

Microbial Entanglements in the Bulgarian Cellar: Control, Collaboration, and Quiet Food Sovereignty

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Abstract

To save food for winter, domestic preserve makers in contemporary Bulgaria employ a variety of microbe management techniques including fermentation, sterilization, drying, and cold storage. This diversity is built upon micro and macro biocultural refugia significantly influenced by everyday life during state socialism, that persisted in the early post-socialist period and after European Union integration. I analyze microbial management techniques as social practices arguing they are manifestations of quiet food sovereignty. The resulting home-preserved foods are prized as clean, tasty, and reliable. They complement industrial foods in everyday life. This article is based on ethnographic research conducted between 2018–2021.

Keywords: food sovereignty; food preservation; food self-provisioning; biocultural conservation; Bulgaria; food studies; practice theory

While fermenting, drying, and jarring food for personal and familial consumption are marginal practices in most of Western Europe and North America, they are relatively common practices in post-socialist countries like Bulgaria (Alber and Kohler 2008; Jehlička, Kostelecký and Smith 2013; Rose and Tihomirov 1993). These everyday household strategies for “making do” and pursuing meaningful lives in these countries are tied to experiences of living under state socialism (Caldwell 2004; Shkodorova 2021). During socialist times people developed complex and multifaceted strategies to negotiate economies of shortage, secure basic material needs, and pursue something more than mere sustenance (Verdery 1996; Creed 1998; Drakulic 1993; Dunn 2004; Bren and Neuberger 2012). Gaining access to food, not only for survival, but also for celebrating, offering hospitality, supporting health, performing personal, local and/or national identity, and satisfying personal and familial desires and aesthetics required elaborate strategies, networks and skills. These strategies included the creation and maintenance of extensive social networks and a robust informal economy for everyday goods like food and clothing (Verdery 1996; Creed 1998; Ledeneva 1998). Home-preserved foods that were typically produced in rural areas circulated far beyond their rural origins; they traveled along networks of extended social relations in what Smollett referred to as the “economy of jars” (Smollett 1989).

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Today, neoliberal economies in formerly socialist countries retain many elements of the diverse economies (formal and informal) from the socialist past. Post-socialist foodways studies such as those of Caldwell (2004), Jung (2009, 2010, 2016, 2019), and Dunn (2004, 2010) demonstrate that while post 1989 entry into neoliberal global economies was a rupture with the centrally planned economy of the past, many of the everyday food related strategies, practices, and networks developed by Bulgarians and other socialist citizens continue to the present day. For example, many Bulgarians actively produce or gather a portion of their annual food supply through gardening, foraging, or tending small livestock and stock up for winter through home-based food preservation and storage. According to a September 2019 survey conducted by a popular Bulgarian news outlet, more than 70% of Bulgarian respondents made or consumed homemade preserves (news.bg 2019).

Food self-provisioning and preservation do not fit the timeline of progress for those who operate within a modernist, capitalist conceptualization of development (Kostov and Lingard 2002, 90; Alber and Kohler 2008, 113–27; Murton, Bavington and Dokis 2016). Because these practices are deeply entangled with industrially produced and globally sourced materials and preserve makers rarely articulate associations or motivations linked to social movements they may also not seem “progressive” through the lens of food-based social movements or public efforts to preserve traditions (Visser, et al. 2015; Yotova 2018). What gets lost in between these two conceptualizations is the emerging, evanescent present manifesting in living practices that draw on inherited, experimental, prototypical, and novel materials, competences, and meanings. Looking around in the present moment (rather than ahead or behind) I have endeavored to engage my “art of noticing” to the proximate and ordinary to better understand stability and change, and how “gatherings” of people, plants, animals, and microbes sometimes become “happenings” (Tsing 2015 12, 22–23). This informed both the method and analytical frame for this paper, which is based on participant observation, interviews, inventories of cellars accompanied by surveys (2018, 2019, 2021) and uses social practice theory as an analytic. Drawing from the multiplicity of social practice theories allows me to avoid a linear conceptualization of food systems development and re-conceptualize food systems as contingently arranged practices, oriented in space and time. These practices have some stability, but they are also constantly shifting.

I conceptualize food preservation in Bulgarian households as social practices that condense in the cellar (Nicolini 2017; Schatzki 1996; Schatzki 2002; Shove, Pantzar and Watson 2012). Food preservation practices are intrinsically linked to other social practices relating to many aspects of everyday life such as shopping, gardening, gathering, cooking, and eating. Social practices are intentional, though often routinized, activities which consist of interconnected elements such as “[...] embodiment, physical objects, inner emotions, competences of how to do things, and motivations to do them” (Neuman 2019, 83). They are performed by carriers of the practices, and when they are performed, they are “[...] the routine accomplishment of what people take to be ‘normal’ ways of life” (Shove 2003, 117). Accordingly, social practices are performed “on the basis of what members learn from others, and are capable of being done well or badly, correctly or incorrectly” (Barnes 2001, 27). While individuals are carriers of

practices, what distinguishes personal idiosyncrasy or habit from social practice is that social practices are shared by a group of people. This means that these practices are necessarily recognizable and mutually referential. They are “collective possessions and accomplishments sustained through interaction and mutual adjustment among people” (Schatzki 2001, 6).

Practices are also “intrinsically connected to and interwoven with objects and non-human entities” (Shove, Pantzar and Watson 2012, 14). This makes social practice theory an ideal analytic for examining the inter-relationships of microbes and humans in terms of food preservation. To save food for winter, home-based preserve makers in contemporary Bulgaria employ a variety of microbe management techniques. Methods like fermentation could be characterized as multi-species collaborations that elongate the time-period of human edibility, protect or promote health, and appeal to human senses. These fermented products, however, sit side by side with foods that are preserved through water-bath jarring, which relies on sterilization to help preserve makers win the “race against rot” (Weiler et al. 2019). I also observed dried foods, pickled foods, and fresh storage of root crops and apples in cellars that I visited.

The diversity of methods employed by preserve makers demonstrate multi-faceted engagement with microbes that are part of their everyday foodways. Though this is true of all of us who engage in everyday food preparation, I was particularly intrigued by the persistence of these microbial management practices as they relate to home-preserved foods that, in the West, have largely been replaced by industrially produced alternatives.

The legacy of socialism continues to shape contemporary Bulgarian food preservation practices through elements of social practice: materials, competencies, and meanings. In the following sections I focus particularly on the durability of materials and competences that people draw from, including taste memories that people carry. The meanings of these foods have always been varied and overlapping and have also shifted over time as broader political and economic circumstances have changed. So, while the materials and competences have remained more stable, the meanings of home preserved food that people described to me are variable and volatile.

The realities of everyday life during state-socialism in Bulgaria contributed to the maintenance, and perhaps expansion, of a large community of practitioners competent and motivated to preserve food and equipped many households with the durable tools to do so. These domestic practices continued alongside the consolidation and industrialization of agricultural production and processing. In terms of food production, in the early years of state socialism formerly private agricultural land was nationalized and consolidated to form large “cooperative” farms (for Bulgarian examples see Creed 1998 and Cellarius 2004, for Polish example see Dunn 2004, for Hungarian example see Lampland 1995). This marked a major shift for socialist nations like Bulgaria from a primarily peasant based agricultural system to an extensive, mechanized, industrial form of agriculture. This style of agricultural production also had impacts on agricultural biodiversity, favoring crops suited to large scale, mechanized production that yielded a high economic impact. Domestic gardening practices continued in parallel, providing refuge for varieties of plants and animals that were not well-suited

to industrial production but that were valued by producers.

Following a similar path, food processing was nationalized and further industrialized by the state; brought into the webs of the centrally planned economy and Fordist production logic (Jung 2009). Microbes were also brought into the modernizing and industrial processes propagated by the socialist state. One example of this can be found by tracing the history of yogurt in Bulgaria. Efforts to standardize the strains of bacteria used to produce yogurt allowed for broader commercialized and industrialized production before state socialism, but this trend accelerated between 1945 and 1989 (Stoilova 2013, 73–92; Neuberger 2022, 97–99). Using home-made yogurt starters as a foundation, government researchers selected and then cultivated strains suited to industrial production which were then patented (Stoilova 2013, 73–92). These lab created “clear” strains were distributed to large scale milk processors (Stoilova 2014). These yogurt cultures, which are still available to buy, were referred to as *maya* by my interviewees. This was a general term they used to describe multiple microbial products such as yeast for baking bread, yogurt starter cultures, or cultures needed for making white cheese (*sirene*) all of which are readily available in most food shops to this day. However, like home gardens, domestic food preservation practices allowed people to negotiate the formal systems on their own terms. While scientists and the state were standardizing and homogenizing microbial cultures, at home many people continued to ferment with self-managed and propagated cultures.

As a result of the economies of shortage and as a way to negotiate the formal food market during socialism, many people in Bulgaria retained materials and competencies related to food production and preservation. These practices did not supplant the industrialized system but rather operated in entanglement with or parallel to it. These practices have created relatively unregulated pockets of biodiversity in terms of plants, animals, and microbes that have continued to be adaptive in a post-socialist context. They also provide an opportunity to retain food diversity from the perceived homogenizing influences of the European Union, with its common market and agricultural policies that generally favor large, industrial agriculture in Bulgaria (Ivanova et al. 2021).

For this research, I documented how people who engage in domestic food preservation ensure safety outside of a formalized environment, with no regulations and little in terms of precision instrumentation. My interviewees routinely identified sensorial skills and relationships of care as necessary to ensure that these unregulated, and sometimes illegal, foods were safe to eat. These foods provide an alternative to industrially produced and globally networked foods, even while sometimes integrating them as ingredients in home-preserved products. In a country where certifications and regulations were not always trusted, these home preserved foods provided a sense of security and safety. My findings were similar to those of Maria Yotova, who observed that Bulgarian consumers implicitly critique state and neoliberal regimes through their persistent valuation of the “goodness” of *domashna* (home-made) yogurt and ongoing production and exchange of homemade foods (2018). Beyond food security, these home-made and preserved foods promote food sovereignty and sit at a nexus of social practices preserving biocultural resources. Though again, not usually

in overt activism against or opposition to mass produced foods or the corporate industrial food regime (Holt-Gimenez and Shattuck 2011; Yotova 2018). Home preserved food is linked to resilience strategies that challenge state and supra-state entities directly and subvert them discretely through relationship management from the micro to the macro.

Saving Food in the Village of Mladen

August and September are especially busy months in Bulgaria when it comes to preserving food. A crush of garden, orchard, and forest products are ready for harvest during this time and preserve makers are in full swing. In this section I describe detailed scenes of everyday life at the end of summer that are emblematic of routine practices carried out by many Bulgarian families. I focus on one extended family who live and work in two cities just north of the Balkan Mountains. During the summer they spend a good deal of time in their familial village called Mladen. I visited Mladen several times over the years (in 2008, 2018, 2019, and 2021), most often in late summer. On these trips to the village, I joined in multi-generational family gatherings, including the oldest family member who was a fulltime village resident. I spent time in their gardens, the nearby forests, and vineyards. While many foods along with wine and brandy were preserved in the village, they were also mobile, travelling in jars and bottles to urban cupboards.

It was a crisp, early fall morning when I arrived in the village of Mladen in 2019 with my friends Irina and Tihomir along with their daughter Zhuzhi. I hadn't been there for 11 years, but as I pushed through the garden gate it was still very familiar. Tatyana, Irina's mother, welcomed me back to her family's village home with a hug and kisses. Her father was a medical doctor, and he built this house in 1923. It was constructed of stone, wood and plaster and had a large, enclosed yard. There were fruit trees, a line of beehives underneath them, a substantial vegetable garden, flower beds, several long rows of grape vines, and two grassy enclosed areas separated by low rock walls.



Figure 1. Photography by the author.

She walked me around the yard, narrating as she showed me various plants and buildings and recalling her childhood days. As Tatyana and I finished our tour of the yard she led me over to a grassy area fenced off by a low rock wall. There we found Irina and Tihomir along with Tatyana's husband Andree, cousins Stefan and Nadezhda, and her uncle Petar deeply engrossed in their big project for the day, distilling plum *rakiya* (brandy). Making the *rakiya* blended a good deal of leisure and socializing into the more laborious tasks at hand so there was plenty of time for chatting and taking pictures.



Figure 2. Photography by the author.

As was common with other interviewees, while engaging in preservation practices everyone shared memories from the past. In this case, the conversation turned to both positive aspects of socialist times such as a robust manufacturing economy as well as the darker legacies, which for Tatyana's family included the killing of her grandfather and displacement of her grandmother, aunt, and mother. The older generations also compared and contrasted the necessity of making jars during socialist times with the contemporary situation. While in the past the problem was insufficient quality or quantity of industrially produced foods, today there were concerns over low wages and pensions, quality control, healthfulness, and aesthetics. Though the political and economic regimes were very different, some of the outcomes were the same: feelings of precarity, a strong desire to hedge against uncertainty through domestic production, and seeking pleasure and

meaning outside of consumer-based pursuits.

When I asked Andree why he made *rakiya* he turned to face me with wide eyes, threw up his hands and exclaimed with a laugh, "What am I supposed to do, throw away the plums?" They indeed had several plum trees in the yard; plums thrive in this region, and it is famous for plum production. They all ripen at roughly the same time and spoil quickly. While Tatyana coated many plum slices in sugar syrup and dried them and made jarred compote and jam, the sheer volume of plums easily outstripped the family's capacity to preserve them in these ways. *Rakiya* used hundreds of gallons of plums and preserved them in the form of long-storing alcohol. The highly perishable plums provided a time sensitive reason for multiple generations to gather in the village to preserve them quickly before they rot. These diverse preservation methods

are emblematic of very different ways of managing microbes from collaborative fermentation to sterilization.

Stefan and Nadezhda lived and worked in Sevlievo, they usually visited Malden on the weekends to spend time with Petar and help with the gardening and preserve making. Petar was the only one of the extended family who lived full time in Mladen; rather lonely since his wife passed away a couple of years before.

On this day, the family gathered around the large copper still (*kazan*). When it was open, the large bottom portion of the *kazan* resembled a giant cauldron, and the men filled it with fermented plum mash. The copper *kazan* was composed of three large pieces: the bottom piece, a slightly smaller top cap, and a pipe for the steam to travel through to the condenser. This meant that there were three seams where the metal pieces fit together. Petar demonstrated to me how he used flour and water to create a dough that he then deftly rolled in his hands, forming a long rope. He took this dough rope and pressed it along the seams of the pieces of the *kazan* to stick them together.

As the *kazan* heated up, the dough cooked and hardened which created an airtight seal. "It's a Bulgarian gasket" Stefan joked. The large copper *kazan* was charred black on the outside from sitting on top of cement blocks over a roaring wood fire. Long branches fed the fire; the men periodically pushed them under the *kazan* as the wood burned down. This saved the step of chopping the wood. As the fire burned down, there was an accumulating pile of thick gray ashes and hot coals between the cement blocks.

Though this was distillation day, the process for making the *rakiya* started a few weeks prior. The family picked and lightly smashed the plums and then put them into 50-gallon plastic vats to ferment for 14 days. Andree took me down to see the vats of fermenting plums. They were kept down a short staircase in a stone cellar, filled with a slightly sour yeasty smell and thousands of fruit flies, hovering low over the fruit. Andree told me that these flies were an essential part of the fermentation process. These non-human collaborators helped to move the yeast around in the barrel. The stone cellar provided a relatively constant, cooler temperature that was ideal for fermenting. In the quiet of the cellar the fermenting barrels would give off a quiet fizzing sound at about the one-week mark. Andree explained that sometimes he had to add sugar at this point if the mash was not fermenting quickly enough which he could judge by



Figure 3. Photograph by the author.



Figure 4. Photograph by the author.

smell and consistency, but otherwise it was just natural fermentation. After two weeks the fermented plum mash could be distilled.

Though this was a male dominated task, Nadezhda also took turns feeding the fire and monitoring the still. She joked about being a woman involved in *rakiya* making by feminizing the word for “*rakiya* master” and conferring the title on herself, which everyone chuckled about. Though clearly familiar with the process, and involved in several of the tasks, the women would always defer to the men when I asked questions about making *rakiya*. The opposite was true when it came to preserving food. Even though both men and women participated, the women were the ones who were considered the experts. These idealized gendered divisions of labor, with men responsible for alcohol and women responsible for food, was also reflected in how consumers of

these products described and remembered them. For example, people would refer to their grandmother’s or their mother’s jam and their grandfather’s or their father’s *rakiya* and wine.

This batch of *rakiya* was finished when no more liquid came out of the condenser into the little bucket positioned underneath the spigot. Nadezhda monitored this and let everyone know when it stopped dripping. Then the men gathered again to pull the charcoal and ashes out from the firepit and let the *kazan* cool.

This took at least an hour. Once it was cool enough to safely handle, they broke the dough



Figure 5. Photography by the author.



Figure 6. Photograph by the author.

seams, and removed the pipe and lid. The bottom part contained the cooked-down plum sludge. Wearing heavy work-gloves, Stefan carefully scooped out the still steaming remnants with a bucket and threw it over the wall into the garden area. “This will work like a compost” he explained as he distributed it over the ground.

Once empty, the three men washed every part of the *kazan* and carefully scraped off the remaining bits of dough along the seams. They then re-filled the *kazan* with fermented plum mash, sealed it with fresh dough, and started a new fire.

There were moments of intense activity distilling the *rakiya*, but there were also long periods of down time, like waiting for the *kazan* to cool off. I listened to stories that came up as the family worked together and used quiet moments to ask

questions about the processes. Each person had little side projects going on in their houses and gardens; they would toggle back and forth as needed.

During one of these downtimes Nadezhda showed me around Uncle Petar’s cellar where she had filled many boxes with home-made preserves in jars. She used water-bath canning to put up shelf-stable tomatoes, jams, fruit compote, and cucumber pickles. While Nadezhda showed me around she told me that her mother-in-law, Uncle Petar’s late wife, was the one who taught her how to make preserves. Nadezhda spoke of her mother-in-law with great fondness.

While in the cellar I recorded Nadezhda’s recipe for *lyutenitsa*, a savory pepper and tomato relish, which she recited to me while holding a small ruby red jar of the most recent batch:

Take about 10 kilograms of tomatoes. You mill them, removing the skins and the seeds, and then you begin boiling the tomato juice until it becomes a thick puree. After this it will be almost as thick as the finished product. You have to roast 10 kilograms of peppers. You remove the skins and clean off all the seeds. After this you put them through

a meat-grinder. In the same way you take eggplants, 2 or 3 kilograms. Again, you roast them, peel them and grind them. If you want you can also add a little bit of carrots, grated. All of this you start to boil until it is a thick puree. You season it with salt, sugar, and oil. Some people put in black pepper to taste, and you boil it until it is thickened. May it be sweet to you all winter long!

In addition to jarring foods through sterilization, Nadezhda also fermented her own yogurt.¹ She sourced the milk from *poznati* which means someone who she knew personally and had a relationship with. This woman kept a cow and sold a little milk informally. The women I interviewed who made their own yogurt all told me that they bought milk from *poznati*. As another woman named Vasi told me, she only bought milk from *poznati* because, “You know they won’t sell you something bad or that will make you sick [...] you know each other and they will take care of you.” Nadezhda showed me the small, enamel covered pot she used for making her yogurt. The milk must have been very rich because the yogurt had a thick layer of solid cream on top. Nadezhda fed me a large spoonful and it had a pleasant, mild sourness and a slightly animal taste. She said that you can buy starter (*maya*) for yogurt or just start the next batch with some yogurt from the previous batch mixed in with new milk.

Though occasionally people I interviewed would name specific strains of cultures, for example *Lactobacillus Bulgaricus*, generally preserve makers like Nadezhda would focus on the “how” of making preserves, rather than the specific biological mechanisms that preserved food. This may be an artifact of speaking with me, an obvious foreigner and non-native speaker. However, even when sharing recipes with other novice preserve makers who were Bulgarian, I never heard anyone articulate the detail of the biological processes or name the specific microbes. The microbial management instruction focused on a description of the ingredients, process, and sensorial indicators.

My friend Irina (Nadezhda’s niece) later confided to me that she didn’t really like homemade yogurt because it had a stronger taste than the store-bought kind. She ate that instead even when homemade yogurt was available. Industrially produced Bulgarian yogurt is widely available and affordable throughout the country from small shops to large supermarkets. Nadezhda commented that she also bought this industrially produced, commercial yogurt from time to time. But she had access to raw milk from a small producer and the knowledge about how to make it herself as well. She preferred the taste and texture of home-made and knew exactly what went into the yogurt when she made it herself. However, these various ways of getting yogurt were not framed as oppositional. Nadezhda had choices about how and when she opted for home-made versus commercial yogurt and when she used her own yogurt cultures or when she bought *maya* (starter cultures) from the store.

Like Nadezhda, Tatyana also made yogurt at her village house and bought the milk from *poznati*. She noted that the village of Mladen had a long history of dairying: “In terms of milk products there was exceptional and healthy milk and *sirene* [similar to feta cheese], *katuk* [thick fermented milk inoculated with *sirene*].” I commented that I thought *katuk* was very tasty. “That *katuk* is not the same as my grandmother’s. I re-

member. The tastes you remember” she emphasized by pointing her index finger to her head. “There is a memory for taste, there is a memory for smell. My grandmother would make it in a *delva*. Do you know what a *delva* is? It is a vessel made of clay. On that shelf in the basement, like that one right there in the corner. Inside was yogurt and *sirene* that was put into it. Crushed into it. But you have to crush the *sirene* into it [by hand]. Now the process is too fast.” *Katuk* is commercially available in grocery stores and is served in restaurants where I had eaten it, but Tatyana did not think that was authentic. She emphasized that the product labeled *katuk* did not match her embodied taste memories. She was adamant that the process needed to be done by hand, fermented slowly, and made in a clay pot so that it would taste right and constitute “real” *katuk*.

Tatyana also let me visit her cellar. As we began the tour of the year’s jarred preserves, Tatyana reminded me that this represented only a portion of her work. Some jars were already in the nearby city of Gabrovo at her apartment and also in her daughter Irina’s pantry. She opened the old wooden doors of her grandmother’s bureau. Inside the bureau were lines of small jars containing “the sweet things” that she had made for the year and tomatoes.

She narrated the contents of the jars by sight, nothing was labeled. “Here we have tomatoes, cut and pureed. All the sweet things, figs, raspberries, apricots, quince.” She picked up a jar to inspect it in the light, “Are these blackberries?” she asked herself. “No, sour cherries [*vishni*]” she decided. There was also wild strawberry jam and a mix of wild strawberries and raspberries. She told me that she didn’t use pectin to thicken her jams but just cooked them down slowly with sugar. Some of the jars were recycled Gerber baby food jars that she had got from a friend who saved them recently. She also had baby food jars from when her granddaughter Zhuzhi was little and they would get baby food from the “Milk Kitchen” in Gabrovo. These were slightly larger than the Gerber jars but also with a screw cap. Moving along the shelf I pointed to a jar, “What is this?” I asked, “syrup?” “It must be, yes” she said, picking up the bottle and tipping it in the light to get a better look. “Well, maybe jelly from blackberry because it is very dark or maybe from sour cherries.” Then she pointed out another row of jars, “Zhuzhi likes jam from only raspberry, so I make that, too.”

Like many preserve makers, Tatyana adjusted her preserve making to suit the tastes and desires of her family. There are many ways that the practice of preserve making creates connections among people. As other scholars have noted, preserved foods circulate in and create social networks (Smollett 1989). They can be given away as gifts to maintain ongoing relationships and are a way that people can demonstrate care for their family by customizing preserves to their tastes or needs. As Tatyana demonstrated, this could take the form of making raspberry jam specifically for a grandchild or sending adult children large quantities of a variety of preserves for their everyday use. They provide a significant source of homemade foods across generations which creates alternatives to commercially produced, purchased foods. Preserve makers often expressed pride in having something good to give their friends and relatives, things that couldn’t be bought in a store not because of the saved expense but because of the high quality, personal customization, and superior taste. In this way



Figure 7. Photograph by the author.

these preserved foods encapsulated care and love, packaged up in portable jars.

She moved to another bureau that was three-quarters full of clean, empty jars. The full jars in this cupboard included *turshia* for which Tatyana recited this recipe, “I made this *turshia* from *kambi* (a small, round sweet pepper), carrots, *tselina* (celeriac), garlic, vinegar, salt and sugar. I always put in a little sugar.” There were also some small jars of preserved cherry tomatoes. She continued through this cupboard pointing out short, squat jars containing mixed vegetables including okra. I commented that I very rarely saw okra and asked if she grew it in her garden. “No” she said, “I bought it.” She agreed that okra was becoming rarer. So, she gave me the basic ingredient list, aside from the okra, “green beans, blue tomatoes or *patladjan* [eggplant], carrots, peppers, tomatoes.”

She used this jarred, stewed vegetable mix to make the final dish called *gyuvech* in the winter. “*Gyuvech* is a dish that you make from sliced potatoes and on top of the potatoes you put this” she said as she pointed to the jar she was holding in her hand. “You mix in the vegetables, and bake it, with a little oil and red pepper. You use a middle-sized pan about like this” she said holding up her hands to show about a 9 x 13-inch size. “For that size you use two jars. You add a little water, red pepper, and



Figure 8. Photograph by the author.

oil and that's it. You can also add salt." These types of partially prepared foods were common in many cellars. They reduced kitchen work during the winter and provided a pop of color on the winter table. Often people remarked that these types of preserves were "a taste of summer in the winter."

She then showed me a jar with whole sweet peppers mixed with carrots and cabbage. The jars were so colorful I asked if I could take her picture with them. "Of course! Take pictures!" she said. So we headed up a couple of stairs and out to the better lighting of the patio.

We went back into the cellar to continue the tour, "There are plums [*slivi*] but also yellow, wild plums [*djanki*]." There were quite a few of these trees in the yard. She had also jarred many cornelian cherries [*drenki*] but she said that she had given all those jars to daughter Irina and son in law Tihomir so she

didn't have any there in Mladen.

Moving on, she pulled out a small jar with a screw-top cap, "These are hot peppers for Andree from last year." Inside the jar was a mix of small, green and red spicy peppers, mixed with whole garlic cloves, black peppercorns, parsley and celeriac leaves, floating in vinegar. Tatyana wrinkled her nose, explaining that she didn't like spicy things at all, but Andree wanted her to make these for him. Tatyana went on, "I like [sweet] red pepper a lot. But spicy peppers, no!" At this point Andree chimed in to say that he ate the spicy peppers as a "treatment," and that eating them kept him healthy. They grew a small bush of spicy peppers in a pot just for him for these purposes. This marked them as important "functional foods" that were not consumed for a basic nutrition or particular medical cure but for general health promotion benefits (Pieroni and Price 2006, 108–10).

Material links to the socialist period are found in tools, jars and the varieties of fruits and vegetables popularized during those years (like Gumza grapes or Kurtovska Kapiya hybrid peppers). Though there were some materials like older wooden barrels or clay pots that were used in the more distant past, these were not typically being used in contemporary preservation practices. What were used and re-used were glass



Figure 9. Photography by the author.

jars, metal cooking pots, food mills, and firepits. Women like Tatyana and Nadezhda learned to make jars during socialism. However, because they were working and had small children their mothers and mothers' in-law tended to make the bulk of the jars for the family. They carry on this tradition for their now working-aged children. They all described personal histories related to the development of sensorial skills required to make preserved foods and to judge their goodness that were passed on directly from generation to generation.

Throughout all my visits to Mladen, Tatyana took the chance to explain various things to her granddaughter Zhuzhi and share family history associated with particular foods

and preservation tools. Much to Tatyana's distress, her granddaughter was not nearly as interested in learning these things as I was. In any case, Tatyana was literally putting a taste of the village and home-preserved foods in her granddaughter's mouth for future recollection. This may be drawn on later by the younger generations in judging goodness through embodied taste memories. Tatyana's daughter Irina was also episodically involved in many parts of the preserve making process, including gardening, foraging, jarring, and drying. Though because of the time constraints of being a working mother her production was limited, she was in the process of developing many competences in food-self-provisioning and microbe management which she could draw on in the future if she so desires.

Growing and preserving food is very labor intensive and there were times when Tatyana would express frustration at being tied to the garden. But this work was also

interspersed with more pleasurable activities like visiting and eating with neighbors and friends and spending time outside in the fresh air away from the grind of city life.

Though there was a lot of work being done on this day everyone stopped to gather around the table packed with salads, stuffed cabbage, grilled meats, cheese, bread, yogurt, soft drinks wine and *rakiya*. We started with garden fresh salad containing cucumbers, tomatoes, finely minced onions, and parsley. This was accompanied by small glasses of *raikya* and several rounds of toasting. The homemade foods and alcohol were a point of pride. This was demonstrated when people pointed out each dish on a table that was home-grown or homemade (*domashna*), and also by comments like, “you can’t buy anything like this in a store.” But even these homemade and home-preserved foods were intertwined unabashedly with industrial (and sometimes global) food chains including the sugar and spices that went into jarred foods.

After eating and drinking our way through the merry, multi-course lunch including dessert and coffee we all went back out in the yard and gathered to say our good-byes. While I got one last look at the distillation process, Nadezhda asked me if we make *rakiya* in the U.S. I told her that my dad makes wine but doesn’t make brandy because it is illegal to make strong alcohol. At this everyone in the yard burst into laughter. Nadezhda replied, “Of course it is illegal to make it here too, but everybody does it.”

Microbial Management and Quiet Food Sovereignty

In domestic food preservation microbial management is handled at close range, often by the same people who are the end consumers of the preserved foods. These preserve makers have a wide variety of embodied skills and knowledge about how to safely preserve foods through lactic acid fermentation, acetic acid pickling, water-bath sterilization, and drying foods for winter. The end consumers also rely on embodied memories of taste and smell to sense and judge the goodness of home-preserved foods and if they are safe to eat. Preserve makers and consumers train their senses through exposure; feeling the temperature of the milk before adding the yogurt starter, referring to taste memories or smells to determine if things like fermented cabbage are still good for eating. In addition to the senses, people rely on relationships of trust, care, and competence to ensure their home-preserved foods are safe. People trust raw ingredients, like milk, and finished goods, like jarred foods, that are produced by people they know. They feel confident that people with whom they have relationships would not cut corners or take risks with the end consumer’s health and that they are highly skilled.

In contrast, industrially produced foods available in formal markets rely on standardized and regulated processes to make foods safe and things like labels and certifications to communicate their quality to consumers. Discerning good food rarely relies on the senses but relies more on understanding, interpreting, and trusting certifications, knowing how to read labels, etc. This can be challenging in a country where there is widespread mistrust of both government regulators and corporations. Though as Jung put it, people in Bulgaria are learning how to be “canny consumers”

of industrially produced foods and do increasingly integrate these foods into their everyday foodways (2009).

In terms of biocultural conservation related to home-based food preservation, the socialist period was significant because of the co-occurrence of industrialization of agriculture and food processing with the retention of small-scale subsistence plots and domestic food preservation. This means that Bulgaria, unlike many Western nations, had no break in the extensive practice of subsistence production and household level self-provisioning and preservation even within an industrialized, international food system. Biological diversity preservation (wild and domestic) and cultural preservation of diverse foodways and traditional ecological knowledge are a significant result of this historical context.

A wide array of materials and methods for managing microbes were therefore preserved and continue to the present day. This includes the knowledge of how to make fermented foods like yogurt by adding microbial cultures to yogurt, lactic acid fermented cabbage in brine and the vessels and cellars within which to do so. This also includes ready access to jars and the skill to put up a wide variety of fruits, vegetables, and meats for winter through water-bath canning. These jars have the advantage of being portable and circulate widely which continues to re-create social relationships of care and maintains a knowledgeable consumer base with embodied taste memories. Many people in Bulgaria also still have familial connections to gardens and orchards which provide a seasonal surplus to be available for preserving, like the hundreds of gallons of plums needed to make *rakia* through a combination of fermentation and distillation.

As multiple generations often gather, at least episodically, to help with large tasks like roasting peppers, harvesting grapes, or distilling alcohol these cultural practices and embodied skills are passed on. This has only been amplified by wide access to technology like smart phones, which have enabled many people to self-document many traditional food preservation practices and distribute them through mediums like YouTube. Some young people described to me using a combination of things like old family recipes, YouTube videos, and embodied taste memories to re-create preserves for themselves, even when the intergenerational transmission in their families had been broken. Access to raw ingredients and equipment, widespread knowledge, and finally time and space to make these home preserved foods create an important niche in Bulgaria for biocultural conservation which has provided both historical and contemporary resilience.

I argue that household-oriented gardens, small farms and wildlands that provide most of the raw materials for home-preserved foods in Bulgaria are biocultural refugia, “physical places that not only shelter farm biodiversity, but also carry knowledge and experiences about practical management of how to produce food while stewarding biodiversity and ecosystem services” (Barthel 2013). I think this concept can be usefully translated from the scale of the landscape to the scale of the yogurt pot or fermentation barrel. They are microcosms of diversity made in collaboration between humans and their more than human counterparts from fruit flies to bacteria and yeast. In fact, even sterilized jarred foods represent refugia and the social networks created

by their circulation support refugia at both macro and micro scales. Barthel et. al argue that *biocultural refugia* contain knowledge, practices, and beliefs relevant to increasing food production, reducing biodiversity loss, and maintaining diverse and ecologically well-adapted practices (2013). I propose that these biocultural refugia both micro and macro, and the foodways that are built upon and within them, are the manifestation of vernacular food sovereignty practices distinct to a post-socialist context that Eastern European food scholars have articulated as “quiet food sovereignty” (Visser et al. 2015, 527–28).

Food sovereignty is a term that was originally coined by members of La Via Campesina, an international peasant movement, in 1996. Though the definition has evolved over time, it is currently defined as, “The right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, and their right to define their own food and agriculture systems” (Nyeleni Agreement 2007). The concept is now used as a platform for participants across multiple geographies to organize and activate for food and food systems that are healthy, just, and locally determined. Food Sovereignty runs counter to the highly capitalized, industrialized, globally networked food system described by McMichael as the “corporate food regime” (2005). The creation of “Alternative Food Networks” (AFNs) or other activism to promote Food Sovereignty are ways to resist and circumvent the ubiquity of the “corporate food regime” by expanding food production and acquisition capacity outside of industrialized, corporate agriculture (Holt-Gimenez and Shattuck 2011; Wittman, Desmarais and Wiebe 2010; Goodman, DuPuis and Goodman 2012). As Wilson puts it, “AFNs are ideas and actions that in some way subvert or contest industrial capitalist foodways, such as urban farming, Community Supported Agriculture, agroecology, fair trade and so on, while continuing to work within its interstices. Similarly, Food Sovereignty emerged as a concept in activist circles (and only later in academia and policy) to describe the project of carving out separate or at least partially autonomous spaces for the production, exchange, and consumption of food” (Wilson 2017, 1).

Home-based food provisioning and preservation in Bulgaria provides a significant amount of food as an alternative to the corporate industrial food regime, while not confronting it directly or seeking to remove reliance on it. This frames home-based food preservation as a practice based in desire and self-determination, although sometimes within constrained choices. In Western Europe and the United States these practices are often framed as “alternative” but are fairly common in Russia and Eastern Europe (Alber and Kohler 2008; Shkodorova 2021; Grivins 2016; Jehlička and Daněk 2017; Acheson 2007). This leads scholars such as Jehlička et al. (2020) to contest the use of terms like “Alternative Food Networks” since it frames industrialized, capitalized, globalized foodways as the norm and alternatives in an oppositional relationship with that norm. In Russian and Eastern Europe, they argue, these “alternatives” are actually mainstream and are not necessarily oppositional to, but rather interconnected with, industrialized, capitalized, global foods. The food sovereignty created through ongoing practices of food self-provisioning and preservation is therefore “quiet” in that it is not associated with a social movement and is not framed in opposition to the corporate food regime.

My observations mirror these findings. Self-provisioning and food preservation were common practices for many families and not typically associated with a social movement. It was clear that for many people the ongoing production of preserved food simply seemed like an ordinary thing to do, was reliant on familial and natural rhythms, and relationships of trust and care reinforced by robust informal food networks. It was a relatively mundane, routinized activity intermingled with a wide range of food provisioning practices including the purchase of globally sourced, industrially produced foods.

The pervasiveness of these food preservation practices has in fact created significant opportunities for people to negotiate the corporate industrial food regime on their own terms. People like Nadezhda can choose when and how to engage with those systems by buying industrially produced yogurt in the corner shop when she wants to. She also has access to the materials to produce her own, has the competence to ferment the milk into yogurt, and the desire to do so for aesthetic and health reasons. This ability to preserve her own yogurt is deeply relational and involves managing microbes at many steps along the way. It relies on human/cow relationships of care to produce the milk. This means that the owner must properly care for cow, make sure to carefully clean the udders and their hands before milking, and store the raw milk in a way that prevents an abundance of microbial life that would cause human sickness. There are then the human relationships of trust that facilitate the buying of raw milk. Then the yogurt maker has to heat the milk to a temperature to kill harmful bacteria and introduce selective strains of bacteria to make yogurt. In this case, that homemade yogurt was then eaten together in a multi-generational human gathering. In other words, the yogurt is intertwined with commensality at multiple scales and making kin within and across species boundaries (Haraway 2016, 71–72). However, it is important not to romanticize. Domestic food preservation is not only about collaborating with microbes in fermentive relationships of life but also about how human control of microbes, including systematic sterilization, are part of the cycle. Living and dying are entangled, and relationality is unavoidable (Haraway 2016, 38).

By “Thinking Food Like an East European,” I argue that home-based food preservation practices in Bulgaria constitute “quiet” food sovereignty that is based on micro and macro biocultural refugia (Jehlička et al. 2020). As such, these practices offer important insights for thinking about interventions to change or preserve foodways that support hopeful, meaningful, and resilient food futures, and contribute to the burgeoning literature articulating “multiple” diverse food sovereignties (Wilson 2017; Kurtz 2015). This quiet sovereignty involves knowledge, ability, and desire to manage microbial relationships to human benefit including collaboration, manipulation, and control depending on context and result in foods that are prized as clean and reliable alternatives to industrial food, tastes of home and the village, and essential components in both everyday and ritual life.

Notes

- 1 For historical context on the significance of yogurt in Bulgaria see Stoilova 2013 and 2015 and Neuberger 2022.

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