsides. I mentioned our cultural attitude to shit earlier on, and it's worth reflecting on the lengths we usually go in Industrial Civilization to prevent others from witnessing our bodily functions: we go to a different room, we lock the door, we feel embarrassed if anyone hears our farts echoing in the bowl, and even more so if we leave any sulphurous gas behind for others to enjoy. Then I think of the place where my mother was born, the small Channel Island of Guernsey, where I first encountered a toilet seat with not one, but two holes! It came as a complete shock to me that people would not only shit together, but have a conversation to pass the time (and the paper) as though it was the most natural thing in the world. How many people in a modern Western city, or an Eastern one for that matter – for the modern Japanese attitude to bacteria verges on the paranoid – would happily sit on a compost toilet, knowing what was beneath them?

After The Fall

Over 50% of the world's population live in urban areas, and that's increasing at a rapid rate; one day the systems will start to fail and the sewage will back up, either because of energy failure or simply that the stressed out system can't cope with the influx of waste when we get up, or before we go to bed. If the sewers fail, you won't be using your toilet, I can guarantee that.

In times not so long into the future, water will also be rationed and the gallons we once used to flush down the pan will be restricted: "if it's yellow, let it mellow; if it's brown, flush it down," will be a mantra that might serve inhabitants well for a while, but eventually things will have to change fundamentally.

It's a strange thing, but as the "civilized" world, suffering from peak oil and system overload, looks across to the so-called "less developed" people – those who haven't been crammed into cities by the theft of their land and the promise of material wealth – there might be a sense of something primitive, a yearning for a simpler life. In rural areas without the density of population that necessitates mass waste removal, collapse might not even be that big a deal, certainly when it comes to defecation. Dig a hole in the back yard and put a privy over it: maybe even cut a crescent moon in the door. Or perhaps install a compost toilet that reinstates the terminally broken nutrient cycle and turns "waste" into "humanure."

Even if you live in a suburban area, you can start preparing for the loss of your gallons of toilet water, and the packing up of the electrically pumped sewerage system. I have a craving for an outside toilet, and it's not such a stupid idea regardless of the current state of things; after all who of us that really care for our surroundings feels nothing when we

flush away our waste and send it to the great unknown – and who wouldn't want a beautifully crumbly supply of humus for growing veg in?

Those of you living in apartment blocks, and other places without gardens; yes, act on the yellow and brown mantra, but start thinking of alternatives, such as indoor dry toilets – they do exist, even if they are pretty bulky. Personally, though, I wouldn't want to be in a city when the sewers are blocked up and the water stops flowing, because although you may have a neat solution, you can guarantee that few other people will. Nor will anyone in authority make serious long-term preparations: knowing the hierarchical, commerce-led system as I do, I am almost certain that no authority would dare to suggest, or respond to suggestions, that we start pooling our humanure in giant municipal digesters, or we use communal toilet facilities.

That would be acceptance that Industrial Civilization can fail...an acceptance that uncivilized people had things right all along.

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Editor's note: I informed Keith Farmish that in Portland, Oregon the first public-use composting toilet facility in the U.S. opened earlier this year. We decided that an article on the subject of humanure versus sewage would be a contribution to our movement for a sustainable, regenerative society.

I have seen various well-functioning compost toilets, but the only compost-toilet business I visited was in all places occupying the former studio of Ivan Illich, in Cuernavaca, Mexico. I was given a fun promotional booklet by the proprietor, Cesar Anorve, an eco-architect:

Cesar Anorve has been promoting two chamber (double-vault) dry toilets. (One chamber is used until full, then left to dehydrate while the other is used.) Anorve has added an entrepreneurial element to his efforts by designing and selling attractive toilet fixtures. He collaborates with a nonprofit organization, Espacio de Salud... from the May/June 2001 issue of Dollars and Sense magazine, "Sustainable Sanitation: A Global Health Challenge" by Laura Orlando

Anorve's bowl design allows for immediate separation of urine and feces, sent to different chambers. More on Cesar Anorve's work can be read at Water Treatment & Alternative Technology, y mucho mas en Español: Excellent Examples: Live healthy without hurting others por Lourdes Castillo Castillo, Nov. 2003.

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Keith Farnish's previous articles in Culture Change were Time To Decide What Matters last month and Thinking About The Future last April. With Dmitry Orlove Keith has begun the three-part series on sea level rise, "The Oceans Are Coming"