

Guest editors' introduction

The culture of cooling – an introduction

Matilda Marshall & Inger Johanne Lyngø

The use of cooling to preserve and handle food and other perishables has a long history. The handling of ice, the ice trade, and the subsequent development of modern refrigeration technology has in the past centuries notably changed geographies and temporalities. New relations between people, food and the surrounding environment have emerged (see also Freidberg 2009). Refrigerators and freezers have enabled a shift from long-term food storage through considerable preservation work, towards consumption of fresh (and frozen) products year-round, irrespective of season. It is almost a century since the first automatic and electrical refrigerators intended for domestic households entered the Nordic homes in the 1920s. Since the 1960s, refrigerators and freezers have become ubiquitous objects in almost every home and part of variety of objects used for managing cold through cooling.

From a physics perspective, cold is simply put the absent of heat. However, a lot of effort is dedicated to making cold through processes of cooling. Cooling through ice or household appliances has had a great impact on everyday life: it has been managed, produced, desired, and consumed by people. During the 19th and 20th centuries, modern refrigeration technology evolved along with shifting notions of hygiene, freshness, new knowledge of nutrition, i.e., vitamins (Freidberg 2009; Schönach 2020), comfort and convenience (Shove & Southerton 2000), as well as increased living conditions and the standardization of the home. Refrigeration was thereby involved in processes that changed daily practices, leading way to new ways of doing and thinking.

Hence, cooling is more than ephemeral and sensory experiences, it is highly cultural. We suggest that it is possible to talk about *cooling cultures*, different ways of living with cooling culturally, which can be traced through history, society and in social relations. While warming has previously been suggested as a cultural analytical tool or metaphor to think about change and continuity (Ger 2007), here we wish to focus on the opposite. By bringing attention to the cultural aspects of cooling and freezing, the aim of this thematic collection of articles is to explore the many ways that cooling is part of how people think about the world, how they go about in their everyday lives, and how relations are established and managed. How does cooling matter and how does it become matter?

An emerging research field

An increased body of humanistic and social science literature has lately investigated cold and coldness as cultural and social phenomena, with a particular focus on Indigenous lifestyles, the Arctic region and climate change (Hansson & Norberg 2009; Dodds 2018; Ruiz, Schönach & Shields 2019; Gustafsson Reinius 2020; Villstrand & Westerlund 2022, to name but a few). Several studies focus on “ice-dependent lifeways and cultures that build out relations from seasonal and geological presences and absences” (Ruiz, Schönach & Shields 2019: 8). Concepts and fields such as ice humanities (Dodds 2021; Dodds & Sörlin 2022), cryo-history and Arctic humanities (Sörlin 2015) have emerged, contributing with how ice and cold link into geopolitics, climate change, and ways of living. We see potential to explore the cultural aspects of cooling even further with more attention to everyday life, actors, and materials.

Another growing field concerning cooling cultures is found within historical, sociological, and geographical research on the emergence, development, normalization, and practices of cooling and of cooling technology. In particular, refrigerators and freezers have gained attention (Shove & Southerton 2000; Hand & Shove 2007; Watkins 2008; Finstad 2014; Rininen, Shove & Smits 2019; Marshall 2021; 2022). In the Norwegian project *The last ice age*, historians have traced the Norwegian natural ice trade during the 19th and 20th centuries showing how ice and cooling permeated places, networks, and industries on local and global levels (Norseng 2022; Klakegg Sturland 2021; see also Bagle this volume). While this body of research gives considerable insight into how cooling diffused into the daily lives through food, appliances and practices, less attention is given to cooling and refrigeration as a cultural phenomenon.

Against this background and departing specifically from a Nordic context, we ask how natural and artificial cooling has created meaning and integrated into everyday life during the past two centuries. The contributors to this theme section apply ethnological, anthropological, and historical perspectives on cooling as part of cultural processes and ideas. In particular, the articles approach ice and cooling appliances, directing attention to how cold has been managed, produced, desired, and consumed. While the production

and consumption of food and beverages is an underlying theme, the articles more precisely draw attention to how cooling shapes people, relations, places, and practices. They explore the commodification of ice and cold through the Norwegian natural ice trade in the 19th century, cultural translations of ice cubes, and how the development of cooling and freezing appliances have affected ways of living and ideas of sustainability.

Cooling as no longer self-evident

On a sunny day in late September 2022, one the guest editors, Matilda, was cycling in the outskirts of Copenhagen. Approaching a small café and delicatessen, she decided to stop for something cold to drink. A refrigerator contained a selection of fizzy drinks and beers, all room temperature. When asking the cashier if they had any cold drinks, he apologized and explained the refrigerator was turned off due to the current high energy costs. Instead, he offered ice for the beverage. While the ice cubes quickly cooled the elderflower drink, the question emerged of how chilled drinks and ice cubes have become mundane, taken for granted objects. This is a topic Helene Brembeck explores in her essay.

As this quotidian scene exemplifies, most of us do not normally think about our cooling appliances until they, with Freidberg's words, "fail us" (2009: 18). As long as they provide us with cool drinks, fresh vegetables and a pleasant indoor temperature, they have a seamless presence. This entanglement of cooling in

everyday life calls for cultural analytical attention, not least in a time of global warming, climate change, and energy crisis. Global warming threatens the ice layers, glaciers, and permafrost, while simultaneously increasing the need for cooling. One illustrative example is the Svalbard Global Seed Vault, containing about a million seed samples, which can no longer rely on the cooling from the permafrost. Instead, emergency power and refrigeration technology will ensure seed storage for the future (Ministry of Agriculture and Food 2018).

Furthermore, as cold is an economic resource for attracting tourists, skiing competitions, car testers, and companies' server halls in northern Nordic areas, this implies that cooling has social, economic, and environmental implications and consequences for people and places. What once was a (perceived) given weather condition or accessible commodity, becomes uncertain, disrupted, and challenged when energy prices and global temperatures rise. Cooling is no longer predictable or self-evident, but highly conditional, dependent on the ways resources and the environment has been treated over time. When cooling is challenged, so are our ways of living.

Cooling is thus political. The threat of the refrigerant Freon to the Ozone layer affected international politics, resulting in the Montreal Protocol (UNEP 2018). On a global level, refrigeration in its different forms contributes with greenhouse gas (GHG) emissions both through energy use and due to refrigerant leakages. In total, refrigeration related emissions are today estimated to



Image 1. Snow canons used for producing artificial snow for a ski track. Photo: Matilda Marshall.

constitute more than 10% of global GHG emissions (Ding, Coleman & Miller 2021).

Storing and consuming fresh food in refrigerators has spread over the world, increasing demand for energy and appliances while also changing food culture (Wilhite 2018; Rinkinen, Shove & Smits 2019). In affluent societies, a trend has been noted towards multiple and larger appliances within the home, challenging goals for sustainability (Sahakian 2022). However, as Flora Mary Bartlett shows in this volume, an additional freezer may materialize ideas of a (sustainable) good life by allowing a closer relation to the surrounding environment through wild game and berries. The cooling achieved by these home freezers are on a different scale than the cooling of server halls providing us with social media platforms. Cooling is done differently depending on context and is bestowed with different meanings.

Like many cultural phenomena, not all have equal access to cold and cooling. The Estonian ethnologists Any Kannike and Ester Bardone (2022) remind us of this when pointing out how cooling technology during the Soviet era was restricted by political forces dictating not only access to electricity but also brands and after social position (within the party). Yet this is an increasing issue in other parts of the world where extreme heat highlights how economy, health, age, and location determine who has access to cooling (see e.g. Farbotko & Waitt 2011; Davis et al. 2021). A similar issue was raised during the distribution of the first vaccines for COVID-19, which required a cold chain that could provide very low temperatures in which to store the vaccines appropriately. This highlights issues of social and economic inequality on both global and local scales where access to sufficient and reliable cooling may become a matter of life and death.

Cultures of cooling thus involve inclusion and exclusion. But they also involve aspects of exclusivity and mainstreaming. In her essay, Brembeck writes about the cultural transitions of the ice cube and how it has been charged and re-charged with different values over time. Consuming ice has become, in a way, consuming modern and American ideals. In a similar manner, Matilda Marshall pays attention to the almost disappearing collective freezing facilities. She asks how freezing food transformed from a collective to an individualized practice and if collective cooling has a future.

The commodification of cooling

In Kazan, at the Siberian border, winter is extremely cold and summer extensively hot. Every farmer in these regions has his own icehouse, which is as simple as it is practical (Asbjørnsen 1860: 38).¹

¹Authors' translation from Norwegian: "I Kazan ved den Sibiriske Grændse er der om Vinteren meget koldt og uhyre hedt om Sommeren. Enhver Bonde i disse Tracter har sin Iskjælder, der er ligesaa simpel som hensigtsmæssigt" (Asbjørnsen 1860:38).



Image 2. Ice machine in a Swedish hotel. Photo: Matilda Marshall.

Humans have since long strived to manage cold and cooling, as hinted in the above quote. It was not until the 19th century that they became global commodities. Frederic Tudor, the American “ice king”, is recognized to be the first entrepreneur. In his contribution, Eyvind Bagle takes us to Kragerø in southern Norway to explore the local, social, and international aspects of ice production and commodification. Ice cut from dams and ponds, and eventually artificially made ice, became sought for. This gave rise to the “Refrigerated society”, which did not start with electricity but with ice-enabling technologies (Freidberg 2009; Rees 2018). Eventually, commodified cold and cooling emerged in new forms, transformed from the major ice block to the small ice cube and freezers, as explored by the other articles in this theme section.

Cooling and notions of freshness have also been part of processes of colonialization, where westernized ideals have been imposed by changing taste preferences and commodity markets, upholding colonial orders (Freidberg 2010; Hobart 2016; Klakegg Sturland 2021). Furthermore, by controlling cooling through harvesting or mechanically producing, storing, and trading ice, control was exercised over nature and seasons (Schönach 2019: 16).

Cooling, both as a practice and commodity, is dependent on different forms of materiality and infrastructures. As explored by Both Bagle and Brembeck in this issue, the



Image 3. Photo of a variety of cooling materiality - ice boxes and refrigerators - from different time periods, taken at the Finnish Museum of Refrigeration in Ylöjärvi, Finland. Photo: Matilda Marshall.

ice – from the large ice blocks cut from rivers and ponds to the small ice cube – functions as an essential material in the history of cooling. Due to its ephemeral nature, ice requires procedures and skills to generate the desired cooling affect as it melts. A variety of tools, storage spaces, buildings and infrastructure have been developed to facilitate cooling: ice pliers, ice boxes², refrigerated railway carriages, wine coolers and freezers, to name some. A range of cooling materiality and technology is found throughout the food chain – sometimes called “the cold chain” – from production to consumption via dairies, slaughterhouses, transportation, wholesalers, grocery stores, restaurants, and wine cellars. Of course, cooling does not necessarily involve ice or electricity. For example, wells, bogs, root cellars and ventilated pantries have been utilized for cooling and storing foods. Through its materiality, we are embedded in the culture of cooling.

This materiality has changed over time, not only in design (Isenstadt 1998; Nickles 2002), but through social and technical processes. A classic example is Ruth Schwartz Cowan’s essay “How the refrigerator got its hum” (1985), demonstrating how the distinctive humming was a result of processes out-conquering the silent gas-powered fridge. The hum is now part of the cooling culture, present in our homes and grocery stores. The appliances have also altered in use and function. While Marshall’s contribution explores how, in the mid 1900s, the home freezer coexisted with collective freezer facilities (see also Finstad 2022), Bartlett shows how the home freezer now is the norm and enmeshed in ideas of a good life in Arjeplog.

The cooling materiality is involved in norms and values about hygiene, food security, economy, convenience, and comfort. Refrigerators and air conditioners influence how we understand, use, and prefer food and indoor environments. The culture of cooling thus has a repertoire of ideas of normality and needs which facilitates demand for certain materiality and infrastructure. The ways our kitchens are built and what food we eat partly evolve around how cooling is culturally meaningful (see e.g. Shove & Southerton 2000; Rinkinen, Shove Smits 2019; Marshall 2022).

² Ice boxes were called refrigerators before the electrical fridge came on the market (see also Lyngo 2023).

Cooling has influenced food culture, the food chain, and everyday practices. As such, ice and refrigeration could be understood as culinary infrastructures that have shaped the way we think about and value food (Pilcher 2016). Values and ideas attached to ice and coldness shaped the preferences of cold drinks and fresh food with implications for contemporary food and consumer culture.

Consuming cooling

The somewhat similar climate and limited seasons in the Nordic region have influenced a rationale and practice of a *storage economy*³ dependent on food preservation to ensure long-term storage until the next harvest, and preferably even longer in preparation for bad harvests. Storage had to be closely monitored and fresh food was in general perceived as a luxury and eaten on rare occasions. Artificial cooling has allowed going beyond the restrictions of seasons and climate. Accessing fresh food from near and afar altered the ways of handling, preserving, cooking, and eating food. Refrigeration allowed a shift from a storage economy, towards an economy of consumption. Kitchens have been designed to become more rational, and pantries and food cellars have been replaced with cooling appliances and room-tempered kitchen cupboards (see e.g. Sandgren 2018; Thörn 2018; Marshall 2021).

Refrigeration is involved in how people understand, think about, and interact with food and nutrients, altering how everyday life is structured and how temperatures are managed. Consuming cold is also about consuming notions of freshness. As demonstrated by Freidberg (2009), the cold chain has reinforced freshness as a desirable quality. Yet the materiality of refrigeration does not act on its own, it has been integrated into, for example, political and commercial projects thereby changing conventions and habits. As shown by Evans and Mylan (2019) with the example of orange juice, different actors have been involved in the process of linking and upholding ideas of freshness and quality. Refrigerated fresh juice – in contrast to non-refrigerated juice from concentrate – has over time been bestowed with cultural

³ *Förrådshusholdning* in Norwegian, and *förrådshushållning* in Swedish.

and commercial meaning, a premium product with a higher price. These preferences require energy to power refrigerated storage in the food chain, resulting in higher CO₂ emissions than a non-refrigerated equivalent made from concentrate. This is just one of many examples of where consuming cold through refrigeration connects to questions of environmental sustainability.

As more people across the globe adopt westernized refrigeration practices and food habits, such as fresh meat and dairy products, more people are ensnared in infrastructures and identities of cooling (Rinkinen, Shove & Smits 2019). At the same time, consuming cooling can also be a matter of survival. In a warmer climate, cooling may become a scarcity and a necessity to cope with extreme heat. This requires both managing the consumption of cooling in a sustainable manner and finding new ways of cooling (see also Farbotko & Waitt 2011). As we have tried to show in this introduction, people constantly learn how to live with cold in its different shapes. Living with cold is thus also to live with extreme heat, like the people of Kazan in the earlier quote by Asbjørnsen.

Final words

We have in this introduction highlighted some examples of cooling as culture, how cooling is part of and shapes daily lives. Cooling is essential not only for the production and consumption of food and to achieve thermal comfort, but also for hospitals, morgues, laboratories, ice rinks, skiing competitions, data storage, and preservation of cultural artifacts. The articles in this theme section trace some places and situations where people interact with, produce, manage, and live with cooling in different ways. The authors contribute with perspectives on meanings and practices that may both be deemed as self-evident in everyday life as well as problematic from aspects of sustainability. They investigate the various meanings and contents embedded in ice machines, freezer lockers, and freezers, thereby allowing us to come closer to cooling as a social and cultural phenomenon.

We propose that cultural analytical and cultural historical perspectives have further methodological and theoretical contributions to make concerning the culture of cooling on both the micro and macro level. Some questions to pose: How can natural and artificial cooling be understood as cultural expressions while also affecting culture? How has cooling affected ways of living and thinking? How is cooling enacted and sensed differently in various contexts? How do people structure everyday life and society around cooling and heating? Are there gendered or alternative ways of cooling?

We do not offer concrete answers to all questions and topics addressed in this introduction but hope that this thematic collection of articles will stimulate further discussion on what the culture(s) of cooling may entail and how cooling is part of everyday life. This may offer new

perspectives to questions of sustainability, for example to illuminate the potential consequences of disrupted energy supply and climate change.

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