Transformations of Retailing in Europe after 1945

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The History of Retailing and Consumption General Editor's Preface

It is increasingly recognized that retail systems and changes in the patterns of consumption play crucial roles in the development and societal structure of economies. Such recognition has led to renewed interest in the changing nature of retail distribution and the rise of consumer society from a wide range of academic disciplines. The aim of this multidisciplinary series is to provide a forum of publications that explore the history of retailing and consumption.

Gareth Shaw, University of Exeter, UK

Chapter 6

Automatic Trade: Self-Service and the Polycentric Early History of Slot Machines

Angelika Epple

This paper traces the history of self-service back to the early history of vending machines. Vending machines emerged throughout the industrialized world in the late 1880s. This paper rejects a 'heroic inventors' history of technology drawing exclusively on the reconstruction of technical innovations. Instead, it argues that automatic retailing has a polycentric history involving many unknown tinkerers, and it is a history that can be told only as a transnational venture among various industrialized societies. Insights will also be delivered into how different cultural contexts shaped the global standardization of products, business and consumer practices, such as self-service, without cultural differences being lost completely.

When considering self-service catering, we tend to think of fast-food restaurants. We do not usually think of vending machines. It is interesting to recall that the self-service idea is actually connected closely to both the emergence of fast food and the growing importance of vending machines. This is a connection that may well have been forgotten. Self-service catering solutions emerged together with so-called automatic restaurants around 1900. They first appeared in Berlin before spreading to other European countries, the US, South Africa and also to other world regions. In Philadelphia and New York, they developed into a famous fast-food restaurant chain, and the close connection between self-service, fast food and vending machines was conserved in its name, The Automat (run by Horn & Hardart). This chain developed a reputation for selling cheap coffee in vending machines and serving as a popular meeting place during Prohibition and the Great Depression. In the 1930s, the Automat chain alone was attracting more than 250,000 customers a day.[1] In the 1970s, Burger King began to take over more

[1] Harvey Levenstein, *Paradox of Plenty: A Social History of Eating in Modern America* (New York, Oxford: Oxford University Press, 1993), p. 50.

and more of these Automats.[2] Finally, in the early 1990s, the last restaurants of this kind closed their doors in Philadelphia and New York.[3]

In Europe, automatic restaurants generally failed to match the first period of prosperity they had enjoyed before the First World War. In the Netherlands, however, they were a great commercial success. The Automatiek restaurant still operates today, combining food or drinks out of vending machines with personally served snacks. This short excursion into the history of fast-food restaurants[4] shows in particular how our present concept of self-catering solutions is tied to *places* of consumption. Apart from automatic restaurants, however, vending machines are usually not places of consumption. There might be corners in public buildings, in canteens or at railway stations where vending machines come close to automatic restaurants, but in general they offer food and drinks and many other products to take away, and not for consumption at a specific location. Self-service, however, is not just a catering solution for specific places of consumption. It also brought about a more profound change in consumer practices that continues to shape our lives today. As will be shown, this change was deeply influenced by the emergence of vending machines.

This paper argues that vending machines liberated buying and thus consuming in specific localities. They transferred these practices from indoor places into the public domain as a purportedly anonymous sphere. The ubiquity of vending machines is only one particular aspect. Another is that of self-service. If we go back to the early history of vending machines, we shall find that their local independence and their self-service model are part of the same story. Both were closely connected to the revolution in communication between retailers and consumers as well as to the changes in consumer practices.

In the following, I shall start by looking at the early history of slot machines, a word that was used at the time to describe both gambling and vending machines. Then I shall comment on the idea of local independence and on the concept of self-service, before presenting a short conclusion.

2 'The Horn & Hardart Story', Robert Byrnes Collection of Automata Memorabilia, Box 1, Folder 9, Annual Reports, 1932–1979, New York Public Library, Rare Books and Manuscripts Division. In 1953, the Horn & Hardart Company had a gross intake of more than $71,000,000 annually: see Jack Alexander, 'Restaurants that Nickels Built', *Saturday Eve Post*, 11 December 1954.

3 To cite but two articles, see: 'New York City's Last Automat Closes', *Monroe (Michigan) Evening News*, 14 April 1991; 'It's the End of an Era as the Last Automat Fails to Find Buyer', *Rochester (New York) Democrat & Chronicle*, 11 April 1991.

4 For further details on the history of 'Automatic restaurants', see Angelika Epple, 'The "Automat": A History of Technological Transfer and the Process of Global Standardization in Modern Fast Food around 1900', *Food & History* 7 (2010): pp. 97–118.

The Early History of Slot Machines

Following the definition in the *Encyclopaedia Britannica*, the word 'slot machine' nowadays designates a 'gambling device byname one-armed bandit, known in Great Britain as a fruit machine'.[5] The dictionary does not fail to admit that the term 'slot machine' is an abbreviation for 'the nickel in the slot machine', originally also used for automatic vending machines. Unfortunately, the entry continues with a misconception regarding the historical facts on coin-operated machines, and mentions the United States as their country of origin. A short look at the semantic and economic history of slot machines will help make things a little clearer.

From the 1880s onward, slot machines spread throughout the industrialized world. One of the earliest active European companies in the sector was the British Sweet Meat Automatic Company Ltd. In 1888, its balance sheet showed a capital of roughly 36,000 pounds sterling. Within 10 years, this had grown to more than a quarter of a million.[6] Another early company active in the area had even more success. In 1886, the company of the famous inventor John Percival Everitt, the Post-Card Automatic Supply, originally based in London, founded the Aktiengesellschaft für Automatischen Verkauf in Hamburg. Major enterprises in the German confectionery industry such as Sprengel, or Hartwig & Vogel, were also involved. They had immediately recognized the potential of this new kind of retailing. They started their joint venture with 110,000 mark. This initial capital quadrupled within only one year.[7] Of course, these are only two random examples. Nevertheless, they are part of a much bigger development.

The growing interest in the new area was not limited to Great Britain and Germany. In all industrialized countries, inventions were being patented nearly every day. New companies sprang up like mushrooms, though many disappeared as quickly as they had arisen. Most of these highly creative tinkerers, engineers and venturesome entrepreneurs have fallen into oblivion today. This should not hide the fact that the euphoric mood of the time included more than a few 'heroic inventors'.[8] The significance of the inventions of well-known (male) individuals such as the above-mentioned John Percival Everitt or Thomas Alva Edison, who was also active in the business, should not be overrated. If we leave all the bombast of the traditional history of technology behind us, we shall see that contemporaries

5 www.britannica.com/EBchecked/topic/548950/slot-machine (last accessed: 30 March 2012).

6 Rhineland-Westphalian Economic Archive RWWA 208-245-7. See balance sheet of 'Sweet Meat Automatic Company, Ltd.', 1897.

7 RWWA 208-786-22.

8 Robert Friedel gives a good example of such an overemphasis on 'heroic inventors', see Robert Friedel, *A Culture of Improvement: Technology and the Western Millennium* (Cambridge, MA: MIT Press, 2007). Eric H. Robinson has convincingly criticized this approach: Eric H. Robinson, 'A Thousand Years of Western Technology in One Volume: Is All-Inclusive Ever Conclusive', *Technology and Culture* 49 (2008): pp. 215–29.

quite often struggled with the signification of technology. Therefore, we shall no longer focus on the history of technological innovations or novelties, but turn to how meanings of technical devices were negotiated in different contexts, and how these negotiations were intertwined with cultural practices.[9]

In the 1880s, when the new machines gained the attention of journalists in the United States, there was still some uncertainty as to how to name them. Different journalists played with different wordings. Their suggestions ranged from broad designations like 'drop a nickel in the slot machine'[10] to more specific names like 'phonograph slot machine',[11] 'automatic lung tester',[12] 'drop-a-nickel-in-the-slot-machine-and-get-a-box-of-candy-machine',[13] or 'automatic weighing and selling machine'[14] – to mention but a few. By the end of the decade, slot machines, as they were more often called, had spread throughout New York and other big cities.

Even though the term slot machine became more common, it was still not reserved for gambling machines. In 1889, a *New York Times* journalist wrote: 'The slot machine, as it is commonly called, which now ornaments railway stations all over the civilized world, is certainly an ingenious invention, and it seems capable of almost indefinite expansion'.[15] In terms of the signification of vending machines, this passage is striking. Obviously slot machine has become a fixed term ('as it is commonly called'). The journalist also formulates the connotations accompanying the new devices: the quote links together an unbroken faith in technology ('indefinite expansion'), the attributed aesthetics ('ornament') and the feeling of cultural superiority present in the Western semantics of technology ('civilized world'). In this spirit, the journalist continues:

> At the time railway stations all over the civilized world are lined with machines that are ready to provide cigars, caramels, note paper, hairpins, and scores of other articles. Every week or two a new machine makes its appearance and it is evident that the principle of automatic trade, if it may be so called, is only in its infancy.[16]

[9] The question 'What is the history of technology about?' (see David Edgerton, 'Innovation, Technology, or History: What Is the Historiography of Technology About?', *Technology and Culture* 51 (2010): pp. 680–97, here p. 686) is currently a topic of much discussion. There are, of course, many less innovation-centric works than Friedel's, and only recently a critical discussion of the 'hazardous concept of technology' began, see: Leo Marx, 'Technology: The Emergence of a Hazardous Concept', *Technology and Culture* 51 (2010): pp. 561–77.

[10] *National Police Gazette*, Vol. LVI, No. 661, 10 May 1890.

[11] *Washington Post*, 10 February 1890, p. 1.

[12] *National Police Gazette*, Vol. LIV, No. 613, 15 June 1889, p. 14.

[13] *Washington Post*, 21 December 1888, p. 2.

[14] *New York Times*, 14 May 1890, p. 5.

[15] *New York Times*, 10 October 1889, p. 4.

[16] Ibid.

If we read passages like this, it is no wonder that the aforementioned entry in the *Encyclopaedia Britannica* mistakenly refers to the United States as the country of origin of slot machines. The American press seems to have been much more enthusiastic and also much more concerned about all kinds of coin-operated machines than its European counterpart. It is difficult, however, to find evidence on how many slot machines were actually working in all the different countries. Business archives can give us some information about the distribution of one company's specific machines. We know, for instance, that already in 1893, 7,000 coin-operated machines were working in the New York railway system alone. They were all installed by a small company in New York that was actually a subsidiary of the huge Cologne-based chocolate maker Gebr. Stollwerck.[17] We also know that in Birmingham (GB), the local gas department adapted slot machines for small consumers[18] who could not afford to pay for their heating in advance. However, business archives concentrate on specific regions and, sadly, they do not cover different countries. What makes the situation even more difficult is that business archives of these early companies in the automatic trade are very rare. The automatic trade initially seems to have been a grass-roots movement involving many small enterprises. Due to their small size, they went bankrupt easily. Finding their traces is hard work, and there is still much research to do.

In contrast, it is comparatively easy to reconstruct the history of inventions related to coin-operated machines. Not surprisingly, Great Britain plays an important role. In respect of the self-service idea, the 'Honour Box' in eighteenth-century Britain would somehow seem to be one of its first predecessors, even though their history can be traced back to ancient Egypt. By inserting a coin, the client could serve himself with tobacco. He (probably not she) was only bound by honour to take the amount he had paid for. During the nineteenth century, trust in the client's honesty deteriorated. In 1857, the first coin-operated machine was patented in Great Britain; 20 years later, the first vending machines came into public use.[19]

Why did it take so long? The difficulties to be solved were tremendous. Simply activating the mechanism with a coin was already a problem. It was even more difficult, however, for the machine to prove the coin's authenticity. In 1884, John Percival Everitt and J.G. Sandeman were mentioned as the inventors of the first patented postcard vending machine.[20] A painted picture of a woman buying a postcard from the machine was reproduced in the *Scientific American*,

[17] RWWA 208-278-2.

[18] Kerry Segrave, *Vending Machines: An American Social History* (Jefferson, NC: McFarland, 2002), p. 9.

[19] Segrave, *Vending Machines*, pp. 3ff.

[20] See Cornelia Kemp, 'Vom Schokoladenverkäufer zum Bajazzo: Die Anfänge der Münzautomaten-Herstellung in Deutschland', in Cornelia Kemp and Ulrike Gierlinger (eds), *Wenn der Groschen fällt ...: Münzautomaten gestern und heute* (München: Deutsches Museum, 1988), pp. 10–24, here p. 11.

and this picture can now be found in almost every article which addresses this development.[21] Even though Great Britain had the cutting-edge technology, the automata business emerged more or less at the same time in all the big cities in the industrialized world. It is striking that the early slot machine companies were quite often international ventures. Everitt's Post-Card-Automatic Supply and its subsidiary in Germany were no exception in this respect. Early global players such as Lever Bros., Diamond Match, Laferme, Sprengel, Stollwerck and many others thus fostered an international exchange on both the business level and on the level of technological transfer.[22] Coin-machine historian Kerry Segrave rightly highlights that the real beginning of practical vending in the US dates back to the late 1880s. In the tradition of 'the heroic inventors' history of technology, he names only Thomas Adams and his Adams Gum Company (later American Chicle Company) who had vending machines designed to sell his Tutti-Frutti gum on the platforms of New York City's elevated railroad stations.[23] It is very likely, however, that in the beginning, many small and middle-sized enterprises were active on the US-American market. Only 25 years later, the automatic trade in the US was consolidated under one roof. In 1911, according to an article in the *New York Times*, a slot machine trust was founded bearing the name Autosales Gum and Chocolate Company. This trust contained eighteen companies and some 250 trade names and brands. One of the largest members was Stollwerck Bros.[24]

There is a simple reason for the comparatively high level of international cooperation within this area. Let me illustrate this with the following example. Gebr. Stollwerck initially installed their chocolate vending machines simply for marketing purposes. The idea behind these so-called test vendors[25] was to advertise a newly introduced chocolate by offering small pieces of it. Their purpose was not to sell directly – first, because the products on offer had to be very small, and second, because the machines were prone to breaking down. Instead, Gebr. Stollwerck hoped to entice clients to go into a shop and buy a whole bar of chocolate. In the beginning, they rented their machines for ten marks a month to interested clients such as innkeepers. Step by step, the test vendors turned out to be an unexpected economic success, and the company started to sell them. Clients had to make an initial down payment, and then pay off the rest by selling

[21] Segrave, *Vending Machines*, p. 7.

[22] Their collaboration was built on their shared interest in selling different products through only one vending machine. At that time, the London, a model distributed by the London & Provincial Automatic Machine Co. Ltd., sold wax vestas, cigar lights, perfume, old brown Windsor soap, chocolate, nougat, Indian pearls, chocolate cream, cigarettes and butterscotch. See prospectus in Hackney Archives (London) Dept./D/B/BRY/4/10/2.

[23] Segrave, *Vending Machines*, p. 7.

[24] *New York Times*, 2 April 1911.

[25] RWWA 208-278-2 'Etwas über automatische Verkaufs- und sonstige Apparate', 1893.

Stollwerck's sweet goods. By 1893, a total of 15,000 vending machines produced exclusively by Stollwerck were running throughout Germany.[26]

Gebr. Stollwerck, who had always built their machinery themselves, outsourced the production of innovative automatic machines to a joint venture with Max Sielaff. Sielaff had been a successful inventor and technician for many years, and he also held many patents. He ran a small factory in Berlin with about 100 workers. In comparison to Everitt, Sielaff could offer his patents for a far more attractive price because he was far less famous. At the time, national patents were highly contested. Even after the first international patent treaty in 1883, Western and Central Europe still had an unparalleled diversity of patent systems. National patents could help to guarantee one's position as a first mover in a country. However, as Eda Kranakis has pointed out, a patent was not only a promise to the patent holder; it could also turn into a threat. Disclosing full details of a patented invention opens the door to piracy.[27] In retrospect, it is very hard to tell who invented something really new and who simply copied existing devices. Whatever the case, Max Sielaff was soon producing exclusively for Gebr. Stollwerck.

The most urgent problems facing the joint venture were to be found in financing. Experimenting with new kinds of automata and finding new forms of financing went hand in hand. Gebr. Stollwerck set up countless small international companies or business partnerships with, for instance, Philippe Leoni of Paris, William Lever of Birmingham, Thomas Alva Edison of London or the Frères Lumière of Paris. With Edison and Lumière, Stollwerck cooperated on machines that were to be the forerunners of the cinema, which Edison himself had named 'kinetoscopes'.[28]

I shall not try to disentangle the Stollwerck network's involvement in the early history of the cinema and the automatic trade, or Stollwerck's international activities as an early global player. This would go far beyond the scope of this paper.[29] I only wished to show that the new innovative developments promoted international cooperation for two reasons. First, patents could be financially promising on an international level, and working together with international partners helped one find out about foreign technical innovations. Second, international cooperation was unavoidable for simple business reasons. The vending machine business as such was scarcely profitable. However, it started to become very interesting as soon as they could be used to sell large amounts of stock. The economic

[26] RWWA 208-278-2.

[27] Eda Kranakis, 'Patents and Power: European Patent-System Integration in the Context of Globalization', *Technology and Culture* 48 (2007): pp. 689–728, here p. 692.

[28] 'Wonders of Kinetoscope', *Current Literature* 15, 5 (May 1894): p. 442; Nic Costa, *Automatic Pleasures: The History of the Coin Machine* (London: Kevin Francis Publishing, 1988), pp. 22ff. For the early film history and the cooperation between Frères Lumière and Gebr. Stollwerck, see Martin Loiperdinger, *Film & Schokolade: Stollwercks Geschäfte mit lebenden Bildern* (Basel: Stroemfeld, 1999).

[29] For more details, see Angelika Epple, *Das Unternehmen Stollwerck: Eine Mikrogeschichte der Globalisierung* (Frankfurt; New York: Campus, 2010).

success of vending machines depended on business on a large scale. In his basic work on German retailers, Uwe Spiekermann notes convincingly that vending machines caused the biggest revolution in the distribution system of the time.[30] He misconceives their importance, however, when he judges that they were never a great commercial success. In 1891, Gebr. Stollwerck, for instance, sold roughly 20 per cent of their business volume through vending machines – only four years after the first vending machines had been installed.[31] This was only possible with the support of their countless subsidiary companies and joint ventures in Belgium, the Netherlands, Switzerland, England, Austria-Hungary and the US. Presumably what is true for the chocolate trade of the biggest European chocolate maker is also true for the trade in other markets such as cigarettes, soft drinks, condoms, soap, matches and so on. However, Charles Wilson's three-volume business history of Unilever does not even touch on the subject.[32] Again, there is much more research to be carried out.

Around 1900, coin-operated machines went through a clear differentiation in their names. The term slot machine in English-speaking countries was used increasingly to refer to gambling machines alone. In German, the corresponding term *Münzautomaten*[33] still designates both vending and gambling machines. However, the German language had distinguished between *Leistungs-* [service], *Waren-* [goods] and *Spielautomaten* [gambling machines] right from the start. Today, many kinds of *Leistungsautomaten* [service machines] no longer exist – and if we think of the x-ray machine in which a person could insert their hand and obtain an x-ray picture,[34] we can surely appreciate why. Others, like weighing machines or automatic photograph booths, have survived until today.

Georg Metz characterizes Denmark as the classic country of automatic vending, claiming that before the Second World War, there was one vending machine per 70 head of population. Twenty-five per cent of retailers' sales were allotted to them. At that time, Germany presumably had more than 1.2 million working automata.[35] Because they did not have to be registered in Germany, these figures are hard to verify. Nonetheless, whatever their economic success, coin-operated machines definitely changed not only retailing, but also our cultural attitude towards buying and consuming itself.

[30] Uwe Spiekermann, *Basis der Konsumgesellschaft: Entstehung und Entwicklung des modernen Kleinhandels in Deutschland 1850–1914* (München: C.H. Beck, 1999), p. 354.

[31] RWWA 208-278-2.

[32] Charles Wilson, *The History of Unilever: A Study in Economic Growth and Social Change* (London: Cassell, 1954).

[33] Coin machines.

[34] An image of one of the first x-ray machines is conserved in RWWA 208-F1573.

[35] Georg Metz, 'Warenautomaten-Gesetzgebung ab 1934', in Gierlinger and Kemp (eds), Wenn *der Groschen fällt* ..., p. 34; Friedrich K.Struckmeier and Georg Metz, *Alte Münzautomaten: Stumme Verkäufer, Automaten zum Spielen, Musik aus der Box* (München: Callwey, 1988), p. 81.

Standardization and Changing Consumer Practices

The importance of vending machines lies not only in their material existence. It lies even more in the utopian connotations that accompany them. It must be an old human fantasy to possess a machine that will do all the work and fulfil every possible wish. However, this omnipotent fantasy and the hope of an easier life also have a dark side: the fear of losing control. If machines act like human beings, they might come to life and even be more intelligent. This scary image did not just provoke a pleasant shiver. It also seems to have been a major topic during the epoch of Rationalism and the Enlightenment. Figures such as the Turkish Chess Player or Ghost-Seers that could tell the future were quite popular and travelled throughout Europe entertaining both the elites and ordinary people. The German romantic author E.T.A. Hoffmann was famous not only for his plays but also his novels *Der Sandmann* and *Die Automate* in which machines play a major role.[36] Hoffmann's weird stories illustrated the contested boundaries between automata and human beings – a subject that had already fascinated many writers before him.

When the first vending machines were installed, it was curiosity that attracted people first. As I have already mentioned, not even the Stollwerck brothers believed in vending machines as a successful retailing outlet. However, it soon became clear that they attracted people for other reasons. To understand this attraction more profoundly, we have to look at the development of retailing as a whole. Before industrialization, the producers of goods usually sold their products at the weekly market. Heterogeneous and locally varying factors of different velocity had to merge in order to trigger a tremendous change in the intimate personal relation between producer and client. Think, for instance, of the invention of chemical fertilizer, the abolition of obligatory guild membership, new market rights, the revolution of transport, an unbroken cold chain and the preservation of food, to give but a few examples.[37] All these factors made retailing possible over long distances. Long-distance retailing called for new products and, most notably, it required a standardization of products. Why is that? The personal relation between the vendor and the client as well as the possibility to literally see and touch what a person intended to buy made quality control easy. If a vendor sold spoiled goods,

[36] The Sandman and the Automat: E.T.A. Hoffmann, *Der Sandmann* (Berlin, 1977); E.T.A. Hoffmann, *Die Automate* (Zürich: Verlag der Arche, 1967). Interestingly, the German word Automat still took the female gender. At the end of the nineteenth century, it became male.

[37] Dieter Ziegler, 'Das Zeitalter der Industrialisierung 1815–1914', in Michael North (ed.), *Deutsche Wirtschaftsgeschichte: Ein Jahrtausend im Überblick* (Munich: C.H. Beck, 2000), pp. 220ff.; Wolfgang König, *Geschichte der Konsumgesellschaft* (Stuttgart: Franz Steiner, 2000), pp. 91ff., 181; Derek J. Oddy and Lydia Petránová, 'Marketing Food in Britain, 1860–1939', in Derek J. Oddy and Lydia Petránová (eds), *The Diffusion of Food Culture in Europe from the Late Eighteenth Century to the Present Day* (Praha: Academia, 2005), p. 238.

he had to explain why at next week's market. Long-distance retailing made quality a tricky enterprise. Products were all wrapped and could no longer be inspected so easily. It is well known that numerous food scandals led to the introduction of food regulations in all industrialized countries.[38] The introduction of brands was an effective reaction to the lost confidence in food quality. Brands guaranteed a constant product quality and thus relied on standardization.[39]

This development introduced a new person: the retailer. During the second half of the nineteenth century, most industrialized regions saw a replacement of the face-to-face relationship between producer and ultimate consumer by a relationship between the producer, the retailer and the consumer. This was the situation in which the first vending machines emerged. Similar to other new retail distribution systems, like the mail-order business, vending machines made the retailer (theoretically) dispensable. He was replaced, on the one side by the machine, and on the other side by the customer: the self-service idea was born. This had some marked effects on consumer practices. Consumers no longer came back because of a personal relationship with a specific retailer. They only bought something if the goods sold met their needs perfectly. Furthermore, consumers returned only if they could anticipate that the invisible product sold by a vending machine would do this. Only reliable standardization made this anticipation possible. The identical repeatability of a specific taste sensation – chewing gum, for instance – or of a specific function – a small bar of soap for washing one's hands just once – became a crucial characteristic of products. Self-service did not just have a strong impact on tastes and product quality; the argument can also be turned around – only the technical reproducibility of tastes and product quality made self-service a success.

Another aspect of consumer practices also changed dramatically. In a continuous face-to-face buying situation, the retailer always knows what consumers want, and, even more interestingly, the retailer knows which desires they will actually indulge. This is intimate information, particularly in smaller communities. With the automatic trade, however, consuming became an activity a person could engage in anonymously. Without the institution of the retailer, consuming is released from social interaction and from social control.

Wherever the automatic trade appeared, it became a major topic in the newspapers. In Imperial Germany, it was also a concern of school authorities

[38] For a history of the growing fear of adulterated food, see: Madeleine Ferrières, *Histoire des peurs alimentaires* (Paris: Seuil, 2002), p. 425; Michael French and Jim Phillips, *Cheated Not Poisoned? Food Regulation in the United Kingdom, 1875–1938* (Manchester, New York: Manchester University Press, 2000). Okun Mitchell questions however, whether food adulteration had increased, or whether it was just the chemical tests that had improved, see: Okun Mitchell, *Fair Play in the Marketplace: The First Battle for Pure Food and Drugs* (Dekalb, IL: Northern Illinois University Press, 1986), p. 15.

[39] Hartmut Berghoff, *Moderne Unternehmensgeschichte: Eine themen- und theorieorientierte Einführung* (Paderborn: Ferdinand Schöningh, 2004), p. 317.

and the Home Office Minister Georg von Rheinbaben.[40] Journalists mused about its effects even more, because vending machines made goods available not only for men but also for women and children. Even though these discussions were ubiquitous, their context varied significantly from country to country. The German discussion on the pros and cons of vending machines focused on the lack of social controls and their seductive power. If social control diminishes, the customer has to exercise self-control. From now on, he or she has to cope with the persuasiveness of modern consumerism. Primarily for children and women, the availability of chocolate outside the stores appeared to be a moral challenge in Imperial Germany.

The US discussions on slot machines followed different lines. The most urgent topics were not self-control or moral questions, but fraud and vandalism – quite often attributed to African-American boys. The US debate on automata thus was embedded in a broad self-reflection of a society struggling with a high level of juvenile delinquency, a rapidly growing immigration rate, and racist stereotypes. In some towns such as Orange, New Jersey, this even led to the confiscation of all coin machines to fight vandalism.[41] However, it was soon the gambling machines that attracted all the public attention. After about 1910, vending machines were no longer a subject of controversial discussion.

The discussion in other European countries also did not seem to have been as moral as that in Germany. I would suggest that in Belgium and France, for instance, the utopian aspect of automata seemed to have been much stronger.[42] Further research should take a closer look at how the self-formation of consumers was constructed differently in different societies.

Another strong effect of the emergence of vending machines derives from this. Vending by retailers also ties consumption to both a certain time schedule and a certain locality. Blue Laws, for instance, prevent shopping on Sundays. Vending by machines, in contrast, liberates consuming from this narrow frame. No wonder, then, that the issue of vending machines caused many juridical problems in Blue Law legislation in the US.[43] Even though Blue Laws differed from state to state, it was common for vending machines to be excluded from all shopping restrictions.

[40] The RWWA possesses fascinating documentation of a complaint submitted to Rheinbaben from a local school authority in Düsseldorf; see: RWWA 208-304-3.

[41] *New York Times*, 3 January 1895, p. 8. A concise overview of the social challenges and rejections during progressivism is given by Phillip Gassert, 'Die USA im 20. und 21. Jahrhundert', in Phillip Gassert, Mark Häberlein and Michael Wala (eds), *Kleine Geschichte der USA* (Stuttgart: Reclam, 2007), pp. 355–87.

[42] One example is an article by a Belgian journalist, 'Les Merveilles de L'Automatisme', *Le Soir. Journal Gratuit Quotidien*, Bruxelles, Nr. 232, 19 August 1892.

[43] Albert M. Friedenberg, *The Sunday Laws of the United States and Leading Judicial Decisions Having Special Reference to the Jews* (Philadelphia: Jewish Publication Society of America, 1908).

The *New York Times* reports in 1902, for instance, that sweetmeats in vending machines were the only goods available in the whole of Boston on Sundays.[44]

The juridical discussion in Imperial Germany also sheds some new light on the above-mentioned discussion about morals. The small retailers' lobby successfully introduced quite restrictive legislation to curtail the advantages of vending machines. Vending machines had to match the opening hours of retailers.[45] Hiding business interests behind discussions on the well-being of children and women seems to have been a successful strategy.

Conclusion

The history of self-service can be traced back to the early history of vending machines. The self-service idea as a fast-food catering solution was first employed in automatic restaurants. The economic success of vending machines depended on large-scale sales. This fact promoted international cooperation and made the early history of slot machines a transnational venture and polycentric story. Vending machines changed the interactions between producer, retailer and consumer. Automatic trade was part of a broader development that in the end loosened the close connection between consumer and retailer. Vending machines introduced new consumer practices like self-service and the expectation of a repeatable consumption sensation. This expectation could only be fulfilled through technological reproducibility, and thus a standardization of tastes, product quality and product function. Automatic trade encouraged the global standardization of products, business and consumer practices.

The signification of vending machines differed regionally. In Imperial Germany, discussions focussed on moral issues, behind which small retailers hid their lobbyism. In the US, the main issues were vandalism and fraud. We can see that an extensive history of the automatic trade still has to be written. This short insight into its early history shows that a 'heroic inventors' history of technology is misleading. The history of technology needs to include the cultural practices and semantic concepts that accompanied new and old technologies along with the attendant technology transfers.

[44] 'Blue Laws in Boston', *New York Times*, 21 April 1902, p. 2.

[45] Reichsgesetzblatt I, 1 October 1900 and 1 May 1904; see also Metz, 'Warenautomaten-Gesetzgebung'.

Chapter 7

Mail Order Retailing in Britain Since 1945: Credit, Community and Technology

Richard Coopey

The mail order sector in British retailing has recently undergone somewhat of a renaissance. There is no escaping the conclusion that this change in fortunes has been primarily driven by developments in information and communications technology. On the supply side new technologies have radically changed enterprises' ability to deliver through the post – ordering processes, stock control systems, delivery systems, credit referencing and so on have all been transformed in recent years. For customers the change has also been dramatic – the location and choice of goods, price comparisons, methods of payment, delivery prediction and tracking have all been dramatically altered. A new world of shopping has been created, and continues to expand. This new retail world is embedded in a wider social and cultural environment which is changing at the same pace, as information and communication technology (ICT) transforms the way people work and play, communicate and interact.

But mail order is not new of course. While it is tempting to view the mail order industry as leaping *de novo* out of the world of ICT, there is a more subtle history to be explored. Almost since the development of the postal system, goods have been advertised, ordered and delivered through the mail. A myriad of enterprises have sold goods by mail in addition to conventional retailing, or sold exclusively through the post. In most developed economies dedicated general mail order stores emerged around the beginning of the twentieth century, some of which went on to become very large and influential enterprises indeed. Sears Roebuck, for example, which became one of the largest corporations in the world, established a presence in millions of households in the USA, and led the way in rationalizing stock control and work flow in American industry, famously influencing Henry Ford in flow-line production techniques.[1] This chapter will examine the British case, particularly the rise of the large mail order houses, and will pose the question – to what extent did the new world of mail order grow out of older forms? And, indeed, to what extent are the new mail order retail systems, with their attendant social and cultural embeddedness, a reflection of a previous connectivity between mail order shopping and the social and cultural?

[1] Boris Emmet and John E. Jeuck, *Catalogues and Counters: A History of Sears Roebuck and Company* (Chicago: University of Chicago Press, 1965).