

Abandonment of potty training in Australian society: Environmental, social and health issues



The euphemistically named “pull-ups” are a visually engaging and increasingly engineered sanitary product designed to capture a market that less than one generation ago was toilet trained at the age of the girl pictured on the packaging.

This product is aimed at children 3-4 years of age (average weight/age charts show only the largest 3 year olds to reach 17 kilos).

The child is portrayed as happy.

It is right that excessive taboos about sanitary products should be avoided, but nappy advertising and packaging like this appear to be advocating the fun, confidence building and lifestyle advantages of the

Potty training in the context of The Restraint Project

Among the subjects that have been covered by The Restraint Project, which examine temperance and self-restraint in Australian society, perhaps the most fundamental is the flight from toilet training that has been witnessed since the 1950s.

This has resulted in children wearing nappies (or “diapers”, in the US literature) for far longer than ever before, leading to a number of suspected harms to:

- The environment
- Community health
- The individual children themselves

The dominant child-rearing philosophy today is, to use the expression made popular by American pediatrician T. Berry Brazelton, to “let children themselves decide when they are ready to use the pot”. As a result of this approach, combined with the availability of labour-saving disposable nappies, only 40%- 60% of children are completing daytime toilet training by 36 months, compared with 97% in the 1950s.

By “restraint” in this context we refer not only to that of the child but what some academics have referred to as the “abandonment of maternal control”¹ over the child’s progress in toilet training. Control of bodily elimination is easily the most early form of restraint that a human or mammal exercises, and the abandonment of toilet training is another way in which we move further to jettisoning restraint.

This paper will suggest causes underlying the flight from toilet training and the harms that result from the phenomenon of extended use of nappies. What it does not do is attempt to adjudicate between the environmental or public health credentials of cloth vs disposable nappies, because it is this very debate that helps to distract the community from the more fundamental issue: duration of nappy wearing and the associated extended state of incontinence associated with it.

¹ “Maternal control” is gender-specific terminology, but should be viewed in the context of when it was written

It will also frame the phenomenon as one of exploitation of consumers by nappy manufacturers, and deprivation of the child's right to be free of its own excrement at the earliest opportunity.

What is the experience of nappy-wearing like?

Few of us can remember wearing nappies. Nevertheless we can imagine the experience.

Cloth nappies are traditionally made of terry toweling, designed to absorb and retain considerable volumes of urine, as well as contain faeces. As such, they suffer from lack of effective sealing at the tops of the legs, which led to the use of "pilchers" – plastic pants worn over the cloth nappies to contain spills. Sometimes, a flannel over pant is preferred for comfort over the plastic pilchers, but is more labour consuming in the laundering of them.

One can imagine the dampness, odour and irritation caused to the skin exposed to urine for periods of time.

Disposable nappy manufacturers have made great progress in developing highly absorbent materials that suck moisture away from contact with the skin. Similar technology has been used in the making of sanitary napkins for women.

Yet despite all marketing attempts to promote the comfort and dryness of their products, the fact remains that nappies are coated in plastic and are therefore hot, with their stretchy elastic side fastening. The two rows of tight elastic around the tops of the thighs (called the "leak guards") appear particularly uncomfortable.

Huggies" "Pull-Ups" Training pants for girls size 4 (17 plus kilograms) are a typical example of such a product.

Concerning the "soft, stretchy sides", according to what standard are they soft? They are far less soft than a cotton underpant. Surely they would also be less soft than a terry toweling nappy. The claims of softness are unsupportable in the face of plain observation. They crunch and crackle as you open them.

Prettily designed, they feature pink love-hearts, lilac bows and the most adorable Minnie Mouse checking herself out in a cheval mirror before setting out in her best dress. A pink filigree border repeating the heart motif completes the design.

The packaging also features an explanation of the theory behind “training pants”, that the bows fade when wet “providing a technique you and your daughter can use together to help her learn to keep her pants dry. Encourage her to keep Minnie’s special bows from fading by going to the potty or the big toilet”. In other words, the child is expected to measure its need to use the toilet by knowing how long it will take to wet the bows. Surely this expectation is unreasonable – is the child to constantly check its nappy by looking underneath its outer clothing?

Contrary to the spurious packaging claims about the training pants assisting a child to learn to keep their pants dry, GP and author Dr Sarah Buckley refers to them as “non-training pants” (telephone interview). In contrast, having children bare-bottomed as often as possible during the training period “heightens their awareness of elimination and speeds up the learning process (sometimes dramatically). They instantly experience cause and effect” (Boucke, 2002 at 139)

Most of us given the choice would prefer to dispense with reliance on sanitary products wherever possible. Feminine tampons were developed to overcome the comfort problems of sanitary napkins.

There is no reason to think children are any different, yet a demonstrated common behaviour among difficult toilet trainers (37% of them) is to ask for pull-ups in which to stool (Schonwald et al, 2004). Moreover, we know from the confessions of adult diaper lovers (below) that some enjoy the sensation of a full nappy. (One blog recommended to those who could not stand the smell of a full nappy, to mimic the sensation by pouring rice cream or soft cheese into the nappy.)

Those children who are not given the early opportunity to shed their nappies are consigned to what some ironically refer to as “the walking toilet” (Buckley, 2002).

Some of what we know about what it is like to wear nappies, we know from “diaper fetishists” tell us about the experience. Fetishists appear to derive pleasure in sensations that others find unacceptably uncomfortable. Their linking of diaper wearing with loss of control (or loss of restraint) requires us to briefly address this aberration.

Nappies and fetishism

Infantilism, including the wearing of nappies by grown men, has long been anecdotally known as a sexual proclivity catered for by specialist prostitutes. It is related to diaper fetishism, but not all diaper lovers are infantilists. They are bundled together under the label AB/DLs (adult babies/diaper lovers) (Pate and Gabbard, 2003). Further research has been published in specialist websites such as <http://understanding.infantilism.org> and <http://infantilism.org> along with blogs on the subject.

Diaper lovers can be male and female, and some self-report as starting wearing nappies again as soon as they reached puberty and were free of parental scrutiny of their toileting.

The crunching and crackling of so-called soft nappies is clearly audible in a video clip on www.youtube.com called "Pampers "Cruisers" Size 7 Diapers", posted on 20 May 2007, and two clips by MettyS called "Vintage plastic diapers, and other diapers" 18 July 2007 and "Vintage plastic diapers, the second" dated 20 August 2007. Such videos are posted by fetishists who are actually attracted by the plasticity of disposable nappies. Related blogs feature comments like

"how I wish they still made the plastic diapers, damn environmentalists! My xgf/mommy used to put me in the Luvs for girls and Pampers for girls, it was humiliating but I loved it. It put me in my place. If I ever hit it big, the plastic diapers will be back. If the diaper companies were smart they'd bring them back, I know there's a demand for them!"

From the limited literature on the subject, it is clear that wishing to relinquish control is one of the key aspects of diaper fetishism (Grey, <http://understanding.infantilism.org>) . As nappies are associated with lack of control, this justifies the inclusion of this study within the overarching Restraint Project.

Pate and Gabbard (2003, at 1936) also speculate that one of the determinants of the adult baby syndrome may be to "avoid the threat of genital sexuality by regressing to an infantile dependent state".

From the internet blogs available on the internet, it seems that older fetishists prefer cloth nappies, suggesting that it is their learned association with their own babyhood that fuels their desire.

Although not all diaper lovers enjoy eliminating into the diapers, many appear to do so. Enjoyment of incontinence is a strong motivator for them. Some describe wearing full nappies around in public places so that others may see they are wearing them, and even see that the nappies are soiled. Others who are repulsed by the odour of excrement on their body prefer to mimic the texture of faces by putting creamed rice or soft cheese in their nappies. These practices suggest that adult diaper wearers derive pleasure from what most people associate with repulsion and discomfort. Whether the practice is comfortable, or merely comforting, has not been made clear from the few available studies.

The study of adult diaper wearing may in future yield insights into the possible psychological harms when toddlers form a too strong attachment to nappies, even if the practice (in the opinion of Pate and Gabbard, 2003) does not create subjective distress, does not distress others, and does not involve functional impairments or legal problems (the first two of which are debatable).

What is the science associated with toilet-training?

“Toilet training” and “potty training” were searched using ScienceDirect, Ovid and Google Scholar databases. The following review is based on the most cited journal articles and selected books written for non-expert audiences.

The literature focuses on these main areas:

- Delayed toilet training in healthy children in advanced societies
- Factors associated with delayed toilet training

How long is the period of infantile incontinence being prolonged?

Since the late 1940s when age of initiation of toilet training was under 18 months, this has risen to 21 – 36 months in 2006, according to US and Belgian studies (Bakker and Wyndaele, 2000; Martin et al, 1984; Schum et al, 2002).

The most significant recent survey of acquisition of toilet training age was conducted in the US (NJ Blum et al, 2004). Schum et al (2002) have also studied the sequential acquisition of toilet-training skills in US children. The results may be compared with earlier Swiss studies (First Zurich Longitudinal Study by RH Largo et al, 1977 and the Second Zurich Longitudinal Study), and the Belgian studies by E Bakker and JJ Wyndaele (2000).

All of these studies regarded “staying dry during the day” as a key milestone.

1950s – Brazelton (1962) reported 97% of children achieved daytime dryness by age 36 months, mean age of completion was 28.5 months

However, bowel continence is also being achieved at higher ages.

Despite the popularity of the Brazelton child-centred approach among the Australian as well as other affluent societies, Brazelton’s study provided no empirical outcome data to support it (Horn et al, 2006). Nonetheless a recent US study found that 72% of paediatricians recommended the gradual, passive, more child-centred approach (Horn et al, 2006).

Definitions

The definition of bowel toilet-trained depends on whether one adopts the Pavlovian approach, ie children less than one year can be conditioned to stool in the toilet with only a few accidents, or the “child-oriented” approach pioneered by Brazelton, which focuses on autonomous achievement of this task (Shaikh, 2004). The child-oriented approach is overwhelmingly popular in western society, and has also begun to encroach in less economically developed societies where the practices of intensive toilet training – in particular allowing the child to be unclothed – are considered a stigma of low class and backwardness.

This duality is also reflected in urinary toilet training. The 1977 Swiss study by Largo et al revealed that 80% of children were held on the potty by their mothers by 9 months of age, despite bladder control not being reached until age 3.

The many manuals (eg Boucke, 2002) on toilet training describe a period commencing as early as a few months in which the parent

becomes attuned to noises or facial expressions of impending elimination – which reliably signal the parent to toilet the child. As many authors point out, this does not mean the child has attained sphincter control.

But the question remains, what difference does it make if sphincter control is preceded by a period during which the child is toileted successfully by the parent, eliminating the expense of nappies, the environmental effects, rashes, odour, and the indignity of the child carrying around their excrement?

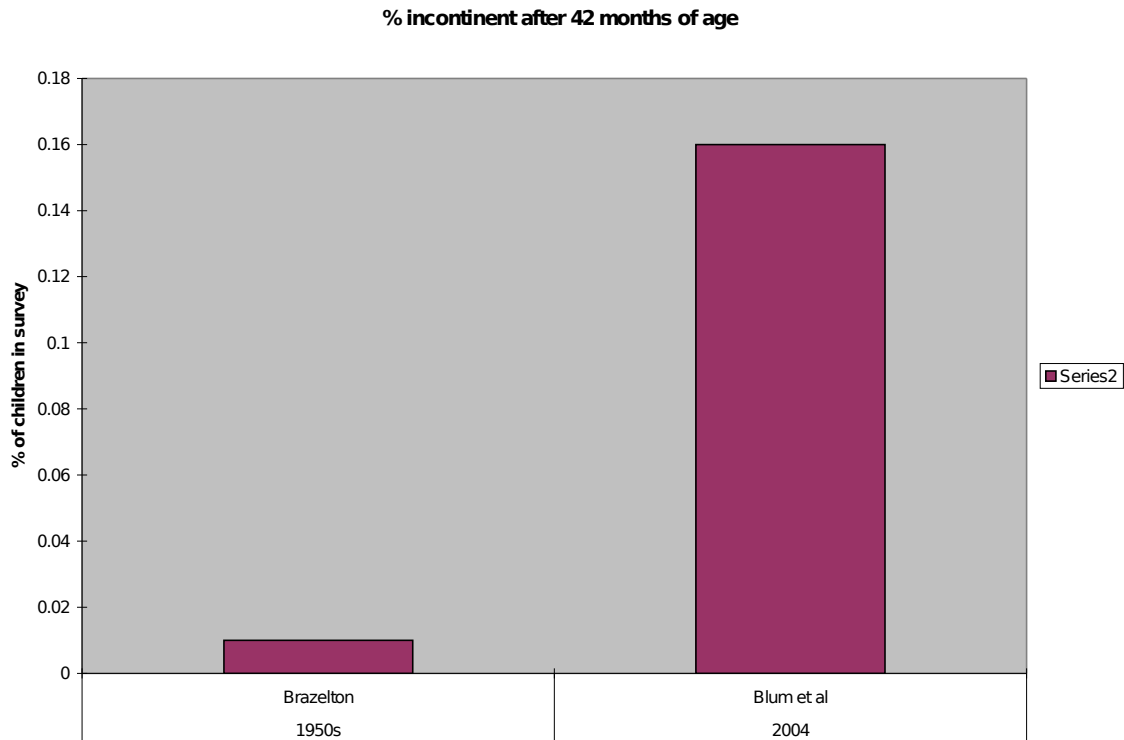
What we observe is that not only has toilet-training been lost to children, possibly the more serious problem is that the knowledge of how to train has been lost to parents and carers.

What does it take to call a child “toilet-trained”?

Blum et al (2004) described daytime toilet training as completed when the child wears underwear during the day and urinates and defaecates in the toilet or potty with fewer than 4 urine accidents per week and 2 or fewer episodes of faecal soiling per month. The

Parental tolerance of “accidents” may influence their perception of whether the child is toilet-trained, or indeed trainable, or not. A parent with low tolerance of accidents may not be amenable to the occasional mopping up of spills, even if it is aimed at achieving independence for the child.

Parental attitudes to accidents and soiling will also affect their stress levels, which in turn create stress in the child.



Factors associated with late toilet training

The three factors consistently associated with late completion of training are late age of initiation, constipation and stool toileting refusal (Blum et al, 2004). Chronic constipation affected 41.7% of late trainers, compared with only 13.2% of children trained before 42 months. However, little is known about the causation of late achievement of toilet training due to non-physiological factors like the attitudes and behaviour of parents, and the interrelationship between constipation and toilet training. It could be that the absence of regular habits and toilet drills contributes to constipation just as it contributes to late age of achievement of toilet training.

Schonwald et al (2004) sought to determine differences between children with difficult toilet training and those who toilet as expected, hypothesizing that those who struggle would be more temperamentally difficult, and likely to have had an anxiety-provoking event associated with training. Their hypothesis was borne out.

While time pressures are frequently cited by parents as reasons they are unable to attempt systematic toilet training, this is contradicted by the evidence that single-parent families have less incidence of late toilet training. If time pressure and lack of spousal support were

factors, then why do single parents have more success in helping their children to achieve continence early?

Parental competence/incompetence

Those who favour the Pavlovian approach accordingly prescribe the systematic approach of toileting drills. On the other hand, the child-centred approach requires the child to be prompted by showing it the potty etc, but little more. The child-centred approach is passive, both on the part of the parent and the child. This may be paradoxical because it is supposed to rely on the initiative of the child, but observation shows that without potty drills the process remains little more than a game to them.

Living as we do, in a society where we are reluctant to apportion responsibility to parents, the notion that parents may be regarded as competent or not because of their ability to toilet train their children would be unpopular to many. Perhaps this reluctance should be reconsidered. On the other hand, while the tasks of the parent administering the child-centred approach may appear easier than the Pavlovian methods, maybe this is not altogether true.

For example, under a Pavlovian regime, the structured approach, or drill, consists of procedures as identified by Foxx and Azrin (1973):

1. Provide distraction-free environment
2. An increased frequency of urination by increased fluid intake
3. Continuous practice and reinforcement of the necessary dressing skills
4. Continuous practice and reinforcement in approaching the toilet
5. Detailed and continuing instruction for each act required in toileting
6. Gradual elimination of the need for reminders to toilet
7. Immediate detection of accidents
8. A period of required practice in toilet-approach after accidents as well as
9. Negative reinforcement for the accident
10. Immediate detection of correct toileting
11. Immediacy of reinforcement for correct toileting
12. A multiple reinforcement system including imagined social benefits as well as actual praise, hugging and sweets
13. Continuing reinforcement for having dry pants

14. Learning by imitating parents and older siblings
15. Gradual reduction in the need for immediate reinforcement and
16. Post-training attention to cleanliness

This so-called “rapid method of toilet training children” was said by the authors to be successful in training healthy children over age 20 months in an average 4 hours of intensive application of the procedures.

In contrast, the child-centred approach is based on indicators of readiness such as (Schum et al, 2002):

- “showing an interest in using the potty” (median ages 24 months for girls, 26 months for boys)
- “staying dry for 2 hours” (26/29 months)
- “indicating a need to go to the bathroom” (26/29 months)

The former method is prescriptive, and certain, but does require some interpretation on the part of the parent eg what is a “distraction-free environment”, or an increased fluid intake. These are indicators that would require some knowledge or skills on the part of the carer. A carer capable of following the regime could be regarded as competent if they carry it out successfully. On the other hand, the child-directed prompts are expressed in very general terms, and in the case of “staying dry for 2 hours” largely meaningless because parents cannot pinpoint the time of urination when their children are in nappies. Under the child-centred approach, there is no question of parental competence because the performance criteria are so vague.

Schonwald et al (2004) hypothesized that the parents would have more dysfunctional parenting styles. Although overall parenting styles did not differ, although “ineffective interactions” and “overreactive” or “lax” parenting styles could be observed around issues of toileting.

Schum et al (2001) found that older age, female gender, non-Caucasian race, and single parenthood were more strongly associated with toileting success than cognitive development or temperament in the child. The results demonstrate that competence of the parent has much to do with success, just as incompetence should do the reverse.

Perhaps the link between delayed toilet training and constipation operates on more than one level: parents who are incompetent in relation to toilet training may also be inadequate in terms of maintaining family health generally. It would suggest that the problems are mutually reinforcing.

Cross-cultural factors

As hinted above, Caucasian people started and completed training later than people of other races and this was so even within the US.

Cultural relativity is without doubt a factor in the age of toilet training commencement, and consequently, completion. Numerous studies have recorded the training practices of other cultures, including deVries (1977) and Horn et al (2006). Also an extensive bibliography that was not able to be accessed as part of this research, but which is appended, refers to witness accounts of toileting infants in many, non-western countries where children are more or less without nappies from a very young age (this is the bibliography of Laurie Boucke's book "Infant Potty Training" (2002).

Of the numerous studies into the factors that play a role in extended incontinence of children today, none of this research is Australian. Nevertheless, the features of family life that are often blamed are paralleled in Australia, such as time-poor working parents, the convenience of washing machines and the availability of disposable nappies.

Even within the US itself, cross-cultural differences are evident between Caucasian and Afro-american parents, where the latter are toilet-trained at an earlier age and their parents believe in earlier initiation of training (Horn et al, 2006).

Economic factors might also play a role, with upper income parents in Horn et al's study reporting that toilet training should begin 30% later than lower income cohorts. The Swiss studies did not reveal any correlations between socioeconomic status and start and intensity of toilet-training (Largo and Stutzle, 1977), but this could be due to the homogeneous nature of Swiss society compared with the multi-racial US society.

Behavioural observations in difficult toilet trainers

Difficult toilet trainers, who are healthy normally developing children, may fall into one of two categories: 1) 3.5-4 years old and not trained after 6 months of trying, or 2) older than 4 and younger than 7 and

refuses to use the toilet or has not completed daytime urine or stool training (Schonwald et al, 2004).

The frequency of their “hiding to stool” and “asking for pull-ups” indicates that a large number of these children have full bowel control, and can control when and where they will defaecate. Also, that these children hide to defaecate may reflect their understanding of the private nature of toileting, and suggests social awareness (Schonwald et al).

Some harms attributable to late toilet training

We can conjecture a great deal, but unfortunately there is little data on all aspects of toilet training, and few longitudinal studies. Moreover, where they exist they tend to be single studies. The following are a few that deserve mention. Others have been considered eg long-term personality effects of lack of control over continence, but until research is conducted remain speculation. In addition, there are the obvious concerns about the cost of nappies to families with small children, who may also suffer decreased income while the mother works less, or not at all.

In addition to the scientifically measurable effects, we must not forget the intangibles such as the dignity of the child who is forced to endure a year or more of nappies beyond the age when they would have been trainable, less than one generation ago.

Decreased bladder capacity

Bladder capacity increases more rapidly after than before toilet training. Greater bladder capacity correlates with being dry at night (Hellstrom, 2000). Hellstrom further posits that there might be a relationship between later bladder training and dysfunctional bladder, but falls short of the thesis of Belgian researchers Bakker and Wyndaele (2000) that changes in attitudes towards toilet training during the past 60 years is a possible cause of an increase in lower urinary tract dysfunction.

To support their connection between failure to actively toilet-train using bladder drill and bladder dysfunction, Bakker and Wyndaele observe that there is a good concordance between the programmes currently proposed for treating bladder dysfunction in children and the traditional bladder-training methods used by parents 60 years ago.

Faecal contamination in day care centres

According to some literature (Holaday et al, 1995) the high frequency of infectious disease in children attending day care is a “growing public health problem”, with double the incidence of otitis media, upper respiratory tract infection, diarrhea and gastroenteritis of home care children, and four times the incidence of croup and conjunctivitis. Holaday et al identified faecal contamination in day care centres but comparisons between centres using cloth vs disposables showed no difference in germ levels.

This affirms the view that the issue of concern is not whether cloth or disposable nappies are used, but whether children should be in nappies at all once at child care, which used to be an important milestone of the need to be nappy-free.

Much of the US research into toilet training has been by paediatricians (in contrast, European research tends to be by urologists) who cite impending child care as the prompt which drives many parents to present their child for diagnosis and treatment.

Community burdened by landfill waste

With disposable nappies comprising 2% of municipal solid waste in the US, reflected in audit figures in some high birthrate Australian municipalities (eg Wollongong) where over 10% by volume is made up of nappies, this is not an insignificant percentage.

While working in the waste industry, I became aware of the problems faced by families with more than one child still in nappies who have insufficient bin capacity to cope with this waste stream. Clandestine dumping of nappies in neighbours bins on collection night is commonplace, as is the volunteering of spare bin capacity.

The mixing of human excrement in the general solid waste stream is not without its concerns either, especially for waste workers.

Disposables may exacerbate asthmatic conditions

Of interest to Australian epidemiologists is the finding that disposable diapers should be considered as one of the factors that might cause or exacerbate asthmatic conditions, following controlled experiments

comparing three types of disposables with cloth nappies (Anderson and Anderson, 1999). All three brands of disposables caused respiratory irritation but vapour from cloth nappies produced only a slight reaction.

Will there be a return to earlier toilet training?

Luxem and Christopherson (1994) predicted that there would be a return to earlier toilet training, mainly in response to the problem of sanitation control in institutional child care. Some 13 years later, the only evidence of this prediction being realized are a growing body of research linking increased childhood incontinence with urinary problems, community health issues, increased difficulty of toilet training older children who become resistant to giving up nappies, waste and environmental problems, among others.

Still, however, there is no groundswell of support for earlier toilet training among today's parents.

I argue that one of the main reasons for this is that the skills and knowledge of toilet training that were, prior to half to one generation ago, learned from older relatives and members of the community, have been lost. Except for the most adventurous, those mothers seeking closer bonding with their babies, people who recognize the economic savings they can achieve by dispensing with nappies and the associated close handling of bodily wastes (who constitute a tiny minority), today's parents are holding firm to the child-centred approach – for now.

This could change as child care experts who embraced the child-centred approach in response to Brazelton's advice start to see that it is creating a generation of nappy-bound pre-schoolers who even after they can be dry throughout the day have to wear nappies at night until 8 years of age. Brazelton's teachings have further suffered some discredit as he is tainted by his close association with Proctor and Gamble, the multinational manufacturer of disposable nappies, which leads to suggestions of bias.

Robin Barker, author of "Baby Love" and "The Mighty Toddler" (Pan Macmillan) is one of Australia's foremost child-rearing authorities, and she believes healthy children should be daytime trained by 3 years (private conversation).

It must be remembered that the reason why the child-centred approach was adopted with such enthusiasm was in response to the

supposed harms that had been committed in previous generation by parents over-zealously potty-training, that such children might rebel later on through prolonged soiling or bed-wetting (Luxem and Christopherson, 1994) – what some refer to as “the battle of the bowels”. These concerns appear to have their origins, in part, in Freudian theory of sexual development which are currently less in vogue than for decades.

Ultimately, it would appear that on the fringes of the general population there are children who will have problems with toileting due to physical or relationship factors, parental style and competency. The toileting practices of the healthy majority should not be tailored to suit the minorities. Society should decide what expectations it has for the sanitary and psychologically healthy management of toilet training. It also has to decide whether the waste and economic burden on parents is justifiable.

The pendulum may now be ready to swing back, but parent education must cut through the reluctance and embarrassment associated with toileting issues before this will happen.

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About Anna Christie

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She has worked in the waste industry, developing educational programmes and communications strategies to improve recycling practices, and has been a broadcaster and writer on environmental subjects.

Anna has also taught environmental communications, values and ethics at the Australian Catholic University.

Her investigations into the delayed onset of potty training in the past 20 years have drawn on scientific literature, her own experience as a

mother and cub mistress, and her own qualitative enquiries about potty training practices.

She hopes that this will lead to the first published Australian research on toilet training attitudes and practices.

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