8. Conclusion

The primary goal of this book has been to generate an analysis of the assemblage of *çıkmacı* material reclamation processes through the identification of the human and nonhuman actors involved. In order to address the research questions, the emergence of the *çıkmacıs* during particular historical urbanization periods was delineated (see Ch. 4). By doing so, their role in the 'pop-up homes' *gecekondu* construction was highlighted and this, in turn, revealed the origin of the CDW surplus. At the present time, they are adapting to neoliberal urban transformation in which salvaged materials are currently being circulated outside the major cities.

This book reveals how the *çıkmacıs*' dual livelihood—scrap collecting and farming—allowed them to move between the zones of city and village. The network of supply yards is examined spatially and ethnographically to reveal how second-hand construction elements are distributed. Supply yards are vessels for *çıkmacıs*' relational activities that circulate commodities and create assemblages of materials. In addition, I put an emphasis on the role of PVC and asbestos' agency in order to confront the human-centric approaches. This approach can reveal the impacts of materials on human health and dwelling construction.

This conclusion has three parts. First, it gives a research overview that highlights the conceptual framework; the association of theory and methodology; and the research findings. It explains the cross-disciplinary approach to the concept of waste and material reclamation as well as pointing out gaps in existing research. It covers how political economy and assemblage thinking are utilized to describe the research subject's economic aspects and urban multiplicity. Ethnographic fieldwork strategies are also reviewed. Secondly, the chapter provides practical suggestions for architects, urban planners, and other related bodies governing and planning metropolitan areas. Lastly, I reveal the research

challenges and restrictions and conclude the book with proposals for future projects.

8.1 Research Overview

This multi-disciplinary research perspective incorporates different fields: ethnography, architecture, and urbanization. It contributes to an observation of diverse subjects and processes: unrecognized forms of migrant and refugee labor, rural incremental construction, material reclamation, demolition, urban transformation projects, labor mobility, and cartography of second-hand networks. These processes come together not only for economic reasons but also from interaction between the social and the material. Urbanization can be thought of as a gathering process in which materials and human activities merge to form a network of interactions.

My research perspective on the subject involves an acknowledgment of the political economy behind urbanization processes and the integration of assemblage thinking; ultimately this allows one to see urbanization as an alignment of different elements. Assemblage thinking enables us to focus on everyday practices and urban realities which are planned one way but lived differently. Urban renewal projects are planned to replace existing buildings in the city. Second hand building materials that are rejected by these projects are assembled together to form rural dwellings. This process is enacted through slower procedures like incremental construction. The assemblage of *çıkmacıs* multiplies based on absence of state planning, the salvaging interventions and informal networks.

8.1.1 Theoretical Framework

The reuse of construction components has been practiced throughout human history. Due to natural disasters, cities have been destroyed and debris has been reclaimed as a construction material since the beginning of civilization. For instance, the remains of ancient Greek cities are reused in informal settlements or incrementally-constructed rural homes in Turkey. Due to contemporary economic forces, reclamation practices in low-income countries operate in an informal economy. However, dualistic economic models of governing informality tend to ignore or formalize unrecognized practices (Portes, Castells, and Benton 1989). Formalization in waste management creates a homogenous

order that leads to privatization (Tuçaltan 2018). The exclusion of waste pickers from formal waste management sidelines informal labor's contribution to urban sustainability.

Each culture's valuation of waste is different. The general theoretical approach to the subject in the West has a tendency to view the question in a binary of waste and humans. This does not allow for a broader comprehension of waste circularity. There is often a presumption that waste is something external to the human body (Douglas 1966; Thompson 1979; Scanlan 2005). In this body of literature, the concept of waste is often viewed with an anthropocentric lens. For example, if some object fulfills its purpose for humanity, it is then discarded out of the human network. Human-centric categorization of waste also downgrades its animate properties.

There is, however, another kind of approach to the subject. Waste has the power to create what Hawkins refers to as transformation networks (Hawkins 2010). Through these networks, the lively and vital 'thing power' of discarded matter has a profound impact on the human sphere (Bennett 2010). For example, CDW affects architectural design practices that focus on deconstruction, reuse, and recycling. Allowing for a distributive agency between the social and the material, this book adopts a more inclusive approach to waste. Everyday practices like reclaiming or salvaging have an intimate relationship with discarded components and prove that the human and non-human world are perpetually intertwined.

Here, the concept of what waste is varies from culture to culture and place to place (Hawkins 2010). In addition to this, waste is a social construct (Gregson and Crang 2010). For those who have limited accessibility to capital and infrastructure, waste is a vital material resource. For example, in places where there is a housing crisis, sustainability is achieved by using what can be salvaged from the surrounding environment (Mehrotra, Vera, and Mayoral 2017). Economically disadvantaged classes tend to be the predominant laborers of gleaning. Within this environment, resilient practices like the *çıkmacıs* emerge. In short, the lack of urban waste management results in people filling in gaps by addressing these issues as an ad hoc 'relational infrastructure' (Simone 2015).

The Global North has more systematic and formal methods of waste management. However, that does not necessarily mean that reuse and recycling is better there than elsewhere, where reuse practices are very creative. Trying to read the latter through the lens of western circular economy debates would limit the aims of this research because, in Turkey, the recycling industry functions through a synthesis of the formal and informal spheres. To better

understand this synthesis, I discuss contributions of Turkish reclamation enterprises within the framework of urban assemblages (Davis 2006; McFarlane 2011; Dovey 2014; Simone 2015).

Rather than focusing on broad worldwide narratives, assemblage thinking calls for a detailed thick description of site-specific urban situations (McFarlane 2011; Blok and Farias 2016). While focusing on the lives of *çıkmacıs*, I have tried to avoid dichotomies and general assumptions that are rooted in the broad categorizations of global politics and economy. However, we cannot avoid the political economic framework because it explains the context of urban renewal. The commodification of land via 'apartmentalization' and urban renewal projects have been addressed as socio-political developments aligned with neoliberal urbanization agendas (Ch. 4).

The dichotomy between formal and informal practices may affect the ways in which governmental legislation intersects with the everyday tactics of the populace. But in fact, the boundaries are unclear. Assemblage thinking provides the potential for investigations of these liminal circumstances. Using this approach, it is possible to avoid seeing things only from the perspective of the overarching frameworks that promote formalization of waste management. While establishing formal rigid systems, these frameworks ignore emerging informal practices and nonhuman agency. Relationships and actor heterogeneity are vitally important for assemblage analysis.

Within such networks, emergence of nonhuman elements causes transformation and unexpected arrangements (Parnet and Deleuze 2002). For instance, CDW is a dynamic agent that participates in the configuration of urban life. Hazardous materials within CDW have an underestimated impact on the built environment and urban life. Additionally, the network of supply yards is composed of spaces with diverse functions where surplus is accumulated, revalued, and traded. They pop up in different locations, and they are part of a larger trade network.

The assemblage of *çıkmacıs* contains very complex associations that can tend to go on forever. For the purposes of this study, I have limited my target to reclaimers (scrap collectors and demolishers), CDW, urban renewal projects, laws, regulations, second-hand markets, supply yards, refugees, migration networks, coops, communication, earthquakes, and other transportation infrastructure. The association of these actors have various impacts on human health and dwelling construction. This assemblage layout—an alternative to the human hegemony over geography point of view—shows how cities are assembled with nonhuman forces.

An earthquake represents what Anders Blok and Ignacio Farias (2016) have reinterpreted as the 'cosmopolitical' capacities of earthly forces to influence urban development strategies. The Düzce Earthquake in Turkey had the effect of changing urban renewal regulations and building codes that, in turn, led to the creation of safer housing. Many NGOs claim that policymakers use the earthquake argument to speed up urban renewal so that the construction sector can generate lucrative assets for capital investments (Adanalı 2012). As a result of this increase in the demolish and rebuild cycle, more second-hand markets are created. This cycle also leads to the activation of other materials such as Asbestos. The governmental authorities and *çıkmacıs* turn a blind eye to the issue of asbestos as an environmental health hazard but NGOs are warning about its long-term detrimental effects.

To investigate the movement of CDW and its active agency, I employed 'follow the thing' methodology and this led me to 'multi-sited' ethnographic fieldwork. As discussed in assemblage thinking, thick description of place specific narrative of *çıkmacıs* is the guiding principle of my fieldwork because it creates an understanding of forgotten actors and urban inequalities (McFarlane 2011a). In this study, the inequalities are interpreted as unrecognized and sidelined agencies of both human labor and waste materials.

8.1.2 Following Things on Multi-sites

The infrastructure of cities is organized in such a way as to keep waste's materiality invisible to us. Following the secondary life of salvaged materials can greatly improve the conceptualization of waste. Their material existence takes place in the unforgotten thresholds of the commodity chain. International waste trade deports urban waste to the Global South where end-of-life ships are discarded on recycling beaches in the Indian Ocean (Gregson et al. 2010). The follow-the-thing approach allows for the grouping of multiple sites to show the relationship between second-hand material networks and local reclamation methods. Such multi-sited fieldwork in my geographical research also captures the circular movement of *çıkmacıs*.

Abduction is a term used to refer to the inferential creative process of developing new hypotheses through "the processes of revisiting, defamiliarization, and alternative casing [case analysis] in response to unexpected research results" (Timmermans and Tavory 2012, 167). It is a way of recalibrating the hypothesis or theory obtained from the empirical data. Employing the abductive framework, I assembled empirical information based on observa-

tions and conversations with the informants. Then, I instantly updated my hypothesis grounded on pre-existing theoretical input. Revisiting demolition sites and supply yards after data analysis enabled me to broaden the perimeters of fieldwork and rephrase research questions. For instance, the initial research was geographically located in Istanbul. At first, I assumed that the second-hand supply yards would only be located in major cities like Istanbul because of rapid urban transformation. Later, I learned from my informants that materials were being traded outside Istanbul. In light of this finding, the field research expanded to Ankara, Kayseri, Nevşehir and Niğde, and the neighboring Tbilisi. I acquired from my informants an empirical knowledge of *ardiyes* (supply yards for *gecekondu* builders during informal urbanization in the 1970s). Only after that did I find some research evidence from earlier literature that they actually existed. As a whole, abductive reasoning led me to reveal the uncharted geography of discarded construction elements.

The use of photography functions as a unique tool for constructing relational bridges between researcher and informant. During the fieldwork, the publication of an online photo essay allowed me to clearly establish my researcher identity. In addition, they were pleased with the article because it provided an alternative narrative to the usual one of their salvaging being perceived as 'dirty work'. That publication became central in allowing me to meet new informants throughout the remainder of my research. The detailed captions accompanying the photos present a more lucid understanding of the everyday labor since they act as short vignettes. They connect the main text and images. The non-linear logic of montage (Marcus 1990), which I used to construct the visual narrative, offers an alternative path for the reader to follow.

The interdisciplinary merging of ethnographic and architectural research provides a useful methodological variation for taking fieldwork notes with spatial analysis. For instance, in order to make comparisons, I created volumetric diagrams of supply yards which are produced from surveys and mappings. They accompany the descriptive ethnographic text to provide a deeper impression of the supply yards. Secondly, architectural analysis of dwellings allows for a comparison of spatial variations. The architectural plans display how incremental practices result in rural building designs that differ dramatically from urban ones.

8.2 Empirical Overview

Previous research on Turkey's informal waste management focused on waste pickers who collect and sort household trash (Altay and Altay 2008; Şen and Artıkişler Kolektifi 2014; Dinler 2016; Tuçaltan 2018). *Çıkmacıs* and their impact on waste management and urbanization has not previously been researched. Moreover, the transformation of CDW to second-hand building materials has not been systematically investigated in a Turkish context.

The research reveals *çıkmacıs'* pathways of emergence from rapid urbanization and their adaptation to neoliberal urbanization (Ch. 4). I focus on them because of their role in affordable building production. They have existed since the *gecekondu* neighborhoods began being developed in Istanbul back in the 1960s. The squatters built their dwellings with reused materials that they purchased from *çıkmacıs* or whatever they could find. For example, one of them was selling second-hand components that he recovered from inner-city demolitions during the 1980s. After several decades, the *çıkmacıs* have organized their own deconstruction processes to create a second-hand market.

The current state administration mobilizes its resources to replace the seismically weak housing stock. In their search to create construction investment assets, the Turkish AK Party has adopted the demolish-and-rebuild dynamics since 2012. As a result, urban renewal projects have created a substantial amount of CDW. Since then, demolition and material reclamation have become part of a secondary construction sector as has, for example, excavation works (D. Öztürk 2019). As discussed in chapter 4, Kadıköy is one of the major residential areas where such urban renewal creating CDW via demolitions is at its peak.

In chapter 5, I focused on labor activities: the demolition and reclamation processes, work conditions, the organization of labor, and the circular movements between urban and rural 'homes'. In recently modernized cities, waste management systems, built upon the coexistence of diverse participants, have informality ingrained into them (Gidwani 2015; Tuçaltan 2018). Istanbul's CDW management is also diversified into official, private, and informal actors. Recycling factories and municipality facilities recycle construction materials gathered by *çıkmacıs*. The dynamics between informal and formal practices is volatile in such contingent socio-material networks (Simone 2015; McFarlane 2011a). Because of such interwoven formation, economic evaluations based on dual models are not instructive for a relational approach. That

is why informality should be a 'heuristic device' that aids the analysis of the two spheres (Roy 2011).

Çıkmacıs develop tacit knowledge and practices that enable them to be resourceful despite their lack of access to the official labor market. Their resilient and relational strategies exist somewhere between the local and global level. On the one hand, they feed reclaimed construction components into a second-hand market regulated by themselves, on the other, they sell scrap materials to a recycling industry directly intertwined with the global stock exchange. As a result of this two-way adaptation, social and economic relationships create a diverse system where informal and formal actors co-function together. However, the possible future formalization and modernization of waste management could someday eliminate their participation. Street collectors are already facing such expulsion.

Çıkmacıs' mobility is a very important part of their flexible labor structure. For example, they sometimes work outside their territory. Based on the number of sites and amount of jobs, they expand their workforce to include family members or villagers. In order to maintain their low-cost operation, they also hire refugees, especially from Afghanistan and Syria. Such a labor force often finds work in this informal sector as soon as they arrive in cities. These jobs are easy to get because there is no legal or bureaucratic process. Through networking, they follow in the footsteps of previous arrivals who have created a kind of loose infrastructure.

Social alliances are an essential aspect of relational human networks (Simone 2015). *Çıkmacıs* find jobs through networking. They generally work with a construction contractor, possibly a relative. Sometimes they simply scan streets to find demolition sites. Apart from positive sides of their self-organized dynamics, it should be noted that their dangerous work conditions, low income and lack of government benefits reveal the *çıkmacıs* as being part of the precariat (Standing 2014).

The demolition regulations in place for the reclamation and demolition operations lack expertise and technical knowledge. Salvageable materials are mentioned but the removal standards and technical methods are not identified. In addition to such legal vagueness, the authorities do not appropriately inspect the sites. They only come to the demolition site to fine them if there is a noise complaint by a neighbor or physical damage to the neighboring properties. That's the only way they are officially recognized.

Çıkmacıs are not recognized as an official profession. Lacking formal attention, they are not adequately informed about workplace safety. Particularly,

they are not aware of asbestos' impact on health. They usually have work-place accident insurance, but this does not cover the long-term effects of heavy labor. They cannot afford the high costs of self-employment benefits. They do the dirty work of a circular economy yet remain unrecognized and invisible. In this competitive and unruly threshold where *çıkmacıs* stand, territorial and sometimes fights often occur between them.

Çıkmacıs transition between Istanbul and their home villages. The family members or workers from the same village, whose employment status is uncertain, come for a short time from the village to the city as seasonal workers. Officially categorized as unskilled workers in the city, they are capable farmers. To emphasize their dual livelihood, I focused on a scrap collector family that practices material reclamation and farming (Ch. 5). The members of this family occasionally travel between Yazıhüyük village and Istanbul. Their farmland creates a stable ground for them in relation to the fluctuating economic and social conditions of the urban sphere. Hence, they did not migrate to Istanbul entirely because of their nomadic occupation. Additionally, their farmland socio-ecologically impacts their livelihood through various types of vegetation that need to be attended to at different times of the year. This farmland is a *vibrant object* that incarnates multiple agencies (Bennett 2010). The liveliness of this farmland embodies manifold agencies of human and nonhuman actants and their symbiosis.

Their constant movement back and forth between their village and the city shows that their migration to the city never really happens completely. For instance, they only ever come to Istanbul temporarily, leaving behind their families in the village because it is too expensive to bring them along. Their main concern is upgrading their village houses to live in with their families and retire. To sum up, nomadic labor that depends on agriculture and building salvaging, creates a different kind of 'circular urbanism' (Echanove and Srivastava 2014).

With the emergent capacities of the assemblage, new types of relationships and activities can be created through second-hand trade (Farias and Bender 2011). The network of *çıkmacıs*, through their supply yards, distributes components to rural dwelling constructions in Turkey and neighboring Georgia (Ch. 6.4 and Ch. 7.3.4). Flea markets, scrap yards and digital marketplaces all feed into their system of distribution. The yards serve as connections between the center and the periphery, the urban and rural, and the domestic and foreign. From these supply yards, the reclaimed materials are distributed to villages. The fieldwork findings associated with supply yards are discussed in terms of

their temporality. Supply yards appear and disappear due to the periodic shifts of the mobility and sector dynamics. The network of trade is deterritorialized and reterritorialized while relational aspects between actors redraw the physical borders of distribution (DeLanda 2016); this occurs, for example, because of their circular movement and economic fluctuations in the sector.

The distribution of yards in Istanbul shows two patterns: scattered single yards and second-hand hubs on the Asian and European sides of Istanbul. The hubs are located near industrial zones, recycling depots, and sites closer to urban renewal. Others are situated randomly in former *gecekondu* neighborhoods. The status of the yards change depending on the populist politics before an election. At first, the yards were illegally occupied but later they gained temporary legal status. After a time, they faced eviction because their land had acquired real estate value. Such politically oppressive state tactics make the *cikmacis*' assemblage less flexible, which results in lessening the diversity of its actors (Delanda 2006).

The yards are networked through an extensive word-of-mouth network rather than through commercial advertising. The demand for second-hand building components comes from neighboring cities, Anatolian towns, and other rural villages outside Istanbul. The exchange is not only domestic but also international. Second-hand traders from bordering Georgia visit the yards regularly. From a larger social perspective, market spaces in the Global South function through a set of relationships in which people jointly use spaces, chances, moments, uncertainties, possibilities, and conflicts (Simone 2011). Similarly, the network of yards in this study shares these same social processes that, in turn, constitute an interactive surface of the social and material spheres. Despite its messy and disorderly appearance, the supply yard functions as a threshold and a transitory node in the network of reuse where things can find a second chance.

The spatial diagrams of different supply yards reveal the architectural organization according to size and complexity. Supply yards are multifunctional spaces consisting of display, storage, living, workshop, and office areas. To avoid housing costs, they stay at their depots together in one room or at worker dormitories. In such settings, the human body and the discarded materials are inseparable, existing in a trans-corporal connectivity and relationality (Alaimo 2010). Beyond their practical economic function, supply yards act as living spaces where *çıkmacıs* temporarily reside. The yard becomes a vessel in which not only waste is stored and sold but also where people live on a day-to-day basis. The margins between the social and the material become so thin

in these yards that one cannot separate the living beings from the discarded materials. Bell's concept of 'living waste' asserts that there is a coexistence of people and unwanted matter (Bell 2019). This intertwined symbiotic relationship could be better understood by exploring social interactions of other entities nearby but outside this zone, for example, the customers who repair their flats, build secondary houses (e.g. summer houses, cottages, sheds, and etc.) on low budgets.

In the other major cities of Turkey, urban renewal projects are increasing pace. Owing to this, I focused on the industrially developed cities of Ankara and Kayseri. Unlike Istanbul, the *çıkmacıs* in Ankara and Kayseri instituted demolition cooperatives and made efforts to attain legal status in order to gain a more professional status. As in the Global South, with its collaboration of scattered actors such as waste pickers, *çıkmacıs* found ways to adjust to the formal waste management structure (Gutberlet 2015; Dias 2016). Furthermore, local municipalities provided spaces for them outside the city center. This model seems to support the co-functioning or co-production of integration between formal and informal spheres.

The type of materials reclaimed from these areas are different because the cooperatives demolish traditional houses which are built with wood and stone rather than industrial components. Additionally, they sell rare antique building components to touristic establishments in the region. They provide materials to housing constructions—mostly inhabited by refugees—in '*Gecekondu* Prevention Zone', which are tracts of land taken and sold by municipalities to promote a more officially recognized dwelling form. Aside from these two cities, I investigated the hometowns of *çıkmacıs*. The supply yards in Nevşehir and Niğde are able to provide materials from Istanbul. All around this area, I discovered Georgian wholesalers visiting the supply yards.

The situation in Georgia is indistinguishable from Turkey in terms of the *gecekondu* housing phenomena. The production of space is based not only on materiality of second-hand materials but also the efforts of residents to find their own solutions for housing after drastic economic and political changes (Chapter 6.4). Due to the fall of the Soviet Union and the lack of housing resources, the people of Gldani were able to appropriate their own dwellings. This, in turn, allowed them to add informal extensions to their apartment blocks by reusing salvaged materials.

Demolition and building salvage are generally excluded from the architectural discourse because they are dirty work and waste represents something unwanted in the capitalist system. Material life cycles of buildings are part

of the circular economy but salvage and reuse is practically and economically complex because of requirements for specialized expertise. It requires time and monetary investment. To confront this problem, a better understanding of the relational agency of the materials is required.

Exteriority refers to the ability of assemblage's components to be separated and reassembled in other constellations (DeLanda 2016). Building deconstruction engages in exteriority in which a building assemblage is dismantled and makes available various construction material nodes that can then be reused in other construction projects. This change is a kind of revitalization of material. The materials influence policy-making because of their relationship to earthquake mitigation, environment contamination and rural dwelling construction. Some of these materials are activated through the activities of human beings. Because of industrial production and recycling processes, these materials can harm people and the environment. Production and recycling of low-quality PVC in window frames is one of the environmental health problems in Turkey. One-fourth of the demolished buildings contain asbestos (Odman 2019). The air contaminated by asbestos in the demolition sites and their surroundings endangers *çıkmacı*s and other nonhuman organisms (Ch. 7.2.4). Hence, the demolition (urban renewal) map coincides with the asbestos risk map of Istanbul.

The act of inhabiting is a process of gathering materials. Informal urbanization is a similar process but on a much larger level (McFarlane 2011b). The 'kinetic city' that exists outside the Global North is assembled with reclaimed materials (Mehrotra, Vera, and Mayoral 2017). For example, *gecekondus* were built with salvaged materials during the rapid urbanization of Istanbul. At present, reclaimed materials are reused in rural areas for upgrading, adding extensions and repairing houses in slow-paced constructions. The three example houses (Ch.7.3) show how different dwellings are part of incremental construction activities in which second-hand materials are gradually gathered. These materials influence the design of rural dwellings. Such a form of construction is a gray zone that resembles the informality of *gecekondus*. These houses entail some people bypassing zoning laws. Rather than focusing on large-scale urban projects, this book presents incremental rural construction as a hopeful alternative model.

8.3 The Commons and Material Reclamation

In economically privileged countries, the entire life cycle of a building has become a trending subject. In the Global North, there are new policies that focus on sustainable deconstruction but their implementations are limited and slow:

> Deconstruction is a green alternative to demolition, sending up to 85 percent less material to landfills. Building materials and construction account for just under 10 percent of the world's energy-related global carbon emissions. Using salvaged materials eliminates emissions associated with making and transporting new building materials. Plus, it's not as noisy as knocking down a house and doesn't spew dust or toxic materials, such as asbestos, into the air. (Marshall 2022, 1)

Furthermore, design for deconstruction or disassembly (DfD) is gaining popularity in architectural practices. Architects and engineers may help this initiative by developing dwellings that are equipped with adaptable and reusable materials and components. They could begin using fewer adhesives like glue or foam sealant for details, which also exacerbates the difficulty of pulling apart buildings. More importantly, such professional practices could come to influence urban policy-making processes that create guidelines and safety measures for deconstruction.

To illustrate, Rotor in Belgium is a company and online platform that primarily builds its practice on the recovery of material resources through the deconstruction of buildings. They address the issue of reuse in the context of formal construction. However, it is a complex task since regulations are stringent. As a result, reuse becomes an almost impossible practice when too many middlemen pop up in the process of developing a building; this also occurs when there are large-scale professional responsibilities at stake (Ghyoot, Devlieger, and Billiet 2018). Rotor is trying to challenge this situation by working with public administrations and authorities or sectoral federations to come up with felicitous rules and regulations.

In contrast to policy and innovative developments in the Global North, Turkey does not yet have a formal management strategy; instead, it has informal scrap collectors, demolishers and waste pickers. With the support of these relational infrastructures, the potential of construction waste can be effectively utilized in the second-hand market so that reclaimed materials can support livelihoods and have second lives. This book can be used as a guide

for architects, designers, and urban planners because it can show how the *çıkmacıs* are able to organize themselves despite limited material and financial resources.

The *çıkmacıs'* assemblage could be interpreted as an everyday political strategy (Simone 2015; Bayat 2004). Material reclamation is not only an economic and sustainable activity but also has the hidden political stance of survival. *Çıkmacıs* gain their advantage from the gray zone emerging from the regulative absence of waste management. Their strategies are to adapt and interpret absences and possibilities. These gaps also serve to identify a Global South modernism that results from infrastructural absences and unequal distribution of resources. However, they are adapting to changing urban conditions while simultaneously creating sustainable practices of revaluing waste. Architecture and urban design can learn from ad-hoc reuse practices and focus on the sociomateriality of discarded construction materials. At the same time, the authorities can improve the social and technical conditions of *çıkmacıs* instead of integrating them into a formal system or taking over their sector.

As a guide for material reuse, Chapter 7 describes how building parts are used in the incremental processes of dwelling construction. The usage of second-hand components in a rural house affirms that urban renewal waste affects rural construction processes. If this conceptual argument could be understood, the excess of these second-hand materials as a resource could be expanded to the commons.

The commons represent material resources available to whatever members of society they apply to. However, they should be socially constructed and maintained in relation to the environment and livelihoods within that society. Waste, through its recovery, becomes another part of the commons. For instance, Lane argues that things discarded on the street constitute an informal 'waste commons' (Lane 2011). Her research shows that more waste is repurposed by informal salvaging activities (gifting and gleaning) than by the official processes of municipal solid waste management. Regardless of this fact, government officials attempt to make this 'waste commons' unreachable by passing legislation that prohibits salvaging. However, at the end of the day, waste belongs to everyone.

Even though the *çıkmacıs'* activities and rhythms currently exist within capitalism, they are a unique group with unique resources who have the potential to transform CDW into an urban commons. They provide a comprehensive assemblage of materials, supply yards and professional experience. This potential could be strengthened by the creation of new government policies in the con-

struction sector that would stipulate a certain proportion of CDW from each demolition to be held by the common good. It is not hard to imagine each construction company donating some of their scrap materials toward such an endeavor. There is already the precedent of the existing *çıkmacıs* collectives and, if they could extend themselves further in the way described above, they could become a vital support of the right to dwell. This relational infrastructure could be reconstructed by donation, common usage, collective participation and sharing. In short, it could be reassembled through reuse.

To imagine the governance of second-hand being part of the commons involves keeping the exchange "off-limits to the logic of market exchange and market valuations" (Harvey 2019, 73). Then such production could be a form of need-oriented value production instead of another profit-seeking framework of capitalism (Gidwani 2013). The *Çıkmacıs'* transactions are slightly independent from the market dynamics dependent on global prices. One of them mentioned that the price of a window frame did not change for many years even though labor costs did. The prices of second-hand items are negotiable. Governing bodies and housing funds could finance the *çıkmacıs* so that second-hand building materials could be used as a common resource.

Another question is: How can one reimagine the scenario when the physical and economic infrastructure comes to a halt as the result of the next earthquake in Istanbul? The Adhocist Manifesto states:

> At a populist level, *adhocism* is radically democratic and pragmatic, as in the first two stages of the revolution. It is also evident after catastrophes such as Hurricane Katrina or the earthquake in Haiti, when people make do with whatever is at hand. (Jencks and Silver 1972, 19)

Accordingly, it is not hard to imagine that the reconstruction will depend on ad-hoc salvaging practices. In the aftermath of an earthquake, debris clearing will most likely be taken care of by demolishers and *çıkmacıs*. With these experiences, they can respond to such emergencies since they can quickly adapt to burdensome situations. This is because they have the ability to adjust to shifting urbanizations and are able to operate in precarious environments, both socially and physically.

Based on these assumptions, in the following section I will reflect on research limitations and offer suggestions for future research.

8.4 Research Restrictions and Potential Proposals for Future Work

The restrictions of this kind of research are related to geography and time. Nevertheless, a considerable amount of empirical data was collected by conducting multi-sited ethnography. In the beginning, the research questions were based on demolitions and material reclamation in Istanbul. As the fieldwork progressed, the research territory expanded to Ankara, Kayseri, Nevşehir, and Niğde. Based on the ethnographic data, I followed second-hand trade in cities where my informants came from. However, other densely-built urban centers in Turkey need to be rebuilt and urban demolitions continue happening at a considerably high rate. For instance, İzmir is the third largest city in Turkey and in a seismic zone like Istanbul, and there is an urgent need to renew the built environment where *gecekondus* urbanized the city in the past. Besides this, the renovation of tourist facilities is also creating a substantial amount of demolition waste. During holiday visits, I spotted a few second-hand supply yards in the area. Ship breaking (also known as ship recycling) is also practiced on the İzmir coast. The region has a unique potential in terms of salvage practices. However, because of time constraints, I did not widen the fieldwork to the western part of Turkey. My visit to Georgia to investigate incremental construction there was also bounded by a restricted time frame.

Another constraint would be the exponential economic and political changes after the research period, namely from 2015 to 2019. The book covers a time when urban renewal projects and the construction sector were expanding. After 2018, the construction sector experienced a steady decrease during a prolonged recession period. The real estate investments have slowed down and Turkey has experienced an economic and political imbalance after the Covid-19 pandemic (Orhangazi and Yeldan 2021).

Based on these economic thresholds, a comparative analysis of material reclamation and second-hand trade could be undertaken. For further research, it would be crucial to investigate how scrap collectors and demolishers were able to adapt to the recession dynamics. On the one hand, the demand for cheap materials may have increased because of inflation and economic contraction. On the other hand, the excess material may have been reduced. However, building salvage as an infrastructural practice—with its long-lasting presence, adaptability and mobility—can handle fluctuating situations. Further, Design for Deconstruction should be implemented as a part of nationwide urban renewal projects.

The access limitations to some demolition sites were another fieldwork problem. As described in the methodology subchapter 3.3.4, my presence at the demolition sites was often questioned and I had to deal with some restrictions. First, I was not allowed to some sites because the site supervisors thought I was a journalist or someone who would make trouble for them by calling up and complaining to inspectors and controllers. From their perspective, it would result in fines or temporary closures. In some cases, our social differences (class, education, etc.) made it an obstacle to communicate with uncooperative informants.

Time limitation was a problem when visiting the villages. My stay in Engin's village was short but useful in terms of being a witness to their rural lives. As an idea of further research, one could put a higher level of importance on the *çıkmacı*'s agricultural livelihood in the village. Farming activities and personal histories of *çıkmacıs* could be more fleshed out by meeting and interviewing other villagers. This way, one could gather comprehensive empirical data on movement between village and urban centers. In order to reassemble the urban and rural areas, it's critical to develop a deeper understanding of the *çıkmacıs*' circular movement. The empirical focus should not just be on the urban centers. It should also be territorial in terms of the impact of urbanization.

It is my hope that my cross-disciplinary approach can be a unique precedent for researchers who investigate socio-materialities and networked livelihood activities in the context of urban studies. I attempted to establish associations between different research fields: architecture, urbanization, economy, geography, and sociology. During the research, I realized that when 'planning disciplines' like architecture and urban design are associated with social sciences, the outcome is substantial. The perspective should be multi-disciplinary because architecture and urban design are not only very technical but also human oriented when it comes to analyzing relational and complex assemblages. Toward that end, thick description could help to reveal the micro ethnographies that have valuable contributions to the life cycle of materials. Meanwhile, the alliance of disciplines should be improved in the earlier stages of practical and higher education. Architectural production focuses on capitalism rather than analyzing everyday practices and informal means of producing spaces. I have attempted to reveal the difference between 'what is imagined or planned on paper' with what is experienced in everyday livelihoods. An ability to follow the material-human symbiosis at play in construction reclamation can contribute to the establishment of a new sustainable commons and the overcoming of environmental devastation.