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Garbage Hunting-Gathering: The Ignored Face of Future Cities

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Abstract

Imagining the future, few people think of how discrimination and poverty will affect the shape of urbanization. Comics and Sci-Fi usually speak about the advanced technological progress of human beings, climate change, and superheroes. Meanwhile, a critical look at our modern lives indicates that this image is only a small part of a big puzzle. Rapid mass production and consumption in modern society has resulted in huge mountains of dumped objects and landfills where garbage communities live or manage their daily lives by collecting garbage. The growing valley between poor and rich gives us enough evidence to predict that garbage communities will continue to exist in the future. These communities have been ignored by archaeologists for many years. In the present article, I would like to propose that we have a look at the future of garbage communities and see whether garbage collecting can be identified as a form of subsistence and studied through archaeology.

Keywords

Garbage collecting, garbage communities, discrimination, marginalization, future cities

Zusammenfassung

Nur wenige machen sich darüber Gedanken, wie Diskriminierung und Armut zukünftige Urbanisierungsprozesse beeinflussen wird. Comics und Science-Fiction-Werke sprechen in der Regel über den technologischen Fortschritt von Menschen, den Klimawandel und Superheld*innen. Ein kritischer Blick auf unser modernes Leben zeigt jedoch, dass dieses Bild nur ein kleiner Teil eines großen Puzzles ist. Schnelllebige Massenproduktion und -konsum der modernen Gesellschaft erzeugen riesige Berge von weggeworfenen Objekten und Deponien, in denen Gemeinschaften von Abfallsammler*innen ihr tägliches Leben durch das Einsammeln von Müll bestreiten. Die wachsende Kluft zwischen Arm und Reich liefert genügend Evidenz um vorhersagen zu können, dass Abfall sammelnde Gemeinschaften auch in Zukunft bestehen werden. Archäolog*innen haben diese Gemeinschaften bis heute größtenteils ignoriert. Im vorliegenden Artikel möchte ich vorschlagen, sich der Zukunft dieser Gemeinschaften zuzuwenden und zu diskutieren, ob Müllsammeln als Form von Subsistenz angesehen und durch die Archäologie untersucht werden kann.

Schlagwörter

Müllsammeln, Abfall sammelnde Gemeinschaften, Diskriminierung, Marginalisierung, Städte der Zukunft

Introduction

The story of Sci-Fi movies usually happens in apocalyptic cities which are full of skyscrapers, huge billboards, and exude a dark atmosphere, for example, Los Angeles in *Blade Runner* (1982). This image of future cities has been repeated so many times that many of us automatically think of skyscrapers and billboards when we imagine the cities of the next centuries. The ignored fact is that many of these movies and other artworks have been made based on the image of the life of upper classes in future societies and simply neglect the lives of others. The poor usually do not experience any excitement or transformation in their daily life that is deemed worth artistic filming (see Dominelli 2019). The huge mounds created by modern garbage around many cities (Rogers 2013) stimulate few people to include dumped items in their image of future cities. Even if they are given a role, it is usually a marginalized one to explain the situation of the middle-class hero/heroine of the story (such as the dystopia in *Wall-E*).

After World War II, the face of absolute poverty transformed, and one parameter of such transformation was the existence of landfills and mass garbage. Landfills became the most popular mode of refuse disposal in the United States as well as in many other countries but with little forethought given to their long-term societal and environmental consequences (Rathje et al. 1992). The main question of this paper is whether garbage collecting can be defined as a distinctive modern source of subsistence, and if yes, how it will transform in the future.

The present article seeks to open a debate about the subsistence of one of the most ignored and unstudied communities: garbage collectors. The development of consumption habits has resulted in a rapid increase in garbage making. Even in the most developed countries, not all the garbage is recycled, but rather it is partly exported to other countries such as Ghana (Bisschop 2016) and India (Johri 2008). The unrecycled garbage shapes huge mountains of landfills around cities in most countries, from Russia to Ghana. Part of the garbage is transferred to undeveloped countries. During the last two decades, some developed countries have changed their recycling strategies and bulldozed the landfills. Homeless, unemployed, and marginalized communities live around or on the landfills and gather their daily needs from others' disposed waste. With this article, I would like to open a discussion on garbage collecting as a very recent emerging lifestyle and one that has been ignored in the studies of future societies. To justify the argument, I will also give some examples from research that my team and I conducted in Tehran.

Who are garbage collectors?

Goud-e Zobaleh (Garbage pit, Ashraf Abad) is a landfill located southeast of Tehran. Afghan teenagers work there and live in the same place (Salarvand 2020). They work from day to night and collect still-useable garbage allegedly from different districts of the city by opening the garbage bags dumped by families. They then sell collected items to dealers in Goud (or another place called Abdul-Abad) (fig. 1). From a global perspective, these Afghan teenagers' lifestyle is not unique.

In her documentary "*Something Better to Come*" (2014), Hanna Polak has filmed 14 years of the hard life of Yula, a Russian girl who lives on garbage landfills very close to Moscow. The family of Yula tries to have a better life, but at the same time they are helpless and despair of finding a solution to get out of the terrible condition they are trapped in. They used to belong to the Russian working class but then lost their jobs and property, became homeless, and were obliged to move to one of the most marginalized areas of the city. The film shows that the community is deeply aware of their situation, criticizes the politicians and feels ignored and hated by the other citizens.

To explain the situation of Yula and her community, it is worth mentioning that the Moscow garbage collectors do not differ from the other inhabitants of the city in terms of religion, nationality, and ethnicity. They are neither refugees nor non-Russians, but they are subaltern because of their socioeconomic status and health issues. There are also communities that have been exiled to the landfills or the areas around the garbage mountains as a result of long-term subordination, for instance, the aforementioned Afghan garbage collectors in Tehran, who are refugees.

More than 260,000 people live in the Cairo garbage city, Manshiyat Nasir, where garbage collectors are poor and marginalized because of their religious beliefs as Coptic Christians (Dorman 2009). Not being able to live in the same districts the majority of Muslim citizens occupy is one of the reasons why certain members of the Christian

minority have been forced steadily to move outside the city and close to tons of garbage. The same pattern can be observed in India where the traditional caste system is still in place (see Doron 2018). The harsh hierarchical social system leads to results strikingly similar to those we observe in other places with the same social stratification such as Brazil (Millar 2018), where the people living in ghettos have no alternative but to collect their food from garbage dumps.

In most cases of garbage collecting, there are also other sorts of discrimination (Naguib Pellow 2004) that have intensified the poverty of the minority communities and later push them to continue their lives on the garbage mounds or by gathering garbage. For example, the Romanian garbage collectors under communism were actually pushed into absolute poverty mostly due to their political ideas or being ignored and alienated because of their ethnicity (Deletant 2018).

The situation of garbage collectors is complex. They are not seen as workers, despite the fact that they earn a living by collecting and selling garbage. They are not considered as part of the recycling system, although there are some attempts to do so and to consider garbage collectors as workers, for example, in Singapore, but these efforts are still in their infancy (Heng 2021). Garbage collectors have no insurance, are not members of any trade union, and even their death is not recorded.

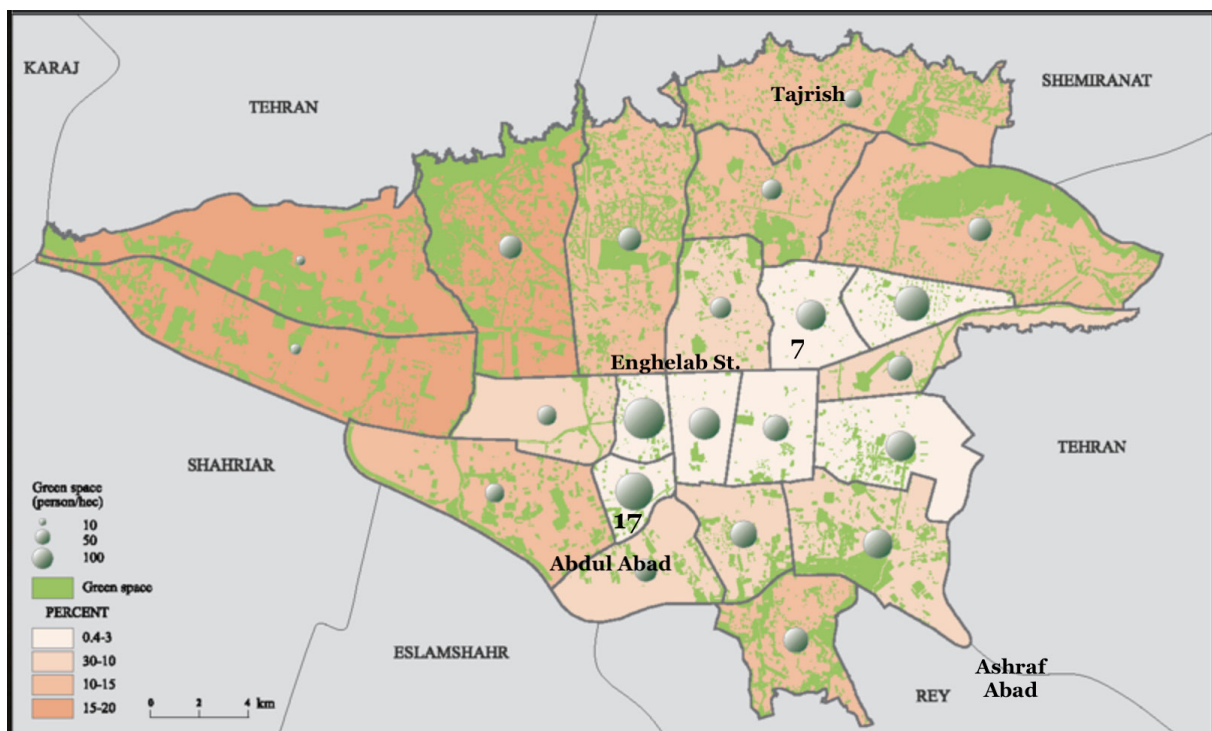


Figure 1. Map of Tehran with locations mentioned in the text and population density, Atlas of Tehran Metropolis, Tehran Municipality (<https://atlas.tehran.ir/Default.aspx?tabid=318>).

Gathering garbage, a modern lifestyle

In his book, *The Consumer Society: Myths and Structures*, Jean Baudrillard (1998) discusses the fact that modern society is addicted to consumption and has been transformed into an entity in which socioeconomic status and agency are connected to the quality and quantity of consumption (Trigg 2001). Schor (2004) explains that modern society is so consumed by consumption and ever more consumption that even children in consumer societies are

born to consume. Based on our garbage project in Tehran, the difference between the average weight of garbage dumped by the well-off and poor classes families per day is 2.5 kg (Papoli-Yazdi 2021). The fact that rich people consume and waste more has been studied from an economic perspective in different regions of the world (O'Flaherty 2005).

The addiction of the well-off and middle classes to buy and consume (Arrow and Dasgupta 2009; Perail 2013) as well as the huge amount of industrial waste are responsible for the production of enormous mounds of garbage or landfills. During the last century, vulnerable communities in some countries moved steadily towards a life on or around landfills. These communities have transformed their lifestyle gradually in order to fit the place in which they live. Observations show that some of the garbage collectors collect their food from the garbage (Hartmann 2012). As seen by the author, there are people in the streets of Tehran who acquire their food from freshly dumped garbage bags.

Not only food but other needed items of these communities are collected from garbage. Salarvand (2020) reports that there are refugees who migrate to other countries (in her case, from Afghanistan to Iran) with the purpose of working as garbage collectors. The instability and years of war in countries such as Afghanistan and Pakistan have forced people to believe that having a job as a garbage collector may open new windows and is better than remaining unemployed for years. Based on Salarvand's ethnography (2020), receiving the services offered by NGOs (for example, Sayyarak in Mashhad city, Yari network in Tehran, and Child Workers' Association in Tehran) such as educational programs is also another temptation for some garbage collectors to move to the landfills.

There is also a second category of living near or on the landfills. Garbage exported to countries such as Ghana includes used mobile phones, laptops, and other types of e-waste (Oduro-Appiah et al. 2001). These used objects are cleaned, repaired, reused, and sold by garbage communities. This happens in other countries such as Senegal where the waste management system faces many challenges (Fredericks 2018). In these societies, some of the garbage collectors classify some useful dumped items, wash them, and sell to other poor citizens.

For more than two decades new businesses have been created around the imported e-waste from developed countries in some developing countries. It has also been reported from Cairo and Beijing (Landsberger 2019). It is of note that one of the parameters that is significant for archaeologists in order to reconstruct societies is how people manage their lives through producing or gathering food. To investigate subsistence, archaeologists usually study the remains of food production and consumption; they examine whether the target community gathers food from nature, hunts, or engages in some procedures to prepare it.

According to the relation of communities to garbage, the garbage collectors can be divided into two general categories. First, there are communities of garbage collectors who live on the landfills or very close to these dumps. As mentioned above, garbage collectors communities living in Cairo, Mumbai, and Moscow are examples of this first category. The second type consists of garbage collectors who do not live on or close to the dump area, but whose diet or subsistence is based on collecting garbage from dump areas or trash cans. In some cases, the garbage-gathering lifestyle seems to be impermanent and only for a short time until the family can better handle their life (for example, the case of Yula). But, reportedly, former garbage collectors may come back to the work anytime they lose their jobs.

More research is required in order to assess the extent to which collecting waste food was also practiced in the past. Based on Rathje's garbology (Rathje and Murphy 2001), the quality and quantity of food waste have changed with the increasing popularity of refrigerators. Our studies in Tehran indicated that more than 35% of discarded food was still edible and fresh (Papoli-Yazdi 2018). Not only families but restaurants and cafes dump fresh food as well (Marthinsen et al. 2012). This dumped food is part of the diet of garbage collectors. In cities like Tehran where every street has garbage containers, the food will be retrieved by garbage collectors before the municipal trucks pick up the daily garbage. In some other contexts such as Moscow, as documented by Polak, food waste is also collected from landfills. In both cases, the community does not buy the food or produce it. They re-cook dumped food in a way that they can eat it.

In both permanent and impermanent garbage collecting, the garbage collectors rely on gathering dumped food and objects, whether for a short while or for their entire life. Garbage collecting is different from some other types of being subaltern. Garbage collectors can rarely communicate with other communities living in the city due to their appearance. They are marginalized people who have been marginalized again and in a more extreme way after being pushed to collect garbage (see Spivak 1988). They experience deeper forms of being ignored by society and even by other marginalized communities.

As archaeologists working on garbage, my team members and I experienced directly being considered as garbage collectors. During the days of our field project (in 2017–2018 in Tehran), we observed that most citizens from different social statuses avoided looking at our faces and hesitated to have eye contact with us. Later, we discovered that our gender did not catch the attention of the citizens anymore. Even in the districts which are famous for being unsafe for women, the inhabitants would avoid us. Interviewing some garbage collectors, we figured out that our experience was not unique and that they also felt that most people preferred to stay away from them and avoid having a conversation with them. Recent studies also reveal that it is much harder for people who have spent some time as garbage collectors or were homeless to find any other jobs (Zimmerman and Welch 2011; Saghafian 2020).

The subsistence and daily life of garbage collectors are very much tied to dumped objects. They eat what they find in garbage bags, wear what is discarded, and build slums from plastic bottles or bags found in the landfills. Garbage collecting is modern hunting-gathering but far away from nature in the megacities; this time, thousands of years after our Neolithic ancestors gave up gathering food.

Encounters: Observing garbage workers and garbage collectors in Tehran

My team and I conducted a garbology project in two districts of Tehran in 2017–2018. The Tehran municipality has divided the city into 22 districts, named from district 1 in the northern part to 22 in the southwest of the city. Tehran is a megalopolis with roughly 9 million inhabitants and a multiculturally diverse ethnic context. Our project took place in districts 7 and 17. District 7 lies in the northeastern part of the city and is occupied mostly by people from the middle classes, except for a neighborhood called Nezam-Abad. In contrast, district 17 is officially the most marginalized district of the city where impoverished families and low-income workers live.

Based on previous studies and our observations, the garbage community in Tehran consists of two major communities (Isari and Shojaee-zand 2020). First, Afghan refugees who consist mostly of undocumented teenage immigrants and work with Afghan and Iranian dealers (Sattar et al. 2019). These young boys collect dry waste from across the city and transfer this waste to Goud-e Zobaleh, Hasan Abad, and Abdul-Abad and sell it to the dealers. The boys usually sleep in the same place every night, in temporary lodgings made of plastic bottles and other types of slums. The second group is comprised of a community that lives in a neighborhood called Kahrizak, located in the south of the city where the landfill lies (Mohajerani and Heidari 2020).

Kahrizak used to be covered by farms and gardens until the 1960s. The farms changed into residential areas after the land reform in 1963, and later the landfill of the city was established in this area. These people can be classified into two categories: the first one consists of the families who have lived in Kahrizak since before it changed into the landfill, while the second group is comprised of newcomers who moved to the area during the post-2004 economic crisis. Low-income newcomers earn money from collecting metal and plastic waste from the landfill. In recent years, the municipality has locked the landfill with security doors, but still there are people who try to access it. The people who work in the landfill are mostly Afghan refugees. They are responsible for sorting and classifying the garbage and sending it to recycling sites.

During our garbology project we met and interviewed Afghan garbage collectors. Our first encounter happened in district 17 where we interviewed 65 informants who were the inhabitants of the district as well as 10 garbage collectors who were all Afghan teenagers. Later, I interviewed 11 Afghan garbage collectors in the city center (Engelab Street). In our team, one of the team members who is originally from Afghanistan, Omran Garazhian, and I were responsible for interviewing the garbage collectors. The dialect of the Afghan teenagers is Dari. Because the

garbage collectors usually do not integrate with the native Iranian Persian speakers and are only in connection with Afghan dealers and roommates, they do not learn the Iranian dialect.

The subsistence of Tehran's garbage collectors is completely dependent on the dry waste collected from across the city. The garbage workers tend to gather garbage from northern districts. It is important to know that the wealthier people live in the northern neighborhoods of the city. The garbage collectors admitted that they all have better opportunities to find more valuable waste in northern districts. Moreover, there are reports that some wealthier people make friends with the younger garbage collectors and donate money or some valuable waste to them (Salarvand 2020). As part of a constant conflict, the workers who are connected to more powerful dealers have more chances to access northern areas. The newcomer Afghans and the worker boys who work independently or are connected to less powerful dealers usually collect garbage from the southern districts of the city. According to Salarvand (2020), the city has been divided into several districts by more powerful dealers who invest in the garbage of wealthier neighborhoods. The independent garbage collectors have to work in the spots outside of the surveillance of those powerful people.

In district 17, most of the inhabitants are from the working class. The average amount of daily waste is 400–600 grams per family. The people living in the district usually pack the dry waste separately to sell it to garbage collectors. Dry waste is an alternative source of income for the poor families of the district (in particular for women who classify the garbage very accurately). The garbage collectors weigh the dry waste and pay 1 cent per kilo. They recycle plastics, glass, and textiles in small workshops, but at the same time they monitor every other dumped object in the garbage bags and hope to find something of greater value inside. On some occasions, the garbage collectors exchange the plastic and metal waste for shampoo, soap, salt, or plastic bags.

There are also garbage containers placed in each street. The inhabitants discard their daily waste in the containers, which are emptied by municipality workers once or twice a day. Boys knock on the doors to buy the dry waste, which housewives collect and keep to sell to them. Also, the boys search the garbage containers to find any pieces of dry waste that have been dumped by mistake. In searching among garbage bags, they tear the bags and make the containers messy. The garbage collectors carry the dry waste in carts which are usually given to them by the dealers. District 17 is very close to Abdul-Abad where most of the garbage collectors working in the district sell their stuff to the dealers. In the evening, they walk towards Abdul-Abad and sell their gatherings. In the very first days of our project, I asked three of the garbage collectors to work for us and proposed to them the standard salary of an adult worker. They all said that they preferred to work independently with their carts but helped us to find intact garbage containers. There is no indication that if they work for other people they would be punished. In contrast, it seems that they are all in a type of competition with each other to collect more garbage (Afrakhteh and Hajipour 2017), since they apparently will earn more when they collect more.

The Afghan garbage community usually does not integrate into the middle-class communities, but they constantly meet, speak, and chat with the inhabitants in district 17 (who are from working classes). One reason is that some of these families are the ones who sell their garbage to garbage collectors. The southern neighborhoods of the districts are occupied by Afghan families, and the garbage collectors bond with these families more than the others.

The garbage collectors work from 10–11 AM till 6–7 PM. Due to their activity, almost no dry waste is dumped in the garbage containers. It is of note that there are stands run by the municipality which also purchase plastic and paper waste, but people of district 17 generally prefer to sell their dry waste to garbage collectors. We studied 10 carts of the Afghan boys. The carts weighed 30–40 kilos each (the older garbage collectors told us that some days they collect more than 100 kg) and contained plastic, paper, metal waste, bottles, glass, and pieces of wood. Metal waste can be sold to dealers at a higher price, and the boys are therefore more interested in finding discarded metal waste. It is very unusual, but occasionally they find old mobile phones and digital devices which may be reused by them or sold at a high price.

The income of these boys is completely dependent on garbage collecting. They exchange their earnings for Afghani (Afghanistan's currency) and transfer it to Afghanistan to their families. They find their food in the waste and sometimes take the still-useable discarded items, such as shoes or clothes, for themselves. They are mostly undocumented refugees, and as reported by Salarvand (2020), they change their names to more familiar ones for Iranians after coming to Iran. Most of them have relatives who work as garbage collectors as well. They do not

have time to attend school but some of them hope that they can improve their skills by learning how to write and calculate. But also reports indicate that they collect many pieces of garbage that they do not recognize but wonder if they are valuable (Salarvand 2020). It has been observed that they keep women's clothes and cosmetic instruments without knowing anything about them (the author has observed the same thing).

During the last two years (and probably after the Kabul takeover by the Taliban), more Afghans have been deported to Afghanistan by Iranian authorities. Although they usually do not deport youth without their parents or a relative, there are reports that they have kept the young garbage collectors in detention for days. The boys who are deported accompanied by a relative will return to Iran again once they get to Afghanistan and resume their job as garbage collectors (Kumar and Noori 2020; Salarvand 2020).

It is very obvious that the Afghan garbage collectors (figs. 2–3) have been trapped in poverty. They are young boys from a country that has faced conflict and discrimination for years. One of the very few options for families is to send their young children to neighboring countries such as Iran to work. They are forced to drop out of school and busy themselves with collecting garbage while living on the landfill or very close to it. They experience deep alienation and do not integrate with other communities. Interviewing the inhabitants of district 17 showed that the community believes that garbage collectors are filthy and full of bacteria, although they feel sympathy for them because they are poor. Most of the Afghan teenagers are from the Hazara ethnic group. Hazara people have been marginalized and oppressed by the Sunni majority in Afghanistan due to their ethnicity and religious beliefs (most of them are Shia Muslims). They experience double discrimination in their homeland as well as in Iran, first for being Hazara and second for being immigrants and poor.

The municipality of Tehran intervenes in this desperate life of garbage collectors by locking the garbage containers, arresting the garbage collectors, deporting Afghan refugees, and even bulldozing their slums, but the communities return to collecting garbage.



Figure 2. Garbage collectors, Brush marker on paper and filter (Leila Papoli-Yazdi).



Figure 3. Garbage collectors, Brush marker on paper and filter (Leila Papoli-Yazdi).

The future of garbage collecting in Tehran

With the recent political unrest in Afghanistan, it is predictable that the number of Afghan teenagers who move to Tehran to collect garbage will increase. As stated by a representative of the Tehran city council, there are more than 4000 young garbage collectors in Tehran based on the 2020 statistics (Hosseinihah 2021).

The economic crisis of the last decade has forced people from the middle classes to move to the neighborhoods where the poor live. The factories have been privatized, and consequently, jobless workers also move to the aforementioned neighborhoods. At the same time, low-income families will be trapped even more in absolute poverty and will turn desperately to collecting garbage from garbage containers and enter this downward spiral of competition. Nowadays, the type of garbage collecting that is based on collecting the food and other material from landfills is still exceptional in Iran and limited to areas such as Kahrizak, but I predict that this lifestyle will gradually spread due to the increasing rate of extreme poverty.

Poverty trap

In their book, *Poor Economics*, Banerjee and Duflo (2011) introduce communities that have been trapped in poverty. There are different economic and social mechanisms that lead to poverty. They are very diverse, ranging from corruption in the political system to population over-growth (Easterly 2006). Based on Banerjee and Duflo's research in 18 countries on different continents, the trapped families around the world follow similar lifestyles and suffer strikingly similar problematic issues: Even if they acquire more income, they usually cannot escape the trap and manage their own lives in a different way from that which they have experienced for years.

Sociologically, long-term discrimination and poverty push people into a situation where the concept of the future loses its meaning (Symonds 2011). An indicator of this condition is that poor communities prefer not to save money even if they can put a small amount aside. Their declining tendency to guarantee their future and the policy of banks not to loan to the poor is influential on their lifestyle.

Archaeologists have already discussed an archaeology of poverty (Orser 2011). From an archaeological perspective, the lack of some sort of material culture in a context may lead scholars to the conclusion that the people who have lived in a particular place were poor. This is also true about the poverty trap (Spencer-Wood and Matthews 2011).

As already mentioned, garbage communities gather their subsistence needs from the discarded objects of others. It is of note that this is completely different from the social norm of buying and selling "second-hand" items. Second-hand things are not discarded. In many cases, they are sold due to the economic need of the owner or because they are not needed any more but are still useable and valuable. In contrast, the things gathered by garbage communities are useless from the viewpoint of the rest of society. Garbage collectors reuse the useless. They eat expired food, wear torn-up clothes and shoes. In the absence of a healthcare system, it is assumed that the garbage collectors get sick and may die young. Consequently, their bodies transform into garbage buried among the layers of landfill or in the simple graves dug by municipalities without any gravestones, mourners, and flowers.

Cases that we see in movies such as *Slumdog Millionaire* (2008) happen very rarely. Got Talents and other TV shows try to change the minds of people from middle-class statuses about poverty. They suggest that it is possible for someone trapped in poverty to climb the ladder of success based only on their God-given talents. In the shows, the producers flash back to the lives of the poor participants before being introduced as talented individuals, lives mixed with poverty, discrimination, suffering, and sickness. And suddenly, the person gets four yeses and comes out of poverty in the twinkling of an eye. In reality, this seldom happens. The poor need education, a proper healthcare system, and acceptance by society to get out of the poverty trap, a process that requires long-term programming and planning by NGOs, governments, and international institutions.

Garbage collectors are mostly subaltern not because of their current situation but because they come from already marginalized communities. Garbage collecting worsens their harsh situation. Among them are stateless groups of

people. They have no identity documents in the country they live in as refugees, or their identity has not been recorded at birth. This erases them even from the list of voters and that is one of the reasons why they are not noticed by politicians in many countries. Since they have no access to social or other media, the narrators of their very difficult lifestyle are the others, journalists, filmmakers, or scholars. To be narrated by others does not reflect the depth of their suffering but highlights that they are estranged from society.

Garbage collecting is a sign of being trapped in extreme poverty. Thus, it seems that garbage collecting will continue in developing countries. In such places as India, Egypt, and Iran, growing poverty results in an increasing number of garbage collectors. Also, conflicts and wars contribute to the continuation of this harsh lifestyle (see Bernbeck and Egbers 2019). The huge gap between poor and rich statuses along with class struggle makes the poor communities more and more alienated.

Towards an archaeology of garbage communities

There have been very few attempts by archaeologists to document the lifestyle of garbage communities, and no advanced methodology has been developed to study these people. Many garbage collectors are stateless or simply have no identification documents or passports. Authorities are not able to provide exact statistics about them, while many of these people have not been educated and will not leave written documents behind.

One way to study the garbage collectors is to survey the neighborhoods where they live. Our observations indicate that the community is in fear of officials who usually threaten to bulldoze the slums (Papoli-Yazdi 2018). The researchers who have been successful in documenting the daily lives of garbage collectors are those who have lived for a long time with the community in order to win their trust by respecting their dignity and lifestyle. This needs a long process of integration, dialogue, and research in order to escape from the usual societal labeling of garbage collectors as criminals, prostitutes, or drug abusers.

Garbage will be gradually pressurized in landfills and form layers of waste one on top of another. It is predictable that excavation methods will be enhanced in the future. To excavate landfills, archaeologists need elaborated methods that are helpful from a documentation perspective as well as materials analysis and scientific laboratory methods. It is of note that Rathje and his team's excavations were carried out before the invention and popularity of some material culture that we use today (Rathje and Murphy 2001). These new items end up as e-waste and micro- and macroplastic waste as well as some toxic substances.

Additionally, we should consider that garbage and landfills are currently the places of settlement of subaltern communities. This should not be ignored when studying landfills. The expansion of cities will cause landfills to be encompassed by some neighborhoods. I have observed buildings that are being constructed on layers of debris and garbage in northeastern Iran. The inhabitants of the buildings still smell the garbage even though they cannot see the layers of rubbish that are located beneath their houses. In these cases, the garbage is part of the history of the neighborhood and would be accessible by excavation, but it also affects the price of the buildings and land. Governments attempt to solve the problem of garbage communities by bulldozing landfills, but later they redevelop in other parts of the city. According to my team's studies on garbage collecting in the Middle East, new forms of landfills are emerging in cities. In Iran, Afghanistan, and Pakistan, we have witnessed markets where garbage collectors sell their findings to dealers. There is a long history of local markets in these countries, which used to be where the local inhabitants sell their products but now have been filled by modern items and recycled dumped objects. These markets are full of e-waste as well as plastic and textile refuse. The reused discarded objects are sold and brought to poor neighborhoods. They do not last long and transform again rapidly into garbage.

Predicting the future of garbage collecting, we should think of novel forms of landfills. Not only in the form of extended areas of rubbish disposal: we will also encounter markets for selling and buying waste in subaltern neighborhoods. In this situation, the landscape of the district will transform into layers of rubbish under the buildings or in the spaces around the houses where people store the waste to sell it later. The nature of the refuse may change in the future, but, predictably, the poor garbage collector community will survive due to the huge gap between poor and rich.

To study garbage and garbage communities, archaeologists should consider the diverse behaviors of societies towards waste disposal, waste management, and hoarding. In the near future, we will not be able to investigate garbage communities and waste disposal solely by studying landfills and industrial garbage, but we will need to develop our methods to understand the communities whose subsistence depends on collecting, selling, eating, and living beside or on garbage.

Archaeology of future garbage communities

Landfills usually take the form of high mounds whose height distinguishes them from the general landscape of the city. If not bulldozed, they transform into dense layers of decayed objects and garbage. According to Rathje and Murphy (2001), the process of decomposition is so slow that even the materials made of paper will last for a very long time in landfills. Taphonomy is a domain of activity integral to defining new terms of the culture-nature divide, addressing perceived vulnerabilities, and working out social contradictions (Dawdy 2006). For some substances, such as food waste, the taphonomic process starts gradually and decomposes them.

Moreover, within decades, garbage creates a harmful stew called leachate, which can move into groundwater, soil, and streams, poisoning ecosystems and harming wildlife. It is predictable that the soil under landfills will not be useful later for farming or accommodation purposes. Rather, landfills will continue to be occupied by subaltern communities and predictably cannot be transformed into areas with other functions, unless novel technologies help to change the toxic compounds of water and soil around the dumps. If we imagine that these areas will be in the hands of the poor, it is expectable that they will be neglected, and it will take a long time for companies that produce anti-toxic chemicals to consider them.

It is noteworthy that the health of the individuals (such as the Afghan teenagers) who are in long-term contact with garbage will be affected by their lifestyle (Maser and Pollio 1995). These health issues may further influence the life of young garbage collectors, relegating them to more complicated types of absolute poverty.

Given the growth of cities, these layers of garbage will gradually come to be located inside cities, likely in the poor and subaltern neighborhoods. Unlike the ancient layers remaining from historical cities that are excavated by urban archaeologists and interpreted as the background of cities, these layers do not contain anything privileged – they are composed of the filthiest objects possible. They are the indicators of bad environmental policies as well as discrimination and extreme poverty (Schiller 2008) and may remain unexcavated forever. From another perspective, the mounds of garbage may shape the topography of subaltern neighborhoods of the cities.

When authorities order the bulldozing of landfills, huge holes replace the mounds, representing the fact that the piles of garbage transform the soil in a way that makes it hard to repair. The long-term effects of plastic and some other chemicals on the soil and water resources are unknown, but we can imagine that the landscape of the areas which were once used as landfills will be transformed forever.

The governments, such as in the case of Iran, destroy landfills, but garbage collecting still survives. Nonetheless, we do not know much about the “culture” of garbage collectors, their taboos and beliefs, since governments in many countries prefer to neglect garbage collecting. It happened also in the case of our project, which was stopped after two seasons when we started to dive deeper into the concept of poverty.

Different aspects of modern society, mass production, consumption, and the invention of novel non-decomposable and unrecyclable substances have influenced the creation of landfills that appeared in the world gradually after the industrial revolution. This proclaims the existence of a lifestyle that can be also archaeologically investigated in the future: garbage hunter-gatherers!

The consumption habits of wealthier groups of society lead to the creation of huge mountains of garbage especially in developing countries, which are being polluted not only due to the rapid growth of the leisure class (Veblen 1961) but also because rich countries export their garbage to them. On the other hand, other communities are becoming poorer. The inequality leaves only very few ways for the poor to survive. One way is to live on the

mounds of garbage and gather food from landfills or other citizens' trash cans. It is how modern society has taken some communities back to the Paleolithic period and their subsistence to hunting and gathering garbage, replacing nature, rural subsistence, and quality with the mountains of garbage generated by well-off classes.

Landfills are the indicators of what the future of urbanization may be, at least for part of society, the poor and subaltern. These people, the garbage collectors, are not considered as documented citizens. They are not assumed to be jobless or to be workers. They stand outside the numbers, definitions, bureaucracy, and statistics, trapped in extreme poverty which will be intensified by rapid economic changes, impermanent contracts, the huge valley between poor and rich, and political conflicts all around the world.

The existence of garbage collectors and their difficult lifestyle warn us that the complicated cities of the future depicted in the Sci-Fi movies are mostly the representative image of richer groups of society. For others, life will continue around more gigantic mounds of garbage.

But let's remain hopeful! While some archaeologists will also ignore future garbage communities, there will be a small group of future archaeologists who will get involved in the life and horrible destiny of the poor and will develop their methods, rework their theoretical frameworks and ask novel questions to study the lives and subsistence of modern hunter-gatherer communities, the garbage collectors. They will struggle to enhance the methodology of archaeology to become more influential in making the world a better place for poor people as well as garbage collectors.

Bibliography

- Afrakhteh, Hassan and Mohammad Hajipour. 2017. Garbage Economics in Southern Tehran Villages. *Eghtesaad, Faza va To'se-ye roostayi (Economy, space and rural development)* 22: 47–72. (in Persian)
- Arrow, Kenneth J. and Partha S. Dasgupta. 2009. Conspicuous Consumption, Inconspicuous Leisure. *The Economic Journal* 119(541): F497–F516.
- Banerjee, Abhijit V. and Esther Duflo. 2011. *Poor Economics*. London: Penguin.
- Bernbeck, Reinhard and Vera Egbers. 2019. Subalterne Räume: Versuch einer Übersicht. *Forum Kritische Archäologie* 8: 59–71.
- Bisschop, Lieselot. 2016. *Governance of the Illegal Trade in E-Waste and Tropical Timber: Case Studies on Transnational Environmental Crime*. New York: Routledge.
- Baudrillard, Jean. 1998. *The Consumer Society: Myths and Structures*. London: SAGE.
- Dawdy, Shannon Lee. 2006. The Taphonomy of Disaster and the (Re)Formation of New Orleans. *American Anthropologist* 108(4): 719–730.
- Deletant, Dennis. 2018. *Romania Under Communism: Paradox and Degeneration*. London: Routledge.
- Dominelli, Lena. 2019. Reconceptualizing Poverty in Europe: Exclusion, Marginality and Absolute Poverty Reframed Through Participatory Relational Space. In Helmut Gaisbauer, Gottfried Schweiger, eds.: *Absolute Poverty in Europe: Interdisciplinary Perspectives on a Hidden Phenomenon*, pp. 17–39. Bristol: Policy Press.
- Dorman, William J. 2009. Of Demolitions and Donors: The Problematics of State Interventions in Informal Cairo. In Diane Singerman, ed.: *Cairo Contested: Governance, Urban Space, and Global Modernity*, pp. 269–291. Oxford: Oxford University Press.
- Doron, Assa. 2018. *Waste of a Nation: Garbage and Growth in India*. Boston: Harvard University Press.

- Easterly, William. 2006. Reliving the 1950s: The Big Push, Poverty Traps, and Takeoffs in Economic Development. *Journal of Economic Growth* 11(4): 289–318.
- Fredericks, Rosalind. 2018. *Garbage Citizenship: Vital Infrastructures of Labor in Dakar, Senegal*. Durham, NC: Duke University Press.
- Hartmann, Christopher. 2012. Uneven Urban Spaces: Accessing Trash in Managua, Nicaragua. *Journal of Latin American Geography* 11(1): 143–163.
- Heng, Lye Lin. 2021. *Environmental Law in Singapore*. Alphen aan den Rijn: Kluwer Law International B.V.
- Hosseinihah, Sadat. 2021. *There Are More Than 4000 Young Garbage Collectors in Tehran*. IRNA press. <https://b2n.ir/q47630>.
- Isari, Maryam and Ali Reza Shojaee-zand. 2020. Urban Politics and Garbage Collectors Lives in Tehran. *Mot-aleaat-e Jameeshenakhti (Sociological studies)* 34: 29–60. (in Persian)
- Johri, Rakesh, ed. 2008. *E-waste: Implications, Regulations, and Management in India and Current Global Best Practices*. New Delhi: The Energy and Resources Institute (TERI).
- Kumar, Ruchi and Hikmat Noori. 2020. *Why Iran Is Deporting Scores of Afghan Refugees. Caught on the Border, Many are Vulnerable to Extortion, Abuse, and Regional Tensions*. Foreign Policy. <https://foreignpolicy.com/2020/01/13/why-iran-is-deporting-scores-of-afghan-refugees>.
- Landsberger, Stefan. 2019. *Beijing Garbage: A City Besieged by Waste*. Amsterdam: Amsterdam University Press.
- Marthinsen, Jarle, Peter Sundt, Ole Kaysen and Kathrine Kirkevaag. 2012. *Prevention of Food Waste in Restaurants, Hotels, Canteens and Catering*. Copenhagen: Nordic Council of Ministers.
- Millar, Kathleen M. 2018. *Reclaiming the Discarded: Life and Labor on Rio's Garbage Dump*. Durham, NC: Duke University Press.
- Mohajerani, Mahshad and Arash Heidari. 2020. *The Outside of Tehran's Inside: Kahrizak*. Tehran: Kherad-e Sorkh. (in Persian)
- Naguib Pellow, David. 2004. *Garbage Wars: The Struggle for Environmental Justice in Chicago*. Cambridge, MA: Massachusetts Institute of Technology.
- Orser, Charles Jr. 2011. The Archaeology of Poverty and the Poverty of Archaeology. *International Journal of Historical Archaeology* 15(4): 533–543.
- Oduro-Appiah, Kwaku, Anne Scheinberg, Kodwo Miezha, Anthony Mensah and Nanne de Vries. 2001. Existing Realities and Sustainable Pathways for Solid Waste Management in Ghana. In Agamuthu Pariatamby, Fauziah Shahul Hamid and Mehran Sanam Bhatti, eds.: *Sustainable Waste Management Challenges in Developing Countries*, pp. 115–143. Hershey, PA: IGI Global.
- Maser, Chris and Carol A. Pollio. 1995. *Resolving Environmental Conflict Towards Sustainable Community Development*. Delray Beach, FL: CRC Press.
- O'Flaherty, Brendan. 2005. *City Economics*. Boston: Harvard University Press.
- Papoli-Yazdi, Leila. 2018. *Garbology Project in Tehran, Districts 7 and 17 (Report)*. Tehran: Tehran Urban Research and Planning Centre (TUPRC). (in Persian)
- Papoli-Yazdi, Leila. 2021. *The Last Word of the Other's Story: Archaeology of Garbage in Districts 17 and 7, Tehran*. Tehran: Negah-e Moaser (in Persian).
- Perail, Federico. 2013. *The Behavioral and Welfare Analysis of Consumption: The Cost of Children, Equity and Poverty in Colombia*. London and New York: Routledge.

- Rathje, William and Cullen Murphy. 2001. *Rubbish! The Archaeology of Garbage*. Tucson: University of Arizona Press.
- Rathje, William, Wilson Wright Hughes, D. C. Wilson, M. K. Tani, G. H. Archer, R. G. Hunt and T. W. Jones. 1992. The Archaeology of Contemporary Landfills. *American Antiquity* 57(3): 437–447.
- Rogers, Heather. 2013. *Gone Tomorrow: The Hidden Life of Garbage*. London and New York: New Press.
- Saghafian, Sepideh. 2020. *On the Crossroad of Poverty, Gender, and Tradition*. Tehran: Kherad-e Sorkh. (in Persian)
- Salarvand, Sepideh. 2020. *It Was As If I Was Dumb: An Ethnography of Afghan Garbage Collector Teenagers in Tehran*. Tehran: Kherad-e Sorkh. (in Persian)
- Sattar, Parvin, Ali Reza Moradi, Umm-e Kolthum Donyayi and Maryam Davoudi. 2019. Immigration and Garbage Collecting as New-emerging Lifestyles. *Motaleaat-e Jamiaayitai (Demographic studies)* 7: 199–228. (in Persian)
- Schiller, Bradley R. 2008. *The Economics of Poverty and Discrimination*. Upper Saddle River, NJ: Pearson, Prentice Hall.
- Schor, Juliet B. 2004. *Born to Buy: The Commercialized Child and the New Consumer Culture*. New York: Simon and Schuster.
- Spencer-Wood, Suzanne M. and Christopher N. Matthews. 2011. Impoverishment, Criminalization, and the Culture of Poverty. *Historical Archaeology* 45(3): 1–10.
- Spivak, Gayatri Chakravorty. 1988. Can the Subaltern Speak? In Cary Nelson and Lawrence Grossberg, eds.: *Marxism and the Interpretation of Culture*, pp. 271–313. Urbana: University of Illinois Press.
- Symonds, James. 2011. The Poverty Trap: Or, Why Poverty is Not About the Individual. *International Journal of Historical Archaeology* 15(4): 563–571.
- Trigg, Andrew B. 2001. Veblen, Bourdieu, and Conspicuous Consumption. *Journal of Economic Issues* 35(1): 99–115.
- Veblen, Thorstein. 1961. *The Theory of the Leisure Class: An Economic Study of Institutions*. New York: Modern Library.
- Zimmerman, Larry J. and Jessica Welch. 2011. Displaced and Barely Visible: Archaeology and the Material Culture of Homelessness. *Historical Archaeology* 45(1): 67–85.