Journal of Ethnology and Folkloristics 20 (1): 62–84
DOI: 10.2478/jef-2026-0005

THE CHANGING MEANINGS OF REPAIR IN POST-SOVIET ESTONIA: FROM NECESSITY TO RESISTANCE*

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ABSTRACT
Repair in the post-Soviet context shows a specific historicity, linked with Soviet consumer culture, that has caused the Soviet socioeconomic system be characterised as a 'repair society'. People's experiences and their narratives of the lively repair culture in the Soviet era are a vivid part of Estonian cultural memory. This article analyses how repair in Estonia has shifted from being an economic necessity to a form of resistance both to consumer society and the capitalist socioeconomic system. Criticism of consumer society has ecological and material foundations arising from experiences of the poor repairability of contemporary commodities. This article proposes that the changing materiality of commodities has political significance, shaping evaluations of the socioeconomic system and facilitating resistance to it. This resistance, including recently emerged repair movements, can be culturally informed, inspired and empowered by local cultural memory and legacies, as well as presenting more sustainable ways of managing.

KEYWORDS: repair • material culture • resistance • Soviet • post-Soviet

INTRODUCTION

Repair and maintenance studies, of which this article is part, address material practices and the labour that goes into maintaining and fixing material and technological infrastructures (see Graham and Thrift 2007; Weber and Krebs 2021) and commodities (see Harper 1987; Sormani et al. 2019), as well as the political and social meanings of these practices (Jonas et al. 2023; Martínez 2018). Many scholars have stressed that repair and other do-it-yourself (DIY) practices have historically been widespread and, perhaps, dominant everyday practices in the West. They accompanied human relationships with things in pre-industrial and industrial societies (Gerasimova and Chuikina 2009: 60;

* This research has been funded by the Estonian National Museum`s Repair as Cultural Heritage: A Cultural Resource under Changing Conditions project (No. ERM10-6/2026PA).

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ISSN 1736-6518 (print), ISSN 2228-0987 (online)

Jonas et al. 2023: 17). Heike Weber and Stefan Krebs (2021: 11–12) argue that repair has not become obsolete in the modern West or Global North, rather, "their modes, their appearance and the sites and actors of repair have changes substantially"; therefore, they propose that repair should also be viewed from a historical perspective. Continuous maintenance and fixing are still central to everyday life, infrastructures and consumer culture, but over the 20th century they became more centralised through the development of larger repair businesses and so became hidden from the public (see Graham and Thrift 2007: 3; Krebs and Hoppenheit 2022: 198). The history of repair therefore shows how repair practices and cultures have altered over time and with changes in socioeconomic (see Weber and Krebs 2021: 11) and political contexts (see Martínez 2018). As these studies show, there are different social and symbolic meanings depending on historical and geographic background and cultural tradition. While repair practices are often studied within the Western context in Europe, more case studies within Eastern Europe and post-Soviet contexts (see, for example, Martínez 2018; 2023) would contribute to a broader understanding of repair and its different historicities, as Iryna Kucher (2024) proposes in her comparative research of Ukraine and Denmark. The meaning of repair in the Estonian post-Soviet context is affected by historical disruptions and rapid changes in the political and social contexts.

Estonia, being one of the Eastern European post-Soviet states, represents one example and heuristic of the post-Soviet case, with its theoretical and methodological limits (see discussion in Murawski 2018; Martínez and Beilmann 2020). Repair, in this context, shows a specific historicity and carries specific cultural meanings, influenced by the Soviet past and its consumer culture. Importantly, these conditions contrast with the development of mass consumption in Western Europe and the US after World War Two (see Strasser 1999; Hawkins 2006). In addition, DIY culture, which emerged as a specific term in the 1950s in the US and Western Europe, is often linked with the home environment and unpaid domestic work done by oneself, such as home decorating and fixing things around the house, but also repairing various types of commodity such as bicycles, cars, home appliances or electronic devices (Gelber 1997; Watson and Shove 2008; Ehn 2011; Dant 2019). In contrast, DIY activity in the context of Soviet society was inherently linked with consumption, indicating a lively prosumption culture (see Hellmann 2023: 24–30) where contributing unpaid labour and time to extending the lives of products, or altering and remaking them, was common, and often necessary.

Ekaterina Gerasimova and Sof'ia Chuikina (2009: 59–61) called the Soviet socioeconomic system a 'repair society', where domestic repair, reuse and repurposing of commodities and materials, along with the DIY mentality and related skills, were common parts of consumer culture as economic necessity, demonstrating a continuity of preindustrial and industrial consumption practices. This was caused mainly by shortages of goods, or their low quality, due to the Soviet planned economy. However, after restoration of Estonian independence in 1991, repair and other DIY consumer practices did not become obsolete.[1] According to Margit Keller (2004a; 2004b), the 1990s were still a time of scarcity for many Estonians; only a minority of the population could afford new Western commodities, which created inequality and tension in society (see also Nugin and Annist 2024). Purchasing second-hand products, alongside repairing, reusing and repurposing, continued to have an important role in the 1990s, with a significant disruption in these DIY practices emerging in the 2000s. Estonia can be considered a consumer

society in which new commodities became accessible to most citizens only in the early 2000s (Keller 2004a; 2004b). This argumentation indicates that DIY repair, among reuse and repurposing practices, remained a necessary and normative consumption practice in the Estonian post-Soviet context historically until more recently than in Western Europe, the UK or the US, where mass consumption developed earlier (see Strasser 1999; Jeremiah 2000; Palmsköld 2015; Krebs and Hoppenheit 2022; Kucher 2024).

This article aims to discuss how the meaning of repair has changed in Estonia, and how the changes in repairability and materiality of commodities over time have affected the meaning and significance of repair. This paper analyses the narratives of domestic DIY repair practices in Estonia by comparing the perception of repair in the Soviet era with its contemporary significance, along with the recently emerged repair movement. This analysis shows that repair is a vivid part of Estonian cultural memory (see Assmann 2021), and a way to relate to the Estonian Soviet past (see Martínez 2018) and present socioeconomical organisation of society (see Graziano and Trogal 2019). The empirical data demonstrate that mending and fixing are not obsolete practices. They have persisted among the older generation, who lived most of their adult lives in Soviet Estonia. In recent years, these practices have gained interest and significance among the younger generation, especially because of increased ecological concerns. This novel interest in repair manifests in the emerging repair movement, which is an international phenomenon (see Jonas et al. 2023: 4–8). In alignment with my empirical material and an increasing body of research, I perceive repair and other DIY practices, and recently established public repair workshops, as sustainable options (see Cooper 1994: 4–11) in consumer culture related to the aims of the Circular Economy (Jonas et al. 2023). Based on international research, repair and reuse practices are still present in everyday life, to some degree at least, and often have a specific local history in many settings (see discussion in Isenhour and Reno 2019), for instance, in Sweden (see Palmsköld 2015), Chile (see Errázuriz and Greene 2021; Muñoz et al. 2022; Muñoz et al. 2023), the UK (see Shipton and Fisher 2010) and the US (see Berry et al. 2019).

This article proposes, firstly, that instead of scarcity and necessity in the Soviet era, the contemporary meaning of repair in Estonia is more closely linked to aspects of resistance and intervention in the current capitalist economic system, in a similar way to what is happening in Western European states and their developments (see Madon 2022; Jonas et al. 2023; cf. Kucher 2024) apart from recuperating historical legacies and amending ruptures in society (cf. Martínez 2018).[2] Importantly, this resistance is culturally informed, being inspired by cultural memory and handicraft traditions that become part of this counter-power. Secondly, this article proposes that the changing materiality of commodities has a political significance, affecting the evaluation of the contemporary socioeconomic system. In this paper, repairability, including the availability of spare parts and construction or design, and the lifespan of contemporary commodities, especially electronic devices and home appliances, are considered analytical units, being part of the material properties of these commodities. These properties and affordances may predispose or impede repair practices and have political significance.

This article is structured into five sections. The first section introduces the empirical data and methods. The second section discusses the main theoretical approaches focusing on the politics and materialities of repair. In the third section, I will analyse people's relationship with commodities during the Soviet Era, based on the respondents' repair

stories and how they reflect the Estonian case as an example of the 'repair society'. These narratives show that repair practices are a vivid part of Estonian cultural memory. In the fourth section, I will discuss contemporary criticism of the consumer society that is based on respondents' troublesome relationships with the poor repairability of contemporary devices. In the last section, I will argue that repair practices today are often perceived as resistance to mass consumption and the consumer society, and to capitalist socio-economic system in general, and that this manifests in the emerging repair movement. In the Estonian case, mending practices are associated with Estonian cultural memory and legacies.

EMPIRICAL DATA AND METHODS: REPAIR STORIES

The empirical data that this article is based on consists mainly of repair and reuse stories collected at the Estonian National Museum (ENM) in 2022 and 2023 using two public questionnaires. Questionnaires, with new ones announced annually, are one of ENM's collection methods, beginning in 1958 and based on a network of correspondences established in 1931 (see also ENM's Network of Correspondents n.d.).

In 2022, the ENM's questionnaire topic was Things, Reuse and Rubbish (No. 244, compiled by the author and Kristjan Raba[3]), and in 2023, Repair and Reuse (No. 247, compiled by the author).[4] This collection of stories consists of responses – about 600 pages of memories and experience narratives and nearly 800 digital photos – from nearly 160 Estonian correspondents, sent to the museum by e-mail or mail; the material is stored in the museum's collections. Many of the respondents were female, between 50 and 91 years old, but the museum also received contributions from people in their 20s and 30s, and school children.[5] Male respondents were mainly in their 70s or older.

The questionnaires included 19 key questions divided into thematic sections. For example, regarding repair, the questionnaire Repair and Reuse included the questions: "Have your parents or grandparents repaired things at home?", "Have you repaired some things at home (for example, household commodities, home appliances, clothing, vehicles)?", and "What kind of things, and things made of what material, are easier or more interesting to repair?" Most of the contributors did not follow the questions strictly and often reflected on topics and questions they could relate to personally, narrating repair practices through their autobiographies and family histories. A selection of responses is presented in this paper, presented as vignettes. In this dataset, the respondents' first names and birth years, as well as the archive numbers of the material (e.g. ERM KV 1375:6/36-44), are presented.

This article is also based on a small selection of semi-structured interviews I have conducted with repair activists, specialists and dedicated practitioners, either in their homes or at *Paranduskelder* (Repair Basement).[6] The interviews have often followed the object interview method (see Woodward 2020: 34–53), and I have taken ethnographic photos of the mended items that were the focus of these interviews. I met my research participants, with whom I conducted the interviews, during my participant observations at Repair Basement, which I have visited numerous times since 2021, and where I have occasionally mended my clothing or fixed my bicycle. In addition, I have carried out ethnographic observations and conducted short structured interviews at several

public events that focused on repair and DIY practices, for example, Viljandi Repair Festival (*Viljandi Parandusfestival*)[7] between 2022 and 2025 and Assembly of Menders (*Parandajate Kokkutulek*) in 2023. Regarding the research participants, their first names and birth years are presented.

THE POLITICS AND MATERIALITIES OF REPAIR

The political and material aspects of repair are crucial in understanding its historicity. This section discusses the politics of repair as a counter-power and as resistance (see Graziano and Trogal 2019), as well as looking at the materiality of repair. Francisco Martínez (2017; 2018; 2023) has studied the meaning of repair in Estonian urban environments from a social and political perspective. Brokenness, as he proposes, relegates certain individuals or places to the margins of history and normality. Fixing functions as a symbolic act against refusal, cultural abandonment or social negligence, and helps to restore identities, relationships and histories (Martínez 2017: 348–349; 2018: 61–77; 2023: 609–613). This demonstrates that repair has social and political power for individuals that goes beyond the material and embodied constraints of the practice (see Harper 1987; Dant 2019).

Brokenness is not the end either; it can be perceived methodologically as the beginning. Steven J. Jackson (2014) has proposed broken world thinking as a philosophical approach that takes the inevitable and natural erosion and brokenness of the material world, rather than novelty or progress, as a starting point in thinking through the use or evaluation of things and their relationships to broader social worlds. Repair as an act of care through constant fixing and reinvention maintains order and meaning in sociotechnological and sociomaterial systems that are confronted with the forces of decay. The response to breakage in acts of repair can be seen as innovation, a moment of rethinking things, and a form of moral relationship with the material world. (Ibid.: 221–231) Repair as a practice and process also embodies hope through a practical and physical engagement with the material world (Jackson 2019: 344–346; 2023: 429–430). Practices of fixing and mending, especially DIY practices in a domestic setting, embody people's relationships with sociomaterial reality. Martínez (2017: 349; 2023: 613) conceptualises repair interventions in a social context as a process, whether successful or not; as post-brokenness that nevertheless has power in individuals' everyday lives.

Valeria Graziano and Kim Trogal (2019) discuss repair as a source of counter-power or counter-conduct (see Foucault 2009: 195) that manifests itself through a "regime of practice" that incorporates human relationships with rationalities, technologies and materialities, including infrastructure and tools. This counter-power can be seen as resistance to the prevalent socioeconomic system. The politics of repair, according to Graziano and Trogal, can be understood through four layers of meaning attached to repair: 1) repair as an intervention in the basic principles of the capitalist economy; 2) repair of the material world and its infrastructures; 3) repair as a labour of care or social reproduction; 4) repair of the immaterial world, including legacies. (Graziano and Trogal 2019: 203–204) In this article, I focus on the first two aspects, and perceive repair as an intervention and counter-power to capitalist economy in a form of a material and bodily engagement with the physical world and objects, including commodities.

Commodities are part of material culture and sociomaterial environments. The meaning and significance of material culture and commodities, as well as consumption, are based on human relationships with objects and materialities (see Dant 2005). This relationship is dialectic, since "persons make and use things and the things make persons" (Tilley et al. 2006: 4; see also Miller 1987: 29–33; 2010: 60). Repair is a specific material practice, built upon relationships and engagements with things and their materialities, including their material properties.

Repair and mending can be seen as restoration of the functionality of things that extends their life. Here, Thomas Vogel (2023: 55) makes a distinction between repair and mending by associating mending with making or crafting the thing whole again, embodying pre-industrial practice, and, in contrast, linking repair with replacing parts, as is the case with commodities that have been produced industrially and have modular design, embodying industrial or post-industrial practice. In light of the empirical examples in this article, replacing a washing machine's door or water tank with spare parts can be defined as repair, while darning a hole in a woollen sock can be defined as mending. Apart from restoration of functionality, repair can be perceived as an engagement with the construction of things (see Dant 2019) or as embodied practice and knowledge (see Harper 1987; Dant 2005). Material and technical infrastructures are also inherent parts of repair practices and services (see Graham and Thrift 2007; Graziano and Trogal 2019; Weber and Krebs 2021).

Both infrastructures and materiality or construction of commodities can predispose or constrain individuals to consume in particular ways and shape their engagement with commodities. Tim Ingold (2007) has proposed that in discussing human engagement with things and materiality, the (raw) materials that things are made of, and their specific material properties and affordances, should be taken into consideration as meaning-making qualities. Following this idea, and Tim Dant's (2019) study of fixing as an engagement with the construction of things, I consider the construction and availability of spare parts, especially for electronic devices or appliances, as being part of their material properties and affordances that may affect their lifespan and predispose or impede repair practices. My empirical data shows how the short life and unavailability of spare parts for contemporary devices are considered a difficulty in human relationships with these commodities, as repair is impeded. These experiences result in narratives that are critical of the contemporary consumer society. Material properties of commodities, as this argumentation indicates, have cultural and political significance. Furthermore, alteration of the materiality of commodities over time has affected the meaning of repair, which has changed in the Estonian case from being a necessity to becoming resistance.

EXPERIENCES OF THE 'REPAIR SOCIETY' IN ESTONIA

Soviet society, before and after World War Two, has been discussed as a 'repair society' in contrast to the economies and consumer cultures of free market and capitalist post-industrial societies in Western European and North American. Gerasimova and Chuikina (2009) propose that this can be defined through specific relationships with commodities, and more specifically practices of repair, reuse and making: lively DIY

cultures that are characteristic of preindustrial or industrial societies rather than Western post-industrial societies. Similarly, in Western Europe, these DIY practices persisted as part of everyday life, representing the 'scarcity society' or 'mending society' until the mid-20th century (Vogel 2023: 57–58; Jonas et al. 2023: 17; Strasser 1999). However, extending the life of goods or materials through repair, reuse or repurposing, or remaking or adjusting them persisted in Soviet society longer and was an essential and common part of everyday economics. The skills necessary for these practices persisted and were passed on between generations, and indeed were supported by the regime.

This 'repair society' was encouraged by conditions of scarcity. For example, heavy paucity during and after World War Two and during the Soviet planned economy, which gave rise to insufficient and low-quality goods, state regulations governing consumption, and propaganda (Gerasimova and Chuikina 2009: 59–61). During and after the war, difficult economic conditions and state regulation were not unique to the Soviet Union, although their continuation was. In comparison with the Western situation, in Great Britain, for example, the government promoted DIY making and repair practices during and after the war, but once industrial production recovered, the state started to advocate for consumption of mass-production in 1946 in order to support domestic industrial production and therefore the economy, with many modern commodities becoming more accessible at this time (see Jeremiah 2000). However, within the Soviet system, state regulation, propaganda and shortages of commodities persisted and became part of everyday life. In contrast, there are other critical examinations of the Soviet socio-economic system that argue against the prevalent narrative of scarcity and deficit (see, for example, Oushakine 2014).

The Estonian National Museum's respondents narrate their experiences with material paucity and deficit vividly. For example, Aili (b. 1943), who was born during World War Two and remembers the early socialist years, emphasises scarcity and ways of managing:

> After the war, times were tough. People lived frugally and made full use of everything at home. Stockings, socks, underwear, sweaters and clothes were mended and patched. Wearing well-mended clothes was not shameful. Today, even homeless people wouldn't wear such clothes. Old knitted items were unknit and the yarn reused to knit new socks, mittens, hats and scarves. (ERM KV 1375:6/36-44)

This vignette depicts especially scarce conditions within post-war society, and the necessity for DIY mending and repurposing practices in a domestic setting, with a special focus on material culture. Many of the older respondents who were born, raised and lived their adult lives in Soviet Estonia have vivid memories of the consumer and material cultures of the Soviet era. The material objects and material environment are an essential part of autobiographical memories from the Soviet era (Jõesalu 2016; Jõesalu and Nugin 2017) as well as in relating to the legacies of the past today (Martínez 2018: 22–23).

Economic situations of scarcity and frugality are key aspects in remembering the Soviet past. Kirsti Jõesalu (2016: 565) writes that based on biographies of women born in the 1940s, material scarcity during and after the war, which strongly influenced their (memories of) childhood and teenager years, is a recurring theme in life histories written or recorder after the Soviet era; material improvements in everyday life are

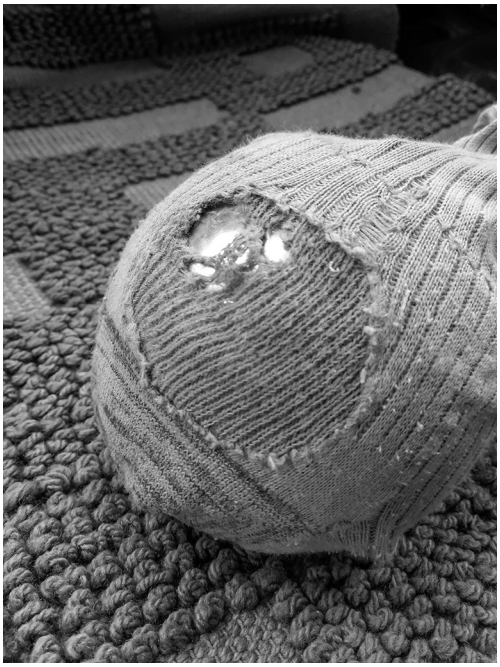
described only in the 1960s and 1970s, which is classified as the late socialist era. Based on biographical interviews, Jõesalu and Raili Nugin (2017: 103–106) find that people born in the 1970s remember and characterise the Soviet era through the deficit of commodities, which defined the experience of the whole generation.

Regarding commodities and material culture, frugality is most often expressed through narratives of making, repairing, reusing and repurposing objects and materials, demonstrating ingenuity. Gerasimova and Chuikina (2009: 68) write that "many examples of how people in the Soviet Union adapted old objects have become proverbial: rugs made of old tights and scraps, sweat pants cut up into dusters, seedlings planted in cardboard milk containers, and the like". Even packaging was reused or repurposed in various ways, and considered valuable material (see Teidearu 2024).

These narratives represent the consumer culture of the time, and people's relationships with the commodities and other materialities of everyday life. Aili, above, perceives extending the life of textiles and materials through mending, repurposing and remaking as a normative practice that was a natural part of consumer culture during these times of scarcity, a practice that was characteristic of the Soviet Era in general (cf. Jõesalu 2016; Jõesalu and Nugin 2017). Many other respondents, too, depict such examples as inherent parts of their childhood memories and of the everyday life and material environments of their families.

> I was born into a time and family where there were significantly fewer things than I or my children's families have today. These times favoured the extended use of items, as fashion did not change very quickly and things were made to last as long as possible, even for the next generations. … I was born into a time and family where extending the life of things was common. The inside of a woollen coat was turned outward due to fading, soiling, or wear at the sleeve ends. Work clothes and children's everyday clothes were patched at the knees and elbows, socks were darned at the heels, and worn-out middle sections of bed sheets were replaced with new ones, leaving the older edges intact … Such mending practices have continued among the elderly even today. (ERM KV 1376:11/54-71)

Anne (b. 1953) emphasises the modest number of commodities and household items, and extending the life of clothing or textiles through various DIY practices in her memories of childhood. In this vignette, Anne associates the necessity of these practices with the sociomaterial context of the Soviet Era. Anne's experiences, similarly to many other respondents' stories, show how the individuals in the context of the 'repair society' were not only consumers but also prosumers (see Hellmann 2023: 24–30), meaning that instead of acquiring and consuming ready-to-use commodities, they often had to contribute their unpaid labour and time into finishing, altering, remaking items as products, or extending their lives through repair, reuse and repurposing. The Soviet 'repair society' was a socioeconomic system that was substantially dependent on prosumption and DIY practices. However, Anne reflects that she still mends her clothing and fixes household items even today. For instance, she mends her stockings, has crocheted chair covers from old stockings (see Photo 1), and has fixed a plastic bucket with waterproof tape. She depicts the persistence of mending practices among her own generation as normative.



Photos 1a–b. Anne's patched stocking heel (left), and crocheted cover, made of old stockings (right). Photos: ERM KV 1376:11/54-71.

The repair stories often depict mending and repair as part of family histories in which knowledge and skills were maintained in domestic settings. Intergenerational continuity and transmission of craft skills for DIY practices was characteristic of the Soviet 'repair society', as Gerasimova and Chuikina (2009) argue. This indicates that repair practice in this context is an inherited craft skill, or inherited traditional technology,[8] adopted in a family or community and passed on between generations (cf. Jõeste et al. 2020: 17–18).

Many examples of repair and mending within the collected repair stories, depict fixing as being an inherent and normative part of consumer culture, or prosumption culture (see Hellmann 2023: 25) in the Soviet Union. Instead of clearly separating different periods within the Soviet era, the respondents portray the Soviet past with its particular consumer culture as a coherent period (cf. Jõesalu and Nugin 2017), as Eve (b. 1960) describes below.

> In the past, children's clothes were frequently mended since the shops offered little. Tights were covered in darned patches. Jackets were patched with decorative patches with bears or flowers; this supplemented the old items. Woollen socks were sometimes reknitted at the soles. In the current era of superfluity of goods, most things are thrown away. Only more valuable or high-quality items are worth mending. I never throw away anything decent just because of a missing button or a loose seam. Life has taught me to be quite skilled at mending damaged clothes. (ERM KV 1367:22/144-150)

As Eve indicates, mending textiles was an essential part of her life in the Soviet era, which was predisposed by the deficit of commodities. Representing the older generation, her mending skills are inherited within her family; the practice of mending has continued to be part of her life today, representing a common trend among the older generation. She maintained the mentality of mending rather than discarding, but in the current economic context, where mending is no longer necessary, this mainly applies to items of a higher quality or monetary value (cf. Palmsköld 2015).

Such experiences and vivid examples of repair and mending in the vignettes form part of Estonian cultural memory. Cultural memory, as defined by Aleida Assmann (2021: 26), is "a system of values, artefacts, institutions, and practices that retain the past for the present and the future"; it creates and sustains distinct collective and individual identities. As part of cultural memory, Jan Assmann (2011: 18) has distinguished and defined communicative memory, which is a non-institutionalised form of collective memory that is present in everyday and informal memories, and which is passed on often through interpersonal communication. These everyday experiences and narratives about material and consumer culture within the collection of repair stories, ethnographic data or biographies form the cultural memory of the Soviet past in Estonia (see Jõesalu 2016; Martínez 2018). This shared legacy provides a collective identity to the generations who were raised and who lived during the Soviet Era, and a culturally accepted way of remembering the Soviet Era. This cultural memory, as my empirical data demonstrates, is collectively shared across generations (cf. Jõesalu and Nugin 2017).

Importantly, cultural memory and experiences of the Soviet Era are often narrated from a comparative perspective, in resonance with the current time and context and expressing ideological or political assessments (ibid.: 100–102). The narratives in my analysis highlight the contrasts between Soviet material and social life, representing the case of 'repair society' with its prosumer culture (see Hellmann 2023: 24–30), and contemporary mass consumption. Depicting a lively culture of repair, mending and fixing as part of cultural memory from the Soviet era gives an evaluation of the current consumer society, as the following sections argue.

CRITICISM OF CONSUMER SOCIETY

In contrast to the deficit of commodities characteristic of the Soviet era, the early 1990s introduced an abundance of novel Western goods to the Estonian market and its consumers. Jõesalu and Nugin (2017: 106) argue that the availability of these commodities in the 1990s made people want to become consumers and gave rise to the desire for consumption as an activity. The availability of goods contrasted with the experience of living in Soviet society, creating the perception that Estonia was now part of Western society and giving consumers a novel and positive Western identity. Similarly, implementing European waste sorting and recycling systems has been shown to function socially and politically as part of Estonia becoming a European society (see Martínez and Beilmann 2020). Evolving consumerism in the 1990s has also been depicted in biographical interviews in a more negative manner as irrational "mass psychosis" (see Jõesalu and Nugin 2017: 106).

Apart from perceiving material environments and objects as symbols or representations of that era, the materiality of goods serves as a meaningful quality, too. Repair and mending involves an evaluation, and a revaluation, of commodities, focusing on their material qualities, and an emphasis on human skills (see Isenhour and Reno 2019: 2) and engagement with the materiality and construction of things (see Dant 2019). Material properties and the affordances of objects are part of human relationships with these objects, as Ingold (2007) suggests. Moreover, material properties of commodities influence the perception and assessment of broader socio-material contexts (see Vogel 2023). The relationships and experiences with goods and their material properties shape the evaluation of the consumer culture of a particular era.

In many repair stories, respondents reflect on difficulties with some contemporary products in repair practices. Most often, they express their discontent with electronic devices, especially home appliances such as washing machines, refrigerators or electric kettles. For example, Eve, who lived nearly half of her life in the Soviet era, writes about the difficulty of choosing and buying reliable and long-lasting electronic appliances today.

> Buying electronic devices is an art in itself nowadays. You can't buy them second-hand, you can't buy them even brand new. The lifespan of all products is so short, and it is already programmed to be short so that you could buy again and again – because we live in a consumer society. (ERM KV 1367:22/144-150)

Eve perceives the short lifespan of electronic devices, which she is criticising in this vignette, as a problematic consequence of mass production and the consumer society. In contrast, Eve also writes that she owned a Soviet Vyatka washing machine, bought in the 1980s, for 22 years, and that it was still functioning until she had to buy a new one because the door didn't lock any more and her husband couldn't find a replacement door despite having replaced it several times before. The next appliance, a Western product, lasted only ten years. When her husband bought the current one, the salesperson claimed that the lifespan of washing machines today is about five years. (ERM KV 1367:22/144-150) This story reflects a common narrative of long-lasting products, including technological devices, from the Soviet era, highlighting the relatively good repairability of those devices and the availability of spare parts, which contrasts with narratives of current devices. Experiences of the poor repairability of contemporary home appliances are narrated in relation to various kinds of device.

> Years ago I had to send a perfectly working fridge to the waste station just because the door seal was worn out. Technicians at the repair shop told me that the manufacturer no longer produced seals for that old model. They made it clear that appliances are generally only serviced during the warranty period, and it's more sensible to buy a modern model… Nowadays, spare parts are often so expensive, or unavailable, that buying a new appliance seems more reasonable. (ERM KV 1376:11/54-71)

In this vignette, Anne expresses her discontent with contemporary home appliances because of their poor repairability due to the unavailability of spare parts, and the resulting condition that favours purchasing a new device instead of fixing the old one. Her experience with poor repairability contrasts with her experiences of the Soviet

'repair society', similarly to many other respondents (see, for instance, Eve's vignette and story above).

Such stories of failure to fix some products are often associated with a more general notion of a lack of spare parts and high repair costs. In addition, these stories show how the construction of appliances affects repairability. Urmas (b. 1975), who is a professional appliance repair service technician, claimed in an interview that today, home appliances are usually designed to last around five years. Urmas is focusing on washing machines in his work, and, as a repair activist, serves as a repair instructor for electronic devices at Repair Basement. In his experience, the construction of washing machines has changed over the last 20 years in a way that impedes their repairability. He explains that all brands have started to design and use sealed outer tubs made of plastic, making it impossible to change bearings or the drum. The cost of a replacement outer tub with its integrated components is nearly as high as a new device. (FM 2023: Urmas) Similarly, Martínez (2018: 80–82) has observed that repair technicians in Estonia are highly critical of the short lifespans and poor repairability of contemporary electronic devices because today they have almost fully digital circuits, which hinders repairability, while in the early 2000s mainly analogue circuits were used; this change in technology and its repairability is a source of dissatisfaction within the current consumer society as well.

Other respondents also had similar experiences with the technological changes that have made DIY repair difficult. For instance, Tiina (b. 1956) writes how her father Jaan, born in 1931, used to repair clocks, radios, electric stoves and electric kettles at home, but failed to fix more modern electronic devices, manufactured since the turn of the millennium, due to their sealed construction (ERM KV 1376:10/51-53). In addition, respondent Maret (b. 1973) narrates how she learned to repair and maintain her Soviet Zaporozhets car from her uncle, using only a spanner and screwdriver, but the more complex construction of contemporary cars makes them more difficult to repair, necessitating special tools and knowledge (ERM KV 1375:2/6-8). Instances of failure to fix indicate changes in the materiality of commodities and devices, as well as change in broader economic and industrial contexts.

These experiences and insights reflect planned obsolescence, a strategy found within economics and industrial design that aims to shorten the lifespan or novelty of goods in order to motivate their replacement with a new device or model (Vogel 2023: 59–61). Companies have made strategic decisions either to produce goods that are fragile by design, predisposing them to break within a predetermined time (Bidgoli 2010: 296), or to offer new versions of particular products, thereby reducing the value of older models (Kuppelwieser et al. 2019: 163). There is a clear gap between the consumer's desired life for products – including household appliances, televisions and mobile phones – and their actual lifespans, or at least periods of use, as Franzisca Weder and others (2023: 142–144) demonstrate in the case of Austria. From the perspective of consumer behaviour studies, many consumers complain about their experiences with products' short lifespans and planned obsolescence strategies (see Kuppelwieser et al. 2019). This suggests that dissatisfaction with the short lifespans of electronic appliances and other commodities is a common part of contemporary consumer society in various European countries despite their different historical and cultural backgrounds. My empirical data and analysis show how the lifespan and repairability of electronic devices, as part of their material properties and affordances, are assessed in temporal and comparative perspective within Estonian cultural memory.

The presence of repair practices in society is also dependent on material infrastructures (Graham and Thrift 2007; Graziano and Trogal 2019; Krebs and Hoppenheit 2022). Apart from the unavailability of spare parts, some respondents reflect on the current lack of repair services for appliances and electronic devices. Anne writes that in the Soviet era, small repair shops fixed various electronic devices, including home appliances, radios and TV sets (ERM KV 1376:11/54-71). In the Soviet socio-economic system, state-established network of household service centres and repair services had a crucial role in managing any deficit in goods (Gerasimova and Chuikina 2009: 64). For example, *Teenindusmaja* (Service House) in Tallinn offered mending and adjustment services for jeans and shoes, bags and suitcases, as well as a fixing service for household appliances; this establishment was closed after the fall of the Soviet Union (see Martínez 2018: 57).[9] On a contemporary political level in Europe, the lack of spare parts, design or construction that impedes repair, and the high cost of repair services are key arguments in the right to repair movement (see Right to Repair n.d.), a civil society initiative, and the right to repair legislation adopted by the European Parliament in April 2024 (EP 2024).

According to my empirical material, electronic devices are the least-repaired commodities in Estonia today. Changes in the material properties, affordances and design of electronic appliances and devices are a significant factor, contributing to a decline in DIY repair practices, repair services and the willingness to fix an old product. Products and their materiality, for example, construction or design that impedes repairability, are key actors in capitalist processes and in shaping regimes and practices of usership and repair (Graziano and Trogal 2019: 212). This has affected people's relationships with the commodities they possess and use, predisposing consumption over prosumption (see Hellmann 2023: 24–30) through the decline in repair and mending practices, in contrast with experiences of the Soviet 'repair society', which is part of Estonian cultural memory. Importantly, as my empirical evidence suggests, people are influenced by the material properties and construction of contemporary products, as per strategies of planned obsolescence (Bidgoli 2010: 296; Vogel 2023: 59–61), which provokes their criticism of contemporary capitalist mass-production and consumerism, especially when they make a comparison with the experiences of Soviet consumer culture (cf. Kuppelwieser et al. 2019).

REPAIR AS RESISTANCE

The problematic relationship with contemporary electronic devices and home appliances, and the perceived decline of repair practices in society, give rise to critical opinions on the current socio-economic system and provide new meanings for repair. The role of repair practices has definitely declined due to the emergence of mass consumption in Estonia in the early 2000s (Keller 2004a; 2004b). However, as my data show, these practices are still present in the domestic sphere to some degree.

Some commodities are repaired more often than others. In contrast to electronic devices, my empirical material indicates that textiles and woollen knitted fabrics are mended most often today, and that this mending represents a continuity of repair practices. Knitted woollen socks and mittens stand out as particular objects that are often handcrafted and often mended. Similarly, Palmsköld (2015) writes that in Sweden,

reusing and mending textiles instead of discarding them is a significant cultural consideration for both younger and older generations.[10] Repairing and fixing are embodied, material practices of engagement with things, their construction and materialities (see Harper 1987; Dant 2019), as is mending. In comparison with electronic devices, textiles and woollen fabrics as materials are predisposed to mending, and its persistence in society.

Importantly, mending and repair have acquired novel meanings in the contemporary socio-economic context that go beyond the economic or use value functionalities that were central in the 'repair society'. Martínez (2018; 2023) discusses how repair functions today as a social potential to fix problematic legacies or social fragmentations for certain social groups in Estonia. However, based on my data, DIY mending and fixing practices are related more to an ecological rationale and resonate with the emerging repair movement (see Madon 2022; Jonas et al. 2023: 4–8). Repair practices are often narrated explicitly through relationships with contemporary consumer society. For example, Katrin (b. 1970) writes about how she aims to introduce mending to her teenage daughter.

> I realised lately that probably there are many families in Estonia today in which nobody would even think about mending broken socks. At the same time I was sitting next to a window and mending my daughter's [woollen] socks. Nowadays, you can have them from a shop for a ridiculously low price. Moreover, it seems like they are made in a way that you have to go and buy a new pair soon. I am from a generation that remembers very well how my mother and grandmother mended socks; everything else as well. Yet, now my own teenage daughter is among those people who tell me excitedly how cheap you get things from H&M … While mending my daughter's socks, I position myself intentionally in her view so she can really see me mending, not only hear me talking about the normality of mending. I really hope it inspires her to do so, or at least it creates a willingness to repair things in the future and not to go shopping for new things. (ERM KV 1366:9/38-39)

Photo 2. The woollen socks Katrin is mending for her daughter. Photo: ERM KV 1366:9/38-39.

In this vignette, Katrin depicts mending socks as an obsolete practice in the current consumer society. Mending a woollen sock, for her, is an act of resistance to the throw-away culture, planned obsolescence and the decline of repair practices. She aims to

maintain the mending skills in her home and pass the knowledge and mentality on to the next generation, as happened to her in childhood. For Katrin, mending clothing items embodies the hope to overcome mass consumption and consumerism. Jackson (2019: 344–346; 2023: 429–430) writes that repair can be perceived as a practice of hope, embodying moral and physical engagement with the world.

In relation to the current consumer society, repair and mending practices are most often narrated by the respondents as resistance to the socio-economic system. Fixing and mending are ways to relate to the current society and culture and the ecological problems therein. Graziano and Trogal (2019: 203–204) discuss repair as a counter-action and counter-power to capitalism and its basic principles, through material engagement with the objects and infrastructures of the material world. DIY repair, along with domestic reuse and repurposing practices, sends a political message by embodying resistance to capitalist markets through these material micropolitical acts (Isenhour and Reno 2019: 2). Repair and mending, as involved in socially transformative projects, can be used as protest and to configure alternatives to current economic conditions (Federici 2016). Importantly, this resistance comes through material intervention in the social and material worlds (see Martínez 2023).

For some individuals, mending is a form of activity that combines craft practice with social activism. This can be defined as craftivism, a social movement that applies traditional craft skills to social challenges through creative, material and affective everyday micro-practices (Vachhani et al. 2024). For instance, Kairi (b. 1968) is a well-known handicraft specialist and textile mending specialist who gives handicraft, mending and patching courses and workshops. She is also a craftivist because she organised the Assembly of Menders in 2023 at Obinitsa Museum, a two-day workshop that aimed to develop mending skills by bringing together mending practitioners and handicraft specialists. Kairi even announced at the event that mending should be considered a new form of handicraft. She responded to the museum's questionnaire and reflected on her views of mending.

Photo 3. Kairi's daughter's old wool gaiters or leg warmers which Kairi has mended visibly and wears as arm warmers. Photo: Kairi Orav.

> I never even question whether to mend something – if it can be fixed, I do it myself, or pay someone to do it. I enjoy the process more than the result. This connects a bit to my father, though, unlike him, I always include a design element. Lately, mending has to look nifty. The change in this came about in 2006. Now I make mending consciously and intentionally visible. The mending usually stands out; I don't even try to hide it, and it is deliberate. Mending is no longer a sign of poverty; it's a lifestyle choice. (ERM KV 1376:6/22-34)

For Kairi, mending is not just an ethical choice; it is part of her life, both professional and private. Similar to many other respondents, memories of mending and repair are part of her family history, too. However, as a professional handicraft specialist and educator, she aims to mend her clothing visibly, highlighting how mending is an intentional and political act.

Mending is a manifestation of resistance to consumer society, especially through visible mending techniques and aesthetics. Visible mending highlights the mending itself and the mended fragment through the use of colours, patterns and materials that contrast with the original fabric. This material assemblage also highlights that the item has been mended. Invisible mending, in contrast, aims to leave the mended area unnoticed. Jaana (b. 1988), who was among the founding members of Repair Basement, explained in an interview that for her and other active members, visible mending is a kind of celebration of repair (FM 2023: Jaana). Visible mending is not just an aesthetic, it is a material practice. Visible mending is a counter-action and resistance in a material form (cf. Graziano and Trogal 2019: 204). Some respondents also acknowledged visible mending, public repair workshops (for instance, Repair Basement) and the contemporary repair movement in Estonia. "Mending can be beautiful or original, as demonstrated by various initiatives in recent years. Mending and repair are growing in popularity among environmentally conscious people, something that is evident in the increasing number of repair workshops." (ERM KV 1376:10/51-53) In this vignette, Tiina highlights the growth of environmental awareness in society and the emergence of the repair movement in Estonia, which is embodied by recently established repair workshops. In addition, Tiina refers to visible mending techniques that empower mending practices in society.

In contrast to regarding repair and mending as obsolete practices in Estonia, recent public initiatives have aimed to promote their relevance. Public repair workshops or maker spaces in Estonia – for example, Repair Basement in Tartu, or Kopli 93, a community centre workshop, in Tallinn –, which have been established in the last seven years, and public events – for example, Repair Festival in Viljandi or Assembly of Menders in Obinitsa Museum – organised over the last four years demonstrate that repair is becoming a social and cultural movement with political aims. Martínez (2023: 612) notes that repair initiatives in Estonia aim to slow down mass consumption and perpetuate repair skills. My ethnographic observations at the public initiatives and interviews with repair activists show that these activists aim to address and communicate the current ecological problems and concerns with mass consumption and capitalism on a public level, as well as develop and cultivate skills.

Repair knowledge and skills today in Estonia and elsewhere in Europe are increasingly acquired through repair initiatives established as part of the repair movement (Jonas et al. 2023: 4–8). The younger generation often learns repair and mending skills by visiting public repair workshops (Durrani 2018; Madon 2022), watching tutorial videos on YouTube (Dant 2019) and attending courses or public events. Novel mending methods such as visible mending, especially that produced using the techniques of *sashiko*[11] and *kintsugi*[12], are also gaining popularity, introducing mending as a visually attractive practice and a creative design method in Estonia (see also Valle-Noronha et al. 2025). Repair and mending skills have become learned skills or traditional technologies (cf. Jõeste et al. 2020) for the younger generation, acquired through dedicated com-

munities, courses or online tutorials. The older generation, and the repair movement in general, associate repair skills with their history and legacies. Beyond the younger generation of repair activists, the repair movement in Estonia is also initiated by handicraft specialists, craft scientists, and sustainable designers who organise public events and give workshops, and aim to link mending with handicraft traditions.

The emerging repair movement and the growing popularity of mending in Estonia show clear signs of functioning as a resistance to consumer society and mass consumption (cf. Graziano and Trogal 2019: 204; Isenhour and Reno 2019: 2). As mending and fixing are a vivid part of Estonian cultural memory, and are perceived as traditionally and historically common abilities and an inherited skill among the older generation, the meaning of repair in Estonia has shifted from being a necessity to becoming resistance. This resistance through repair has become a culturally informed counter-power to the current socioeconomic system.

CONCLUSION

Repair has certain historicities (see Weber and Krebs 2021) that indicate how the practice of repair and repair culture have changed over time in different socioeconomic and political contexts. This article has focused on the changing meanings of repair in Estonia, which represents a heuristic of the post-Soviet context with its own unique characteristics. The Soviet Union has been discussed as a 'repair society', characterised by lively DIY repair, reuse and repurposing practices as a necessity and normative part of consumer culture due to commodity deficit (see Gerasimova and Chuikina 2009). Repair and mending practices, narratives and knowledge are still a vivid part of Estonian cultural memory (see Assmann 2021). Based on the repair stories and interviews analysed in this paper, this practice and its narratives are perceived as a rather positive legacy, providing a way of remembering the Estonian experience of the 'repair society', providing a collective identity for the older generation and symbolising the possibility of a more sustainable consumer culture for the younger generation. Importantly, repair and cultural memory have a political value and meaning (Graziano and Trogal 2019). People interpret and evaluate experiences and narratives of lively repair culture in the Soviet era in comparison to contemporary ecological concerns and consumer society, giving an assessment of the contemporary socioeconomic system. This article has demonstrated how the meaning of repair in Estonia has changed from being an economic necessity, which it was until quite recently, to being a form of resistance to consumer society, mass consumption and, moreover, the capitalist socioeconomic model (cf. Graziano and Trogal 2019; cf. Isenhour and Reno 2019; cf. Martínez 2018). In contrast, Kucher (2024) shows that the meaning of mending in Ukraine is associated mainly with scarcity and necessity, demonstrating the variety and limits of the post-Soviet frame as a heuristic (see discussion in Murawski 2018).

Consumer culture and repair practices are based fundamentally on an engagement with the materialities of commodities (see Dant 2005; 2019), and their material properties and affordances (cf. Ingold 2007). The criticism of consumer society for my research participants is often based on their comparison of experiences with Soviet devices, narrated as having long lifespans and good repairability, and contemporary home appli-

ances and electronic devices, which are affected by planned obsolescence (see Bidgoli 2010; Vogel 2023). In addition to repair practices, planned obsolescence, too, has its own history within a specific cultural context. These findings suggest that the politics of repair with the resistance to the capitalist economic system (see Graziano and Trogal 2019) is inherently linked with the changes in the material properties of commodities, and infrastructure related to fixing. Material affordances are infrapolitical, influencing critiques of capitalism and resistance to it.

Resistance to consumer society often manifests itself in individual and domestic repair and mending practices, which are linked with cultural memory on an individual level. In addition, for some individuals there is the hope that these skills will be passed on within families. Resistance also manifests in the emerging repair movement in Estonia, with newly founded public repair workshops and the organisation of public events or workshops. Importantly, this repair movement is establishing clear links with traditional technologies (i.e. handicraft), mainly because of handicraft specialists and craft scholars, who organise the public events and workshops. These findings suggest that local repair movement and the persistence of repair are not only inspired by international civil society activism (for instance, the right to repair movement or repair cafés) and popular visible mending techniques, but can also be inspired by local cultural memory, legacies and handicraft traditions.

This article proposes that the materiality of commodities with their physical properties and affordances has political value or effect that can initiate resistance and intervention against mass consumption and the capitalist socioeconomic model. This resistance, linked with cultural memory and legacies, can be inspired by local history, traditional technologies and vernacular livelihoods, which are perceived as presenting sustainable ways of managing within the contemporary ecological crisis. The study of repair, which has already demonstrated persistence of this practice in domestic households in various geographical and cultural contexts, should consider the links between repair as traditional and vernacular skill and knowledge, and the contemporary, sustainable-driven, meanings of repair within the emerging repair movement. Perhaps the history and heritage of repair practices serve, or can serve, as a cultural resource for empowering sustainability.

NOTES

1 Similarly, the implementation of European waste sorting and recycling systems in Estonia was slow, and some old habits persisted (see Martínez and Beilmann 2020).

2 However, my empirical material does not cover marginalised social groups, urban environments or geographical areas in Estonia, as is the case for Francisco Martínez (2018). Therefore, my research proposes an alternative approach and results that are dependent on my ethnographic material and methods. The fact that my research participants were motivated to reply to the ENM questionnaire means that they probably have a rather positive view of contemporary repair practices.

3 Chief Coordinator of Partner Relations at the ENM.

4 See the two questionnaires in the Questionnaire Archive n.d.

5 This study only analyses responses from adults.

6 Repair Basement is a public repair workshop or maker space in Tartu, Estonia, established and run by a younger generation of activists. Established in 2019, it was the first, and is now the best-known, public repair workshop in Estonia.

7 Viljandi Repair Festival is an annual public event that introduces various DIY repair, mending and repurposing techniques. The festival started at 2022 and is organised by craft scientists at the Viljandi Culture Academy, which is a college of the University of Tartu.

8 Kristi Jõeste, Madis Rennu, Ave Matsin and Kadri Tüür (2020: 17–18) have proposed the term 'traditional technology' as "a technological and cultural practice, and associated implementations and developments, that are based on vernacular craft techniques, principles of design and skills". They also distinguish between inherited, learned and reconstructed craft skills, and traditional technologies.

9 Apart from corporate repair services, small repair shops still exist, although their significance is sometimes in maintaining social networks, skills and traditions rather than yielding high profits, as Martínez (2018: 61; 2023: 605) has shown in both Tallinn, Estonia and Lisbon, Portugal.

10 Palmsköld (2015) also discusses generational differences, showing that representatives of the older generation still aim to mend textiles, while younger adults prefer to extend their lives by giving them to second-hand outlets.

11 *Sashiko* is a textile stitching technique originating in Japan that has become popular in decorative crafts and design. In *sashiko* stitching, layers of materials are sewn together, and decorative and "complex interlocking stitching patterns are created with a simple running stitch" (Hayes 2019: 263).

12 *Kintsugi* is a traditional Japanese decorative craft technique for repairing broken ceramic objects that has become popular in contemporary crafts. The *kintsugi* technique has traditionally used a plant-based adhesive lacquer with gold or silver powder, while in the contemporary DIY scene, gold-coloured adhesive is often used (Keulemans 2016).

SOURCES

The author has obtained informed consent to publish the full names of the correspondents.

Estonian National Museum's Archive of Correspondents' Responses (ERM KV):

ERM KV 1375:6/36-44, Aili, born 1943.
ERM KV 1376:11/54-71, Anne, born 1953.
ERM KV 1367:22/144-150, Eve, born 1960.
ERM KV 1376:6/22-34, Kairi, born 1968.
ERM KV 1366:9/38-39, Katrin, born 1970.
ERM KV 1376:10/51-53, Tiina, born 1956.
ERM KV 1375:2/6-8, Maret, born 1973.

Author's Fieldwork Materials

FM 2023: Urmas = Interview with Urmas, born 1975, conducted on April 15, 2023.
FM 2023: Jaana = Interview with Jaana, born 1988, conducted on May 10, 2023.

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