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□ Durable Remains: Glass Reuse, Material Citizenship and Precarity in EU-era Bulgaria

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Abstract

Bulgarian Roma living in the capital city of Sofia rely on glass for EU-era survival because of its role in food-jarring practices and its ability to be repeatedly used and reused without breaking down. The durability of glass emerges as a salient material quality for ensuring a means of preservation in the face of everyday economic precarity. Glass's durability is material and temporal: temporal in that it transcends political and economic upheavals, and material in that, unlike plastic, metal and paper, glass does not naturally decompose over time. Instead, it enables structurally disadvantaged urbanites, like the Roma, to use homegrown food packaging technologies in order to survive in the era of EU "free" markets, plastic packaging and neoliberal discardability. The temporal and material durability of glass juxtaposes the precarious circumstances of those most engaged with its contemporary reuse for whom glass enables both survival and a form of EU-era material citizenship. However, EU regulations focused on recycling fail to acknowledge the widespread practice of glass reuse in Bulgaria. This paper analyzes how EU policy, recycling company officials and Romani and non-Romani Sofia residents reconfigure durability through different temporal materialities – and practices – of recycling and reuse.

Keywords: Bulgaria; citizenship; consumer cultures; European Union; glass; materiality; precarity; recycling; reuse; Roma

Material Citizenship

It was September in Levanka,¹ one of Sofia's largest Romani neighborhoods. The air smelled of burning coal, as if winter had come early, but I was wearing a T-shirt and sweating as I walked up the hill to my friend's house in the late afternoon sun. I arrived to see a pile of hot coals in the concrete front yard, the empty area between the green metal fence and the entrance to my friend's family's café. Atop the coals was an iron grate partially hidden by a massive pot emitting a steady heat.

In the driveway by the side of the café, my friend, Margarita, and her mother, Rosa, were squatting over the pavement with dozens of glass jars in rows around them beside a couple of large overflowing cardboard boxes of ripe red tomatoes. Without looking up, they instructed me to leave my bag in the café and get to work. They told me to take one jar at a time, which they had already sterilized and filled with fresh-cut tomatoes, and to add a spoonful of salt from a common salt jar. They were working quietly and quickly. The first batch of *zimmnina* (preserves for the winter) was already boiling in the pot as they prepared the second batch. There was only one pot large enough to accommodate the jars, so we worked in shifts late into the evening.

Each winter, many of their Levanka neighbors worry about from where their next meal will come and resort to eating only cheap, dry foods available during these months. By preserving tomatoes every year, Margarita and Rosa enable what they call a "normal life" (*normalen zhivot*), a form of material-based citizenship in which they partake in eating not-in-season foods along with the majority of urban Bulgarians, who typically consume produce like tomatoes in the winter via store-bought jars, homemade preserves or expensive off-season fresh markets. When I asked Rosa why she makes *zimmnina* she explained that "it tastes better, it is healthier and less expensive." She held up a jar of commercially preserved tomatoes that she took from the café's stock shelf: "Look, [there are] only five or six tomatoes in here and it is very expensive." "But", making a compacting motion with her hand, pressing against the air below, she continued, "when we make *zimmnina* we stuff the jar full of tomatoes." "Is it really less expensive?", I asked. She nodded emphatically, "Yes." Then, she thought for a moment and concluded: "If I can find tomatoes for less than a *lev* [approximately 0.50 euros]² it is, but these days even the [summer] tomatoes are expensive. That's why I usually wait until September." Each year Rosa waits for the price of tomatoes to drop to an amount that makes their jarring financially feasible.

The making of *zimmnina* marks the end of summer and the beginning of a new, colder season during which the ability to eat sweet tomatoes depends on what is done in the months prior. The durability of glass enables a form of *material citizenship*, which I define here as the experience and practice of national and sometimes supranational (in this case, European Union [EU]) belonging through human-material relations. Material citizenship emerges through human relationships with certain substances and their range

1. All names, including the name of the neighborhood, are pseudonyms to preserve anonymity of those involved in this research. Research for this paper was conducted in Bulgaria between 2010 and 2013 and during the summers of 2016 and 2017.
2. This cost refers to the price per kilo of tomatoes.

of potential actions, significations and influences on and in daily life. The practices of material citizenship that I address in Sofia, Bulgaria are founded upon the endurance of socialist-era food preservation technologies, the material durability of glass over time, and the domestic labor of converting late-summer produce abundance into something that can be stored and used later, thereby forging a sense of annual stability.

I draw on ethnographic research with Romani and non-Romani Bulgarian citizens who have come to rely on jarring practices in the wake of EU-era economic liberalization, which has exacerbated existing racial inequalities (Resnick 2016). Full participation as European citizens in the aftermath of the neoliberal reforms that came with EU accession on 1 January, 2007 entails particular kinds of politico-economic relations. Many Bulgarian Roma who cannot economically participate as full citizen consumers (Ozkan and Foster 2005; Foster 2008) due to institutionalized discrimination turn to other forms of citizenship, namely through material relations (cf. Anand 2011, 2017). Glass has enabled new kinds of material citizenship, which I differentiate from consumption-based citizenship in that it is based less in relationships with consumer products than connections with the physical properties of material substances (cf. Mazzarella 2003; Foster 2008; Manning 2010).

This essay focuses on two interrelated aspects of glass: (1) its temporal endurance and (2) its material durability. With this framing I explore the role of glass in everyday Sofia life. In the age of consumer plastics, the material and temporal durability of glass enables a mode of survival – and citizenship – through informal economic recuperation. I use the concept of durability to analyze the material-temporal nexus of glass's properties that make it enduring and useful, especially for those needing it as a material counter to the economic precarity of their EU-era lives.

Jarring in Bulgaria

Glass reuse has archaeological and historical importance (Staski 1984; Busch 1987; Stuart 1993; Burley 1995; Adams 2002) as well as contemporary worldwide prominence (Harrison 2006; Manning 2012; Jasarevic 2015). In Bulgaria, small-scale domestic preservation of fresh fruits and vegetables in jars has a long history, continuing even when jarred foods were industrially produced. In my own research and in the work of other scholars of the region, interlocutors have remarked on the sense of rational control coming from the socialist state that, at the level of the factory, was subverted by human error or apathy (Dunn 2004, 2008; Jung 2009). Many Bulgarians remember stories of cigarette butts ending up in industrially produced food items like factory-assembled jars of preserved vegetables (Jung 2009). Out of gustatory preference and in order to cope with the potential for human error on the assembly line, many Bulgarians during the socialist period preferred to jar their own vegetables at home even when mass-produced jars were affordable and available.

The annual practice of jarring has continued into the postsocialist era, albeit for different reasons. For many Bulgarians with connections to villages, “*burkani* [jarred items] like *turshia* [pickled vegetables], purees, and *kompot* (fruit in syrup) are still produced in the villages in large quantities and then brought to the city for consumption” (Jung 2009, 32). In discussions about jarring and the practice of making *zimnina*, Romani and non-

Romani Bulgarians alike described the taste of homemade *burkani* (jarred items) as far superior to that of commercially sold preserves. They also noted the higher nutritional content of homegrown produce that when jarred they could consume year-round.

However, jarring has taken on new importance for structurally disadvantaged populations living in urban areas, like the Romani residents of segregated neighborhoods in Sofia. Most Romani residents of Sofia who once had the financial ability to consume in similar ways to their non-Romani Bulgarian counterparts during the socialist period disproportionately face economic hardship in the postsocialist and post-EU accession periods (Resnick 2016). Due to rising unemployment among Bulgarian Roma in the aftermath of the collapse of the socialist state in 1989 and the subsequent neoliberal economic reforms, jarring has become essential for enduring the difficult and cold winter months. As a result, the making of *zimmnina* in urban Romani neighborhoods has become a crucial practice of economic resourcefulness, not only a gustatory preference (cf. Dunn 2008; Jung 2009; Jasarevic 2015).

Durable Glass in an Expanding Europe

For Roma in Sofia, glass's durability emerges as its most salient material quality because it provides a material means of preservation in the face of their seemingly precarious European Union future. Glass's durability cannot be reduced to its physical resilience and weight. Rather, glass's durability is materially, temporally and morally significant (see Manning 2012). In the remainder of this paper I trace glass's durability along temporal and material axes, which throw into stark relief the material politics of glass. Glass endures. Unlike plastic, metal and paper, glass does not naturally break down over time; the temporal durability of glass transcends political and socio-economic upheavals.

Contrary to many accounts of Eastern European socialism, fueled in part by Cold War intellectual legacies that have focused on the material shortages of state socialism, Bulgarian Roma often live in conditions of economic and material shortage that they link not with state socialist legacies but with contemporary liberal reforms (Hawkins 2006; Gille 2007; Fehérváry 2013; Resnick 2016).³ Market liberalization in Bulgaria has resulted in increasing food prices since 1989 while pensions, social benefits and most wages have not adjusted accordingly. Although a wide range of goods are abundant in EU-era Bulgaria, many Romani Bulgarians who were once able to buy consumer goods (who were also commonly working to make them in local factories) can no longer easily afford to do so.⁴

In Sofia, income and living disparities continue to increase between those working for international corporations in shiny new business parks making competitive wages and those living in underserved areas such as decaying socialist-era apartment buildings and urban Romani neighborhoods.⁵ Since the 1990s, the educated elite of Bulgaria has emigrated in large waves to western Europe and the US (Resnick 2017). Many emigrated

3. For more on material things and Romani racialization in post-Soviet and postsocialist contexts, see Lemon 1995, 1998, 2000, 2002 and Resnick 2016.

4. This is especially true for Roma living in segregated neighborhoods.

5. Roma are subject to severe employment discrimination in Bulgaria. This was an important topic throughout my fieldwork and has also been documented by, among others, the Open Society Institute, the European Union Agency for Fundamental Rights (2014) and the World Bank (Gatti *et al.* 2016).

following European Union accession in one of Bulgaria's most notable contemporary "brain drains".⁶ Subsequently, I was often told during fieldwork that those who had the financial means to emigrate had done so and that those "left behind," who did not stay for ideological reasons or family connections, are poor. One non-Romani friend, who had lived abroad for many years explained that "since [EU] accession all that remains [in Bulgaria] are pensioners, Gypsies and the rest of Bulgaria's trash."⁷

In the wake of Bulgaria's EU accession and related economic reforms, many Romani Bulgarians have comparatively reframed state socialism as a time of abundance and as a "normal" past, in contrast with the EU-era of mass consumption in which they cannot fully partake (cf. Resnick 2017; see also Creed 2002; Fehérváry 2002, 2009, 2013; Greenberg 2011, 2014). For Roma who can no longer afford full-price fruit and vegetables, especially during the winter when nearly all income goes toward expensive heating fuel, non-disposables like glass jars are key to survival. Romani urbanites rely on the material durability of glass in jarring practices in order to get by – and preserve a so-called "normal life" as Bulgarian and EU citizens. With this jarring phenomenon in view, it becomes clear how EU-era capitalist regimes of market-based consumption and discard, of "throwaway culture" based in notions of freedom-to-consume (and discard), might not be so "free" after all.⁸

Durability and Precarity

In order to think through the relationship between a material like glass and the social worlds in which it becomes significant, I look at how material durability in Bulgaria intersects with EU-era economic instability and precarity. To explore the durability of glass, I turn to both semiotic and science and technology studies (STS) analyses of human-material networks. Glass affords a range of latent possibilities of how, as a material substance, it can function and be interpreted in the world. Glass can serve as an index of fragility as well as an index of durability or even transparency (cf. Keane 2005). Within a Bulgarian context, the relevance of glass's durability emerges from the ways in which glass is *used* in everyday practice.

In line with the science and technology studies (STS) scholars Bruno Latour and Peter-Paul Verbeek, I show how glass's quality of durability becomes relevant through the role of glass in human/non-human networks, what Latour (1992) calls "collectives". In the networks that emerge among humans and non-human things in Bulgaria, glass's durability is key to a variety of social relations (Verbeek 2005; Callon *et al.* 2002). In my research on waste management, waste firm officials, manual waste workers and domestic laborers like Margarita and Rosa discussed and used glass for its durability and related

6. Although incomplete, Eurostat data confirms this general pattern of Bulgarian migration: <http://ec.europa.eu/eurostat/web/population-demography-migration-projections/migration-and-citizenship-data/database>.

7. This quotation comes from a conversation with an upper-middle-class, English-speaking Bulgarian friend and was reiterated by many of my interlocutors.

8. Over the course of fieldwork, many of my interlocutors framed capitalist-democratic models of "freedom-to consume" (and discard) in juxtaposition to socialist-era recycling practices, which were often compulsory and state-mandated (see Gille 2007).

qualities: heaviness, sturdiness, permanence. Never once did my interlocutors in the waste collection sphere refer to or engage with glass as fragile.

If we think about material politics as “emergent and contingent”, a politics focused upon when and how certain materials “become political” (Gabrys *et al.* 2013, 5, emphasis in original), glass is critical to understanding how EU-era urban life takes shape in Bulgaria. As Roma use glass, its durability acts as an axis across which socialist-era practices, economic stability and material consistency intersect with large-scale politico-economic change and new EU regimes of disposability. Glass usage also highlights ongoing tensions between durability and discard, between what *should* remain and what (and who) *should* be thrown out.⁹

As Bulgarian Romani livelihoods become increasingly uncertain, the resilience of certain materials functions as a refuge from large-scale instability. The use of durable objects like glass jars serves as human–material compensation for economic precarity: a precarity that, in many ways, has become the new EU-era normal. Employment has become flexible, temporary and hourly, and normalized as such (Schevchenko 2002; Molé 2010; Muehlebach 2011). Bulgarian Roma, in particular, utilize sturdy objects – like glass jars – to secure their own livelihoods, using domestic technologies honed during their “normal” socialist lives, in attempts to counteract their insecure EU-era future (Shevchenko 2002; Galbraith 2003; Fehérváry 2013).

The permanence of glass juxtaposes the “impermanence and bluster of capitalist culture as well as its destructive tendencies” (Dawdy 2010, 769; see also Benjamin and Tiedemann 1999). This “pervasive identification between the social significance of an artefact and its physical permanence” is integral to the salience of glass in Bulgaria (DeSilvey 2006, 324, referring to Colloredo-Mansfeld 2004). Glass’s endurance in the face of physical stress links up with the social significance of its durability amidst economic trauma and political upheaval. Structurally disadvantaged populations like the Roma were often the first to be fired from their places of employment during the post-1989 economic reforms. Swept out with the “broom of [capitalist] efficiency” (Gábor Kertesi, translated in Stewart 2002, 134), they have turned to cultivating ways to manage the troubling experience of losing salaried steady labor and the sense of permanence that once structured their everyday state socialist lives. This is not to presume that engaging with glass objects promises the successful recuperation of stability amidst precarious circumstances. Such recuperation is impossible. In fact, some urban Bulgarian Roma have, at times, had to resort to using discarded and near-rotten food in jarring practices. However, enduring materials afford specific ways of being in the world that make market liberalization potentially more manageable for those without direct access to its market-driven benefits.

Glass’s durability operates across a spectrum of scalar temporalities that span the historical and the quotidian. Jarring is a method of stockpiling or preserving present abundance to ensure a kind of predictability when future supply is unknown. As heating costs rapidly rise each year, jarring not only allows Sofia’s Romani residents to cope

9. For a non-material, EU-era example of this one might look to the forced expulsions of eastern European Roma from France throughout 2010 to 2013.

with expensive winters but also enables a form of citizenship outside of state regulatory networks that they deem untrustworthy. As Jung explains: “Like many Sofians, my informants still believe that the capitalist system in Bulgaria does not work and that the government is too corrupt and weak to exercise control” over things like food standards (Jung 2009, 50). This feeling of distrust is even more heightened in segregated Romani neighborhoods, where national programs for “minority integration” have exploited local communities in attempts to access EU funds, high-interest loan schemes target poor and illiterate populations and local residents serve as the receptacle/market for expired food items.¹⁰

Jarring practices link the large-scale temporal durability of glass’s materiality with the labor-time of people’s lives. Margarita and Rosa, along with many of their neighbors in Levanka, endure the hot discomfort of standing over a boiling pot when September temperatures remain high, in order to make the winter livable. They spend days collecting produce through socialist-era connections with vegetable warehouse managers and then spend hours upon hours jarring those items at home. Due to high levels of unemployment in Bulgaria, which are disproportionately higher for Romani Bulgarians (European Union Agency for Fundamental Rights 2014), many urban Roma have channeled their labor-time into domestic jarring practices in attempts to live “normally” during the difficult winter months.

Scales of Temporal Durability

In this section, I shift from the use of glass in jarring practices that stave off insecurity on both small and large temporal scales – of the winter months and a European Union future – in order to turn to the role of durability in an EU-era environmental sustainability framework. I address how EU regulations focused on recycling (reprocessing) fail to acknowledge the widespread practice of glass reuse in Bulgaria.¹¹ I extend my argument about durability from everyday labor to EU regulation by analyzing how durability is reconfigured through different temporal materialities of recycling and reuse. If materials are, as Tim Ingold (2012, 439) puts it, “the stuff of time itself”, how might we understand the ways in which glass catalyzes varied experiences of temporality? The post-use aftermath of glass functions as a node on a temporal scale that encompasses the quotidian labor-time of domestic reuse and the slowing down of eco-time through recycling.

In her account of socialist and postsocialist waste regimes in Hungary, Zsuzsa Gille explains that in adopting an energy transformation perspective “we’ll find that recycling can sometimes take more energy than the production of new materials, as with glass recycling” (Gille 2007, 33). The temporality of recycling is contingent on varied perspectives and specific concerns. With glass, for example, “if our viewpoint is not focused on energy, but rather on raw materials for making glass, by recycling glass we have indeed slowed down time” (Gille 2007, 34).

10. This information comes directly from participant-observation and interviews conducted during 2010 to 2013 and the summers of 2016 and 2017.

11. For more information on EU definitions of reuse and recycling see http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Recycling_of_waste.

When we conceive of slowing down time, we might think in terms of large-scale geological time. We might imagine, for example, “slowing down the depletion of nonrenewable resources” or “harmoniz[ing] the pace of depletion and pace of regeneration of renewable ones” (Gille 2007, 33). Glass recycling, albeit highly energy intensive, potentially enables the slowing down of raw material usage. I take this as a starting point to think through how time functions within a framework of fuel usage (for heating glass-melting furnaces, transporting heavy glass packaging) and raw material consumption (soda ash and limestone deposits) in glass recycling and manufacturing. From a production perspective, the efficiency of recycling glass vs. producing glass from raw materials depends on the costs of mining raw materials, the price of energy and the cost of recyclable glass collection and related labor.

For the Bulgarian recycling industry, glass recycling has become prohibitively more expensive in the postsocialist period – especially since EU accession in 2007, when energy costs rose significantly.¹² Making cullet from recycled glass packaging and melting it down has become increasingly expensive when analyzed in terms of energy expenditures. However, mining for soda and limestone has remained relatively inexpensive despite the late-1990s privatization of the Black Sea coast mines. Soda, which lowers the melting point of glass, effectively reduces energy costs while limestone makes glass substantially more durable. The Bulgarian state socialist soda mine, the Sodi Soda Ash Plant, provided soda ash to glass factories throughout Bulgaria for decades. Factories used – and still use – Sodi’s soda ash along with sand from the Black Sea in order to produce inexpensive, locally sourced glass. Due to the abundance of local soda and sand, more than one recycling-firm official told me that manufacturing glass in Bulgaria from inexpensive natural resources is often more cost-effective than recycling.

Bulgaria’s accession to the EU also entailed, along with increasingly open migration borders and “freer” market relations, a new form of control: European Commission policy legislation. When Bulgaria became a candidate for EU accession, it had to comply with EU environmental sustainability regulations which mandate that, by 2020, Bulgaria must recycle at least 50% of all collected household waste (European Commission 2011).¹³ However, EU mandates do not account for the practice of glass packaging recovery that is widespread throughout EU-era Bulgaria: reuse.

Reuse, according to EU regulations, does not “count” toward the 50% recycled waste recovery requirement. Instead, Bulgaria must “harmonize”¹⁴ with EU legislation, typically by using an EU-wide packaging recovery system led by Bulgarian packaging recovery organizations (also referred to as producer responsibility organizations, PROs) in which

12. Data for this comes from ethnographic interviews and is also confirmed by Eurostat statistics available at <http://ec.europa.eu/eurostat/web/energy/data/database>. Bulgaria depended on USSR energy from the end of World War II and Soviet resources powered Bulgaria’s socialist-era glass industry. However, in the 1990s and 2000s, Bulgaria’s shift to market capitalism was also coupled with US and European programs aimed at diversifying the country’s main energy sources, which included the shutting down of four reactors (between 1990 and 2007) at Kozloduy, Bulgaria’s Soviet-built nuclear power plant that was supplying nearly 44% of Bulgaria’s energy.

13. Recycling is typically measured by the amount of packaging waste recovered by official packaging recovery and recycling organizations (PROs).

14. This is the technical term for when newly accessed EU member countries comply with common EU standards.

differently colored bins, each intended for a different waste stream,¹⁵ are used for public collection on city streets. In order for glass jars to be counted in waste recovery statistics, they should be collected as recyclables in public recycling (or mixed-waste) bins.¹⁶

In the winter of 2012 I visited a PRO recycling site along with a group of local politicians. We followed the CEO of one of the largest packaging recovery organizations in Bulgaria on a tour of his company's waste-sorting site, where the firm amassed items collected in company-owned colored bins on Sofia's streets. First, he showed us the long and loud conveyor belts where predominantly Romani women sorted through recovered waste items, with each person on the line responsible for collecting one waste stream. Next, he led us into a room that housed a much-prized optical glass sorting machine, which was not in use at the time. One of the local politicians who accompanied us on the tour began to laugh when we saw the high-tech glass-sorting facility. Under his breath, he told me that whereas he would definitely throw out a cardboard milk carton, he would never throw away a *lutenica* (pepper spread) or mayonnaise jar: "I don't throw away jars like that, because I give them to my mom who makes homemade *turshia* [marinated pickled vegetables stored in jars]."

The politician's mother is like many older Bulgarian pensioners who reuse glass jars. However, unlike Margarita and Rosa, who began this essay by focusing on the economics of jarring, non-Romani Sofia residents commonly use jars to preserve fresh food and produce out of habit or nostalgia (cf. Jung 2009).¹⁷ Additionally, urban Roma who preserve fresh produce in jars often do so without familial or personal connections to villages but rather through longstanding connections to wholesale fruit sellers and those willing to dispose of non-saleable items on the verge of rotting.¹⁸ That is to say, the reuse of glass containers is not particular to Romani communities; what makes Romani reuse of glass jars remarkable is its relation to everyday EU-era urban life. Whereas many pensioners, like the politician's mother, reuse glass jars in order to store their higher-quality domestic preserves, glass is essential for the survival and material citizenship of entire Romani communities (cf. Smollett 1989).

Glass jars in Bulgaria are more likely to be domestically reused than recycled via EU-wide separate collection systems. In 2013, a director of another waste management firm explained to me that any recovered glass was not processed but stockpiled: "At the moment we only separate the glass. We separate the glass and wait until somebody comes to buy it. But, at the moment, nobody buys this glass." Most recycling firms have deemed the recycling of glass cost-ineffective when compared with the

15. "Waste stream" refers to different categories of waste, like cardboard, plastic, glass, etc.

16. Although the EU system of waste packaging recycling is based in the collection of recyclables in PRO-owned colored bins, this system does not function according to plan in Bulgaria. Instead, recyclables are often recovered from municipal mixed-waste bins by informal waste collectors or via manual sorting at waste separation facilities.

17. This is not to presume that pensions are commensurate with changing market prices. In fact, there are non-Romani pensioners throughout Sofia that do make *zimmna* for economic reasons. However, their practices of jarring differ in social and historical significance from that of Romani communities facing systemic EU-era institutionalized racism.

18. This is in contrast to many non-Romani pensioners who do have enduring personal village connections, due to legacies of land ownership in Bulgaria, from which Roma have been historically excluded.

recycling of other streams of packaging waste, which are lighter-weight and easier to both transport and process.

Glass's durability directly contributes to its not being recycled in the official EU-mandated way. Since it can be stockpiled without fear of decomposition, glass is often stored until the international market makes its recycling cost-effective. "We just separate it and wait", confirmed Miro, an environmental engineer and director of a well-known non-governmental organization in Bulgaria. According to Miro, glass was indeed being stockpiled in storerooms because recycling firms claimed that it was "too difficult" to recycle and too heavy and expensive to export abroad.¹⁹

While visiting another, much smaller, waste-sorting site three years later, in 2016, Ivo, the manager, explained that "the biggest problem here in Bulgaria is glass [...]. Plastic is not a problem, because there is a lot of manufacturer power. So, basically, the glass recycling sector [has been] killed off." Manufacturer power, here, refers to the ability that manufacturers have to use recycled materials to make a saleable product. Ivo continued: "[We] collect 30,000 tons of glass per year. In Bulgaria you can process [recycle] between 5000 and 10,000 tons [annually]. What do we do with the other 20,000 tons?" He explained that he had recently met with "some Irish guys" who were working on a project to develop a new optical sorter. This would allow him to process glass in Sofia, "because the glass has to be color-separated if you want to be competitive, but sorting glass by color [...]. Nobody can do it in Bulgaria. But, plastic, plastic is easy." Using plastic as an intuitive counterpoint to glass, Ivo explained that recycling glass is much more difficult than plastic, a material with a notably shorter lifespan (cf. Hawkins *et al.* 2015). In this view, glass's durability becomes a hindrance to its recycling because of the kinds of possibilities that durability enables: glass can be stored indefinitely – and it is. It can be stockpiled. It can be reused. This extends the life of glass in ways that the EU never imagined.

Conclusion

To conclude, I return to the durability of glass, which draws together large-scale temporalities of material endurance with the everyday labor-time of reuse, the labor performed by people who engage with glass's durability to forge EU-era forms of material citizenship. The temporal and material durability of glass enables Roma to manage the economic precarity of EU-era life in Bulgaria by preserving food in ways that make the future more predictable. Glass reuse is prevalent despite EU regulations, which do not "count" reuse in recycling quotas. As the future seems more unstable – especially for Roma, who are disproportionately negatively affected by EU-era neoliberal labor and economic reforms – glass's material and temporal durability provides a refuge. Rosa explains that during the socialist past tomatoes used to be cheaper and she never had

19. While plastic- and paper-recycling sorting involves manual sorting, glass recycling utilizes optical sorting, which is more expensive than unskilled manual labor in Bulgaria – where a minimum wage was, at the time of research in 2013, approximately 310 *leva* per month (159 euros per month). Many of the optical sorting facilities I visited were not in use and I was often told that the cost of running optical sorting machines is much higher than the human labor of manual plastic and paper sorting.

to worry about how to afford to heat the house in the winter. Now, she always worries. Making *zimmna*, she tells me, helps her worry a little less about what the winter will bring. Glass's material strength merges with its temporal durability to endure over time in ways that both circumvent EU policy and enable Romani communities to align themselves with a past in which they did not worry about the future.

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