Minna Lammi / Mika Pantzar

The Fabulous New Material Culture

How plastics were introduced to Finnish consumers[1]

Abstract: This article focuses on how plastics were introduced to Finnish consumers. In Finland plastics made their breakthrough in the 1950s. New materials and domestic appliances were sold and advertised to Finnish consumers as offering the housewife the chance to liberate herself from the 'slavery' of housework. Our observations are based on press discussions and advertisements, as well as short films that will be examined in more detail in the article. The film material suggests that active efforts were made to gain public acceptance for the 'miracle material'. New synthetic materials were presented not as luxury consumption, but as a form of progress, a new, more rational, way of attending to daily chores.

Key Words: short films, consumer culture, rationalization, 1950's, practice innovations

Introduction

After the end of the Second World War, a strong movement to educate the public about how to act in a developing consumer society took off both in Europe and the United States. At the time, Finland was poor compared with much of Europe, and was still a largely agrarian country. Having been on the losing side in the war, Finland faced a large number of economic challenges connected with reconstruction, the payment of war reparations, and population resettlement.[2] Moreover, urbanization, which intensified in Finland in the 1960s, meant changes in housing and material culture.

The changeover from a traditional agrarian society to a modern industrial and consumer society in Finland was one of the most drastic in Europe. Consumer soci-

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ety was still in its infancy immediately after the Second World War, and the prevalent attitude to industrially-produced goods was one of suspicion. It was a huge challenge for industry and business to transform this suspicion into trust.[3] Therefore, companies introduced their output and products as a type of civic education, alongside the obvious objective of advertising.

In this article we will focus on the domestication of plastics and show how this new material and the novel practices connected with it were linked with ideas of economic and efficient housekeeping. We suggest that the American lifestyle was presented to Finns as the model of the future especially in the 1950s and 1960s. The idea of rationalization spread from America, first to Finnish industry, and then to households since the late 1940s[4] New household appliances, new materials and new ways of attending to daily chores were presented, not as luxury consumption, but as a form of progress, rationalization and saving money and effort. The notion of 'rationalization' was a way to introduce the new synthetic material culture into everyday live.

For reasons of convenience we approach plastic as a simple and easily-defined category. It should be recognized, however, that there are several types of plastic. At the turn of the 20th century there was Bakelite (imitating hard rubber) and celluloid (imitating ivory). In the 1930s new plastics emerged: urea formaldehyde, cellulose acetate, polymethyl methacrylate, polythene, polystyrene and nylon. Since then plastic materials have been sold under numerous different names, such as Plexiglas, Polyester, Teflon and Kevlar.

Newspaper articles, advertisements and short films were all excellent means for helping to transform public attitudes, but we shall concentrate on the short films. They were produced by studios for private firms, banks, advisory organizations, communities and the state. Some film production companies concentrated solely on making short films, but the biggest operator in the field, Suomi-Filmi, was also a major producer of feature films in Finland. The development of short films on consumer affairs was greatly influenced by a special tax reduction system. Introduced in 1933, it lasted until 1964 and boosted the output of educational short films significantly.[5] As has been shown in Minna Lammi's dissertation, more than 1.200 short films dealing with consumer affairs were issued.[6]

Short films were usually shown to cinemagoers before the actual feature, which ensured that they received large audiences. Generally they described how the new modern consumer could make financially wise, rational and systematic decisions, often in cooperation with, for example, banks. The distinction between educational short films and advertising was not always clear-cut. All in all, in the period under consideration short films were used to help the public to accept and appreciate industrial goods and to inculcate the notions of planning and saving. The films

were not only a key instrument, but also a mirror, of consumer education. They portrayed an entirely new world, a world of imagination and market economy utopias. Stylistically, the films were often a mixture of documentary and fiction. The beginning of the film was usually staged, centring on a model family and household. It was then followed by a documentary part introducing, for example, factory production. At the end the film would return to the model family again to show the family using the featured product in everyday life.

Some twenty short films were explicitly dedicated to new materials, but in many other films new materials also got a brief mention. New plastic products were presented in films like *Uusille urille* [*On New Tracks*], 1953, *Mukavuutta kodin arkeen* [*Comfort to Everyday Life*], 1957, *Aurinkoa arkipäivään* [*Sunshine to Everyday Life*], 1956, and *Muovista mukavuutta* [*Comfort from Plastics*], 1959. The films showed ways of using these new materials and how they could make everyday life easier.

There is a large amount of research literature available on various methods of film analysis. Since the 1970s, the research has largely been dominated by film semiotics and screen theory. The principle sources of inspiration for screen theory lay in Christian Metz's film semiotics, Saussure's linguistics, Lacan's psychoanalysis, Althusser's Marxist theories of subject and ideology and Barthes' semiotic analysis. It is an extensive and diverse research tradition, commonly defined by its focus on text, subject and ideology. Its principles also include the notion that the viewer's interpretations can be disclosed through texts and images.[7]

Screen theory was challenged in the 1980s by alternative theories. Their approaches use various analytical frameworks; they study their subject as a historical phenomenon and are empirical. Historical poetics is concerned with the circumstances in which films have been made, and how they serve specific functions.[8]

Traditionally film research, both in Finland and internationally, has focused on the study of fiction films. However, there is a rapidly growing branch of socially-oriented film research (of which this article is an example) which has started to pay wider attention to documentary and non-fiction films.[9] There has been growing interest in studying different areas of film together and in considering more thoroughly the different aspects, such as the script, production and reception of a film. We proceed from the assumption that films are products of culture, and are influenced both by the prevailing production structure and their audiences.

As for the short films examined in this article, we have sought out the basic information, about their authors, their buyers, their classification number by the *Finnish Board of Film Classification*, and their taxation status. We have studied the films using a close reading technique, and analysed their content: their images, narration and music, as well as the duration of the different types of scenes. We have also paid attention to the general aspects of the films, people's clothing, the milieu,

the atmosphere and things that may seem peculiar to today's viewers. The visual material of the short films is sometimes rather simple and streamlined.

When analyzing short films, our theoretical concern is how everyday practices were to change as plastics entered people's homes. By practices we mean sets of more or less controlled, more or less regular, more or less goal-oriented, more or less conscious modes of action. Daily practices like walking or cooking represent recognizable, relatively enduring sets of norms, conventions, ways of doing, know-how and necessary material arrays.[10] Practices involve and depend upon the effective configuration of three defining ingredients: objects and materials; symbolic meanings – including concepts of value and purpose; and competence – including skill, knowledge and understanding of sequence and procedure.[11] We emphasize positive historical research, the kind that pays as much attention to discontinuities and insignificant-looking developments as it does to continuities or to impressive changes. By examining not only fragments but also certain regularities, one can use data to speculate and infer how routines and unities of thinking and acting originate, change, and disappear.

Films are powerful shapers of images, even though they derive most of their subject matter from familiar environments. They can be regarded as an important part of the collective reality of society: their premises are often familiar, and the end result is an interesting mixture of old and new. It has also been argued that films can give rise to common dreams among their viewers, and can further define people's own, sometimes unformulated, dreams. They can create models of a lifestyle to which people can aspire.[12] By shaping worldviews, general opinions, values, attitudes and behaviour, the media, in this case short films, are an important forum for exercising power in society.[13]

"Be modern, follow your times!"

In post-war Finland the public discussion tended to favour ideas and people that 'created the new era' or were 'ahead of their times'. For example, members of the intelligentsia like the architect Alvar Aalto, or Armi Ratia, founder of the Finnish textile and clothing design company *Marimekko*, brought new ideas from across the Atlantic. Aalto, for instance, proposed that an entire American-style town be built in Finland. Innovations were justified not only on the basis of their direct utility but also on the basis of Finns' need and desire to 'follow their times'. The attitude that had to be overcome was once described as follows:

> "You are mentally lazy, you do things the way you have always done them, the way your mother did them, the way your granny did them, the way you learned to do them as a child. You don't use your brain, you don't follow your times."[14]

This rebuke was addressed to housewives and is a quote from Maiju Gebhard, probably the most influential Finnish figure in the area of household labour efficiency. She was the head of household research at the Work Efficiency Association (Työtehoseura). According to her, "it is not only equipment, machines and appliances that make people's work easier. People themselves are in a crucial position: their capability to organize, to think, to understand." The housewife should be awakened to reflect on how she worked, so as not to tire herself out unnecessarily. Then she could find the "resources to improve herself and create the home's atmosphere."[15] Household appliances and new materials were part of this promise of progress. This was progress, but not in every respect. The woman's workplace was still in the home.

In her writings and radio lectures Gebhard was the first to introduce Finnish households to the freezer and the dishwasher, among other innovations. The rationalization movement, she claimed, was marching from the factories to homes. International connections and influences were important – in 1949 she organized a visit to Finland by a zealous supporter of rationalization, Professor Lillian Gilbreth of *Purdue University*, the wife of Frank Gilbreth, one of the fathers of the American theory of rationalization.[16] Their ideas reached larger audiences when the Gilbreths became columnists for *Kotiliesi*, arguably the most important family magazine of post-war Finland.

In the 1950s most of the educational articles published by the *Work Efficiency Association* (in *Kotiliesi* and elsewhere) were written by Maiju Gebhard, who had been educated in Sweden. It is no wonder that Sweden, a country which emphasized 'functional ideals', was taken as the model for the Institute's educational activities.[17] The Swedes themselves had sought inspiration from several sources: Germany and Britain as well as the United States, where home economics had a long tradition. The Swedish approach became very popular in Finland because it emphasized research and information on household needs as well as direct effects on producers. The fact that all Nordic countries shared a history of strongly normative discussion about luxury and unnecessary consumption added to the attraction of the Swedish model.[18]

While the normative dimension of the discourse about household efficiency showed a markedly Nordic imprint, technological progress was almost invariably conceived on the basis of examples from the United States. The ideas of progress and of the primacy of utility were repeated in almost the same terms in the press

coverage of the washing machine, the refrigerator, the freezer, the dishwasher, and later on, the mobile phone and the personal computer.[19] This was not, however, the 'voice of technology itself', or that of consumers, but rather a set of established cultural frames. From this perspective, instead of technological determinism, we should better speak of a cultural determinism, epitomized in the 'rational management movement' of the home. The freezer is perhaps the product on which rational housekeeping put the greatest stress, drawing on idealized notions of the housewife and the ideology of efficiency. With the help of the 'steel-cased bank' of the home: "the housewife is freed from worrying about food and she can enjoy a Sunday off or go on a holiday because the family is provided for by food preserved in the freeze-storage."[20]

New materials and domestic appliances were sold and advertised to Finnish consumers as offering the housewife liberation from the 'slavery' of housework, although the notion of the 'housewife' predominant in Europe and America had never really taken root in Finnish society. This can even be seen in the Finnish language: There are three different words for housewife. The word "perheenemäntä" ("mistress") was the most commonly used in short films and newspaper articles. However it is not equivalent to "housewife": The word has its roots in agrarian society. It refers to a woman (traditionally a farmsteader's wife) who has children and runs the household, but she could also work outside the home. The word "kotirouva" ("housewife") was not often used. It refers to more upper class housewives who might be wealthier and could even afford to hire help for household work. The third word "kotiäiti" ("home mother") refers to homemakers, i.e. women who stay at home to take care of their children. This word was not very common in the 1950s, although it became more common later.

Before the Second World War Finnish women – and men – worked mostly on farms. In post-war Finland women were needed as workers, not only as housewives. Indeed, one key feature of Finnish society was the comparatively high rate of female participation in the labour force. The number of working women did not decrease after the Second World War when men came back from the front. In the 1950s, 34 percent of working urban women were married. In the 1960s the proportion of working married women had increased to 45 percent. Moreover, in mainstream political discussion the stance on the issue of working mothers was moderate: it was not taken for granted that mothers with small children would stay at home, although it was seen as advisable.[21]

In the 1950s, ideal notions of better-equipped homes were quite similar in all Western countries.[22] Compared to the present day, attitudes towards new technologies were open and uncritical. Household technology was meant for women. Women were no longer the victims of technology, incompetent and helpless, but

active users and definers of technology. And women emphasized the utilitarian aspect of technology: saving time and money. The key principle of proper saving was regularity, just as it was with children's feeding or bed times, or control of one's bowel movements. Other key concepts of those times were goal-orientation and balance: striking a balance between present desires and future possibilities, and between household consumption patterns and the development of the national economy.

New materials, new appliances and new ways of saving shifted the Finnish households of the 1950s away from a surplus-saving agrarian society (saving for a rainy day) towards an industrial society emphasizing household investment. Household appliances (and new materials) were durable tools, and thus suited much better the 'industrial' mode of the times than, for example, Mediterranean holidays or exotic foods (their time would not come until the 1980s). Taken together, a unique combination of Eastern planning, investment-driven economic thought, and Western dreams of consumption may explain why Finnish households accomplished an exceptionally swift transition from an agrarian surplus-saving culture to a Western consumer and "credit culture".[23] Another reason for the ready acceptance of American ideals of consumption might be that both Finland and the United States have had quite short and similar periods of 'cultural evolution' in their histories. In both countries the progressive tone in nation-building may be related to a sort of 'new frontier' ideology[24] and strong peasant roots with an egalitarian tradition. A combination of individualism, collective responsibility and pragmatism could arise in these countries where, unlike in many other European countries, no court or powerful nobility had ever existed.

The Americanization of Finland

In Finland, as in many other Western countries, it was expressly after the Second World War that the consumer came to be seen as the fundamental historical agent around whom a stable, democratic order could be erected.[25] Yet there were notable differences between countries:

> "Whereas in France, a country with an active, outspoken and critical communist presence, the prosperous consumer was projected as an alternative to the organized and militant worker, and in Germany the consumer was conceived as the basis for a stable and democratic political order on the front line of cold war, in Britain the post-war social and political order was imagined around an austere, self-abnegating consumer."[26]

The evolution of a consumer society in Finland, a country that had recently lost the war alongside Germany, had much in common with the corresponding development in Germany. The United States became an important model to follow (uncritically). Why was it the United States, in particular, that came to serve as a model for the Finnish future, especially in the 1950s and 1960s? Without doubt, part of the explanation lies with the deliberate propaganda made by US officials under the banner of 'cultural exchange'.[27] This would suggest what could be called a 'dictating' (or 'trickle-down') model. A simple and linear causality leads from American intentions to Finnish reality (e.g. exhibitions). However, it would be an over-simplification to assume that American influences were transmitted 'undisturbed', to become the ideals of Finnish consumer society, even though there was little evidence of anti-Americanism in the Finnish media until the mid-1960s.

Instead, we would argue that the role of various interpreters and mediators has been very important. This implies a 'mediation model'. Mediators – 'agents of change' – can be divided into three related classes: new products such as jeans, hygiene products, or domestic appliances; the media, i.e. newspapers, magazines, radio, television and fairs; and people, both organizations and individuals, promoting ideals of modernity. These Mediators – films, persons, images and available products, and the new practices which came with them – helped to shape new cultural landscapes.[28]

In this article we will mainly focus on the role of short films in moulding and forecasting people's experience of new technology. But historical accidents and cultural context also have to be taken into account. It was not self-evident that an American utopia was achievable.[29] Until the beginning of the 1950s, most consumer goods were rationed. Furthermore, the availability of imports depended on foreign exchange cycles. In spite of these retarding factors, in the years following the Second World War the United States became the undisputed model: 'A Society Looking to the Future'. When the consumer market was finally liberated, new products, like plastics, freezers, refrigerators, washing machines, televisions and cars, flowed onto the Finnish market. New products were regarded almost invariably as if there were only two, mutually exclusive options: either to board the train of progress and well-being, or to bid farewell forever to development.[30] The following passage from an interview with one the fathers of the Finnish welfare state provides a good example of the 'catching-up' attitude prevalent in post-war Finland:

> "As we finally catch up with the West, we asked ourselves: What are we to do with our new affluence? We can't eat more. There is a limit to the automobiles and gadgets we really need… So I started to persuade my countrymen that we should build a suitable and beautiful environment for everyone."[31]

The process of material modernization that had begun during the first half of the 20th century accelerated in post-war Finland. Private consumption doubled between 1952 and 1975. A change in material affluence of similar magnitude had taken twice as long in the first half of the 20th century. During the 1950s and 1960s there was a pronounced widening of consumer goods markets and extensive urbanization. Less than 60 percent of the population of working age were wage earners in the early 1950s, but twenty years later that share had reached nearly 80 percent.[32] The beginning of the 1950s saw a new liberalizing atmosphere, with wider consumer goods markets and a vibrant popular culture. At the same time, the rationing system introduced during the war was finally abolished. Many new consumer goods became available. For instance, in November 1950, *Oy Anglo-Nordic Ab* organized a presentation of General Electric's new television set in the *Stockmann* department store. Coca Cola became available in Finland in 1952, the year of the Helsinki Olympics. Rock and Roll music began its invasion in 1956 when the film *Rock around the Clock*, with Bill Haley and the Comets, premiered in Helsinki.

Fairs and exhibitions, extensively covered by the press, had played a major role in hastening the advent of the modern age in Finland since the last decades of the 19th century. In post-war Finland the press was particularly inspired by the stands at the *America Today* exhibitions. For example, the 1953 exhibition in Helsinki, entitled *The American Home*, got fulsome praise in magazines. *Suomen Kuvalehti*, a weekly magazine with a wide circulation, wrote about the exhibition as follows:

> "A piece of America in Helsinki […] ordinary Finnish consumers and specialists alike got new ideas which can be realized also in our conditions. The model kitchen of the American home and its labour-saving inventions may remain a daydream for the Finnish housewife, but still it is likely that a number of new gadgets and household utensils may appear on Santa's wish-list this year".[33]

The world's most 'advanced' country had made dreams come true even for ordinary people. The essence of the modern ideal was 'a democracy of material wealth'. However, as Finnish consumer society developed, the press adopted a more critical tone. This can be clearly seen in the coverage of the 1961 *America Today* exhibition. In 1959 it had been shown in Moscow under the title *People's Capitalism*. (The meeting between Soviet Premier Nikita Khrushchev and Vice President Richard Nixon in the 'kitchen of the future' had been widely publicized worldwide.) It was therefore argued that "nobody can claim that the exhibition has any provocative political purposes".[34]

While the press still celebrated the vision of a better future based on material prosperity and new technologies, some more critical comments accompanied the admiration. For instance, the editor of the women's magazine *Kotiliesi* wrote:

> "Do the Americans really think that we don't have the latest household appliances on sale here? In the past few years we women have been pampered by our importers and shopkeepers so that there is nearly any kind of household novelty available in our shops".[35]

She particularly questioned the compatibility of an ideal laboratory-like kitchen with the Finnish lifestyle.[36] The differences between the Scandinavian and American styles were conspicuous:

> "It seemed that the American interior designers' idea of a comfortable home did not comply with our Finnish taste. Here in the Nordic countries we are used to seeing high-class interior design and we are proud of it. Maybe the Americans were not sufficiently aware of this when they were planning the exhibition."[37]

In fact, the 'Americanization' of Finland did not take the form of an influx of physical artefacts, but rather of ideas and cultural goods. Small artefacts such as records, comics and cosmetics were both manifestations and bearers of the idea of modern society. Most of the 'American' technology, including big domestic appliances, was produced either in Finland or in Sweden, the UK or Germany, which were Finland's most important trading partners at this time. In many cases, real American products were either too big or too expensive for Finnish consumer markets. Besides, the rather small Finnish consumer market was not very attractive to American firms.

The sources of modernity were quite different among various sections of the intellectual elite. While advertising people took their model quite directly and unproblematically from the United States, designers and architects, with a similar professional and educational background, took their model of modernity from European sources, and condemned Americanization as a banal and decorative style, mere 'nameplate engineering' (e.g. Alvar Aalto in the opening ceremony of the New York World Fair 1939). The interior decoration of Finnish homes shows one paradox of Americanized Finland. Anecdotal evidence suggests that Finnish households were already light years ahead of their counterparts in the United States in terms of their 'modernistic style'. The values of simplicity and functionalism were propagated both by the intellectual elite and by retail outlets.

While the creation of needs is not a straightforward process, the Finnish experience suggests that discussions on the need for new material consist of three stages: 1) the invention of the product (e.g. nylon, 1939), 2) the invention of the need, and 3) the invention of the consumer. Although in many cases the stages overlap, and this periodization is subject to debate, it is nevertheless based on a large number of observations from press discussions, short films and advertisements.[38] In the first stage, 'inventing the product', the technology itself was news. The public discussion

emphasized the role of the new technology in replacing the old one. The refrigerator simply replaced the cold cellar. The washing machine replaced the washerwoman, and the computer robot would replace the thinking human being. As the markets developed, the discussion shifted from a focus on the product itself to considering its applications, i.e. 'inventing the need'. This shift in focus – from its news-worthiness to its more everyday benefits – seems to be a necessary condition for the product to remain successful. A customer does not buy the same product twice merely because of its novelty. In the 1950s and 1960s, in the process of invention of the consumer and user, the product and the consumer together started to form a relatively stable entity in which it is difficult to distinguish the more dominant party. For example, it is almost impossible to be a manager (or a servant) in a modern organization without a phone. It is no longer an issue of an individual's needs. We learn to use appliances, but they also learn to 'use us'.

One example of how new materials learn to use us can be seen in relation to Americanization. An American cluster emerged and developed in the Finnish context when the Erkko family captured a significant share of the local media market. The family, part of the political and economic elite of Finland, built a media empire, hosting many cultural products of American origin. More formally, we can talk of self-propagating cycles (rather than clusters), which existed through self-production. As cycles generated surplus to their members (profit, well-being etc.) their ability to survive increased. Gradually, American clusters also became integrated with similar blocks in both Finland and other countries. The original elements of these cycles consisted of almost purely 'American' objects – ideas, patterns of meaning, human beings and material artefacts – which reinforced one another. In the early phase 'foreign' objects were internally coherent but with only a minor amount of contacts to the receiver culture. By and by, however, their 'foreignness' vanished and they became integrated (through processes of normalization, domestication, internalization, socialization, appropriation etc.) into the domestic systems of meanings and ecology of goods, resulting in stable clusters of meanings and artefacts.

The arrival of plastics in Finland

The history of the plastics industry in Finland starts in the period between the world wars, although plastic products did not come into common use until the 1950s and 1960s. Finland's first company manufacturing plastic products, *Sarvis*, began its operations in 1921. The first products the company made were buttons, combs and other articles for daily use. The buttons also gained wider recognition: at the Paris World Fair of 1937 *Sarvis* buttons were honoured with a gold medal. *Sarvis*

expanded its production in 1936, when the company started to make its own phenol formaldehyde resin, commonly known as Bakelite. It established a factory for making plastics, and began to produce technical products. *Sarvis* became Finland's first producer of the raw plastic material, and supplied Bakelite powder to the other plastic plants in the country. *Sarvis* also started to export this material at an early stage; in the 1930s one third of the company's output was exported.[39]

It was, however, not until the 1950s that plastics made their breakthrough in Finland. Before the Second World War plastic products were not found in ordinary homes. The import of plastic raw material was regulated in the 1940s due to the lack of foreign exchange, and the shortage of raw material (e.g. oil) continued until the early 1960s.[40] Most of the plastic raw material and manufacturing equipment was imported from West Germany, Sweden, Denmark, Britain, the Netherlands and the United States. After the Second World War the mass production of household equipment started to develop rapidly and plastic products spread into Finnish homes. Dozens of companies were established in the plastic industry, especially in and around the cities of Helsinki and Lahti, and on the west coast. The west coast had a strong tradition of trade with Sweden, while the Helsinki region had been the hub of trade ever since the war. Most of these companies produced various consumable items, such as household products and packing material.[41] Plastic products found their way especially into kitchens and bathrooms, as well as being used for storage and cleaning. Intensive house building after the mid-1950s served to accelerate this development, as the new apartments were equipped in the modern fashion.

In 1940 the plastics industry founded its own society, the *Finnish Plastics Association*, a sectoral organization of the *Finnish Federation of Industries*. The association raised the profile of plastic production and products, and also aimed to influence access to raw materials and ensure that they were fairly distributed. It was one of the first of its kind in the world; similar organizations had only been set up in Britain and the United States in the 1930s. The Finnish public in the 1950s still only had a rather vague conception of the qualities and uses of plastics. For this reason, the association held an exhibition in 1951 showcasing plastic products at *Stockmann*, Helsinki's largest department store. A couple of years later the association commissioned the film *Uusille urille* [*On New Tracks*] from *Suomi-Filmi*, which was screened in movie theatres before the main feature of the evening.[42]

Apart from *Sarvis*, *Plastex* also manufactured plastic products in Finland. The company had been founded back in the 1930s, with combs as its most important product. In 1953 the company changed hands, and its new owners, Olli Ant-Wuorinen, director of the Chemistry Department of the *Technical Research Centre of Finland*; Aarne and Pauli Metsäkallio, owners of the *Lahden Rautateollisuus*; graduate engineer Harry Schumacher and two Swedish engineers, started building a

new factory. The new management spent much of its time in negotiations with the authorities about raw materials. In the 1950s *Plastex* still made its own machines, which were used to manufacture such items as plastic hoses and nylon string. Toy cars and wash basins were among the best-selling articles in 1954. Sales were boosted with a strong marketing campaign. Showy advertisements were placed in newspapers and magazines. The short film *Mukavuutta kodin arkeen* [*Comfort to Everyday Life*] from 1957 formed part of this promotional effort. Despite its commercial objectives, the *Finnish Board of Film Classification* classified the film as a tax reduction film. The law provided this means of supporting domestic industry, creating an image of a common Finnish industry, even though the company in this case – as in many others – was under purely private ownership.[43]

Alongside *Sarvis* and *Plastex* there was also a third Finnish company that sought to get its plastic products into the homes of Finnish consumers. The *SOK Cooperative* acquired the license to manufacture foam plastic in Finland from the German firm Bayer. The company and its foam plastic were named Superlon after the German plastic trademark Perlon and the first letters of both Finland's name in Finnish – Suomi – and the *SOK Cooperative*. For a few years the company had no competition in Finland, so the name Superlon established itself as a general term for foam plastic.[44] The cooperative movement used newspapers, magazines, and films (which were both commissioned and made in large quantities) for marketing and for civic education purposes.[45] Superlon products were advertised in newspapers (and later also on television), at trade fairs and through promotional events at cooperative stores.

The film *Muovista mukavuutta* [*Comfort from Plastics*], made in 1959, features the manufacture of foam plastic products in the Rauma factory and the use of foam plastic in households. The *Finnish Board of Film Classification* granted it a tax free, but not a tax reduction status, possibly because of its length. The film was used primarily at trade fairs, promotional events and presentations given by the Superlon factory's salespeople as they travelled around the country.

Across the world in the 1950s, the home of the future was epitomized by modular apartments and the revolution in plastics.[46] Around that time, plastic products began to come into common use in Finland. In 1955 an average Finn consumed 2.6 kilos of plastic, whereas within ten years the amount had soared to 34 kilos.[47] The *Finnish Plastic Association* was founded in 1940; in 1950 there were 30 companies manufacturing plastic goods in Finland. In the following years, with the partial abolition of rationing, the number grew to as many as 60 companies. From the time of the Helsinki Olympic Games in 1952, Finnish designers have become noted for their use of plastic in addition to wood and glass.

Plastics in short films and the ideal of economic housekeeping

Moving images were not only an effective means of shaping consumer attitudes but also of disseminating new information. Films were an important channel of both education and advertising. In short films, advertising was usually mixed together with ideological education, whereas clear, short product advertisements were scarce. Besides civic organizations and cooperative societies, short films were made by Finnish businesses, which saw them as an effective marketing tool. Even though the films were not 'marketing' in the most direct sense, they provided the means whereby a business could portray its operations and product manufacture or show how the products could be used.[48] In the early years of Finnish advertising, advertisements were first and foremost informative, their central message being that the advertised product was available in certain places.[49] Prior to the Second World War, advertisements rarely relied on selling an image; even the film commercials predominantly used 'rational' reasoning. This sort of education, which did not necessarily strive for impartiality and was often of an ideological nature, had been produced by civic organizations and cooperative societies since the beginning of the 1920s. It is impossible to trace the exact route by which the new ideas about household technology found their way to Finland in the 1950s. However, the origin of these ideas is quite clear. The numerous articles in the Finnish press which depicted the future always began with a reference to the same model. This account from an exhibition is typical:

> "The American kitchen marketed by Eri Oy attracted the largest crowd of spectators. It had a refrigerator, a deep-freezer, an ultra-modern oven, a dishwasher and a washing machine, an all-powerful 'kitchen assistant', an electric mixer, an automatic toaster, etc. – all of them a dazzling white."[50]

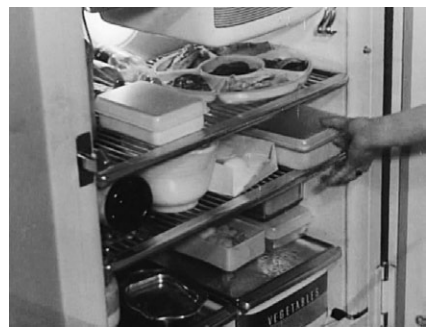
Faith in material progress was strong in post-war Finland. Whether we look at advertising, short films, educational material or newspaper articles, we find very similar voices, tones and specific claims in the public discussion. Although this article focuses on the Finnish experience, the mentality related to the modernization of housework and domestic appliances seems to have been very similar in different countries.[51]

The trend that emerged in the household management advice given in Finland following the Second World War was to educate the public in rationalizing household work, planning expenditure, and using and choosing new materials and household appliances. New plastic products were among the innovations that were actively marketed in films. In *Uusille urille [On New Tracks]*, 1953, for example, plastic is featured as a miracle material extending into every sphere of life. The film

follows the day of an ordinary man, presenting the products which surround him, and the materials they are made of.

> "An increasing number of products we use in everyday life are already made of different plastic materials, from alarm clocks to shirts and underwear. From light switches to lampshades, plastic products serve us day and night."

The film presents a run-of-the-mill family doing their morning chores, at work, surrounded by plastics wherever they are. After presenting the family, the film moves on to the factory's laboratory, and from there, to the factory itself to show the manufacture of plastic products. After the tour of the factory, various household textiles and products are introduced, which are said to bring "more comfort and colour pleasure into our lives, and reduce our efforts."



Stills from the film ‚On new tracks'. National Audiovisual Archive.

When new materials and new products are introduced to the public they are often seen as risky and suspicious. To become a part of everyday life they need to connect with common systems of things, ideas and competences.[52] A thorough understanding of the concept of good living is crucial. Furthermore, objects are not just communicative but also pragmatically useful.[53] Early advertisement and civic education especially had to convince the public that these new products were merely new articulations of traditional wisdom. According to Susan Strasser, who has studied American consumer society extensively, businesses did not purposefully set out to create new needs – new needs and consumer behaviour were born in tandem with social change, urbanization and the shift towards a modern, urban lifestyle. New needs were 'defined' and new products were born at the same time as the new way of life took shape.[54]

Jeffrey Meikle reconstructs the historical transformation of the image of plastic as follows. Initially, around 1900, plastic was regarded as a novelty and a substi-

tute. The proliferation of plastic in everyday life also reinforced an attitude that not much was really changing:

> "The repetitive act of throwing away lost its meaning in the face of the more insistent reality of stability through instantaneous replacement. A forever vanishing world of objects was forever renewed with identical plastic clones – occasionally mutating in style enough to reinforce and satisfy a desire for novelty but not enough to produce an expectation of substantive change."[55]

Households were transported to the modern era with new products and materials. In the film *Aurinkoa arkipäivään* [*Sunshine to Everyday Life*] two families, Virtanen and Mäkinen, brought their old kitchens and bathrooms up to the modern standard using new tiles. The narrator instructs in the film:

> "Virtanen built with modern and economical methods and materials. The moisture insulation on the wooden walls, asphaltic felt, runs along the floor under the concrete slabs. The wall surface is made up of baked enamelled Enso tiles."

The film carefully follows the progress of the tiling project. The fixing of the tiles is illustrated by instructive charts and the men are observed at work. Finally, the film returns once more to the family theme and turns to admire the Mäkinen family's refurbished home. The children are playing in the kitchen, and soon their father joins them there. According to the pleased father, after the renovations, the kitchen has become everyone's favourite room.

> "[…] indeed a smashing new material. And when the kitchen furnishing comes ready-made and planned by the *Work Efficiency Association*, then you know it must be just the way a wife would want it."

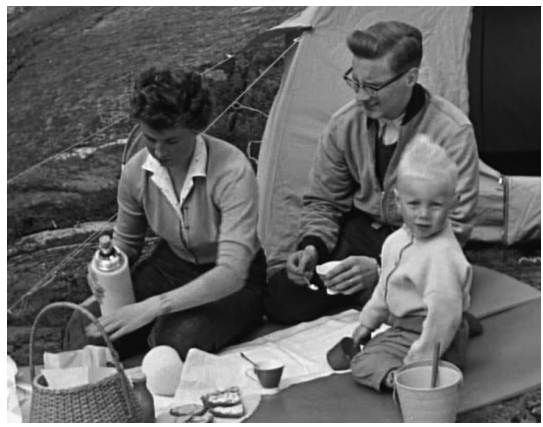
Virtanen and Mäkinen in a newly modernised bathroom. Scene from the film ‚Sunshine to Everyday Life'. National Audio-visual Archive.

The ideal housewife of the educational short films displays a positive attitude towards technology, rationalization and economic housekeeping. At first the principles of rationalization were of interest mainly to Finnish industries. In 1924 a special organization, *Maatalouden työtehoseura*, was established to spread ideas of rationalization into the agricultural sector. The organization gradually expanded its range of activities and in 1937 changed its name to *Työtehoseura* (*Work Efficiency Association*). Under its new name, the organization started to concentrate its activities on housework. It also provided practical guidance by organizing exhibitions and commissioning educational films.[56]

The film *Mukavuutta kodin arkeen* [*Comfort to Everyday Life*] from 1957 praises plastic as durable, able to cope with temperature changes, modern, beautiful, resilient, practical, suitable for a large variety of uses and "unafraid of water". The film features an 'ordinary family', remarkable only in one respect: its enthusiasm for plastic, which is described in the film as "one of the emblematic and most versatile materials of our time". The product itself, states the film, excels in countless ways, but how can it help the housewife with her daily chores? The film makes plain that it can simplify and lighten her workload. The mother of the family busies herself in the kitchen while the narrator points out the various objects made of plastic. The mother picks plastic containers out of the refrigerator, and packs the husband's lunch in a plastic box. Many of the objects in the bathroom are also made of plastic. Preparing dough is easy as pie with a plastic rolling pin, and all the dishes are made of plastic. Thanks to plastic, the children can help with household chores: they can set the table without the mother worrying about dishes getting broken. According to the narrator, "the use of plastic in, for example, household equipment has increased rapidly and won the approval of homemakers. Due to its high adaptability, plastic has in a short period of time proven its functional diversity." The new lampshade and even the sewing box are made of plastic, not to mention the plates. In the film, plastic provides a solution to many housekeeping problems: "So new and effective solutions are constantly being developed, with the goal of simplifying and lightening the housewife's daily burden. Here plastic shows its enormous potential." The film, like many of its contemporaries, depicts plastic as the marker of a new era:

> "Stone Age, Bronze Age, Iron Age and now the Plastic Age – there's an idea that is positively welcomed by a technology-minded family. Plastic has literally made its breakthrough, we encounter it everywhere, and it now serves as a symbol of our time. Plastic is beautiful, durable and practical."

In 1959 Maiju Gebhard of the *Work Efficiency Association* was asked what were the best plastic products for boosting a housewife's work efficiency. Among the key reasons for using plastic she listed was that it lightened household tasks due to the lower



Camping, family picnic, and lots of plastic. Scene from the film ‚Comfort from Plastics'. National Audiovisual Archive.

weight of plastic products like plastic buckets or foam plastic mattresses. She also mentioned better organized and more hygienic homes thanks to items such as storage containers.[57]

Even though plastic was presented as a miracle material, its use was associated with familiar things. It made everyday life easier but didn't change it radically. Superlon, for instance, is showcased in the film *Muovista mukavuutta* [*Comfort from Plastic*], made by *Suomi-Filmi* in 1959. First, we follow the manufacture of Superlon in a factory, and then we hear the material praised as light, resilient and durable. Next, charts are presented showing the various items of clothing in which Superlon is used. We learn that it is well suited for padding, hats, bras and handbags as well as for furniture and many other objects ranging from camping gear to thermoses. All in all, the whole world around them seems to be filled with Superlon, which in the end even appears in the main character's dreams.

The example above shows how the material nature of an object can become defined in the consumers' world of experiences, especially in relation to competing materials and their performance: simplicity, resistance and cleanliness were seen as more important aspects of plastic to consumers than the scientific attributes of the new material. Typically films present plastic as firm, beautiful, practical and suitable for the most varied uses. It is also praised for simplifying and lightening the work of housewives at home.

From the outset the new plastics industry worried about the public image of its product and presented its new materials as imitations of, or substitutes for, the traditional ones.[58] In our case, the short films tried to relate the new materials and their everyday use to pre-existing concepts of good living and well-established practices. The concept of professionalism entailed preplanning, management, control and efficiency. The ideal of rationalization encouraged and steered household consumption towards appliances, modern factory-made furniture and factory-produced gro-

ceries. This also had a strong impact on notions of what an ideal home should look like and how it should be furnished.

The short films we have studied represented a familiar genre to their viewers at the time: an educational film shown before the main feature. They portray exemplary, middle-class families who hold an enthusiastic but sensible attitude towards innovations. As consumers they keep the best interests of the nation in mind as they choose domestic products, plan their purchases in advance and look after the household in a professional and efficient manner. The presentation of plastics in these short films has to be analyzed in the context of their genre. As they follow industrial production through the manufacturing process, they conform to a pattern familiar from presentations of industrial products since the 1920s and 1930s. The manufacturing process provided the films with a logical structure. By showing in detail how the product was made and packaged the films served to assure the viewer of its good quality, safety and hygiene. They also acquainted the audience with laboratories, highlighting the scientific precision of the production process.

The films portrayed modern Finns as self-reliant, active, well-educated, and goal-oriented. This was not necessarily a true depiction of an average consumer in the agrarian Finland of that time. Rather, the narrative of modernizing Finland was a set of ideal representations. The general discourse both reflected the hopes for a new type of consumer-citizenship and reinforced these ideals.[59] Incidentally, there was a similar set of ideals in Sweden. Boel Berner, for instance, has described special afternoon matinee films, *Husmors Filmer* [*Housewife Films*], as a "double parade" of information and advertising. The housewife of these films was a modern homemaker who trusted the advice of experts and warmly welcomed all new technological solutions in her home and kitchen.[60]

Practice innovations in the age of plastics

In the post-war period, within the everyday lives of consumers, plastic became defined more by its functional (plasticity, flexibility, durability) qualities than by its scientifically recognized properties.[61] As the prominent scholar of semiotics Roland Barthes has noted, compared to traditional materials, plastic is "more than a substance". It entails a promise of "infinite transformation": "Possessed of endless possibility, it triggered perpetual amazement at the proliferating forms of material."[62] The connotations of plastic have varied over time. In the 1930s Du Pont, to give one example, represented it in terms of a very strong belief in progress, celebrating the idea of human supremacy over nature: "Better things for better living – through chemistry", "nature-free future"; "nature is no more the boss". By the 1980s, in

response to the bad reputation of plastic, the industry tried to efface the word 'plastic' from its product vocabulary, preferring to use such paraphrases as, for example, 'composite material'.[63]

Our film material suggests that active efforts were made to support public acceptance of the 'miracle material'. The media presentations described above challenged, among other things, institutional, technical and mental systems. Importantly, the new (material) did not necessarily replace the old but lived and developed alongside it, as for example, when plastic began to be used as moisture insulation in wooden walls, or plastic boxes were used to pack lunches in or for storing food in the refrigerator. The point is that the introduction of plastic into homes was connected with changing everyday practices such as, for example, keeping different household surfaces clean.[64]

Indeed, we can approach and understand the rapid general adoption of plastic immediately after the Second World War by shifting our focus from a single material onto specific practices and mentalities related to the new material. Plastic challenged the general and explicit understandings, tacit knowledge and emotional engagements inherent in many routines of everyday life. We can characterize this moment in terms of several *'practice innovations'*. By the term 'practice innovation' we simply mean that new combinations of material objects, ideas and competences evolved, feeding each other when plastic came into the market.[65] Focusing on lifestyles, changes in daily practices and practice innovations is necessary as a corrective, both to simplistic notions about psychological resistance to change among consumers about the necessity of progress, as well as to the established way of approaching materiality only on the basis of natural properties.

The film material we examined traced how plastic was defined as a 'functional material' in various contexts of use not only by virtue of its natural scientific properties but also by the "demands" of practice. This line of thinking refers to such concepts as the 'performance',[66] 'affordability',[67] and 'functionality'[68] of the material. Each of these perspectives underscores both the experiential and institutional embodiment of plastic.

In abstract terms practice innovations challenge, on the one hand, the systemic links between practices. For example, plastic explicitly suited an urbanizing lifestyle where hygiene was emphasized in myriad respects. On the other hand, a focus on practice innovations emphasizes components of practices, various combinations of skills, images and material objects. From this point of view, plastic, or any other material, could be looked at in terms of its ability to integrate and become integrated, to strengthen (or weaken) the functional combinations of a specific practice. Once plastic had invaded people's homes and everyday lives, the description 'plastic' was applied to any dishes that do not break when they fall on a stone floor or

clink in the way that metal or glass dishes might do. It is the functional properties of plastic – ease of use, durability and hygiene – that was stressed in the short films. The films themselves painted a picture of the homes of the future. It was barely conceivable in the 1950s that plastic could really be found in all household wares, even though the films gave such an impression. With the development of Bakelite and nylon, of Plexiglas and Vinylite, applications of plastic in consumer goods moved beyond imitation of natural materials to embody forms, colours and textures that were frankly artificial – thus announcing by their touch and appearance that they had transcended the material limits imposed by nature since the beginning of time.[69]

A purely technological, product or material-based perspective could give the impression that good matter (technology) always replaces bad matter. This misguiding sweeping notion commonly appears in technological visions of the future and in public discussion, where change is always seen as revolutionary or as an either/or solution. It fails to understand the entire infrastructures (of information, desires and technologies) that support the existing structures of needs. At the same time, while practical activity is based on ideas, competence and use of materials, these components are also defined through practice. For instance, activities aimed at improving hygiene supported and strengthened the ideal of cleanliness.

The established way of approaching materiality only on the basis of natural scientific or natural properties (as a component of practice) is too simplistic. Other components presupposed by practice innovations, especially the competences, perceived needs and capabilities of consumers, may mature only slowly and are not always amenable to change. The breakthrough of plastic in Finland in the 1950s became foreseeable when new capacities for work efficiency and management were introduced to everyday life. Plastic was highly compatible with the ideals of work efficiency, increased household efficiency and the division of labour within the family.

Can the introduction of plastics into Finnish homes as promoted by short films be considered part of a process of constructing the Finnish nation as an imagined community? Did the cinematic discourse on plastics and the practices which it prepared, or was entangled with, contribute to an understanding of what it meant to be Finnish? In the short films plastic products were introduced in the context of daily household chores and as items of everyday use. Still, there is nothing specifically Finnish about this aspect of the presentations. A possible noteworthy exception, however, is the link with the nation's strong 'do it yourself' tradition. This is reflected in the way the new materials are treated, and the sequences on both factory production and the household feature Finnish craftsmanship. The emphasis on neighbourly help can also be seen as one of the more emphatically Finnish aspects.

But more importantly the films played a part in the project of modernizing Finland. In post-war Finland, people were encouraged to consider their consumption decisions in the context of the well-being of the nation as a whole.[70] As after the Second World War capital was short, personal saving was advocated as a way to help rebuild the country. Therefore, work efficiency in households was considered an important issue, and both in Finland and Sweden the acceptability of luxury consumption was actively discussed. Was it not better for consumption to be oriented towards the satisfaction of actual needs/wants? Such ideas fitted smoothly to the economic and puritan agrarian culture of Finland.[71] Finns were made familiar with plastics in the 1950s, when ideas and ideals of rationalization gradually spread from industry to households. New ways of taking care of daily chores with help of new materials like plastics were presented as a way of saving money and effort, and certainly not as a luxury.

The ideal of work efficiency also exerted its influence on Finnish conceptions of a beautiful and tasteful home. Decorative things that are not effective or practical cannot be regarded as beautiful either. On the other hand, an unadorned thing that because of its simplicity is economical and easy to clean is considered beautiful. Practicality combined with beauty[72] became an inherent value and goal of design, as reflected in films like *Aurinkoa arkipäivään* [*Sunshine to Everyday Life*] and *Mukavuutta kodin arkeen* [*Comfort to Everyday Life*].

The entire Finnish elite took part in the project to educate Finns to become sensible consumers and savers, and to adopt proper consumption models as well as forms of housing. When home economics began to professionalize housework, working conditions and appliances were put under the spotlight. Therefore, when people were being taught to perform their daily chores as efficiently as possible, functional and economical new materials were highly recommended. The concept of professionalism entailed preplanning, management, control and efficiency, while the ideal of rationalization encouraged and steered household consumption towards modern practices and new materials such as plastics.

Notes

1 We are grateful to Susan Heiskanen for her comments, translations and language checking, and to Oliver Kühschelm for his many useful comments and help as well as to Marc Schalenberg for discussions. We would also like to thank the National Audiovisual Archive for research material and photographs.

2 Historically, Finland had close connections with both Sweden and Russia. In 1809 Finland ceased to be part of Sweden and became an autonomous part of Russia. In 1917 Finland won her independence, but culturally the country owes a lot to her former mother countries. During the 19th century Germany became increasingly important as a source of cultural influence, while Sweden lost ground.

It is important to bear in mind that Finland was an autonomous Grand Duchy of the Russian Empire until the declaration of independence in December 1917. In the Second World War Finland fought alongside the Germans against the Soviet Union. After the war Finland had to pay onerous war reparations to the Soviet Union.

3 Minna Lammi and Mika Pantzar, Feelings of Trust – How Educational Short Films Turned Suspicion into Feelings of Trust in Industry in the 1920s and 1930s, forthcoming.

4 Pauli Kettunen, Taylorismin tulo Suomeen, in: Arki ja murros, tutkielmia keisariajan lopun Suomesta, Helsinki 1990, 361-397.

5 The state granted film theatres a five percent reduction in the stamp duty on admissions revenues if a short film classified as a tax reduction film was screened before the main feature. The stamp duty on the main feature varied in e.g. the 1940s and 1950s between 15-50 % (Repealed Act on Stamp Duties, 1941, 1955). The tax reduction applied to science, educational and art films and films centring on the domestic industries, with a minimum length of 200 meters, i.e. approx. 7 minutes. (Laki leimaverolaista [Repealed Act on Stamp Duties], Uusitalo 1965, 73; 1975, 138-139). The system was in effect until 1964. Most of the films eligible for tax reductions were newsreels. Some 1200, i.e. 15 %, of them dealt with consumer matters.

6 Minna Lammi, Ett' varttuisi Suomenmaa. Suomalaisten kasvattaminen kulutusyhteiskuntaan kotimaisissa lyhytelokuvissa [The Birth of Modern Consumer Society in Finnish Short Films], 1920–1969, Helsinki 2006.

7 E.g. Louis Althusser, Ideologiset valtiokoneistot, Helsinki 1984 [1976]; Roland Barthes, Mytologioita, Helsinki 1994 [1957]; Roland Barthes, Elements of Semiology, London 1967; Christian Metz, Film Language. A Semiotics of the Cinema, New York 1974; Juri Lotman, Semiotics of Cinema, Michigan 1981.

8 E.g. David Bordwell, Narration in the Fiction Film, London 1985; Figures Traced in Light: On Cinematic Staging, Berkeley 2005; The Way Hollywood Tells It: Story and Style in Modern Movies, Berkeley 2006; Poetics of Cinema, London 2007; David Brodwell/Kristin Thompson, Film Art, an Introduction, 8th ed. New York 2006.

9 E.g. Ramón Reichert, Im Kino der Humanwissenschaften. Studien zur Medialisierung wissenschaftlichen Wissens, Bielefeld 2007.

10 Theodore Schatzki, The site of the social. A philosophical account of the constitution of social life and change, Pennsylvania 2002. Michel Foucault, The Order of Things. An Archeology of the Human Sciences, New York 1994/1966.

11 Mika Pantzar/Elizabet Shove, Understanding Innovation in Practice: a Discussion of the Production and Reproduction of Nordic Walking. Technology Analysis & Strategic Management, forthcoming 2010.

12 See e.g. I.C. Jarvie, Towards a Sociology of The Cinema, London 1970; Garth Jowett/James M. Linton, Movies as Mass Communication, 2. ed. London1980.

13 Douglas Kellner, Mediakulttuuri, Tampere 1998 [1995], 46-47.

14 Maiju Gebhard, Lopen uupuneelle perheenemännälle, in: Työteho, issues 7-8/1944, 44.

15 Hilkka Jahnonen, Kotitalouden rationalisointitutkimuksen uranuurtaja Maiju Gebhard 15.9.1896–18.7.1986, in: Teho, issue 9/1986, 4-5.

16 Visa Heinonen, Talonpoikainen etiikka ja kulutuksen henki. Kotitalousneuvonnasta kuluttajapolitiikkaan 1900-luvun Suomessa, Helsinki 1998, 203.

17 See e.g. Billy Ehn et al., Försvenskningen av Sverige, Stockholm 1993.

18 Peder Aléx, Konsumera rätt – ett svenskt ideal. Behov, hushållning och consumption, Lund 2003, 69-75, 122-125.

19 Visa Heinonen/Mika Pantzar, 'Little America': The Modernization of the Finnish Consumer Society in the 1950s and 1960s, in: Americanisation in 20th Century Europe: Business, Culture, Politics, vol. 2 (2002), 41-59. Mika Pantzar, Tulevaisuuden koti. Arjen tarpeita keksimässä [Future home. Finding the Needs of Everyday Life], Helsinki 2000.

20 Maiju Gebhard, Pakastamisesta, in: Teho, issue7/1957, 381-383.

21 Riitta Jallinoja, Suomalaisen naisasialiikkeen taistelukaudet, Helsinki 1983, 112-122.

22 Catharina Landström, National strategies: The Gendered Appropriation of Household Technology, in: Mikael Hård, ed., The Intellectual Appropriation of Technology. Discourses of Modernity, 1900–1939, Cambridge 1998.

23 Sheryl Kroen, Negotiations with the American Way: The Consumer and the Social Contract in Postwar Europe, in: John Brewer/Frank Trentmann, eds., Consuming Cultures, Global Perspectives, Oxford 2006.
24 C.f. Nuala Johnson, From Time Immemorial. Narratives of Nationhood and the Making of National Space, in J. May/N. Thrift, eds., Timespace. Geographies of Temporality, London 2001, 95.
25 Kathleen Donohue, Freedom from Want. American Liberalism & the Idea of the Consumer, Baltimore. 2003; Heinonen, Talonpoikainen etiikka; Heinonen/Pantzar, 'Little America'; Kroen, Negotiations with the American Way.
26 Kroen, Negotiations with the American Way, 263.
27 Liping Bu, Educational Exchange and Cultural Diplomacy in the Cold War, in: Journal of American Studies, vol. 33 (1999), 393-415; Heinonen, Talonpoikainen etiikka; Pantzar, Tulevaisuuden koti, 2000.
28 See Michael Carroll, Popular Modernity in America, New York 2000, xii.
29 Heinonen/Pantzar, 'Little America'.
30 For instance, in the mid-1950s the establishment of national television broadcasting was justified in public by warnings such as: "If Finland is not active in establishing television stations it will be, with Albania, the last country in Europe to do so". Television was introduced to Finnish audiences in the early 1950s and broke through very rapidly during the 1960s. A Finnish specialty in the European context was the early adoption of television advertising. Television was typically an American medium and television advertising became an important institution and source of income for the public television company.
31 Wolf von Eckardt, A Place to Live. The Crisis of the Cities, New York 1967, 351.
32 Visa Heinonen, Näin alkoi 'kulutusjuhla'. Suomalaisen kulutusyhteiskunnan rakenteistuminen, in: Hyvää elämää – 90 vuotta suomalaista kuluttajatutkimusta, Helsinki 2000, 8-22.
33 Suomen Kuvalehti, issue 46/1953, 31.
34 Kuvaposti, issue 22/1961, 4-7.
35 Kotiliesi, issue 13/1961, 862-865.
36 Oddly enough, at the Daily Mail Ideal Home Exhibition of 1961 the Finnish Nursery was dismissed as being "delightful if only for its graceful simplicity". (Ryan, Ideal Home, 128). The exhibition catalogue pointed out that it appeared to have been designed more for the convenience of those in charge of children than for the children themselves (ibid., 127-128). In contrast the American Nursery, called "A Room for a Little Man to Grow in", was equipped for a toddler, with robust fittings and many items to encourage manual dexterity (ibid., 128).
37 Kotiliesi, issue 13/1961, 862-865.
38 Pantzar 'Little America'; Lammi, Ett' varttuisi Suomenmaa.
39 Kalevi Laalo, Nappikaupasta muoviaikaan. 70 vuotta suomalaista muoviteollisuutta, Hämeenlinna 1990, 17-29.
40 Ibid., 53-55.
41 Ibid., 73, 89-91, 239-240.
42 Ibid., 262-274.
43 Ibid., 53-59.
44 Aino Laine, Vaahtomuovista mukavuutta. Superlon, 1955–2005, Turku 2005, 11-12.
45 Heinonen, Talonpoikainen etiikka; Visa Heinonen et al., "Ei nimittäin haluttu valmistaa tavallista reklaamifilmiä…" Mainonta ja valistus suomalaisissa lyhytelokuvissa [Advertising and Education in Finnish Short Films], in: Lähikuva, issue4/1995, 34-47; Lammi, Ett' varttuisi Suomenmaa.
46 Pantzar, *Tulevaisuuden koti*, 33.
47 Tiina Huokuna, Muovi modernin kulutusyhteiskunnan symbolina, in: Tekniikan vaiheita, issue 4/2004, 29-39, 30.
48 Heinonen, Mainonta ja valistus; Lammi, Ett' varttuisi Suomenmaa.
49 Visa Heinonen/Heikki Konttinen, Nyt uutta Suomessa! Suomalaisen mainonnan historia, Helsinki 2001, 32.
50 Suomen Kuvalehti, issue 47/1948, 16-17.
51 Kristin Ross, Fast Cars, Clean Bodies. Decolonization and the Reordering of French Culture, Cambridge, Mass./London 1999; Deborah Ryan, The Ideal Home Through the Twentieth Century. Daily Mail Ideal Home Exhibition, London 1997.

52 Susan Strasser, Satisfaction Guaranteed. The Making of the American Mass Market, Washington/London 1989; Mika Pantzar, Kuinka teknologia kesytetään. Kulutuksen tieteestä kulutuksen taiteeseen [How Technology is Domesticated], Helsinki 1996.
53 Elisabeth Shove et al., The Design of Everyday Life, Oxford 2007, 9, 13.
54 Strasser, Satisfaction Guaranteed, 16-17, 89-123.
55 Jeffrey Meikle, From Material to Immaterial. Plastics and Plasticity in the 20th Century. In: Tekniikan vaiheita, issue 4/2004, 5-17.
56 Heinonen 1998, Talonpoikainen etiikka, 40; Pauli Kettunen, Suojelu, suoritus, subjekti. Työsuojelu teollistuvan Suomen yhteiskunnallisissa ajattelu- ja toimintatavoissa [Work Safety in Industrializing Finland], Helsinki 1994.
57 Huokuna, Muovi modernin; Laalo. Nappikaupasta muoviaikaan, 309-310.
58 Jeffrey Meikle, American Plastic. A Cultural History, New Jersey 1997.
59 See also Minna Lammi, "Home Comes First": Housing and Homemaking in Finnish Civic Educational Films during 1945–1969, International Journal of Consumer Studies 33 (2009), 5, 533-540.
60 Boel Berner, Sakernas tillstånd. Kön, klass, teknisk expertis, Stockholm 1996; Boel Berner, "Housewives' Films" and the Modern Housewife. Experts, Users and Household Modernization: Sweden in the 1950s and 1960s, in: History and Technology, vol. 18, (2002), 3, 155-179.
61 Illustratively, Du Pont's representative (in the 1939 New York World's Fair) demonstrated the first man-made textile fibre (nylon) as based on coal, water and air. The analogy called out for a comparison of the novelty to other materials: "It could be 'fashioned into filaments as strong as steel, as fine as the spider's web." Meikle, American Plastic, 141.
62 Roland Barthes, Plastics, in: Mythologies, London 1973, 104.
63 Meikle, American Plastic, 3-7.
64 Practices are not always adaptable to new materials. For example, the mental and material preconditions for the paperless office might already exist at present, but we haven't so far been able to develop work practices that would accommodate the paperless office. Abigail Sellen and Richard Harper, The Myth of Paperless Office, Cambridge, Mass. 2003.
65 Elizabeth Shove/Mika Pantzar, Fossilization, in: Ethnologia Europaea. Journal of European Ethnology 35 (2006), 1-2, 59-63; Pantzar/Shove, Understanding Innovation in Practice.
66 Frank Trentman, Materiality in the Future of History: Things, Practices and Politics, in: Journal of British Studies, vol. 48 (2009), 283-307.
67 Sellen/Harper, Paperless Office.
68 Paul Duguid, Material Matters. Aspects of the Past and Futurology of the Book, (2005) Htpp://www2.parc.com.members/brownpapers/mm.html.
69 Meikle, From Material to Immaterial, 5.
70 Lammi, Ett' varttuisi Suomenmaa.
71 Heinonen, Talonpoikainen etiikka ja kulutuksen henki.
72 Minna Sarantola-Weiss, Sohvaryhmän läpimurto. Kulutuskulttuurin tulo suomalaisiin olohuoneisiin 1960 – ja 1970 lukujen vaihteessa, Helsinki 2003; Harri Kalha, Muotopuolen merenneidon pauloissa. Suomen taideteollisuden kultakausi: mielikuvat, markkinointi, diskurssit, Helsinki 1997. See also Marc Schalenberg's article in this issue.