Normalising Bottle Reuse

Lessons from the Victorians on the Limits of Voluntary Schemes

- The UK has a long history of bottle reuse schemes and also bottle waste
- Historically, our reuse systems have been market-driven and voluntary
- Such systems universally failed to check the rise of bottle disposability
- In other countries central intervention has reversed throwaway trends
- Central intervention is the best way to promote bottle reuse in the UK

As the world acknowledges the environmental consequences of unsustainable consumption, attention is focusing on methods of reducing waste. Packaging waste from food and drink is the obvious contributor to landfill for most people. Being highly visible, it provides a focal point for campaigns to reduce waste, and for changing wasteful habits among the public. A market has recently appeared for reusable bottles. But they remain a lifestyle choice for the minority rather than being mandatory for all.

The UK, one of the first developed nations, has the longest history of bottle reuse and waste. Since Victorian times the practices have competed, but waste gradually prevailed, and reuse has yielded to recycling. The main incentives to waste bottles were the ease of disposability for the consumer and the greater efficiency of distribution for the producer of bottled goods. Markets may generate incentives for producers or consumers to reuse bottles. Governments too may create them by legislating. Where incentives to reuse outweigh incentives to waste, reuse is normal practice.

As policy makers look for ways to exploit the environmental trend towards reusable bottles, we can learn from our own past. By examining systems that have been trialled in Victorian times and comparing them with schemes operating today, we may identify both ineffective and effective ways to normalise bottle reuse.

A key question is whether incentives are better targeted at the producer of bottled goods or the consumer. It is no accident that the only surviving widespread return system in the UK maximizes the convenience to the consumer, who has only to leave empty milk bottles for collection outside the front door. It is also no accident that the producer in this case (large commercial dairies) retains plant infrastructure for storing, washing and refilling empties.

This paper will examine each of the reuse systems trialled by the Victorians. It will finally contrast those market-driven, voluntary, systems with the successful central interventions observed in other countries.

Relying on Consumer Goodwill

With the exception of the excise duty levied on stoneware bottles between 1817 and 1834 to protect the glass industry, incentives for bottle reuse in the UK have been non-governmental. Traditionally, a mixture of cultural expectations and market forces have determined whether bottles were reused or discarded. The greatest level of organized intervention came with the Bottle Protection Societies (see below). Beyond a series of rulings in the 1870s establishing that bottles were the property of companies whose names they bore, courts and government adopted a non-interventionist approach.

For most of the nineteenth century producers tried to ensure the return of empties by having their names on their bottles. At that time they were of stoneware (impermeable pottery fired at a high temperature), or of thick glass. A typical example is a stoneware ginger beer bottle from the 1870s impressed with the text: 'This is the Property of W THORP, 28 Coley Street, Reading'. Bottles remained the property of the bottler whose name they bore. They were not sold but lent to customers, and their return relied on goodwill. This system proved effective in communities where trade was local, bottlers knew their customers, and points of sale and consumption were nearby. It worked less well where the customer base was anonymized or widely dispersed. Manufacturers whose beverages travelled by road or rail could not expect their bottles to be returned.

For many holidaymakers the concept of having fun precluded inconveniences such as bottle return. Grabbing an opportunity for a day at the seaside, few wanted the bother of returning empties. In 1902 the Hunstanton fizzy drinks seller Robert Cullen was declared bankrupt. A notice in the newspaper stated, 'He went in for bottling and lost a lot of money in that trade, principally through people not returning the bottles.'

Large stores such as Crosse and Blackwell's in London and the Army and Navy Stores ran counters where customers could return bottles, pots and jars. The returns would be washed and refilled. Since Crosse and Blackwell did its canning on the premises, jam jars could be returned, refilled and resold at the same location. As ever, convenience was key to whether customers returned the empties. A key shift occurred when firms started distributing goods internationally. In 1885, the sauce manufacturers Goodall, Backhouse & Co contracted for 6,750 000 bottles, the largest order so far. The reason they gave was that 'sauce bottles are seldom if ever returned to manufacturers.' Building bottle wastage on a massive scale into their business model, they did away with the costly infrastructure of washing and refilling and profited from the disposable economy created by cheaper glassware.

In towns, cities and regions, soft drinks firms collaborated to establish Bottle Exchanges and Protection Societies. The Exchange was a collection shop, with a counter and a depot, where empties could be returned. Lorry men did the rounds of the pubs and shops supplied by their employers, collecting empties by the crate. Employees at the Exchange sorted the bottles and redistributed them to the partner firms. Exchanges were operable as long as the money saved through bottle recovery met the overheads of running them. As bottles became cheaper, with mechanised manufacture, they ceased to be commercially viable.

Allowances

Allowances were used by firms throughout the nineteenth century. Bottles or jars remained the firm's property, but a sum was offered as an 'allowance' for the consumer who took the trouble of returning them. Conceived as a goodwill gesture, the allowance system provided financial incentives on top of the obligation to return property to the owner/ lender. As early as 1803 Schweppe's began offering an allowance of 10d (ten pence) per dozen stone bottles returned. Allowances were also offered on the firm's glassware bottles, crates and syphons. Variations in on-costs impacted on the allowance system, forcing firms to adapt to changing conditions. In 1900, the Biucchi brothers of Clerkenwell, manufacturers and wholesalers of soft drinks, informed their retail customers that 'in consequence of the enormous increase in the cost of Bottles, Boxes, Coal, and other articles (the rise in bottles alone being more than 50 per cent) we shall be obliged ..., to discontinue all discounts and allowances'. Customers subsequently had to pay an additional 3d (three pence) per dozen bottles - a sum which was refundable if all twelve were returned. The firm had moved to a deposit scheme, putting the cost of bottle wastage onto the customer. The allowance system had failed.

Deposit Schemes

Whereas allowances were a financial incentive to return a firm's property, deposit schemes built the cost of the bottle into the purchase price, whether by the crate (for retail customers) or by individual bottle sold. The bottle then became the customer's property, and there was no obligation to return it. The customer could nevertheless sell it back to the vendor for the price of the deposit. Bottles for 'Harry Ramsden's half-penny Herb Beer' explained how it worked. The text printed on them declares, 'If not drunk on the premises 1/2d extra will be charged which is paid back when the bottle is returned'. Deposit bottles usually had text on them informing customers of the sum to be refunded. This encouraged return by reminding people of the reward, including children, who searched for empties to return to the grocers. When a firm ceased using deposits, it would often have 'No deposit charged on this bottle' embossed on the new bottle stock, to re-educate customers.

Consumer demand for disposable bottles made it impossible to carry on a deposit scheme in towns where there was fierce industry competition. The London fizzy drinks firms R. White and Batey's abandoned deposits in 1885 because competitors were undercutting them. Both contracted for new bottles that announced 'No Deposit charged on this bottle'. By 1900 the cost of bottling for that industry was on the rise. The balance of market forces tipped again, and both firms responded by reintroducing deposit bottle schemes.

Deposit schemes in the UK lasted into the late 1980s, when the soft drinks firm Corona still charged a 10 pence deposit on bottles that were sold with screw-on cap. The text informing customers of the deposit was printed on top of the cap, where it would be visible on bottles stacked in crates and where its presence confirmed the need to return the cap as well as the bottle in order to redeem the deposit.

Sorting and Scavenging

Sorting and scavenging systems operated where bottles possessed intrinsic value, sometimes alongside return schemes. R. White's and Batey both ordered green glass bottles with brown lips, which were more easily distinguished in mixed crates of empties, and therefore easier to spot and return. The Yarmouth Aerated Beverage Company paid a little extra to the potteries to make their ginger beer bottles with blue tops, so that their bottles could be quickly picked out and returned. (Their several rivals in the town all used brown-topped bottles, which was standard for stoneware.) Bottles were sorted in their thousands at the Bottle Exchanges then returned to their rightful firms.

Prior to the First World War (1914-18) there was much trade in second-hand bottles among the so-called 'marine stores' - general second-hand shops which sold anything that could be sold and reused. Most towns had at least one or two, as well as hawkers, who traded second-hand goods. By the end of the War, advances in technology meant that up to ninety per-cent of bottles were being machine-manufactured, a system of mass production which eliminated the intrinsic value of all but the specially designed patent glassware. The second-hand bottle trade declined, as larger numbers of bottles were sent to landfill. In rural areas, demand held up somewhat, and there are reports of children scavenging rural rubbish dumps in the 1930s to recover jam jars and wine bottles for home filling.

Purchasing and Reusing Second-hand Stock

It was standard practice in the nineteenth and twentieth centuries for the assets of liquidated firms to be sold to pay creditors. These might include bottling plant, machinery and bottles themselves. When the partnership under the style of the Cohen Brothers dissolved in 1892, their bottles were sold to Nicholas Paul of St Pancras. Although the bottles were embossed (or, in the case of stoneware, impressed) with the name and address of the Cohen Brothers, Paul sent them to be sandblasted with his name. Such use of sandblasting was common and was recognised by the customer base as denoting a transfer of ownership.

When firms changed hands, the bottle stock would pass into the hands of the new owners, who simply stuck their labels over the printed or embossed names of previous proprietors.

Penalties and Prosecution

If allowances and deposit schemes were the proverbial 'carrots', penalties and prosecution were the stick. Increasingly reliant from the 1870s on expensive patent bottles, soft drinks manufacturers had to contend with the resale of their bottles by marine store owners. They also had to contend with their illegal reuse by rival firms. Sometimes, thousands of bottles were appropriated in a way that allowed one firm to purloin another's investment.

The mineral water trade journal frequently ran stories reporting successful prosecutions of marine store dealers and rogue vendors. Details must have made for gratifying reading for honest traders, when reports described how large caches of illegally purchased bottles had been impounded in the shadowy recesses of dank cellars, beneath those Dickensian shops. Ten Yarmouth makers clubbed together in 1873 to form a Bottle Protection Society. They announced, in the paper, their intention to prosecute 'any person who shall Buy, Sell, Use, Misappropriate, Unlawfully Detain, or Wilfully Destroy' those bottles identified as theirs.

The Yarmouth Bottle Protection Society was finally absorbed into 'The Eastern Counties' Mineral Water & Ale & Porter Bottle Exchange and Trade Protection Society Ltd', which handled returns and lawsuits for multiple firms across Greater East Anglia. They regularly announced prosecutions, and as late as 1911, a woman called Alice Milne, who had been brewing herb beer, was forced to publish an apology in the papers for using bottles which belonged to Hunt & Son and Lawrance & Son of Yarmouth. Some bottlers ordered stock that bore threats of prosecution against anyone ‘illegally buying, selling or destroying this bottle’.

Although prosecution was effective at deterring large-scale appropriation and misuse of empties, it was unsuitable against consumers who discarded the occasional bottle, since private throwaway habits were not policeable and were too inoffensive to be justiciable. Eventually, the throwaway tide proved as costly as wholescale misappropriation.

Firms also experimented with penalty schemes which fined retail customers who failed to return the firm’s bottles. The premise, as above, was that bottles remained the property of firms who lent them to retailers, who sold the contents to customers and were expected to recover empties. Unlike allowances, which rewarded return, penalty schemes asserted the firm’s right to punish non-return. Sensible firms announced any change in strategy on the bottles. In 1900, Lawrance & Son of Yarmouth introduced bottles with a more expensive kind of stopper. The bottles stated that ‘1d (one penny) will be charged for stopper if not returned in bottle’.

Penalty schemes brought problems of their own. Prior to 1907, the Army and Navy Stores operated a penalty scheme that involved charging customers for bottles, syphons and cases that were not returned within a reasonable time. In that year, however, the Stores did away with the scheme, claiming that this decision was ‘entirely in the interest of Members’ (i.e. retailers who purchased its goods wholesale). While the abolition of the scheme benefited members, as claimed, the real motive behind it was to stop them switching to wholesalers who implemented no penalty.

Returnable stoppers were an added complication of the system. Customers keen to avoid penalties replaced missing stoppers with stoppers from bottles belonging to another firm. Firms tried to arrest this practice by stamping the company name on the stopper. But the process of checking crates of returned bottles for errant stoppers was prohibitively time-consuming. The regular failure to match stoppers to bottles (which raised doubts about a bottle’s contents) is attested by the numbers of bottles excavated from Victorian rubbish which present a mismatch between the name on the bottle and the name on the stopper.

Discussion

From the early nineteenth century up to the First World War, firms selling bottled products trialled a variety of systems to encourage the return and facilitate the reuse of empties. The same period saw growing consumer demand for disposable bottles. Firms able to use cheap glassware were the first to abandon the infrastructure of bottle reuse. Firms which relied on specialized containers that were expensive to produce fought longer against the throwaway trend, though their efforts were undermined by market forces and the hardening of the new habits being trained into consumers by firms promoting disposability. The industries which fought longest were the fizzy drinks manufacturers, breweries and commercial dairies. All but the dairies, eventually, succumbed to a throwaway culture in the late twentieth century. Then the arrival of plastic bottles and thinner glassware ended the commercial viability of using the thicker, heavier bottles that were necessary for systems of washing and refilling.

In the UK today, reuse systems have become the preserve of commercial dairies, caterers or hotels whose trade occurs on the premises, and a handful of newly arrived zero-waste shops where empties can be refilled. The UK, nevertheless, has a longer history of experimenting with reuse than any other country, and the lessons are clear. Social expectations and market forces alone have failed to create a culture of bottle reuse. It remains to be seen whether the new trend of environmentally conscious consumption will change things. To date in the UK, industry competition and consumer choice have created a culture of bottle waste. This won out over historically entrenched habits of reuse and despite the various schemes to promote that practice. The experience of the UK indicates that incentives to waste are powerful, and that stimulating voluntary reuse has consistently failed to counter them.

The alternative is to make it mandatory by central intervention. Charging for plastic bags in the UK has been shown to encourage reuse. And countries which have passed legislation to promote the reuse of bottles have succeeded where the Victorians failed. Norway took steps from the 1960s. The Disposable Container Act of 1970 gave its government the right to ban disposable containers. In 1974, they mandated a standard deposit value, reflecting the need for an industry standard to prevent firms undercutting others. Sweden in 1973 introduced a tax on reusable and disposable bottles. The tax promoted reuse, since it had to be paid once per bottle, benefiting producers who reused bottles.

Oregon was the first US state to pass a 'bottle bill' in 1971. Others followed, improving the early legislation and learning from mistakes. New York, in 2009, passed the 'Bigger Better Bottle Bill' requiring beer and soda bottles and single-serving plastic bottled-water containers to carry a deposit. The effectiveness of the legislation is clear. In 2011, the eleven US states with mandatory deposit laws had an average redemption rate of 61.4%, in contrast with an average of 24.2% for the non-deposit states. Returns in Norway, Sweden, the US and other countries are made easier by the use of RVMs (reverse vending machines). The hole-in-the-wall machines are installed in grocery stores and supermarkets. Consumers insert reusable bottles and get a refund receipt, which is redeemable at the store.

Legislative solutions were proposed in countries or territories whose throwaway habits were less well entrenched than those of the UK, and where there were stronger traditions of state market intervention. Nonetheless, there is evidence from those counties and from Victorian Britain that the public buy into such schemes, once established. In Berlin, a variety of glass and plastic bottles declare a refundable deposit (Pfand), which can be redeemed at multiple stores. The bottles are eagerly collected by homeless people equipped with bags or trolleys, who make money from bottle return and remove litter from public spaces in the process. In the UK, children earned pocket money by performing a similar service as late as the 1970s.

Today in the UK, consumers and producers, concerned about the climate crisis, possess that added incentive which the Victorians lacked. In debates addressing the crisis, there is now a greater appetite for government intervention to reduce waste. Now is the time for UK policy makers to reflect on the failure of voluntary systems that have all been trialled in the past. It is time to acknowledge the need for central intervention.

Further Reading

Tom Licence, *What the Victorians Threw Away* (Oxford, 2015)

Finn Arne Jørgensen, *Making a Green Machine: The Infrastructure of Beverage Container Recycling* (New Brunswick, New Jersey and London, 2011)

Bette K. Fishbein, *Germany, Garbage, and the Green Dot: Challenging the Throwaway Society* (New York, 1994)

Susan Strasser, *Waste and Want: A Social History of Trash* (New York, 1999)

Derwin Gregory and Tom Licence, 'Historic Global Commodity Networks: The Research Potential of Rubbish Dumps for the Study of Rural Household Market Access during the late Nineteenth and Early Twentieth Centuries', *Rural History* 28 (2017), 161-75

Peter Douglas, *Extracts from The United Kingdom Mineral Water Trade Review and Guardian, 1870s to 1880s*, 2 vols (Holywell, 1992)

Tom Licence, FRHistS, FSA,

Professor of History and Consumer Culture,

University of East Anglia