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Building **Inclusive** Urban Communities

CASE STUDY
STRUGGLES FOR EVERYDAY SPACE: SCRAP PICKERS IN AHMEDABAD

Ravi Sannabhadti – 2019
(with research assistance from Shachi Sanghvi)

Funded by the Erasmus+ Programme of the European Union

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ABSTRACT

The most vulnerable and lower-most of occupational groups in the rungs of the value chain of the waste-recycling sector, i.e., the scrap pickers and itinerant buyers, have been studied for this paper. The study explores the access of scrap-picking households to everyday spaces (residential and livelihood spaces) by exploring the challenges/risks involved for and the strategies employed by these households in their day-to-day practices of residential use and livelihood operations. Households in the four modes of scrap collection—1) Door-to-door waste collection, 2) Scrap collection from roadsides, 3) Scrap collection from waste dumps or landfill sites, and 4) Itinerant scrap buyers (raddiwallahs/pithawallahs)—have been studied to understand the barriers in entry to everyday spaces; challenges; vulnerabilities and opportunities; and, adaptive strategies employed by households in response to the same. The inability of scrap-picking households to access spaces leads to various kinds of vulnerabilities, which they then strive to overcome by using various adaptive strategies. This study is an attempt to understand the negotiations and space-usage-related trade-offs made by these four kinds of households. The close relationship between residential spaces and livelihood spaces in the lives of the scrap-picking households is thus clearly brought out. The study also reinforces the ability of housing as an asset in influencing not only their occupational choices and practices, but also the development gains of waste-picking households, and in having an intergenerational impact as well. ◆

“ This study is an attempt to understand the negotiations and space-usage-related trade-offs made by these four kinds of households.”

CONTENTS

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CONTENTS

LIST OF ABBREVIATIONS

AMC	:	Ahmedabad Municipal Corporation
AUDA	:	Ahmedabad Urban Development Authority
BPL	:	Below Poverty Line
BRTS	:	Bus Rapid Transit System
CBO	:	Community-based Organisation
IIM	:	Indian Institute of Management
KKPKP	:	Kagad Kach Patra Kashtkari Panchayat
NGO	:	Non-governmental Organisation
NIC	:	National Industrial Classification
TPS	:	Town Planning Scheme

PART 1
INTRODUCTION

In India, out of the total non-agricultural employment, 83.6 per cent is informal. Of the 47 low- and medium-income countries surveyed, India had the highest share of informal employment (ILO 2012). Informal workers are made up of 92 per cent and 78 per cent of the workforce from the 'wholesale and retail trade' and 'manufacturing' sectors respectively—which are two of the top three sectors employing informal workers in urban areas (NSSO 2012). Nearly 73 per cent in the 'other community, social, and personal service' were informal workers. Scrap-picking- and/or waste-collection-related activities broadly seem to come under the above-mentioned sections and group of industries, as classified at the national level by the National Industrial Classification (NIC), 2004. Estimates suggest that 1 per cent of the urban population in developing countries is engaged in salvaging recyclables from waste (Medina 2008).

Waste picking, which is considered to be the lowest in the hierarchy of urban informal occupations, involves a large number of women and children (Easwaran et al. 2013). Also, scavenging has been stated to be the only source of livelihood for the unskilled and unemployed (Tevera 1994). According to some estimates, there are six million informal waste pickers in India (Bonner 2008). Informal waste recycling is carried out by the poor, disadvantaged, vulnerable, and/or marginalised social groups—for example, gypsies, rural migrants, religious minorities, the disabled, the elderly, and the illiterate—who often resort to scavenging as an adaptive response (UN-Habitat 2010). In the Indian urban context, the Municipal Solid Waste (Management and Handling Rules), 2016 (MoEFCC, 2016) are supposed to govern and support all the waste management activities and players. These rules define "waste picker" and "informal waste collector". These rules by the central government also advocate that state policies and strategies should recognise the primary role of informal waste collectors and provide guidelines to integrate them into waste management systems. However, the implementation of these rules at the city level currently seems to ignore the informal recycling and reuse happening in Indian cities.

In Delhi, it is estimated that 27 per cent of the total waste is recycled by the informal sector compared to 7 per cent which is done through the formal sector (UN-Habitat 2010). In Mumbai, more than 30,000 waste pickers recover scrap material estimated to range upto 1 billion dollars, in terms of economic impact (Medina 2007). Examples of best practices involving such workers or their collectives in the formal waste collection efforts made by government agencies do exist in cities such as Delhi, Pune, and Bengaluru. The existing literature about these workers in other cities (Bonner 2008; Easwaran 2013; Gill 2009) have indicated that there is a hierarchy in the waste recycling value chain. This hierarchy usually consists of the big recyclers, big traders, small traders/itinerant buyers, and scrap or waste pickers. The focus of the current study is limited to the two lower rungs of this hierarchy—waste pickers and itinerant buyers.

In Ahmedabad, little is known about the complex issues faced by scrap pickers and itinerant buyers in gaining work opportunities; maintaining their livelihood conditions; and, getting access to shelter. The study has explored the factors influencing access to

everyday (housing- and livelihoods-related) spaces of these two most vulnerable occupational groups. One of the most important challenges faced by the informal workers in Indian cities while gaining work opportunities is the access to space (housing and livelihoods). Most studies on informal workers in Indian cities either focus on employment (work spaces) or their housing issues (residential spaces) as being separate aspects. However, in actual practice, these may not be separate in the lives of these actors. Thus, the present study has explored these aspects by keeping the occupational group at the centre of the analysis, instead of taking a segregated view of 'spaces' or a site-/area-based approach. ◆

PART 2
METHODOLOGY AND LIMITATIONS

Since not much is known about those engaged in waste picking/recycling in Ahmedabad, the study has been exploratory in nature and has attempted to understand the occupational practices and their relation to shelter and space usage.

Four modes of waste/scrap collection are mentioned in some studies available in other Indian cities:

1) Door-to-door waste collection
2) Scrap collection from roadsides
3) Scrap collection from waste dumps or landfill sites
4) Itinerant scrap buyers (*raddiwallahs/ pithawallahs*[1])

Some of the grey literature also mentions scrap collection from industrial sites or niche collectors wherein waste pickers specialise in collecting only a specific type of scrap. Such scrap pickers do seem to exist even in Ahmedabad; however, we were initially unable to trace such groups for inclusion in the study. Later, although we came across some of them during the field visits to one of the sites, we were unable to build a rapport with them in order to understand whether they are a different type or only a sub-group of the other modes of waste collection. This could be considered a limitation of the current study.

It became evident from our initial explorations that not only were 'household residential spaces' used for occupational purposes, but also that the occupation itself was a collective endeavour of household members where the labour, roles, and responsibilities were shared. Thus, a 'household' was taken as a unit of enquiry for exploring aspects such as livelihood practices, related space usage, and inter-relationships (if any) between residential and livelihood space usage.

Initially, to identify the households engaged in scrap picking/recyclying, households across all four modes of scrap collection were identified. In order to ascertain which households could be probable recruits for the study and to get introduced to them, select non-governmental organisations (NGOs) and community-based organisations (CBOs)[2] working in Ahmedabad city with the said target groups—on issues as varied as housing, health, community development, and education—were contacted. These organisations also facilitated the initial reconnaissance visits and introductory interviews. During the reconnaissance visits at each of the identified sites where the scrap pickers resided, brief interactions with key persons from the locality and probable case study households helped us narrow down our search for the study further. Some households dropped out of the study after a couple of interviews; since the follow-up interviews could not be completed with them, we only have partial information pertaining to such households. A total of 12 households were studied in detail, but partial information is available for four more households.

The selection of households for this case study, after the reconnaissance visits and interviews, was undertaken by identifying different typologies for further rounds of interview (3–4 interviews per household) based on the following parameters:

1 There is a slight difference between the *raddiwallah* and the *pithawallah*; however, we have come across *raddiwallahs* themselves serving as *pithawallahs* in peri-urban locations of Ahmedabad city.

2 Janvikas, Manav Garima, Manav Sadhana, and Paryavaran Mitra were the NGOs/CBOs that facilitated the initial reconnaissance visits.

1) Mode of waste picking
2) Housing and tenure conditions
3) Location of residential spaces or collection practices in the core/periphery areas of the city
4) Type of settlement in which residential space is located (transit site/notified slum3/recognised4or unrecognised slum/informal settlement)

Although all the households were picked on the basis of the above parameters, it is necessary to specifically mention two sites from where households were included for this study:

One of the sites, an unrecognised informal settlement, adjacent to Ishaan Towers near the Prerna Tirth Derasar area in the city, where the reconnaissance visit was initially conducted to identify probable cases, faced eviction during the course of the study. Most of the households shifted their residential locations (within or outside the city), while a couple of households continued to occupy a sidestreet adjacent to the eviction site. Interviews were conducted with the households which continued to reside near the original site as well as with select households which shifted to rental housing in the vicinity. However, the households which moved out of the city could not be included in the study. By observing and comparing the lived experiences of these households and the changes that their lives underwent, we were able to get an insight into the lives of many other scrap pickers who acknowledged having gone through a similar experience at some point in their lives.

The other site is the Ramapir No Tekro area, where the Smart City project[5] has been proposed; it has a cluster of *pithas* and a high density of scrap pickers seem to reside here. Some of these households are members of a co-operative that lends them support: this initiative provides access to a designated space for storing and sorting the collected scrap to members who need it. The households which are a part of this initiative were studied not only to understand the relevance of such institutional support, but also to gather the relevance of sorting/storage spaces for collection activities. The comparison of the livelihood practices of these households with those of other households following similar modes of collection helped in developing an understanding of the influence that sorting and storage spaces have over their livelihood strategies.

Semi-structured interviews were the primary data collection tool. A mix of group interviews (of family members, usually husband and wife) and individual interviews (based on the availability and convenience of household members) were undertaken with members involved in or supporting waste collection. Interviews with other relevant stakeholders—such as *pithawallahs*, neighbours, community representatives, CBO representatives, and extended family—were used to triangulate the information that had been collected. The interviews with key persons explored aspects such as housing and livelihood conditions; day-to-day livelihood practices; opportunities, challenges and negotiations required for scrap-picking-related activities; and, negotations involved in getting access to shelter.

3 Notified slums, being notified by the state government under Acts pertaining to slums or related aspects, are statutorily/legally recognised as slums.
4 Recognised slums are those enumerated by the government under any of the state or central government programmes or schemes and mentioned as a 'slum' in their reports. A list of such recognised slums is also often referred to by the Census of India for houselisting operations.
5 Smart City projects are city- or area-specific projects funded by the state and national governments under the Smart Cities Mission of the Government of India. This particular project in Ahmedabad is an area-based development project consisting primarily of affordable housing/slum redevelopment components.

In addition to the above, 'walking interviews' were conducted with select participants based on their comfort level and availability of time. Walking interviews are interviews conducted with participants where the researcher/interviewer walks (and, if possible, participates in the process along with the waste pickers) and interviews them during the collection activity. As a part of this study, four walking interviews have been conducted. The use of this tool helped in understanding the inter-relationship between time, space, and the practice better—i.e., it allowed the researchers to observe and simultaneously experience the inhabitation of a particular space at a given time within which the occupational activity was taking place—thereby serving as a trigger to raise new questions to gain further insights into the experiences of the waste pickers. Due to time and resource constraints, walking interviews could not be undertaken with all the households/members engaged in waste picking. In some of the spaces, the participating households could not facilitate the walking interviews as they feared that a walk with the researcher would be viewed as a threat by other stakeholders, who might then restrict the households' access to/usage of the said space. This was particularly the case with the Pirana dumping site[6] where the walking interview could not be conducted as planned, on account of the controversial nature of this site and the events of fire that were being reported by the media at the time of the study. In the walking interview conducted at this site, the researcher followed the respondent at a distance as he went about his routine activities. Based on the researcher's observations, the interview was conducted immediately after returning from the site, as opposed to the respondent being questioned during the walk.

Another limitation of the study was that the gender dimensions affecting women's access to and usage of space could not be systematically explored, given that many of the interveiws were done in the presence of the men of the households. ◆

6 Pirana is the largest, open dumpsite in Ahmedabad, and is often mentioned as a landfill site. It is not a scientifically designed landfill but an open dump that has grown to humongous proportions, with five hillocks of waste which are sometimes sarcastically referred to as Mount Pirana.

PART 3
MODES OF SCRAP PICKING IN AHMEDABAD

Door-to-door cleaners-cum-waste collectors

Door-to-door waste pickers are those who collect household or office waste on a daily basis on account of being employed or engaged in the cleaning activity in residential/commercial gated and non-gated complexes. This system consists of a group of cleaners-cum-waste pickers being employed by the housing co-operative society[7] for cleaning the common spaces in the premises. Easily pickable and larger pieces of scrap materials are gleaned during this process, in and around private premises across the city, usually during morning hours. The waste pickers go from door to door collecting waste (often unsegregated, wet and dry domestic waste).

Once the cleaning activity is finished for the day, the cleaners are not expected to stay on the premises and are free to utilise their time for any other personal purpose or alternative employment. Such an arrangement allows the waste pickers to spend the free time available to them in segregating the recyclable material from the unsegragated waste that they have collected from each unit/house in the gated complex, sorting it, and drying it. This sorted, dry scrap is sold to the *pithawallahs*[8], thereby being diverted to the recycling chain. The wet organic waste mixed with smaller pieces of dry scrap, which is more difficult to glean, is taken out of the gated premises for disposal into municipal waste bins/dumpsters or open dump yards at designated public spaces in the vicinity.

Dalit[9] households/individuals seem to be a major caste group involved in this type of service provision. This is because many of these activities are looked down upon as unclean and the so-called higher-caste and the non-Dalit, lower-caste individuals do not, traditionally, prefer to be associated with such activities. Usually, the family or extended family of the waste pickers seems to be employed as a group for such purposes.

The waste pickers are paid a lumpsum on a monthly basis for undertaking this cleaning-cum-collection activity. This then gets divided as a monthly wage among the family group on pre-agreed terms and conditions. The head of the group gets a larger share/proportion of the wage as there is a notional sense of ownership of the system linked to a particular gated complex. In this system, the group employed by the housing co-operative society is supposed to undertake this activity daily, throughout the year, without any break; sometimes, 2–3 holidays are allowed per year. Two other nuances found in the arrangements of this type of cleaning-cum-waste picking have been described in **Annexure 2**.

Roadside scrap pickers

In Ahmedabad, the municipal waste collection by the Ahmedabad Municipal Corporation (AMC) happens from designated waste bins/points on the roadsides near gated complexes, where all the collected waste of that particular gated complex is dumped by the above-mentioned cleaners-cum-waste pickers. Such waste bins or roadside points

7 A co-operative housing society is a collective of individual households residing in an apartment block, which is usually a gated complex and is registered under the Trust or Co-operative Societies Act.

8 *Pithawallahs* form the first level of aggregators who buy the recyclable material from the scrap pickers and pass it on to wholesalers or bigger dealers in the value chain of recycling.

9 'Dalit', as a term, academically carries many nuanced interpretations, but in the interviews, this term was used by key persons interchangeably for 'Harijan', 'Scheduled Caste', 'Rohit Samaj', or 'Valmiki'.

become spaces from where the second level of scavenging happens by other scrap pickers. This type of scrap collection does not involve any cleaning of the spaces. The scrap pickers glean or scavenge recyclables from the waste dumped in the public spaces and the roadsides that are accessible to them. Apart from the above-mentioned waste pickup points, there are particular areas (prone to littering) that seem to be of interest to such scrap pickers—these often include open dumpsters; public spaces around transfer stations[10]; street junctions; street edges and/or open vacant spaces abutting transit nodes, hotels, city parks, temples, malls, office complexes, etc. (i.e., public spaces with a high footfall). This mode of scrap collection is prevalent across the city and it seems to be happening at all hours, even at night.

When undertaking walking interviews with such scrap pickers, it became evident that these pickers had developed an acute degree of expertise in scanning the surroundings for recyclables, which was otherwise not visible to the researchers. They had also, through regular practice, a sense of intuition about the likely points where the chances of finding recyclable scrap material was high.

In this mode, the pickers collect recyclable material that they feel has some recyclable market value. Among the various roadside scrap pickers, there seems to be a slight variation in terms of what they consider to be of value, depending on what becomes saleable to the *pithawallah*(s) known to them. Usually, such scrap picking seems to be a family enterprise undertaken to augment family incomes, particularly when no other work opportunities are available. In most cases of roadside scrap picking, the picker keeps shifting between this mode of scrap picking and other kinds of work (casual labour, for example), if and when available. This mode of scrap picking seems to generate lesser income than even casual labour, when undertaken without any use of cycle carts. The use of cycle carts in this mode helps the scrap pickers (usually working in pairs) to pick up relatively larger volumes and cover considerably more area in the city, resulting in relatively higher earnings compared to those of pickers who are unable to use cycle carts.

Unskilled casual labour seems to generate around Rs.150–250 per day, while this mode of waste picking seems to generate around Rs.80–200 per day. An exception to this seems to be when these waste pickers are supported through NGO/CBO interventions: the work of Manav Sadhana or Paryavaran Mitra[11] seems to help these scrap pickers earn better compared to other roadside scrap pickers who function in the areas where the NGO has no presence.

Scrap picking from open landfills/dumpsites

The third mode of scrap collection found in the city comprises workers picking recyclables from open landfills/dumpsites. The open landfill at Pirana is the largest site in Ahmedabad and has the maximum number of waste pickers practising this mode of collection. Pirana receives an average of 4,200 metric tonnes of garbage every day (Misra 2014, quoted in Miklian & Birkvad 2016). Unsegregated domestic waste, many a time mixed with industrial waste, is transported to the site through trucks and tractor trolleys (belonging to the AMC or other private contractors) from refuse-transfer stations across the city.

10 Refuse transfer stations are nodes where waste from the surrounding areas is transported by smaller four-wheeled vehicles (known as *chhota hathi*) which collect the waste from the designated dumping places (public dustbins, dumpsters, or open roadsides) in the various neighourhoods. There are various waste pickup routes planned for each area and *chhota hathis* (belonging to private contractors or government-owned) are assigned specific routes to pick up the said waste once a day; however, in many neighbourhoods, each such dumpster/public dustbin is not emptied every day. At the transfer stations, the waste is compacted and transferred to a larger vehicle/truck to be transferred to the city-level landfill, i.e, Pirana.

11 Paryavaran Mitra, a co-operative of women scrap pickers supported by Manav Sadhana, strives to support the scrap pickers, who are its members, through a number of parallel initiatives. For details, please see http://manavsadhna.org/sidenode.aspx?&sidenode=7

In this mode of scrap picking, the pickers are concentrated at the site because the availability of waste is assured every day. Since the site keeps getting waste through the municipal waste-collection system throughout the day and is physically accessible to everybody, the scrap pickers are found functioning at the site throughout the day and the year (24x7 for 365 days). There is enough waste available daily to support a large number of scrap pickers. "At any point, there are 150–200 people picking here," (AMC Supervisor quoted in Miklian & Birkvad 2016).

During the walking interview conducted here in the span of an hour, 45–185 scrap pickers were found working at the site's different active mounds/areas[12] where waste was being dumped. The scrap pickers undertaking this work seem to come from nearby areas, i.e., from within a radius of around 5 km. surrounding the Pirana, such as Khodiyar Nagar, Ganesh Nagar, Chandola, Danilimda, etc. There is mention in certain interviews/discussions that some of the scrap pickers stay on the site; however, this could not be corroborated[13].

In this mode of waste collection, the scrap pickers choose to go to the landfill site as per their convenience and continue to pick waste for the time desired, which ranges from 4 to 12 hours, depending on the volume of scrap that an individual intends to collect. There have also been instances of household members working in shifts to collect scrap from the site. In the recent years, one of the risks increasingly affecting the scrap pickers at the Pirana is the cordoning off of the site, thus rendering it inaccessible to them, each time an occurrence such as the death of a scrap picker or a fire at the site attracts the media's attention. This is because, as per solid waste management rules, open landfills are illegal; therefore, the city governments find it difficult to justify their existence.

Another difficulty faced by these scrap pickers is that the waste dumped at the Pirana, being of the lowest quality, needs to be intensively sorted, cleaned, and sometimes dried for it to acquire resale value. In the waste hierarchy, this waste can be said to be located downstream of the catchment after multiple rounds of filtering/gleaning by other scrap pickers have been completed at the household level, community level, and in transit. So, the rate that they get out of similar scrap, compared to that of the other modes, is relatively less given the time they spend in gleaning the said scrap.

Itinerant scrap buyers:
kabaddiwallahs/raddiwallahs/pithawallahs[14]

In this mode of scrap collection, an individual or a team of 2–3 people go around specific neighbourhoods and collect segregated, dry, and sorted recyclable scrap material. Such a scrap collector goes from door to door buying the recyclables from households which request for his services in disposing of the collected scrap kept aside by them. The *raddiwallah* pays the household, based on the quantity of the different categories of scrap supplied. Most *raddiwallahs* have an established client base with whom they check for the availability of such segregated scrap at regular intervals, usually once a month. The recyclable waste collected by the *raddiwallah* is sorted dry waste—paper, certain types of plastic, metal, glass, and cardboard.

12 Pirana has five mounds, out of which two were active (i.e., waste was being dumped there) at the time of the field visit in the afternoon. The number of scrap pickers varied across the different mounds at the site (i.e., 45–60 were on one mound and 125–185 were on the other mound in the span of an hour). The interviewees have reported that the number of scrap pickers not only varies based on the time of the day, but also seasonally. The decision of the authorities to make a particular mound active or divert more trucks to a particular mound influences the number of scrap pickers congregating at that mound.

13 Spaces in the mounds being used as residences were not visible during the walking interviews. However, the site is huge and a modified form of the walking interview was taken up in portions of the active mounds where the waste was being dumped. Moreover, it could be that these residential spaces become visible during certain times or conditions as residing on the site is legally not allowed.

14 *Kabadiwallah* and *raddiwallah* are both colloquial terms used for itinerant scrap buyers/collectors, while *pithawallah* is a person who runs a pitha—a designated shop/entreprise for buying segregated and sorted dry scrap from different types of scrap pickers or directly from domestic households. A *pithawallah* can sometimes also employ other itinerant scrap buyers.

Households/commercial units keep such items aside and give them to the *raddiwallah*. Most households in India seem to be practising such segregation of recyclable material which fetches a relatively higher value compared to the other kinds of scrap mentioned above which are gleaned from unsegregated domestic waste. Any defunct or semi-defunct instrument, appliance, or even large household item (for example, a cupboard or even a two-wheeler) is usually sold to the *raddiwallah*.

A *raddiwallah* or *kabadiwallah* may sometimes be employed by a *pithawallah*, or he can be a self-employed entrepreneur who sells the collected scrap to *pithawallahs* in the city. Most *pithawallahs* seem to have operated as a *raddiwallah* when entering this occupation. This mode of scrap collection is dominated by the non-Dalits, with many migrants from the Marwari[15] community being engaged in this activity. However, in Ramapir No Tekro, we also came across certain Dalit households which were engaged in running *pithas*. Such households had been able to establish themselves in this profession after having practised it for 10–15 years; they had access to large, empty spaces which they could appropriate for the said activity; and, other Dalit households from the informal settlement that they resided in supported them as their clients. ◆

15 'Marwari' refers to the people of a community who have their roots in the Marwar region of Rajasthan. This community is traditionally known for its trading acumen.

PART 4
SEASONAL FLUCTUATIONS IN SCRAP PICKING/COLLECTION

The peak season for scrap collection seems to be summer and the period just before the Diwali festival when most households in Gujarat undertake the annual spring cleaning of their homes. Since the households discard the old or unused stuff and replace these with new items, the scrap pickers tend to get more and better-quality scrap in the discarded waste at this time. During summer, plastic bottles are available in greater quantity as the consumption of bottled water/juices is higher. The relative rates paid to scrap-picking households have been reported to decrease during the summer and Diwali even though the volumes of scrap increase.

Invariably, across all modes of scrap picking, the lean season is reported to be monsoon, when most of the available scrap becomes wet. There is no demand for wet waste even when it is of recyclable nature. The *pithawallahs* refuse to accept such waste, since, without drying such waste, its storage becomes very difficult. Non-plastic waste (like paper) tends to become heavy due to humidity, even when dry, whereas plastic waste decreases in weight on turning dry. So, most *pithawallahs* impose a cut in weight, ranging from 15–40 per cent when buying scrap during monsoon to account for this loss. On rainy days, most scrap-picking households only collect plastic waste such as bottles, toys, broken chairs, etc. that would easily turn relatively dry by the time of sale. Items such as low grades of polythene sheets, carboard, and paper are not collected at all, since these are difficult to dry.

The condition of the roadsides, dustbins, and the open dumpsite of Pirana is such that not much scrap collection can happen on rainy days, for it is extremely difficult to keep scrap dry during the processes of collection, segregation, and sorting. In the case of the Pirana, instances where landslides of waste have partially or completely buried scrap pickers have been reported in some of the interviews; this occurs due to the soggy condition at the site and because the dumped waste does not get compacted properly. The door-to-door cleaners-cum-scrap pickers too, although they can collect waste in relatively dry conditions, do not collect non-plastic waste, on account of the difficulty faced in storing it.

The key to a scrap picker's survival in this activity seems to depend on her/his ability to access and continue to retain access to collection, sorting, and storage spaces. Such spaces are termed as 'livelihood spaces' in this paper. The activity seems to be influenced by a wide range of other actors exerting control over access to such spaces: the exclusion rights vested/exercised by certain actors in the urban domain affects the scrap picking and recycling activity. The various vulnerabilites and livelihood strategies that have arisen as a result are described in **PART 5** of the paper. ◆

PART 5
ENTRY INTO SCRAP-PICKING ACTIVITY AND ACCESS TO COLLECTION SPACES

Caste: An organising principle determining access to space

The low social status of the waste pickers (Gill 2009; Furedy 1993) has been documented in other cities as well. Even among the so-called Scheduled Castes, not all the sub-castes were interested in waste collection or scrap picking. It seems that until recently (around 7–8 years ago), the Dalits were completely monopolising the mode of waste picking from households, where it happens along with the cleaning work in gated residential complexes. However, waste pickers from other castes have also begun to take up this occupation in recent times.

In an interview with the researchers, Dina-*ben*, a Dalit scrap picker, said, *"Institutions like the Civil Hospital, Sachivalay/Vidhan Sabha, Jivraj Mehta Bhavan, Police Bhavan, etc. have people from castes such as Thakor*[16] *being employed in cleaning…. Private hospitals have employed more people from castes other than Valmiki*[17] *through the contract system…. Now, an increasing number of Waghris*[18] *and other castes have also begun getting similar jobs. Previously, the Waghris would sell vegetables across the city, but their livelihood through that has diminished; which is why, they now resort to occupations like cleaning."*

However, the Dalits still seem to comprise a large percentage of those who take up waste picking along with the cleaning of premises as their occupation. The cleaning of premises is still viewed as a Dalit profession by the other castes, but not so much the activity of scrap picking. Punja-*bhai*, a Dalit scrap picker from the informal settlement at But-Bhavani[19], told the researchers,*"Nowadays, all the other castes seem to be getting interested in waste as it is becoming lucrative. We have come across instances of other castes—even Rabaris—picking plastic. Earlier, they would look down upon this job and never do it…. Maybe, because of the lack of jobs, they have now traditionally accepted it."*

Several challenges are involved in beginning to work as a door-to-door cleaner-cum-waste picker. This activity seems to be monopolised by the Scheduled Castes who have traditionally been known to undertake cleaning-related activities. In interviews with non-Dalit waste pickers who particularly pick waste from the roadsides and open-access public spaces, it was reported that some of them have tried to enter the cleaning-cum-waste-collection mode, but have been unsuccessful even after multiple attempts. Samita-*ben*, a non-Dalit, roadside scrap picker belonging to the Bharthari[20] sub-caste, said,

"*We do not get waste from gated societies as they do not employ us for cleaning. Only the* 'bhangis'[21] *get waste from the societies on account of being employed there and having direct access to the waste disposed of from the houses. We have tried several times, but nobody employs us. We have no choice then but to pick waste from the road…. Even now, after so many years in the city, we do not get work as cleaners in the*

16 Thakor is a community that is classified as 'Other Backward Castes' (OBC)/Socially and Economically Backward Class (SEBC). In the state of Gujarat, these two terms are used interchangeably.
17 Valmiki is a term used by some of the Dalit castes to describe themselves.
18 Waghri is a Scheduled Caste. 'Waghri' is considered a derogatory but pejorative term that is not used often now in day-to-day conversation.
19 But-Bhavani is an informal settlement's site, which gets its name from a nearby temples's presiding deity (Mother Goddess) who has the same name; she is worshipped by the people of certain castes.
20 Bhartharis are a sub-caste among 'Other Backward Castes' (OBCs) who are viewed to be socioculturally higher than the Waghris.
21 'Bhangi' is one of the scheduled /Dalit castes who are considered the lowest in the local social hierarchy. The term is also a sometimes derogatory but pejorative term used for sweepers and cleaners-cum-waste pickers which is considered to be their traditional occupation.

housing societies. They ask for an introduction; they only employ people they know or those who have been introduced to them."

Territorialisation through notional ownership over cleaning arrangements

Traditional roles and the existing client-patron mentality among the general castes seem to prefer Dalits for such cleaning work. The usual way to get employed in such an activity is when a builder is constructing a housing co-operative society or office building; he employs a few Dalits/Valmikis to keep the premises clean. This usually consists of his office premises and the sample unit (including the toilet spaces). The builder or his agent offers the right to clean a particular premise to the cleaner known to them.

If a waste picker or cleaner is unable to take up the offer to work for a specific gated complex, he can sell the opportunity to another waste picker who is looking for work for a price. This system is known as *Vechati aapvi/levi*, i.e., 'to buy or sell the claim over cleaning services of that particular gated complex'. The usual price seems to be twice the monthly income expected from the gated complex at a later date, once the premises are occupied. This system functions through social networks and social controls, and many cleaners-cum-waste pickers get employed thus.

The builder expects the employed cleaner-cum-scrap picker to keep the premises clean; in return, s/he is paid wages after the completion of construction. In the initial years, there is hardly any waste picking and the sole job of the worker is to keep a small portion of the premises clean. So, in the initial years, a wage component does not exist; the worker seems to be paid occasionally, on a need basis. Sometimes, the builder tends to scout for cleaners through the social network of cleaners who may already be working for him in other parts of the city.

In an interview, Kalu-*bhai*, a cleaner-cum-waste collector), said, "*I got introduced to Seth [the builder] through the guard and the man who operated the water pump at the under-construction housing society. Seth is a Patidar*[22] *from Kathiawar. I have worked for him at almost all his sites, right from the time the construction had begun. Whenever the builder built another property, he would employ me to work there as well. It's okay that the builder used to pay me less, but he looked after me at times when my family or I were sick or needed money. Even recently, when I had to undergo an operation, he helped me…although he himself is no longer a part of the construction business.*"

Kalu-*bhai* had to struggle a lot before he could find a patron who agreed to support and/or employ him:"*I came to Ahmedabad 25 years ago. Before working as a waste picker, I earned my living as a daily-wage construction worker for 3–4 years. I was always on the lookout for work as a cleaner and would ask the watchmen of the buildings that I passed by if the society required cleaners. Through some contacts, I got work as a temporary* safai kamdar[23] *in the Thaltej area. I used to get a monthly salary of Rs.150. However, as I was hired on a temporatry basis, I was asked to leave after some time. That's when I got work with my Seth, who was one of the builders operating in this area.*"

The Dalit waste pickers, not having any assured source of income (even when they work as temporary *safai kamdars* with the AMC), undertake the cleaning of gutters in order to supplement their income. This practice continues, although this is a cognisable offence under the Prohibition of Employment as Manual Scavengers and their Rehabilitation Act, 2013, and can also be construed as an atrocity under the Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989. Sometimes, the builders and/or the housing co-operative societies also engage the Dalits, whom they employ to clean their premises, in work such as

22 Patidar is the caste of people who traditionally tilled the land for the Rajput community that reigned over the region before Independence. Over the years, Patidars have become land owners and are known today as a business community. Families having 'Patel' as their surname belong to the Patidar caste.

23 *Safai kamdars* are contractual/salaried, part- or full-time workers employed by the municipal corporation for street sweeping and other related solid waste management activities such as emptying dumpsters, driving *chhota hathis*, etc.

the cleaning of a gutter/drain and pay them an extra sum of money. The Dalits take up such work many a time under pressure, to sustain the client-patron relationship. Their refusal to undertake such work could make them lose even their cleaning jobs which fetch them assured monthly wages. Although such client-patron relations give them new work opportunities, these come associated with risks.

All the waste pickers, who were interviewed for this study, aspired to have a job—be it with the government or in the private sector—that would provide them a regular, monthly income. However, the Dalits invariably aspired for a permanent job as a *safai kamdar* with the local municipal corporation, because this not only gave them the security of a government job, but also allowed them the flexibility and the free time to undertake cleaning-cum-waste-picking jobs in private premises. Advocacy with the local government officials to employ only Dalits as *safai kamdars* is a constant mention in most interviews.

Kinship ties to gain entry into and territorialise space

Relying on kinship ties is another strategy used to gain entry into and territorialise various aspects of scrap collection. Non-Dalits seem to have made inroads into all the modes of scrap picking, except the door-to-door mode. The engagements by non-Dalits in the business of scrap picking, which is traditionally not considered to be their domain, is causing a fair amount of resentment among the Dalit scrap pickers. Most of the *pithawallahs* are non-Dalit Marwaris. However, the Dalit households studied for this paper seem to be consciously extending the outreach of their operations through kinship groups (i.e., being introduced to new opportunities/information through them) in order to keep out the non-Dalits, or through diversification into different modes of scrap picking. Some of the *pithas* in the Ramapir No Tekro, for example, are run by Dalit entrepreneurs, with the support of other Dalit scrap pickers.

Entry into the activity of running a *pitha* also seems to depend on social networks to cultivate a client base of scrap suppliers and on developing a network with larger aggregators of scrap to whom the collected scrap can be supplied. A *pitha* cannot function without such a network, which is why most of the *pithawallahs* seem to have functioned for 1–3 years as a *raddiwallah* or *kabaddi* wallah before opening a *pitha*.

Mohan-*bhai*, a Marwari *pithawallah* who is currently trying to establish himself in a peri-urban area of Ahmedabad, told the researchers, "*I worked for 2–3 years with a cart. One has to know this business to grow a customer base…. Even today, those people approach me. Since my brother's* pitha *was in Ahmedabad at that time, I used to give the collected scrap to his* pitha." Mohan-*bhai*'s brother now works as an intermediate aggregator and has set up an alternate business.

A *pithawallah* requires access to a relatively large amount of liquid cash (around Rs.1.5–3 lakh[24]), apart from having to invest in rental premises or an open plot. This also becomes a hindrance for many scrap pickers who wish to become *pithawallahs*, even if they have come to know the waste business intimately over the years. For the *pithawallahs* too, finding a suitable rental space in the core areas of the city seems to be a hindrance. Space is a concern especially at the Smart City site, and the *pithawallahs* have been protesting against the plans put in place for developing the Smart City there, for it fails to address their concerns regarding the allocation of suitable spaces for operating their *pithas*.

Baka-*bhai*, a Dalit cleaner-cum-waste picker, was residing in a semi-pukka structure on the site adjacent to Ishaan Towers, but was evicted from there. He is currently trying to procure a home in an informal settlement in a nearby locality for a monthly rent of Rs.4,000. When asked why he

24 The range seems to vary for different types of *pithawallahs*. This is also based on their own credit worthiness in social circles and their ability to borrow based on their social and business networks.

hadn't yet set up his own *pitha*, despite having been involved in this activity since a long time, he said, "*Around Rs.8,000–12,000 would be required for renting a space to run a* pitha. *Where do we get the capital from? It is unaffordable*."

Even a relatively well-off household like that of Kalu-*bhai*, who works as a door-to-door cleaner-cum-waste picker, is unable to enter this business because of the risks involved. He expressed his apprehension in getting into this business thus:
"*There is a lot of money in the business of waste. We are illiterate, but are we mad? We know that, to be in this business, one needs to have enough liquid cash and a capital of Rs.1,50,000–2,00,000. A* pithawallah *can only sell all of his stock when he has enough to fill an entire truck. The cost of transporting a truckload of, say, paper to Morbi*[25] *itself would cost around Rs.5,000–6,000. So, to make the transaction profitable, he needs to be able to collect at least 500 kg. of waste. Moreover, the* pithawallah *needs to send his stock once a week to Morbi…until which time, he needs space to store the same*."

The availability of space seems to decide the duration for which a *pithawallah* can store the stuff. This, in turn, seems to decide the volume and the cycle of transactions (discussed in detail in **PART 6**). Apart from the above-mentioned two modes of scrap picking (i.e, which involves the door- to-door cleaner-cum-waste picker and the iternant scrap buyer/*pithawallah*), entry into the other types of waste picking (i.e., from the roadside and the dumpsite) does not seem to pose any major barrier, except for finding a place to stay in the city. Finding a space for a short duration (usually ranging from 1–3 hours every day) to sort the collected scrap is another minor requirement, but this too is generally available to those involved in scrap picking from the roadside and the dumpsite. Under normal circumstances, the Pirana dumpsite and even the roadsides (in most locations of the city) can be used for short durations to sort scrap. If these two requirements—having a place to stay and access to sorting space—are met, then the roadside and dumpsite scrap pickers can generally go about their work without any major hurdle, though, without access to storage spaces, their earnings remain low and risks remain high.

However, an important caveat, as reported in some interviews, is that individuals who have been unable to learn the nuances required for identifying different kinds of scrap have mostly failed in the business of scrap picking.

Efficiency in collection practices through associations with gatekeepers

Entry into the scrap-picking activity is relatively easy, but getting good rates for the scrap is difficult for scrap pickers who don't have links with *pithawallahs*. In other cities too, it has been documented that waste pickers cannot work independently as it is the traders/dealers who define the terms of the trade (Choudhary 2003). A particular scrap picker needs to establish trust and cultivate a relationship with a *pithawallah*, so that the latter can rely on the quality of scrap being supplied by the former.

This is not possible without having maintained a relationship over a long period with a *pithawallah* or without depending on social networks that can provide an introduction or a guarantee to the *pithawallah*. *Pithawallahs* who buy scrap from a waste picker who hasn't been introduced through common contacts tend to pay her/him a lower rate or impose a slightly higher cut on the quantities of scrap supplied. This is to account for the possibility of a higher percentage of scrap becoming non-saleable after finer sorting is done by the *pithawallah*. *Pithawallahs* in interviews with the researchers have been quoted as saying that the chances of this happening are rather high when buying scrap from an unknown person. Hence, in order to have a guarantee that the

25 Morbi is a town and municipality, the district headquarters of Morbi district in the Saurashtra region of Gujarat, situated around 340 km. from Ahmedabad.

supplied recyclable material is not mixed (given that there are finer variations in each type of scrap), most *pithawallahs* prefer to buy scrap from waste pickers who are known to them. On being sorted carefully, the scrap appreciates in value.

Interviews with *pithawallahs* show that those scrap pickers who have established a reputation of supplying well-sorted scrap get a slightly higher price compared to the others. The *pithawallah* saves money if the incidences of different types of recyclable materials turning up in the procured scrap reduce. By paying a relatively higher price, the *pithawallah* saves time and even the labour that he would have had to otherwise spend on getting the scrap re-sorted. He not only saves on the operational cost, but also minimises the chances of his lot of recyclable material getting rejected by the next-level aggregator.

The roadside scrap pickers (without a cycle cart) need access to a 'node' to increase their scrap-collection efficiency. The 'node' is a space where they can temporarily park their sacks containing the collected scrap for 4–6 hours during the period of collection, before they transport it to the sorting or storage space near their residences or *pithas*. Generally, a scrap picker is able to carry around sacks/bags containing around 5–8 kg. of scrap on his/her back. When they set out to collect more scrap, they need to park these sacks/bags containing the already collected scrap at some place. Hence, they need access to a node. The areas or stretches where they collect from are located around this node where they temporily keep their other sacks of collected scrap.

The scrap pickers function exactly like the hub-and-spoke model of air travel. They collect scrap by walking around 1–2 km., along a particular stretch, and return to the node to pile up all the collected scrap. They then walk towards another stretch, collect some more scrap, and return to the node. This practice allows them to collect a larger quantity of scrap without having to walk around with the heavy weight of all the collected scrap. After collecting waste from three to four such stretches centred around a node, all the collected scrap is transported to the storage/sorting space using cycle carts or autorickshaws by paying cartage charges. Although this increases their efficiency, access to a node is possible only by cultivating a relationship with other actors operating in that given space—stationary street vendors, shopkeepers, local policemen, private security personnel, local residents, parking fee collectors, or cleaners of public toilets. These actors keep the collected scrap from being appropriated by others in the absence of the scrap collector, when they are collecting in other stretches along the node. Without such a node and an association with the local actors, the scrap picker cannot function effectively and would be forced to either abandon the area of operation or s/he has to hire a cycle rickshaw to move along with the collected scrap. As actors are likely to change over time in the operational areas, scrap pickers must constantly scout for new actors who can continue to play this role.

Scrap picking at dumpsites:
Associations to overcome intense competition

A garbage slum, like the Pirana landfill, is a site of intense competition, segregation, and conflict (Miklian & Birkvad 2016). The authors call it the "most vulnerable space". At the Pirana landfill too, there is intense competition—as acknowledged by the families picking scrap from the site and as observed by the researchers during the visits conducted along with the scrap pickers. At times, the competition is so strong that scrap pickers end up shoving and pushing each other to collect the scrap that they feel has more resale value.

"*Once I place my hand on a particular piece of waste, it is mine. But, this results in fights many a time,*" Vandana-*ben*,a scrap picker at the dumpsite and wife of Somesh-*bhai*, said in an interview with the researchers. Vandana-*ben* further said that she dislikes fighting and lets the others have what they want. The scrap collectors rush in hordes when a

new truck or tractor trolley comes in and empties the waste at the Pirana. This is because there are so many scrap pickers at the same location and all of them want the best piece of waste that emerges when the truck/trolley is emptied. This often results in fights and accidents.

At the time of the field visits, we counted around 45–60 waste pickers on one of the mounds in the span of an hour. On another active mound, which was bigger, in the half hour that we were present there, we observed around 125–185 scrap pickers. They kept moving around the site as the waste got dumped and levelled at different locations on the same mound. Thus, it becomes difficult to even take a simple count of the scrap pickers present in the area at any given point. The scrap pickers work on a rotational basis, often members of the same family alternating with others throughout the day; individual households have their preferred time slots.

Accidents take place because the drivers are unable to see the people who are picking waste behind their vehicle when the trolley is being emptied. In the pushing and shoving, occasionally, it so happens that the vehicle crushes someone's limbs or hits the person. Another reason for accidents is the short time gap that is available between the emptying of the trolley and the levelling of the emptied waste by earth movers/compactors (JCBs[26], as they are locally known). This is done by the municipal staff in order to accommodate the next lot of waste in an organised manner. Without levelling and compacting, it would not be possible for the various heavy vehicles to move in and around the landfill. Every morning, the areas within each mound that are to be used for the day's dumping operations are decided by the municipal staff and the Pirana staff. Once compacted, it becomes difficult to pull out or glean the recyclable stuff from the organic waste. So, the scrap pickers rush in to pick the waste even as the truck/trolley is being emptied. They have a short time, usually between 10–15 minutes, before the compactor moves in to level and compact the dumped waste.

Gujarati versus non-Gujarati schisms

In order to increase their chances of picking up the best possible waste, some of the local/Gujarati scrap pickers seem to have developed a relationship with the truck/tractor drivers, operators of earth movers, and the municipal staff employed at the site. They are treated a little sympathetically and extra time is allowed if such scrap pickers come across a particular load which seems to have more recyclable waste. Even when fights occur, the local staff intervene to support such scrap pickers. Some local scrap pickers also seem to be aware of the timings, i.e., when a particular truck/tractor driver known to them is likely to arrive with the waste at the landfill. They also have access to information about where that particular waste is coming in from. Based on this relationship with the driver and the information about the location, they even follow the truck/tractor to lay claim to the waste as soon as the vehicle reaches the landfill.

It was reported by some local scrap pickers that those scrap pickers who come from outside the state prefer to work more than eight hours a day and work at night as well. Some of them also tend to collect and store waste for shorter durations to get a better price.

Associations formed to facilitate scrap picking from the roadsides

Intense competition is found even in roadside scrap picking, as the availability of waste in this mode tends to fluctuate. Households, which are engaged in this type of waste collection in a particular area since a long time, develop a relationship with the local officials and residents in order to try to territorialise specific areas/routes. They do this to protect their own waste-picking areas from other scrap pickers who may be new to the area. Monitoring of the same is difficult, but, through such relationships, they get to know if other unknown scrap pickers have been

26 J. C. Bamford Excavators Limited, known as JCB locally.

encroaching upon what they consider to be their territory for waste picking. This becomes evident from these conversations that the researchers had and witnessed during the walking interviews:
"*Somebody else seems to have come here yesterday…. Day-before yesterday, I had got a lot of bottles here; such bottles should have been found here even today…. Let us ask the tea seller ahead…or the security guard,*" the srap picker said.
The security guard (of the nearby complex) revealed, "*You did not come for two days. I had seen another woman waste picker yesterday,*" to which the scrap picker replied, "*You should have scared her off!*"

The scrap pickers are so well known to the local gatekeepers of such spaces that in one instance, the night-shift sub-inspectors of the police chowki directed us to the exact location (adjacent to the police chowki) where the scrap pickers kept their empty sacks; there, they asked us wait for the scrap pickers who they knew would arrive shortly. Once the scrap pickers arrived, we observed the camaraderie they shared with the police officials—they even had tea together. The scrap pickers told us that the police kept the sacks safe for them.

However, continued access to a secure residential space near their livelihood space for 2–3 years is a mediating factor that facilitates developing such associations. When the case studies of those with secure residential spaces and those without such spaces are compared, it becomes evident that those roadside scrap pickers who are pavement dwellers—and therefore keep shifting their locations—do not seem to be able to develop such a relationship with either local officials or local residents. Interviews with such scrap pickers revealed that the local residents consider new/unknown scrap pickers to be a nuisance and sometimes accuse them of thievery. Thus, they are unable to territorialise, even to a marginal extent, the routes or areas that they visit for waste collection. This results in occasional fights between the old/established and new scrap pickers, when they chance upon each other during the course of waste collection. However, we observed an interesting phenomenon here: In order to reduce the chances of being considered a nuisance, these pavement dwellers in this mode of scrap picking would return most of the covers of dustbins or any such street furniture, which may have been disturbed by them when looking for recyclable material, back to its original position/condition.

During lean periods, the women continue to collect scrap while the men strive to find alternative sources of livelihood/income—casual labour, driving autorickshaws/vans/cars/tractors, loading/unloading goods, etc.

Effects of privatisation
The *safai kamdars*, who are hired by the local municipal corporation on a contractual or permanent basis to clean and collect waste from designated beats/public spaces, are presently not allowed to glean scrap from the waste they collect (although this used to happen earlier). Interviewees stated that private contractors who have been hired by the municipality to transport the waste do not allow recyclable waste to be picked from the transit vehicles, even if such scrap picking is done by the employees who've been tasked with the loading/unloading of this waste—this is because the munipality pays fees (tipping charges) to these private contractors on the basis of the weight/volume of the waste. Naturally, the private contractors would not want the weight to reduce.

But this was not the case when the waste was being transported by the municipal vehicles. Even now, on the routes where the municipal vehicles are employed, such gleaning takes place in the absence of strict monitoring. Most of the employees in these departments belong to the Dalit communities. Earlier, the roadside scrap pickers would get access to such scrap—as in, they would be allowed to glean waste from transit vehicles—through kinship, but this has now been affected by privatisation. ◆

PART 6
ACCESS TO SORTING AND STORAGE SPACES

The segregation of dry and wet waste does not require much skill or diligence but a lot of labour time. This segregation usually has to happen alongside or immediately after waste collection is done. However, sorting does require some diligence, and there are certain categories of waste that a person involved in sorting must learn to recognise. This learning may take around 2–3 months of time once a person joins the waste-picking activity. The first level of segregating (scrap from waste) and sorting (into broad categories of scrap) happens immediately on collection, i.e., at the very spaces of collection (gated complexes or landfill sites). The second level of finer sorting happens near the spaces available for storage (residential spaces or other public spaces) and at the sale locations (*pithas*).

"We use the space available in the societies, which employ me for cleaning, to segregate the collected scrap and for the first level of segregating and sorting. The space available outside my house is used for the second level of sorting and for the storage of scrap. The rooftops are also used for storage of recyclables if their volume/weight ratio is low," Kalu-*bhai* told the researchers.

The better the sorting, the higher the price of the scrap material. The scrap pickers seem to decide on the extent to which sorting should be done as per the availability of space and the time taken for the same. For instance, Kalu-*bhai* told the researchers that if the milk bags are washed and sold, they would fetch a price of Rs.20 per kg. (from the iterant buyer), while unwashed milk bags can be sold only for Rs.5 per kg., thus indicating that their value appreciates by at least three times[27] after they have been washed. However, Kalu-*bhai*'s household lacks the space, time, and the basic facilities needed to undertake such an activity.

All scrap materials have a saleable value. For instance, tubelights are disposed of in glass waste at the rate of a mere 50 paise or 1 rupee per kg. Things such as batteries are sold as *kalu ramakdu*[28] for Rs.2 per kg. However, each category of scrap needs a minimum threshold volume/quantity for it to be sold to the *pithawallah*. Moreover, some *pithawallahs* do not accept certain kinds of scrap. For example, Kalu-*bhai*'s *pithawallah* does not accept cloth and tubelight, so Kalu-*bhai* usually does not collect these items as he would need to go to a separate *pithawallah* to sell them. Also, such scrap would need to be stored for a longer duration, for this kind of waste is available in low quantities. If such scrap is mixed with other categories of waste, then there are chances of a reduction in value or a rejection of the other scrap categories being sold.

As mentioned above, the scrap picker decides on the extent of sorting that needs to be carried out, based on the volume of scrap available for each category in that particular cycle of collection-storage-sorting. The availability of space for storage

27 One kilogram of unwashed milk bags (fetching Rs.5 per kg.) reduces in weight by 100–200 gm. after the bags are washed and dried as the milk solids and other dirt are washed away—the effective weight of the bags thus reduces to 900 or 800 gm. So, they would be paid Rs.18 or Rs.16 for the same volume/number of plastic packs even though the rate for the same would amount to Rs.20 per kg.

28 The literal translation of the word in Gujrarati is 'black toys'. However, the liternal meaning is not so important as 'black' is meant to convey a negative connotation and *ramakdu* is colloquially used for 'miscellaneous small items'. Put together, *kalu ramakdu* is a typical term used in business dealings to demaracate a particular type of scrap consisting of many small items with undesired/less value.

and the opportunity cost of storing one particular category of scrap versus another category seem to be the deciding factors when it comes to sorting. Sometimes, a particular category of scrap (for example, note book paper) fetching a higher value is sold mixed with other scrap (shredded, loose paper) having a relatively lower value: this is done when the volume of a particular type of waste is too low to be sold as a separate category. The risks associated with storage too determine the scrap picker's decision of whether to sort the waste or sell it as mixed waste even if it would fetch a lower value. These risks could be structural in nature, arising out of a lack of control over their sorting/storage spaces (perhaps a consequence of an ongoing eviction/ cleanliness drive) or due to seasonal factors such as the monsoon and fluctuating prices. Thus, households without access to storage spaces are forced to sell the scrap on a daily basis, thus forcing them to sell scrap even when the market rates are low. Such households derive less income from such scrap as they are also forced to mix the low-value and high-value sub-categories of similar kind of scrap to reach the minimum threshold quantity required to be sold to a *pithawallah*. Those who have access to storage spaces, and thereby have greater volumes for each finely sorted sub-category of scrap per transaction, get higher revenue.

Across the different modes of scrap picking, there seems to be a slight difference in the proportion of time spent on sorting in relation to the time spent on collection: i.e., the proportion of sorting time seems to range from one third to half of the time spent by the scrap picker on scrap picking. The sorting activity is minimum among the itinerant scrap buyers (*raddiwallahs*) as they get already sorted scrap material from their clients. Apart from them, the roadside scrap pickers who move around in pairs with their cycle carts also tend to spend relatively lesser time on sorting compared to all the other scrap pickers. These roadside scrap pickers usually carry separate bags for two to three categories of waste in their carts, so they segregate some of the scrap during collection itself. Moreover, the sorting spaces available to them are usually in or around the *pithas*, which may already have many claimants. Thus, keeping the scrap sorted during collection itself reduces their dependence on such spaces. All the other scrap pickers seem to be spending the same amount of time in sorting collected scrap.

The door-to-door cleaners-cum-waste pickers prefer to use the very premises of the gated complexes to segregate, sort, and store the scrap which is gleaned from the collected waste. However, the storage of sorted scrap material within the premises of gated complexes beyond a certain time or volume poses a challenge to well-established door-to-door cleaners-cum-waste pickers like Kalu-*bhai* too. The residents of the gated complexes are also known to raise objections if they store too much scrap.

"*It is difficult for people from our caste to pick waste if we do not have enough space for storage. Only a few societies, where the residents are sympathetic/ understanding, allow us to sort and store scrap. Residents of other societies do not allow people like us to store scrap. They say, 'We hire you to clean our waste, but you collect and store it here. What do we pay you for?' So, people working in such gated complexes would have to immediately sell whatever they have collected,*" Kalu-*bhai* explained during the interview. Many gated complexes do not allow the cleaners-cum-waste pickers to store the waste in their premises; instead, the residents ask them to take the scrap to their homes or dispose of the same in municipal bins.

"The residents of some societies understand that waste pickers like us can earn a little extra income by selling scrap in this age of inflation, and hence do not impose such restrictions. It is now common knowledge that there is money in any kind of waste that is generated—paper, oil cans, all of them fetch a price. So, over the years, the amount of sellable scrap that we get from garbage has also reduced consider-

ably. The residents themselves sell the stuff directly to raddiwallahs *who come to the complexes with their handcarts,*" Kalu-*bhai said*.

Even when the society/residents of the gated complexes are sympathetic, the waste pickers need to keep negotiating with them to allow storage for at least two to five days, in order to achieve a certain volume to make it saleable. This is why having access to a residential storage space seems to make a difference. At present, the saleable scrap is collected and kept by Kalu-*bhai* in a corner of the premise of each gated complex he works in. No special space has been allocated to him for sorting the waste; however, sometimes, he uses a small cabin—provided for the storage of cleaning equipment—for collecting the sorted scrap. There are constant negotiations with the residents over the storage of saleable scrap within the society's premises.

At times when the waste has been stored outside the gated premises, roadside waste pickers have been reported to take it away. Kalu-*bhai*'s household tries to involve and motivate the security personnel of the gated/non-gated premises to keep an eye on the collected scrap at night-time or when they are away. However, there is no guarantee that the security personnel would indeed do so. Also, since the security personnel change according to shifts, there is a possibility that roadside scrap pickers would still take away the segregated scrap from non-gated complexes.

Similarly, there are other challenges in storing the sorted scrap at or near their residential locations: "*We cannot store all the waste that we collect beyond five to seven days because of the risk of it being damaged by dogs, rats, and cows increases. And who would take care of it all?*" Kalu-*bhai* said. This happens because of the characteristics of storage spaces (adjacent to their residential space) that are partly fenced and partly covered. So, beyond a certain volume, the scrap spills over into the uncovered and unfenced spaces, thereby increasing the risk of being damaged by dogs, rats, and cows.

The other challenge that they need to constantly address is the opposition that comes in from the municipal workers from the AMC's estate department if a lot of scrap is stored outside the scrap picker's house, alongside the edge of the street. The municipal workers have been reported to harass and question them about the amount of scrap collected. Instances of the garbage/anti-eviction vans (of the AMC) picking up their bags of sorted scrap, if such scrap becomes noticeable, have also been reported. Kalu-*bhai* said, *"If they see too many of these bags lying outside our house…they take them away. At times, they have also picked up the cots that we sleep on (usually kept outside our house)…. We would then have to make many trips to the municipal office to collect them back.*"

The roadside scrap pickers seem to face more challenges in getting access to sorting and storage spaces. For access to sorting spaces, scrap pickers in this mode rely entirely on the goodwill of *pitha-wallahs* or gatekeepers/watchmen and the cleaning staff employed at public spaces. These public or semi-public spaces used for sorting and storage comprised the edges of public toilets, spaces under high-tension electric frames, edges or unfrequented corners of parks/playgrounds/lakes, land adjoining railway tracks or canals, vacant government plots in peri-urban areas, edges of cremation grounds and graveyards, private agricultural plots in peri-urban localities, dilapidated garages/workshops in the city's core areas, and abandoned/unused structures in low-income settlements or peri-urban localities.

For this activity to be economically viable, the operational costs involved must be kept minimum. Thus, sorting and storage are conducted in spaces having relatively low usage value, therby ensuring low rental value (if any). Transaction costs can also be non-monetary in nature and involve a continuous struggle to convince the people who control such spaces to allow the waste pickers to use the same. When the usage value of a space is less, the scrap

pickers report that it is easier to convince the space's gatekeepers to allow access. Sometimes, even if such a space is not being used, the usage of the street edges adjacent to this space also needs to be endorsed by the actors controlling this public/private space.

Usually, roadside scrap pickers rely entirely on the goodwill of *pithawallahs* to store the unsorted or sorted waste for 2–3 days. There is mention of spatial arbitrage being charged by the trader/dealer (Gidwani et al. 2011). Only the well-established *pithawallahs* allow such usage of their premises or edges for storage and/or sorting of scrap. This seemed to be a common practice in many large *pithas* in areas such as Ramapir No Tekro and around the Pirana landfill where a cluster of *pithas* exist. This seems to be a strategy of the larger *pithas* to differentiate themesleves from the smaller *pithas*, in order to attract the scrap pickers who do not have access to sorting/storage spaces of their own in the vicinity. This practice also increases the dependence of the scrap pickers on a particular *pithawallah*, even though the rates being paid may be similar to those of the smaller *pithas* in the same locality. Such a practice also reduces the cost of the labour that the *pithawallah* himself would have to employ otherwise to sort the waste.

Scrap pickers working at the city level dumpsite seem to be largely using the Pirana site itself for the sorting of the collected scrap. The scrap pickers here use the open space atop the landfill to sort out the waste. Since a large volume/quantity of waste (which becomes necessary to sell) is available at the Pirana site, many of them do not store the waste but work in shifts to collect enough volume of each kind of scrap material. Many of them also use the streets around the *pithas* in the vicinity to sort the scrap. Only those households which have access to storage spaces at their residential locations (within 1–2 km.) occasionally sort and store the collected scrap there.

Many households at the transit site (Ganesh Nagar) have open spaces around their residences to store the collected scrap. We have come across migrant scrap pickers in Ganesh Nagar who store waste in order to get slightly better prices. Some of them use a part of their residential premises (bamboo shacks) to protect the waste from dew and stray animals. There also seems to be sale as well as renting of spaces based on the people's sense of notional ownership over the said plot or shack[29]. Somesh-*bhai*'s family seems to have bought a plot/structure, adjacent to their residence, from the plot's previous occupant. Thus, access to sorting and storage spaces does not seem to be a major issue for those residing at the transit site.

Trade-offs between storage spaces, scrap volumes, and rates

Across all modes of scrap picking, the scrap material that fetches the highest price is metal, but the availability of metal (particularly brass or copper) is limited in most modes. Such high-value, sorted scrap usually goes to the *pithawallah*. However, except for iron and aluminium, the *raddiwallahs* interviewed for the study too did not seem to be getting much metal from domestic households. They said that domestic households usually sell brass or copper items directly to or exchange them for similar new items at local utensil shops. They also said that there are some *pithas* which specialise in buying metal waste[30].

The roadside and dumpsite waste pickers reported that metal scrap turns up in very low quantities, so they store such waste for a long time (sometimes, upto a year) to accumulate enough quantities to sell the same. As the volume-weight ratio of such scrap is less, requiring smaller storage spaces, it can be stored in the residential premises of scrap-picking households.

29 We do not adequately understand the manner in which such notional claims over ownership have emerged or have been established. But social networks and preferences in allotment of plots by AMC seems to be playing a role in establishing such notional claims recognised by the community of residents.

30 However, we could not include such *pithas* in the present study.

"They store it in small vessels or empty pickle jars…. That becomes their Diwali bonus,[31]" a key person from Paryavan Mitra, who works with scrap pickers at the Smart City site of Nava Vadaj, told the reserachers.

In terms of volume and quantity, plastic and paper seem to be the two largest categories of scrap collected across the different modes. However, the *raddiwallahs* collect a higher volume of paper, whereas all the other waste pickers seem to collect a lesser proportion of paper than different types of plastic. This is also because most forms of plastic fetch a higher value compared to the paper scrap found at dumpsites, streets, and even in unsegregated domestic waste. Paper needs to be dried before it can be sold, when it is found mixed with wet waste. Moreover, shredded paper fetches a lower price compared to whole paper sheets found discarded in office complexes. Thus, wet paper is not collected by scrap pickers who do not have access to storage/drying spaces. Only for the door-to-door cleaners-cum-waste pickers employed in office complexes does the volume of scrap paper equal that of plastic.

Plastic as a scrap category seems to come second, in terms of the rate it fetches, after metal. Different types of plastic fetch different rates. It was reported in key person interviews[32] that there are 18 to 22 finer categories of plastic. However, most scrap pickers sort plastic into four or five broad categories. Out of all these varieties, household plastic items such as chairs, toys, cassettes, etc. seem to be commanding the highest rates (Rs.16–22 per kg.). This is followed by plastic bottles (Rs.10–20 per kg.). The *pithawallahs* usually employ their own labour to further sort these 4–5 varieties of plastic into 9–10 finer categories. As far as the volume to weight ratio is concerned, certain types of paper too seem to be commanding a rate equivalent to plastic once the collected paper is compressed into bales by the *pithawallah*.

"*Our* pithawallah *pays us a particular fixed price, but he further segregates the different types of plastic. Sometimes, we get Rs.20 for every kilogram of household items sold to him and Rs.16–17 for plastic bottles. However, we don't get as many household items as we used to five years ago…. The price of scrap also keeps fluctuating every few months, depending on how much the* pithawallah *gets for the scrap. We get only Rs.10–12 per kg. for plastic bottles now. Cardboard boxes, which used to fetch us Rs.10–12 per kg. a year ago, now fetches us around Rs.7–8 per kg,*" Bhima-*bhai*, a roadside scrap collector, told the researchers.

The *raddiwallah* gets the best rates for all scrap materials, when compared to the other modes of scrap collection, since he gets access to the pre-sorted dry waste which has a relatively high proportion of reusable and recyclable items. On the other hand, the scrap pickers at the Pirana seem to be getting the lowest rates for each broad category of scrap material. This variation in rate seems to be the least for scrap metal. The roadside scrap collectors and the cleaners-cum-scrap pickers get similar rates across different locations. The prices fetched for the scrap collected from the city's core areas seem to be slightly higher than those for similar materials picked from the city's peripheral areas.[33] However, the *pithawallahs* generally acknowledge that they pay a slightly higher price to a known and reliable scrap picker. In fact, many *pithawallahs* do not even buy scrap from unknown scrap pickers.

In order to generate returns to sustain scrap picking, access to storage space becomes crucial when the collection volumes are not large. When a storage space isn't available and the volume of scrap is less, the scrap picker is forced to sell the waste on a daily basis, leading to a higher transaction cost. Moreover, storage space does offer the household a slight measure of security by allowing them to postpone their sale during times when the rates of scrap material are very low.

31 Just as employed staff get a bonus during Diwali, the scrap pickers generate their own bonus by selling such high-value stuff during the Diwali season.

32 Interviews with the staff of Paryavaran Mitra and NEPRA.

33 This needs to be verified using quantitative studies, as the sample sizes of this study are not enough to arrive at conclusive findings in this regard.

The importance of storage spaces to households which collect low volumes of scrap on a daily basis can be gauged by understanding the impact of the loss of such spaces during evictions at the site adjacent to Ishaan Towers. The residential spaces in rented premises are not large enough for these households to store the collected scrap for even one or two days. So, all the households are now forced to sell off the scrap on a daily basis—and this does not yield them good returns. All the households which lost storage spaces because of eviction found it difficult to continue to undertake scrap picking. But those who continued with this profession, as they did not have an alternate source of income, said that their income through scrap picking had reduced by half or three fourths, on account of not being able to store and accumulate the sorted scrap in different scrap categories.

Even at other sites, scrap-picking households in rental housing seem to be unable to store scrap as they lack access to storage spaces.The notion of dirtiness associated with this occupation also seems to make it difficult for the scrap-picking households to convince the owners of pukka houses (even in low-income neighbourhoods where the built conditions do not look clean) to allow them to store scrap. In the city's core areas, getting rental housing that allows the scrap pickers enough space to store scrap is a major challenge. Moreover, it is difficult for such households to stake a claim over spaces around their rental housing as they lack the social network and status required to do so.

Even for the *pithawallahs*, the availability of space and the location's/surrounding's built fabric decides the duration for which they can store the scrap. This further decides the cycle of transactions and the volume of scrap that they are able to trade in, in each transaction. During interviews, key persons[34] have said that *pithawallahs* prefer to have their *pithas* at a larger space near a wide/main road. This allows them to not only store more scrap (enough to fill a large truck) compared to the locations in settlements surrounded by dense built fabric (where physical access is limited due to narrow roads). This further increases their transaction costs as they need to hire smaller vehicles to transport it to the bigger trucks.

Many *pithas* are found on or near wide roads, such that loading scrap on to and unloading scrap from large vehicles becomes possible. *Pithawallahs* in the old city of Ahmedabad (which has narrow bylanes) seem to be operating with limited volumes (100–250 kg.) and with only specific varieties of scrap, since the storage spaces available are smaller and getting large vehicles in to load/unload becomes difficult[35]. Thus, relatively larger spaces allow *pithas* to store more waste and, in turn, reduce their transaction costs. For, they are able to get larger vehicles to undertake the transportation of a particular category of scrap once or twice a week, instead of using smaller vehicles multiple times in the same duration. ◆

34 Key persons from Paryavaran Mitra and Manav Sadhana.
35 This particular information of select *pithas* in the old city of Ahmedabad was collected in a parallel studio exercise, undertaken by students with guidance from the author, at the Faculty of Planning, CEPT University.

PART 7
RESIDENTIAL SPACES AS LIVELIHOOD SPACES

'Working and living in the same space', a concept put to use by waste pickers in Mumbai, is argued to be far more efficient compared to the formal waste management systems' use of space for landfills (Veronesi 2016). The author also states that informal waste management is an adaptive response to the inadequacies of planning-related institutional mechanisms.

Most of the households, which are a part of this case study, were found to be using their residential spaces in some form to sustain their scrap-picking activity. A majority of these households stayed in semi-pukka or *kutcha* structures in informal settlements. The residential spaces of these households ranged from around 40 sq. ft. (single-room houses) to around 280 sq.ft. (for a house comprising two rooms and a kitchen-cum-verandah), but the per capita availability of space seemed to be almost similar across the different households. The households having comparatively larger houses lived in a joint family set-up, with multiple generations (and occasionally, even extended family members) sharing the same residential space. Increasing family sizes possibly brought in better efficiency into their scrap-picking activity as it increased the flexibility and the options available to the households.

The households with access to open spaces around their residential premises seem to be using these spaces for the storage of collected scrap. Such spaces could be unused roadsides, pavements, parks, graveyards, public toilets, electricity transmission frames, etc. Access to variable public spaces seems to give them a sense of security. The extent of space usage could increase or decrease, depending on the need and risk perception. However, only those households having a relatively higher de facto tenure were able to exert some form of social or physical control to stake a claim for the usage of such spaces in the vicinity of their residential units. If we compare the households staying on rent with the ones who have a sense of notional ownership on account of their high de facto tenure, the latter usually have been able to gain control over some storage space in the vicinity. Due to their long stay and their social networks in the area, they have been able to establish a sense of 'territoriality' over these spaces.

Pithas as residential spaces in peri-urban areas of the city

Pithas in the city's periphery often double up as residential spaces. In a number of cases, when the family stays in the *pitha*, the husband and wife jointly manage this entreprise. This is only possible because rents are relatively low and the *pithawallahs* can afford to take larger plots/shacks in the periphery on rent. Often, the *pithas* functioning from tin-roof shacks are attached to semi-pukka buildings where the family of the *pithawallah* stays. This seems to be a strategy to save on rent which, otherwise, the *pithawallah* would have to pay at two places in the city. Also, this allows the *pithawallah* a fair amount of flexibility in terms of engaging paid labour, as family labour can be substituted for the same.

There are *pithas* where the employed staff or extended family members stay, while the *pithawallah* lives in a separate residential space elsewhere in the city. Such an arrangement seems to have been made for the purpose of saving on rents, which, otherwise, would have to be paid by the staff; also, in lieu of this, they can be paid relatively lower wages. This arrangement

also affords security to the stored scrap if the *pitha* is located at a relatively secluded site, surrounded by vacant plots or open farmland in peri-urban areas. In the core of the city, we have usually come across *pithas* in *gamtal*[36] zones and informal settlements, where the rentals are low. But these don't seem to be used as residental spaces.

Access to residential spaces and tenure status

The level of tenure security associated with their residential spaces influences the various livelihood strategies of the households involved in scrap picking. Some of the households have better de facto tenure compared to that of others, on account of possessing documents that lend them some form of legitimacy/recognition from the municipality. However, the existence of such documents does not always lead to better tenure security if the household/group lacks the ability to reinforce their claims. The ones who have been able to stay in the same settlement for a long time have been able to procure these documents through contacts with those from the bottom rungs of the bureaucracy hierarchy or through their social networks. Moreover, it seems to be relatively easier to get such documents as well as a place to stay in the peri-urban areas than in the city's core areas.

The perceived tenure security was more prevalent in recognised slums/informal settlements compared to unrecognised informal settlements. The de facto tenure security seems to increase with the duration of stay and this, in turn, also enhances the capability of the households to diversify into different forms of scrap picking. The households with relatively high tenure security had also resorted to casual labour in the early stages of having taken up this occupation.

In comparison with the households staying on rent (or those with no de facto tenure security), those with a high de facto tenure security have, over time, built social links and client-patron relationships that are necessary to turn scrap picking into something more than just a survival strategy. However, such households have struggled for two to three decades to gradually strengthen their tenure status, even in recognised slums. Ironically, the households staying at the transit site at Ganesh Nagar seem to be the ones with the highest level of perceived tenure security, as they were assured that eviction from the site was unlikely. Such perceived tenure security seems to be missing even in some of the recognised slums.

Kalu-*bhai*'s family claims to be paying property taxes to the municipality[37] and they even have an electricity connection in his name. They have a ration card[38], Aadhaar numbers, and voter's identity cards as well. There is a strong de facto tenure security that they enjoy because these documents are available and also because of his links with the local officials. Initially, when he was staying at the Ramdev Nagar slum (5–6 km. away from his current residence), he did not have any of these documents. He has been able to get these documents on account of the contacts he has made with those from the bottom rungs of the bureaucracy hierarchy of the then Gram Panchayat, where he had been employed as a temporary *safai kamdar*. Janvikas, a rights-based NGO, also helped them to procure these documents.

In fact, they have been able to get access to the current location only because the sarpanch and some of the lower-level bureaucracy members were supportive and gave tacit approval to Kalu-*bhai*'s family to stay there. Kalu-*bhai* got access to his present residential space after struggling for 7–8 years in the city. He moved to this new location from Ramdev Nagar, where his in-laws have had a house since two

36 *Gamtal* zones are land-use zones, demarcated so by planning authorities (AUDA or AMC) as these are areas of original village/rural settlements that have been in existence from before the planned urban developments were initiated or the municipal authority areas were demarcated. These are unplanned, organically developed settlements with dense built fabric and are also known as *laldora*, *gaonthan*, etc. in other states of India. Urban planning interventions usually happen around such demarcated *gamtals* and these continue to exist as organically developed pockets in the middle of planned areas.

37 This could not be verified or triangulated.

38 A card instituted by the Government of India for the Public Distribution System; it is often used for establishing proof of address.

decades, because he was unable to afford the rent and the electricity and water charges there (levied by private providers). Once he started working as a temporary *safai kamdar* with the panchayat, he requested the sarpanch to suggest a place where he could live, as Ramdev Nagar was relatively far from his beat and he had to travel quite a distance every day. The sarpanch directed him to a vacant patch of land and said, "*You can live here; nobody will tell you anything, and if anybody tells you anything, then tell me about it,*" Kalu-*bhai* said. Thereafter, he put up a shack on that land, which he went on to build incrementally over the years. His familyspent the initial 10–12 years in a *kutcha* hut. Over time, the builder he worked for helped him get sand, bricks, and cement to construct a semi-pukka house. It took Kalu-*bhai* two years of hard labour to build the house that they live in at present—a feat he accomplished around six years ago. However, till date, he does not know who the land, on which his house now stands, belongs to.

The other families living at the same site have not been able to hold on to the in situ tenure. Around 100–150 shacks across the road had been demolished a decade ago for road widening. The residents, with assistance from activists, approached the then chairman of the Ahmedabad Urban Development Authority (AUDA) and the sarpanch and got themselves resettled in Vejalpur[39]. However, all the households could not get themselves resettled in that area on account of not having certain required documents.Kalu-*bhai*'s family did not get a house either, as the municipality did not evict anyone from their side of the road. Initially, their house was built right up to the edge of the road; but, they had to give up parts of the front portion of the house that faced the street during the road widening process. This ended up reducing the space available to them to store scrap material.

39 Vejalpur is an area located in the southwest of Ahmedabad, around 7–8 km. from the site at which these families were residing. At that time, Vejalpur used to be the periphery of the city.

Eviction, a constant

"Squatters...are able to establish territorial claims in the unmapped city. These claims remained dependent on the arbitrary and fickle practices of the state," (Roy 2009). The making of such claims by scrap pickers and the fickleness of the state become evident in the instances of eviction, as reported in a number of interviews. This has been a constant phenomenon across most of the sites where the households studied for this paper lived. Most households, at some point in their life, have faced eviction or have mentioned that their neighbours/relatives at the site have faced the same. Vandana-*ben* and Sailesh-*bhai*'s household (dumpsite scrap pickers living at the transit site at Ganesh Nagar) was relocated to the Ganesh Nagar transit camp when their settlement was evicted from the Khodiyar Nagar *chowkdi* (crossroad) due to flyover construction. They had been living there for 12–13 years and have all the documents for proof of residence. They were initially allotted a plot over which they had constructed a semi-pukka structure over the years. Around two years ago, they were allotted a house under the BSUP scheme[40] at the Vasna site, but were unable to stay at the new site due to safety concerns for their adolescent daughters. Moerover, the low volume of scrap available in the vicinity of the BSUP site also made the shift back to Ganesh Nagar all the more necessary.

Description of households and eviction in an informal settlement

In January 2016, 56 families occupying the plot of land adjacent to Ishaan Towers near Prerna Tirth Derasar in the city were evicted. Most of them (nearly 34) are reported[41] to be Dalit families with extended relations who were all involved in different modes of scrap picking. Out of the remaining families, some were Adivasis and Waghris who worked

40 Basic Services to Urban Poor (BSUP) was one of the schemes under the erstwhile Jawaharlal Nehru National Urban Renewal Mission (JNNURM) to fund housing for the economically weaker sections and low-income groups across Indian cities. This was later merged with the Pradhan Mantri Awas Yojana (PMAY). There are a number of sites where BSUP housing is built in the city; one of these sites is in Vasna, around 7 km. from the Ganesh Nagar transit site.

41 Key person interviews with Manav Garima and residents of the site.

as casual labour in construction or other activities. Of the Dalit households, members from around 5–7 families were working with the municipality as cleaners; other families worked as cleaners-cum-waste collectors or as roadside scrap pickers in the local area; alongside this, some families were also involved in the cleaning of gutters and had undertaken casual labour in the vicinity.

Karman-*bhai*'s family is one of the oldest settlers in that particular site. Karman-*bhai*, a door-to-door cleaner-cum-waste collector, migrated to the city 25 years ago from his village due to non-availability of farmwork. He and his family first moved to Dholka town[42] and lived there for two years but could not settle there. Since they had many relatives in Ahmedabad, they decided to move to the city. They first lived for three years on a plot which was a little distance away behind Ishaan Towers. This area then was designated as 'rural' under the jurisdiction of the gram panchayat[43] and was outside the AMC limits. "*It was all waste land…. There were jungles and bushes and it would be difficult to pass through the area. One would feel scared there. The land had no value,*" Karman-*bhai* said. At the location, the family was staying in a shack built with *kutcha* materials such as bamboo, cow dung, etc. They would have to get water from the surrounding societies. Sometimes, a considerate operator of a government water tanker would give them some water. There were around 40–45 huts in that settlement. The huts were demoslished by AUDA after three to four years; the resident families were informed that some construction was going to take place on the said plot. However, it remains an empty, open plot even today.

This forced some families such as Karman-*bhai*'s, who are engaged in cleaning-cum-scrap picking to shift to the plot adjacent to Ishaan Towers in the year 2000–2001. At that time, access to the plot was controlled by a Bharwad[44] who stayed there and acted as its caretaker for the owner of the plot, who was a Thakor. The presence of two or three Dalit families at the site, attracted their kin such as Karman-*bhai* to the site too. Gradually, the families of many extended relatives clustered around the present site. However, during this phase, they faced a number of challenges in getting access to basic services such as water, sanitation, and electricity.

Supposedly, an ex-MLA lived in a bungalow behind this large plot. She frequently complained to the municipality about the squatters—because they used to defecate in the open—saying that the environment in her vicinity was getting unhygienic. However, from the squatters' perspective, they did not have a choice, because there were no toilets. So, they got a portable toilet installed with help from some CSR entities, but this could not function without water. "*At one point of time, officials from the municipality had told us,'You can stay here if you want to, but just ensure that no other squatters come here anymore.' So, we took good care of the place and did not allow any new person to live here, else this place would have had over 500 families by now,*" Baka-*bhai*, a cleaner-cum-waste picker, told the researchers. Since then, they had restricted more number of households from squatting on the plot[45].

Under the Town Planning Scheme (TPS)[46], the plot occupied by Karman-*bhai* and other families is currently marked as "saleable for residential" purpose by AUDA. So, it seems that the private owner(s) was/were allotted land/compensation by the government in exchange for this plot. "*Earlier, the land was not on the government's maps; only in the past one or*

42 Dholka is a town situated around 40 km. to the southwest of Ahmedabad city.
43 Gram panchayat is the lowest tier of governance in the panchayat raj system followed in rural areas just as the municipality or municipal corporation is in urban areas.
44 Bharwad is a pastoral community that has been recognised as a Scheduled Tribe by many districts of Gujarat.
45 The plot had a lot of open space even when the researchers visited it during the initial reconnaissance visits.
46 The Town Planning Scheme (TPS) is a statutory planning instrument in the state of Gujarat and is a land-pooling mechanism used for the local-/area-level planning and the provision of public amenities, primarily in greenfield sites.

two years was it seen in the municipality's maps. One portion of the land belonged to a Patel. He was also given land somewhere else," Karman-*bhai* said. This means that earlier, the plot was not marked as government property. The residents seem to be caught in the local politics. Through interactions with those working at the bottom rungs of the bureaucratic hierarchy and local political representatives, they have come to understand the details regarding the change in ownership. "*We are unclear about how much of the land that we were occupying was* kaapat ni jameen[47]. *If we knew this, we could have requested the municipality to evict people from that portion of the land and let the others stay. A portion of the land had been allotted for the construction of a road, which they had cordoned off so that we could not use it*," Karman-*bhai* elaborated. These evicted residents are agitated and have approached the court, seeking a residential house/plot in lieu of their *kutcha* houses built on this land. Around four attempts had been made earlier to evict them, but they were able to leverage political and judicial pressure to stall the eviction processes, with the help of activists.

"*The reason for all that happened to us is politics. In 2013, a political party came to our aid with a group of 40 persons when our huts were broken down for the first time. This had also been covered by newspapers. The opposition's representatives had also come. They carried out some negotiations at their level and allowed us to stay here. They monetarily helped people whose huts had been broken and provided other kinds of assistance too. Workers from the party lived with us for two days and rebuilt the huts. Other community-based organisations also got involved. They have been telling us for a long time to gather proof about our residential status on the land, but we could not do the same. It is only now that the land has become immensely valuable and it has caught the attention of the municipality. Otherwise, nobody would even glance at us since 2001, the time we began living here. We have documents but those are not the ones listed by the municipality for recognition as slum dwellers. Some of us had a few documents earlier, but we lost everything when our homes were demolished for the first time. We got new documents made, but now these are not valid as the government needs proof of residence from before 2010. We are not complaining about being evicted, but if an alternate provision had been made for us before eviction, we would not be facing such hardship. So many people have to spend more than half their incomes on rent now. Those who can't afford it lie outside in the open. The government could have allowed us to live here at least till they identified a separate site*," Karman-*bhai* told the researchers. He shifted to rented premises in a low-income neighbourhood in Vejalpur, which is around 5–6 km. away.

Currently, three families still live on the pavement of the plot that they were evicted from, because they have no place to go to. The government cordoned off the plot and even deployed a security guard to monitor the area, so that the evicted residents don't return to it. Mani-*ben* and her husband (an aged but childless couple) are one such household living along the roadside adjacent to the plot. Since they are destitute and without any relatives in the city, they have no one to even temporarily offer them a space to stay. Mani-*ben*'s husband, Kanu-*bhai*, worked with the municipality in the sewer-cleaning section. Years of entering the city's gutters and inhaling toxic gas took a toll on his health; he is now unable to even stand for a few minutes, let alone work. His wife, the sole earning member, supports the family by picking scrap from the streets. They cannot afford to live in any place on rent as Mani-*ben*'s earnings are minimal. Kanu-*bhai* has never received any form of compensation from the government. They wish to approach the court to get compensation, but are unable to afford to do so.

47 *Kaapat ni Jameen* is that portion of land which is supposed to be deducted under the land-pooling mechanism for contribution towards public land/purposes during the implementation of the TPS.

Every evening, Mani-*ben* and Manjula-*ben*[48] visit the societies around the plot to collect leftover food (*valu*)[49]. "*Some arrangements will have to be made for me and my husband before the monsoon. But, we are not in a position to pay the rent, maintenance, and the electricity bill at present. In the worst-case scenario, we will return to our village*," Mani-*ben*, who picks scrap from roadsides, said during an interview. Although night shelters may seem like an option, they prefer not to live at such shelters because they have some possessions, to store which they will require space—vessels, stoves, and some minor silver jewellery.

The direct impact of eviction for those who have had to consequently move into rented places has been on their livelihood. Earlier, all the livelihood spaces were close to the plot on which they lived; but now, they have to travel 5–7 km., spending around Rs.20 one way on transport. At times, many of the families prefer to walk the entire distance; since they stay in Vejalpur, one-way travel on foot takes them around an hour and a half. Before eviction, most households at the site used to collect the waste, segregate it, and store it in the open areas near their residential premises for a week or ten days before selling it. However, most families which do not have the privilege of such a space near them now have stopped picking scrap—as a result, in a number of cases, the household income seems to have reduced by almost half. Thus, in this mode of scrap picking, access to storage locations near the *pithas* or their places of collection is crucial; without this facility, scrap picking cannot be undertaken due to the low volumes of scrap generated.

48 Manjula-*ben* is a Dalit door-to-door cleaner-cum-waste picker who provides these services in gated and non-gated housing societies in the locality. She too used to reside at the plot adjacent to Ishaan Towers before getting evicted from the site recently.

49 *Valu* is a traditional practice under a client-patron kind of arrangement whereby the leftover food in middle-income households is given away in the late evening/night to the cleaners-cum-waste pickers. The cleaners-cum-waste pickers bring their own vessels in which the leftover food of the day is given by the middle-income households, particularly by communities residing in non-gated societies. This system is known as '*valu levanu*' in Gujarati.

Pavement dwellers' strategies to survive eviction/ anti-encroachment drives

Samita-*ben* (currently a pavement dweller),who picks scrap from roadsides, used to live in a semi-pukka structure in a slum in the Vastrapur area, near the Indian Institute of Management (IIM) overbridge. As Vastrapur[50] Lake (before its redevelopment as a beautified city-level recreational space) was used earlier as a dumpsite, many scrap pickers had clustered around the slum which was close to IIM's new campus. Initially, they were evicted as the new campus of IIM was being developed on this plot. So, the scrap pickers shifted to the roadside adjacent to the plot. They were evicted two more times from the area due to the construction of the overbridge and for widening the road for the Bus Rapid Transit System (BRTS). Some of these families then shifted to an adjacent open plot about 700–800 metres away that used to be a cremation ground, near the presently situated posh Alpha One mall near Vastrapur Lake.

Around four years ago, 50 families were evicted at night-time by the police from this site. Ever since, they have been pavement dwellers. None of them has received any form of compensation or rehabilitation, and all of them have dispersed to different locations: some of them are still in this locality, while others now live in Thaltej, Bodakdev, Makarba, Ambli, and Bopal. All of them cannot stay together at one place. If the police sees too many of them squatting at one location along the edges of the road or under flyovers, they might evict them again. Samita-*ben* herself has changed 5–6 locations as a pavement dweller. "*When the* dabanwalas *(anti-encroachment officials) come, we take our belongings and hide temporarily.... They accuse us of making the city dirty. They take away our belongings…even the scrap we have collected to sell. When we were staying at the slum site, the police would harass us: the menfolk, asleep outside our homes, would be woken up by the police and arrested*

50 The Vastrapur area, which is presently a part of the city's core region and is one of the posh localities, was then considered to be the periphery of the city.

3–4 times[51] *for no reason; they would be released after a few days of protest. We have documents such as the ration card, voting card, BPL card*[52]*, Aadhaar card, some of which we got with the help of a local NGO [Rehthaan Adhikar Jumbesh]*[53]," Samita-*ben* told the researchers. A pavement dweller, she currently resides with her family near the Thaltej locality and picks scrap from the roadsides; she belongs to non-Dalit Bharthari caste.

These narratives show that the struggle is not just for space, but also for legality. A sense of 'uncleanness' seems to be associated with the activity and a sense of 'illegality' with the space inhabited by the scrap pickers. As a peri-urban area urbanises, it leads to expectations of 'looking clean', achieved through the sanitisation of spaces. Among the pavement dwellers, the struggle for residential spaces manifests as a strategy to remain invisible to the local gatekeepers (officials and important local residents having a clout) who control the use of such public spaces. Even in the evicted settlement adjacent to Ishaan Towers, the scrap pickers initially stayed closer to the bungalow of a politically influential person—which was on an adjoining plot. However, due to complaints by the person, they had to shift to a relatively far location within the site, in order to not live at an easily noticeable location and avoid inconveniencing the said office bearer. Both the above instances are unlike what had happened in the case of Kalu-*bhai*, for these people seem to have lacked the collective strength and/or the links with officials to reinforce their claims.

Another strategy employed by scrap pickers is to constantly be ready to move quickly, so that their belongings or collected scrap are not confiscated. To be able to do this, they collect less scrap despite the availability of plenty of space in the vicinity. Such mobility is possible on account of their meagre belongings and the availability of cycle carts within a family—Samita-*ben*'s household, for example, owns two such carts.

During the course of an interview with one of the leaders of these evictees (who has represented the case of evictees in a number of forums and who stays in a peri-urban locality), it was observed that a call was received from the leader's adolescent son—stating that the anti-eviction squad had arrived: the boy asked him, "*How am I supposed to move all the stuff without the cycle rickshaw being around?*" The leader, after checking if an adult from the other family living on the same pavement was present to help, suggested to his son that he should move their stuff to a nearby private plot with whose owners they had cultivated a good relationship. Later, we were informed that they had cultivated a mutually symbiotic relationship with these private land owners in the peri-urban locality. They, along with 2–3 families, stayed on the pavement adjacent to the open plot and prevented it from being encroached upon by any other group. In return, the land owners allowed them to occupy the plot temporarily for short durations, whenever such situations arose. Although the leader himself is a bamboo worker (he makes bamboo curtains), the same behaviour of seeking help from plot owners was reported in discussions with others who picked scrap from the roadsides and resided on pavements in peri-urban locations.

Being dispersed is a strategy that seems to favour their scrap-collection activity. The competition for picking from the same spaces reduces and this applies to the competition for storage and segregation spaces as well. While their physical proximity has reduced post eviction, their network of information sharing continues to be as functional as before, even across multiple locations and caste boundaries. For interviews, Samita-*ben* introduced us to many

51 In 5–6 years.
52 The BPL Card indicates a 'below poverty line' status for households and entitles them to receive subdisied food items such as wheat and rice under the food distribution system. This card, issued by the local administration/ collectorate, is also considered to be a proof of address for all the members of the household.
53 An advocacy-based NGO working for the cause of housing rights in Ahmedabad.

other scrap pickers—her relatives as well as unrelated fellow scrap pickers (Dalits)—who used to stay at the Vastrapur site before eviction. They seemed to be aware of each other's day-to-day activities and conditions.

Another strategy seems to be to cultivate good relations with lower-level staff or other local residents and depend on their good graces for overcoming eviction drives. Some of the anti-encroachment officials had apparently told Samita-*ben* and her family when they were searching for space to squat, "*Move towards the highway; do not live 'inside' the city*". Ever since, they have been living near the Thaltej area[54], without much harassment from the anti-encroachment officials. "*Only when a famous politician or government officer visits or passes by, we are asked to temporarily vacate this area,*" Samita-*ben* said. They are informed in advance (by the municipality cleaners or the lower-level staff employed with eviction trucks[55]) about when and around what time the visiting politician is expected to pass by the area, so that they can vacate accordingly.

Night shelters are supposed to take care of pavement dwellers, but thisparticular mechanism ignores their need for livelihood spaces and private family spaces. At the night shelters,there is no place for them to store their belongings. Those families who are involved in scrap picking cannot live inside night shelters because neither willtheybe allowed to store the scrap that they have gathered throughout the day, nor isthere any space for them to segregate the same. Such households would therefore be forced to sell the scrap on a daily basis. Thisis what is done by the roadside scrap pickers found in the city's core areas.

54 The Thaltej area, until now, has been considered to be the edge of the built fabric of the city. However, fast-paced building construction has now started in and beyond Thaltej; once the area beyond develops, there may be resistance to the presence of pavement dwellers even in the current location which is along the highway, for the area is expected to develop further and cut through the built fabric of the city in a couple of years.

55 Eviction trucks are operated by the AMC for their anti-eviction drives to confiscate the belongings of the evicted households or informal business establishments.

Another challenge faced by the interviewed households was access to basic services. Households which now have access to water supply, sanitation, and electricity in their residential units have got these only after a sustained struggle over 7–10 years, through the employment of repeated strategies to force municipal authorities to extend such services (albeit temporary). The Ganesh Nagar transit site was found to be the worst, in terms of access to such basic services. In Ganesh Nagar, the resident scrap pickers have no access to individual water connections or toilets. There are common standpipes and many households have drawn a temporary water connection by tapping into the trunk line supplying water to the community toilet in the area. The community toilet[56] has been dysfunctional since a long time due to choking of the main sewerage; in spite of numerous complaints, not many efforts have been made to repair it. The sewerage overflows onto the unpaved street, often contaminating the nearby water connections. This situation results in a lot of fights among the local community as individual households try to divert the overflowing sewage water away from their shacks/semi-pukka structures.

Relation between residential and livelihood spaces

The door-to-door cleaners-cum-waste pickers operate within a radius of 2–3 km. of their residential premises, particularly if they have storage spaces in or around. The transportation of collected scrap becomes difficult and their transaction cost increases if they decide to reside far from the places where they provide the cleaning-cum-waste-collection service. There are households which provide these services to places despite residing at a distance of 7–8 km., however their efficiency in and earnings from scrap picking are considerably reduced. The household of Dina-*ben* (who is Kalu-*bhai*'s daughter) is one such family, even if they seem to be an exception. Every morning, Dina-*ben* comes from Lakhudi, which is

56 During the field visit, the community toilet was under repair by the AMC after having received numerous complaints from the residents.

7–8 km. away from her place of work in Bodakdev. She is able to work as a cleaner-cum-waste picker as well as undertake scrap picking efficiently, away from her own residential space, due to the access she has to her father's residential space in Bodakdev—the locality where she works.

Those cleaning-cum-waste-picking households which have no access to storage spaces in the areas where they primarily operate do not engage in scrap picking or they try to operate in multiple gated complexes using connections from their extended family. However, the short window of time in the mornings, within which the waste from most gated complexes needs to be collected, limits their scope of operation. Without segregating the wet waste from the scrap, it does not make economic sense to transport all the collected waste to the sorting/selling location. Moreover, the volume of scrap that door-to-door cleaning-cum-waste collection generates per day is relatively low (2–5 kg. per gated complex in low-rise apartments) compared to an itinerant scrap buyer (10–25 kg. from similar low-rise apartments). It does not generate enough returns to be able to transport the entire collected scrap on a daily basis to their residential spaces for sorting and storing, if their houses are at faraway locations, due to the cost of such transportation.

The households providing such services to large office complexes in the commercial areas of the city, though, seem to be generating enough volumes for them to be able to do this. All such households have their own cycle carts or engage the services of a known cycle-cart owner/operator who transports the scrap for a fee. Cycle carts and handcarts are the two chief non-motorised kinds of transport used by the waste pickers across all modes to move the sorted/unsorted waste. A common kind of motorised transport, used as an alternative, is the autorickshaw.

Unlike the door-to-door cleaners, those who pick scrap from the roadsides operate across larger distances from their residential spaces. A large number of households residing[57] in the Ramapir No Tekro settlement (the proposed Smart City site), belonging to different communities and castes, seem to be involved in scrap collection from the roadsides. These households which undertake scrap picking (without having any cycle-cart ownership) travel around 3–5 km. from their residences in order to collect scrap. Many of these households visit the commercial areas of the city to collect waste and they seem to have developed niche client-patron relationships at these sites, to have access to recyclable scrap. Most scrap pickers hire cycle carts which charge around Rs.20–50 per trip for transporting the waste from collection nodes to the sorting spaces/*pithas*. Those who own cycle carts pick scrap from the roadsides of places that are even 12–15 km. away from their residential locations: the ones who use cycle carts usually work in pairs as this helps them pick waste more efficiently. One of them cycles, while the other walks alongside the cart, continuously scanning their surroundings and adding the collected waste to the cart.

However, staying in rental accommodation seems to limit the ability to own cycle carts. In the case of those evicted from near Ishaan Towers, it was found that parking space for their carts was an issue that many of them faced when looking for rental residential spaces. Due to a lack of space to park their vehicles at night, many of them were forced to either look for a rental space in the city's outskirts or had to sell or give their carts away.

At the landfill site, most of the people seem to be using the services of the private tractors, which come to deposit the city's waste there, to transport their segregated waste to the sorting sites or *pithas*. Many

57 Due to a high number of scrap pickers found at this site, a number of *pithas* seem to have come up here. So, while it is a residential space, it also acts as a storage, sorting, and selling space, in close proximity to one another. If scrap pickers do not have storage spaces in their own residential premises, then they find some space nearby or have arrangements with the *pithawallahs*.

of these scrap pickers use the empty truck or tractor to transport the collected waste to that particular *pitha* where they intend to sell the waste. Sometimes, this service is provided by the truck/tractor drivers for a fee; at other times, if the driver is known or is benevolent by nature, it is a free service. Usually, Rs.25–50 is charged for such a service, depending on the distance of the travel. Most of the *pithas*, where these people sell the segregated stuff, are located around 2–3 km. from the landfill. Some of them use cycle carts, but getting these into the landfill site becomes difficult, so they choose to use the cycle carts (if necessary) only once the segregated waste is brought down from the landfill site.

Mobility becomes an important consideration for scrap pickers' survival in the city as it allows them to keep shifting and quickly adapt to the loss of space or overcome the risks arising due to the inability to exert control over residential/livelihood spaces. ◆

PART 8
EARNINGS AND CREDIT ACROSS DIFFERENT MODES

"After so many years, the family has begun to earn well. Kalu-*bhai*'s family's earnings from cleaning-cum-waste collection may be around Rs.30,000–35,000 per month[58]," Ilesh-*bhai*, Kalu-*bhai*'s son-in-law, who is also a cleaner-cum-waste picker, told the researchers.

Since there are four family members, plus two extended family members and four hired labourers[59], involved in the cleaning-cum-waste-picking services provided to 200 offices, 60 flats, and 40 bungalows across five gated complexes, a major part of the household income comes from the provision of cleaning services. Each person seems to earn around Rs.5,000–6,000 per month from such services. The share of the monthly income that comes from picking scrap from the collected waste varies from Rs.1,500–2,500 per person, depending on the season. However, Kalu-*bhai*'s family seems to be among the better-off families. None of the other families involved in this profession had household incomes comparable to theirs. The *raddiwallahs* and door-to-door cleaners-cum-waste pickers have relatively higher household incomes compared to those from the other two modes of scrap picking.

Sole reliance on roadside scrap picking as a livelihood activity does not allow incomes beyond subsistence levels. Picking scrap from roadsides and dumpsters along the roads is fraught with risk as the quantity and composition of scrap available to a household fluctuate drastically on a daily basis. There is no assurance of stability in daily incomes. The nature of the work is similar to casual labour in certain ways. But, unlike casual labour (in which there may be days with no income at all), some quantity of scrap (fetching Rs.30–80 per person) is always available in roadside scrap picking, making it possible for the person to feed himself/herself.[60]

The above situation is borne out by the fact that out of the people evicted from the informal colony near Ishaan Towers, only those households having multiple sources of income—either on account of having multiple members from the family involved in scrap picking or due to diversified livelihoods—could somehow afford to shift to rental housing in slums/low-income neighbourhoods within the city. On the other hand, those households which had a single member engaged solely in roadside scrap picking had no savings, even to make the part payment of the deposit amount necessary to procure rental houses. In order to reduce such a risk, the households relying solely on scrap picking for a livelihood are now ensuring that more than one family member takes up this activity. This is also why most of the Dalit households seek to have at least a part of their household earnings as assured income by being engaged in the provision of cleaning-cum-waste-picking services (with or without scrap picking)—be it at gated complexes, as municipal services, or for private contractors.

58 Although Khoda-bhai said this was a large estimate, he did not deny the figure. He was not forthcoming about his share of the earnings received from the provision of services in different gated complexes compared to the share of his extended family and the wages of hired help.

59 Labourers belong to the same caste and are known to the family through friends and relatives. Their wages are similar to the daily-wage rate paid to casual labourers on a pro rata basis. They are assured of work every day, but are not hired for the entire day—only for 3–4 hours in the morning—and are paid a weekly or bimonthly wage. The family members seem to be paid a share in the profits.

60 An exception to this is the lean season of monsoon when dry waste is not easily available.

The case of Bhima-*bhai*, a Dalit who lives in the city's core area but has undertaken roadside scrap picking in the city's periphery, further elaborates on this aspect. Bhima-*bhai*'s household earns around Rs.20,000–22,000 per month and is not as well-off as Kalu-*bhai*'s household. However, it seems to be better-off than all other households engaged in roadside scrap picking. Bhima-*bhai* began to undertake this activity more than two decades ago. Over time, his household seems to have consciously decided to mix two different modes of scrap picking: while the women in the family (Bhima-*bhai*'s wife and daughter-in-law) work as cleaners-cum-waste pickers in gated complexes, his two sons undertake cleaning-cum-waste picking for hospitals or other commercial contractors. Even though the sons are not allowed to glean scrap for these contractors/institutions, they continue to be engaged in the jobs as it ensures them an assured source of income. The supplemental income comes from Bhima-*bhai* who goes around in a cycle cart collecting scrap from far-off peripheral areas in the city and transports the same to be stored and sorted at street spaces near his residential premises in the city's core area. On account of the flexibility in the cleaning-cum-waste-picking engagement, the women of the household spend their surplus/spare time helping out in the sorting activity of the waste collected and stored by Bhima-*bhai*. Thus, the assurance of a stable income is complemented by Bhima-*bhai*'s income from scrap picking—which ranges from Rs.200–300 per day and is more than what most other roadside waste pickers earn. Thus, taking up waste collection through two different modes allows them to have steady incomes, even as they are able to maximise their returns from the scrap-picking activity that has been built over two decades. This is especially possible because Bhima-*bhai* has access to a storage space and also has built a long-term association (since more than a decade) with his *pithawallah*, a Marwari who had been helped by Bhima-*bhai* in his earlier days to pick up the ropes of the trade and set up his *pitha*.

The assurance of scrap always being available also applies to households picking waste from the Pirana dumpsite. This site provides an assured income (of around Rs.100–180 per person/day), but the income is not enough for households to rise above subsistence levels. For households picking scrap from the Pirana dumpsite, the cause of subsistence levels of income is different. Although the Pirana dumpsite provides assured quantities of scrap daily, the quality of scrap is such that it tends to fetch a lower price[61] compared to that of the scrap collected from homes or roadsides. Moreover, scrap picking at the Pirana dumpsite is particularly fraught with a greater risk for the individuals involved due to the higher incidence of diseases and accidents. This makes the scrap pickers working at the site lose a number of productive days, consequently resulting in a loss of household savings which continue to remain low.

Thus, on relative comparison, scrap picking combined with cleaning-cum-waste-picking services provided to housing societies or individual households in gated complexes seems more lucrative, for it fetches better incomes: this is because of the non-fluctuating part of the household income that provides them a measure of security. This, in turn, allows such households to plan and organise their expenses. Moreover, the quality of scrap which the cleaners-cum-waste pickers collect is relatively better as they are the first to glean the unsegregated waste thrown out every day by the homes or commercial units. Across all cases studies, we found that those relying solely on scrap picking from roadsides or the Pirana dumpsite did not seem to be as stable as those picking waste from gated complexes. Their ability to survive for long in the said location and the activity seems limited.

61 The lower price quoted at this location could also be because of a large number of waste pickers and *pithas* clustering around the dumpsite, thereby creating a slight oversupply which is likely to suppress the prices/rates. However, without a quantitative exploration, this cannot be verified.

Among those picking waste from gated colonies, there is a preference to provide such services to high-rise societies rather than complexes comprising bungalows or row houses as the volume of waste generated seems to be greater in high-rises due to higher population density within the smaller spaces.

We had assumed that waste-picking households would prefer to provide services to the bungalow typology as these are generally occupied by higher-income groups, whose consumption patterns are such that they would result in greater volumes of waste and high-value recyclables.[62] So, we were surprised to find that our hypothesis did not hold true. The bungalow and row houses, even if occupied by high-income households, do not generate high-value recyclables in the daily waste. These households have more storage space, so they store the high-value waste and themselves sell it to the *kabadiwallah*. Moreover, they employ a larger number of domestic and maintenance staff, who get the first chance to glean any unwanted stuff that is thrown out by the high-income households. This is not the case with middle-income households living in high-rise apartments: they have limited space and they choose not to store bulky recyclables, even though these are likely to fetch higher recyclable value. The domestic staff employed in such homes are also fewer, so the chances of gleaning reduces as well. Thus, the main reason for waste pickers preferring to work in high-rises is the quantity of recyclable waste that gets generated here. This may be of relatively lower value, but, cumulatively, the quantities generated are such that they offset the value of recyclable waste generated, on any given day, in low-rise apartments, bungalows, and row houses.

62 A study undertaken by a trade union called Kagad Kach Patra Kashtakari Panchayat (KKPKP) in Pune mentions that the composition of dry waste in the total waste is considerably high (30–37 per cent) compared to the waste that comes from slums/low-income neighbourhoods (where it could be as low as 9 per cent).

Credit arrangements

Households relying solely on roadside or dumpsite waste picking have been found to have a higher need for microcredit due to the lack of household savings and to tide over the fluctuations in their incomes. They do not seem to mind getting paid slightly lower rates by a *pithawallah* if he extends credit to them. In the absence of accessibility of credit from formal sources (banks or co-operatives), most of the scrap pickers rely on the *pithawallahs* for credit. No instances of collateral being demanded have emerged in the interviews across the cases where credit has been extended by a *pithawallah*. When questioned, the *pithawallahs* said that they extend credit only to known or reliable scrap pickers and, that too, with no collateral and interest[63] being involved, because "*dhiran*", i.e.,'earning from credit' is not their business. If the *pithawallahs* begin to give a large proportion of their capital on credit to scrap pickers, then the liquidity in the business (the *pitha*) starts to suffer. Most of the roadside and dumpsite scrap pickers are not able to get credit easily from the *pithawallahs* without proving themselves to be 'reliable'.

Those scrap pickers who are not viewed as being 'reliable' do not get access to any credit. What constitutes 'reliability' is a *pithawallah*'s sense of how invested the scrap picker is in his place of residence or operation. This helps the *pithawallah* assess the possibility of the scrap picker shifting from his place of stay or operation. If there is a change in either of these, then there is a chance that the *pithawallah* may lose a scrap supplier. Another way in which the *pithawallahs* check for reliability is by asking for an introduction/guarantee from a mutually known scrap picker who has been supplying waste to the *pithawallah* for a long time. Even when such an introduction or guarantee

63 This aspect about 'interest not being charged' needs to be verified using other methods of data collection from the roadside or dumpsite scrap pickers. Although the scrap pickers have said in their interviews that "no interest is charged", there is a possibility that the deductions being affected by the *pithawallah* during each transaction have an inbuilt interest component even when there is no explicit statement of the same. Since the scrap pickers are illiterate and do not maintain any record of their transactions, it is not possible to verify this aspect based solely on their oral recollections, since the long recall periods do not lend themselves to such verification.

is available, the *pithawallah* assesses the volume and quality of the scrap supply possible by aparticular waste picker before extending credit to him/her. Only after transacting for a couple of months with a particular scrap picker does the *pithawallah* loan even small amounts (usually a few hundred or around a thousand rupees) to that individual.

Pithawallahs said that they lose money (which is relatively a high opportunity cost) if the same gets locked for a long period, as 'liquid cash' is what keeps their business functional. So, *pithawallahs* are known to extend credit only to those whose reliability of supply, in terms of volume and quality, is good. *Pithawallahs* as well as scrap pickers have mentioned about certain *pithawallahs* extending credit upto Rs.5,000–7,000 to specific "good" scrap pickers. Thus, building a reputation as a 'reliable scrap picker' seems crucial for getting credit. Scrap pickers with access to residential premises and/or an assured place of collection (for example, a gated complex) seem to add to the element of reliability assessed by the *pithawallah*. *"Bhima*-bhai *has been selling his scrap to us since many years…. The quality of his scrap is good. He stays and works in the same locality since many years too…. I would not want to lose such a person,* Madan-*bhai*, Bhima-*bhai*'s *pithawallah* who comes in his own tempo to collect the stored waste from Bhima-*bhai*'s residence, said.

The recovery of the credit is done by deducting a small amount from the scrap picker's earnings every time s/he comes to transact with the *pithawallah*. This is known as "*valiyi levana*" (paying back) in the local system. There seems to be a fair amount of flexibility in the amount that gets deducted from every transaction. Instances of the *pithawallah* and the scrap picker haggling over the amount to be deducted from their earnings in that particular transaction have been observed during interviews. Since the earnings of the scrap pickers fluctuate, and a basic income is necessary for their sustenance, a fixed percentage of the amount does not get deducted from every transaction. If the scrap picker has earned well and if there is no immediate need, or if he has been unable to pay anything for a couple of transactions, then a large sum gets deducted. However, if the earnings are very less or if, in spite of earning well, there is an impending need such as an upcoming marriage in the family, then the amount deducted is meagre.

By extending credit, the *pithawallah* is making sure that a reliable scrap picker does not start supplying to another *pithawallah*. Availability of credit is a means to attract the scrap picker. Instances of scrap pickers supplying to a particular *pithawallah*, just because he extends credit (even though he pays them slightly lower prices for the scrap) have also been mentioned in many of the interviews. Some scrap pickers who had the experience of selling to NEPRA[64], a private company involved in scrap recycling, had a grouse that they were unable to get credit from the company, which is otherwise extended to them by the *pithawallah*. Similarly, *pithawallahs* also have been quoted as saying that they have extended credit, despite having lost money, to unreliable scrap pickers in the initial years, in order to establish a clientele for their relatively new *pithas*.

Scrap pickers also seem to be relying on other sources of credit such as private moneylenders for larger loan requirements—in the case of an upcoming marriage or sudden hospitalisation. Collateral in the form of gold or agricultural land in their native villages and introduction through social networks does seem to serve as a guarantee in getting access to such credit. The rates of interest in such transactions range from10–20 per cent per month.

Many of the cleaners-cum-scrap pickers rely on builders for credit, given their client-patron relationships. Instances of waste pickers undertaking

64 NEPRA, a private company, has been licensed by the government for scrap collection from specific parts of Ahmedabad. The scrap is further finely segregated for recycling and sold to other aggregators or industries.

incremental housing[65], with the help of stuff gleaned from builders' stored materials or through their financial help, have been mentioned in some interviews. Similarly, getting financial help from the builders during instances of hospitalisation of a family member have also been mentioned. For smaller credits, the cleaner-cum-scrap picker occasionally also relies on help from the management/societies of the gated complexes where they provide these services. ◆

65 Incremmental housing is the process of gradually (over a number of years) improving their housing/residential conditions by such means as upgrading their structure from *kutcha* to partly pukka, increasing the space by constructing an additional room/toilet, or improving the quality of residential space through paving, tiling, etc.

PART 9
INTERGENERATIONAL CHANGE

While many of the households have been a part of scrap picking since two generations, some of them are new entrants—those who have migrated from rural areas and have now established themselves in this occupation. The condition of the non-Dalit roadside scrap collectors residing on pavements, seems to have remained the same across generations: they are still having similar living conditions just as their fathers or mothers had before them. Moreover, they have not been able to better themselves in terms of education, health, or assets. The Dalit cleaners-cum-waste pickers seem to be doing better, but only in cases where they have some form of de facto tenure security over their residential spaces. Intergenerational changes with regard to the ability to diversify their asset base and livelihood portfolio, while also investing in the skill building and education of their children, have been mentioned by such scrap pickers who have relatively secure residential tenure.

When they are evicted or their control over the use of a particular space is lost, they lose almost all the gains that they had built over a period of time—their savings, asset base, and stability. Thus, most scrap pickers, across all modes, see an advantage when a peri-urban area begins urbanising. This urbanisation phase seems to offer new/migrant scrap pickers an opportunity to establish themselves. ◆

PART 10
CONCLUSION

In the light of the above discussions, we have found that the ability or inability of the scrap-picking households to continue to retain *access to everyday spaces* seems to be the factor that influences/decides whether, when, or how these households are rendered vulnerable. Access to livelihood spaces supporting scrap picking allows households subsistence levels of existence, i.e., to be able to survive as functional, productive units in the city. However, the loss of such spaces results in the households' inability to survive, thereby pushing them out of the city or compromising on their ability to achieve other human development goals.

Caste and kinship networks play an important role too. In the absence of caste-based affiliations in this livelihood activity, the non-Dalit, reserved-caste households involved in roadside scrap picking without any access to storage spaces in the city's core areas seem to be the most vulnerable as their ability to employ livelihood strategies is severely constrained. Their ability to organise themselves is also limited due to the absence of a 'collective identity' and the presence of intense competition in the activity. Across all the modes of scrap collection, kinship and other social networks play a major role in increasing the ability of scrap-picking households to not only overcome risks and threats, but also to be more efficient in their livelihood practices. 'Caste-based identity' as an organising principle perpetuates itself in the case of the Dalit households working in the waste-collection sector.

Apart from these networks, other local actors operating in the spaces of storage and sorting are also very important to the scrap picking activity; strategies to promote symbiotic relationships or reduce conflicts need to be considered by policy/urban decision makers when thinking about public or semi-public spaces. The niche opportunities for the survival and operation of scrap pickers, provided by the local, grass-roots bureaucracy[66], and the layered nature of the governance institutions—which makes it difficult to enforce centralised control over public spaces—seems to be an opportunity for the scrap pickers, for they use it to their advantage.

Evictions seem to nullify all the human developmental gains that the scrap pickers have struggled to build over the years, forcing them out of the city or making them start afresh. Recognition of their 'right to work' should be considered on a par with goals such as keeping the city's spaces healthy, organised, beautiful, and sanitised, if the developmental aspirations of such vulnerable occupational groups are to be realised. ◆

66 By overlooking, ignoring, or facilitating decontrolled usage of public spaces or planned spaces.

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Author Bio

Ravi Sannabhadti *is a social worker and urban planner by education, with experience of working on social equity and community development issues since 2001, particularly in the thematic sectors of disaster response, rehabilitation, and preparedness; integrated water management; affordable housing; and, urban poverty and sustainable livelihoods. The said experience spans work profiles in policy analysis, research, capacity building, and programme management with multilateral donor agencies, national government agencies, corporate consultants, academic institutions, and non-governmental organisations. All engagements have involved aspects of capacity building and the development of 'knowledge tools and products' such as policy papers, guidelines, toolkits, etc. to aid decision making and improve governance and service delivery in rural, urban, and peri-urban domains. Currently, the author is Assistant Professor and Faculty Co-ordinator at the Faculty of Planning, CEPT (Center for Environmental Planning and Technology) University in Ahmedabad, Gujarat, India.*

Annexure 1
Characteristics of households selected for the case study

Household (Location of residence)	Kalu-bhai (near AES Ground between Vastrapur and Bodakdev)	Samita-ben (SG Highway, near Thaltej)	Somesh-bhai (Ganesh Nagar, near Pirana, the city-level dumpsite)	Bhima-bhai (Surya Nagar)	Bhinu-bhai (adjacent to Ishaan Towers near Prerna Tirth Derasar)	Mani-ben (adjacent to Ishaan Towers near Prerna Tirth Derasar)	Astha-ben (Ramapir No Tekro, Nava Vadaj – Smart City site)	Savi-ben (Ramapir No Tekro, Nava Vadaj – Smart City site)	Narabda-ben (But-Bhavani)	Assi-ben (But-Bhavani)	Som-bhai (Thaltej area, SG Highway)	Shiva-bhai (Public toilet , between Thaltej crossing and gurdwara crossing)
Mode of waste collection and the spaces in which they operate	Door-to-door collection from housing societies and com-mercial complexes (high-rise buildings)	Roadsides and public dustbins in peri-urban and core urban areas	City-level, open dumpsite—the Pirana	Roadsides and public dustbins in peri-urban areas	Door-to-door collection from housing societies (high-rise buildings in core urban areas)	Roadsides and public dustbins in core areas	Roadsides and select com-mercial complexes in core areas	Roadsides and public dustbins in core areas	Door-to-door collection from housing societies in semi-de-tached/ row houses	Door-to-door collection from housing societies in low-rise, semi-de-tached/ row houses	Itinerant scrap buyer (kabad-iwallah/ raddiwal-lah)	Roadsides and public dustbins in peri-urban locations
Location of residential space in city	Between core and periphery	Periphery	Periphery	Core	Core	Core	Core	Core	Between core and periphery	Between core and periphery	Periphery	Periphery
Type of residential structure	Semi-pukka	Tarpaulin sheets (No structure)	Semi-pukka	Semi-pukka	Semi-pukka	Pre-eviction: Kutcha; Post-eviction: Pavement dwellers	Semi-pukka	Semi-pukka	Semi-pukka	Semi-pukka	Kutcha (Tempo-rary struc-ture made with tin and corru-gated iron sheet)	Pukka
Tenure status	High de facto tenure (Notional ownership)	Squatters (Pavement dwellers)	Perceived tenure (Notional ownership)	Medium de facto tenure (Notional ownership)	Pre-eviction: Perceived tenure; Post-eviction: Rental	Pre-eviction: Perceived tenure; Post-eviction: Squatters	Perceived tenure (Notional ownership)	Perceived tenure (Notional ownership)	High de facto tenure (Notional ownership)	High de facto tenure (Notional ownership)	Perceived tenure (Open plot on rent)	Perceived tenure (Client-patron relation-ship)
Type of settlement	Informal settlement (Recog-nised slum)	Pavement	Transit camp for project-affected	Informal settlement (Recog-nised slum)	Informal settlment (Unrecog-nised slum)	Informal settlement (Unrecog-nised slum)	Informal settlement (Notified slum)	Informal settlement (Notified slum)	Informal settlement (Unrecog-nised slum)	Informal settlement (Unrecog-nised slum)	Open plot—still marked as agricul-tural land	Public toilet

Note: *The names of respondents interviewed for this caste study have been changed to protect their identities. Therefore, the names and related details in terms of location, settlement type, etc. (as mentioned in* ***Annexure 1****) would not match with the real people/families found in these locations. Also, some of the names quoted in the main text of this case study do not figure in* ***Annexure 1*** *as they dropped out after a couple of interviews; although they provided insights for the purpose of this study, they do not form the basis of the analysis.*

Two other variations in the mode of door-to-door cleaning-cum-waste collection

Cleaners-cum-waste collectors under a client-patron relationship

While in the first type of arrangement, the cleaner-cum-waste picker is employed by the gated housing co-operative society, in the second type of arrangement, there seems to be some kind of a client-patron relationship between the cleaner-cum-waste picker and the household from which the waste is collected. This system is prevalent among individual households living in non-gated complexes—tenements, row houses, and bungalows—for the cleaning of common and public spaces around their premises. The waste picker or his family would provide cleaning services to keep the public spaces around the private premises clean, in return for which they get paid a lumpsum at regular intervals (usually, on a monthly basis); additionally, they can also collect leftover food from the same households in the evenings. This system is known as '*valu levanu*' (daily collection of leftover food at night) in Gujarati. The waste picker is also entitled to additional money or sweets during festivals or social occasions celebrated by the patron household. In return, as and when the need arises, the waste picker is expected to undertake activities such as cleaning of the gutter/*kundi*[67] or the disposal of the carcass of dead animals found in the locality.

There is a lot of similarity between the first and the second type of arrangements and, sometimes, it is difficult to know whether it is a client-patron relationship or an employer-employee relationship. We found evidence of the client-patron relationship to be more common in the initial years when a waste picker was trying to establish himself/herself as a door-to-door cleaner-cum-waste picker. When a peri-urban area is urbanising, and there is a lot of construction work going on, a builder usually employs a cleaner-cum-waste collector to keep the under-construction premises and the sample house clean. When the cleaner-cum-waste picker is employed with the builder, the client-patron relationship is more evident. The builder is expected to engage the same waste picker for any project proposed by him in the nearby localities (or occasionally, even in other distant locations in the city).

Contractually employed cleaners-cum-waste collectors

The second system consists of a similar arrangement; however, instead of a waste picker family/group being employed, the cleaning-cum-collection work is outsourced to a private contractor or company, who then hires cleaners-cum-waste pickers as their employees. This system seems to be increasing in the large, gated complexes, where the residents find it easier to deal with a single private contractor than groups of service providers. In such an arrangement, the individual waste picker is paid a monthly wage and is supposed to work for 8–10 hours on a daily basis. Some holidays are available to the employees, but they are supposed to remain at the premises of the designated housing societies and work throughout the eight hours. Such an employee's family or extended family plays no role in the job s/he does. Moreover, the employed waste picker has no incentive to undertake waste segregation and sorting in order to divert it to the recycling chain, as the proceeds of the same do not go to the waste picker but to the contractor.

Many of the contractors explicitly prohibit their employees from undertaking waste segregation and sorting as they want to profit from the said activity themselves. Those employed for cleaning-cum-waste collection in institutions have fixed work timings, say from 8 a.m. to 4 p.m., as well as holidays on Sundays/public holidays. They cannot take any leave other than the stipulated days, for, otherwise, they face a steep cut in their wages. The private contracting arrangement serves as a threat to the earlier-mentioned two arrangements of 'cleaning-cum-waste collection'.

67 Kundi is the the opening in the sewage/drainage line that connects the household line to the municipal line/connection at the household level.