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Electronic Repair Clusters, Nehru Place, Informality, Hybrid City, Bazaar Economy, Oral Histories

Un-intended Emergences: Electronic Repair Clusters in the city; Voices of entrepreneurs from the Electronic Repair Cluster at Nehru Place, New Delhi

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ABSTRACT

This study brings forth the voices of the entrepreneurs to highlight their complex and dense network of relationships deployed and how. The study approaches the perception of the cluster and the physical space that it occupies from the perspective of the entrepreneurs thereby allowing life-stories to reveal the opportunities, challenges as well as negotiations made. The research uses a case study methodology to document oral history narratives of entrepreneurs in a cluster. The cluster chosen for the study is that of Nehru-Place in Delhi. The electronics market in Nehru Place which came into being before 1990, is regarded as the largest hub in Asia for electronics repair and reselling. The Nehru Place market is a focal point of movement of used and discarded electronics from the national as well as international networks. Importantly the study highlights the primacy of spontaneous flows, networks and activities that produce space.



Himadri Das is a doctoral candidate and works as a visiting faculty at CEPT University. His research explores micro-entrepreneurs in electronic repair clusters of the city. He is aiming at gaining a deeper understanding of processes that lead to evolution of businesses of repair micro-entrepreneurs in clusters within the Indian city and how they are governed. He is a trustee at Repair Café Bengaluru. Himadri is part of a team of volunteers who help spread the message of repair and re-use domestic items by organizing pop-up workshops in communities.

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Introduction

Assa Doron describes a scene from Lucknow in 2010, where a thriving repair market existed which consists of small shops. There was an established hierarchy of repair entrepreneurs with a range of expertise. He shows us how the specialized repair markets had more shops together and the repair entrepreneurs there were experts. If the neighbourhood repairer could not manage to fix a phone, he would bring it here. The experts did not allow the local repairer to view the work being done. The knowledge of repairing was kept a secret. Assa Doron's neighbourhood repairer would mark the parts inside the phone ostensibly to ensure none of the originals were removed, but this would allow him to identify those parts that were repaired or replaced (Doron & Jeffrey, 2013).

While extending the life of used equipment and keeping them in circulation could be construed as an answer to the tension of consumption led growth and environmental degradation in a broader context. At the ground level, there is a burning issue of e-waste in urban areas that manifests itself as the flip-side of the consumption conundrum. The wave of e-waste grows every year and requires attention not only from policy makers as more and more countries sign up to worldwide agreements to manage e-waste safely but also from society at large (Perczel, 2022). It is here that the repair and reuse clusters perform a critical function (Corwin J. E., 2017).

Most of these repair clusters have arisen by responding to the needs of the market and planning frameworks have fallen behind. However, the clusters do exist within the spatiality of the city and in spite of restrictive planning frameworks (Gidwani & Maringanti, 2016) (Jain & Gidwani, 2023). The cluster located within the city becomes the significant direction this research follows. The research focus is on clusters as a conceptual bridge between the life-histories of micro-entrepreneurs and the spatiality of cities.

Conceptualizing Informality and Emergence of the Hybrid City

The scholars of informality such as Ananya Roy have successfully dispelled this idea of the binary of formal-informal. In the cities of the south, the binary of formal-informal, is

indicative of the puzzlement of the western gaze. From a more southern perspective, formal-informal are interdependencies. In this context it is necessary to look deeper at the relationships and networks that allow the repair entrepreneurs to thrive. Looking at this phenomenon from an entrepreneurship lens affords us a clearer understanding.

Ravi Kanbur in his paper on 'Conceptualizing Informality: Regulation and Enforcement' says that the literature of informality is ridden with lack of conceptual clarity, in spite of a vast body of work. He proposes to provide a sharp focus that brings 'the context' to the center of the analytical frame. He proposes to look at informality from the perspective of applicable regulation and compliance. He says that there are four possible scenarios: within regulation and compliant, within regulation and non-compliant, outside regulation by adjustment and lastly outside regulation and no need for compliance (Kanbur, 2009). Hence using his simple and yet nuanced framework it becomes easier to locate informality.

In his article the Un-intended city, Jai Sen highlights the state of the cities of the south where rich, middle and poor classes share the same space. He points to the fact that planning professionals belong largely to a certain class in the whole spectrum of society. Needless to say, the planned city reflects the needs and aspirations of those classes. However, the reality of the city is more complex, as it accommodates the whole spectrum of the city. So he points at the emergence of a 'hybrid city' which truly reflects the development and progress aspired for by the middle and upper classes, alongside with the flexibility and security so critical for the poor (Sen, April 1976)).

Bazaars, Re-use Industries and Clusters

Maitrayee Deka tells the story of resilience of small firms at the street level in cities of India. She argues that there are two key levers that help these firms to be resilient in the face of multifarious issues. The first being the networks of kith and kin that they dip into and the second being responsive to the needs and desires of the customers, having their 'ears on the rails'.

She argues that bazaars are unique in the sense that they are embedded in the local social context. Unlike large corporations that bring to bear large capital, develop massive infrastructure to conduct their transactions, the bazaar leverage social capital. She points out that many of the actors in the Bazaar are actually school or college dropouts or even unlettered. Had it not been for the Bazaar these individuals would be left out from the right to a livelihood and decent life (Deka, 2023).

Julia Corwin in her article 'Nothing is waste in Nature: Delhi's Repair economies and value creation in Electronic waste sector' describes the dense network of shops for repair and re-manufacturing at Nehru Place as *Reuse industries*. She then goes on to define the three types of *Reuse industries* in India. The three types are: "*Maintenance and repair; resale and refurbishment; and reassembly and remanufacturing*" (Corwin J. E., 2017).

In the context of Indian cities, urban villages and old city areas provide a rich set of possibilities for renting small spaces in complex urban fabric. A range of use, rent and lease arrangements are employed. Ravi Sundaram in his book, *Pirate Modernity* shows us how neighbourhood factories thrived in unauthorized areas of the national capital. This is so, he explains, because of high cost of entry in legal industrial areas (Sundaram, 2010).

Benjamin Solomon in his article says, small firms find ways to locate themselves in the newly developed parts of the city too. Informal sharing strategies offer possibilities for small firms to set up businesses in high real estate, high rent locations. New developments in the peripheries of cities are characterised by large formats of space and high entry costs for small entrepreneurs. So they opt for sharing strategies with other businesses or locate themselves in areas with complex tenures that dot the peripheries, like urban villages. Some operate as informal vendors in the public space of the city (Solomon, 2008).

Sub-altern Accumulation in Clusters

Sharad Chari in his book *Fraternal Capital* highlights a 'sub-altern form of accumulation' that is able to sustain itself by adapting work politics developed in the agrarian past of the region. The key factors, the tensions between which, allowed the Gounder men in the region of Tiruppur to consolidate the production was of flexibility and geographical specialization. Chari uses life - histories as a means of generating a dataset from which he could identify the key factors that led to their success (Chari, 2004).

The author uses a combination of archival research, survey and ethnographies in the form of life-histories to tell a complex story. Maps, published audited accounts, written accounts as well as oral accounts from other sources are deployed to cross-verify and triangulate the information presented. The subsequent survey after gathering of oral histories narratives allows us to unpack the factors that have the most significant impact on growth of businesses in the cluster (Chari, 2004).

Method

Robert Yin in his book titled *Case-study research and applications: Design and Methods*, illustrates the usefulness of an oral history method for investigating phenomenon that are partly in the recent historical frame and partly in the contemporary i.e. not something completely historical. In the same book, he also underlines the fact that research questions which are investigating the why and how of a certain phenomenon the way it does, are better addressed by a case-study research (Yin, 2018).

Hundred Years and Hundred Voices: The Millworkers of Girangaon an Oral History, employs the oral history method because it seeks to document the history of the subaltern. The authors want to tell the story from the perspective of the millworkers, who were residents of Girangaon during those fateful and tumultuous years. The primary advantage of such a

method, is a detailed first-hand documentation of the sub-altern (Menon & Adarkar, 2004, p. 28). The entrepreneurs based in Nehru Place have evolved to the present condition having gone through multiple dispossessions (Deka, 2023). The story of the entrepreneurs is the story of the subaltern.

This study approaches the perception of the cluster and the physical space that it occupies from the perspective of the oral life histories of the entrepreneurs thereby revealing the opportunities, challenges as well as negotiations made.

The Case - Nehru Place

The repair entrepreneurs in Nehru Place follow their life-trajectories in the space of the cluster (**Figure 1**). The electronic cluster provides possibilities of flexibility to respond to market changes, supporting each other during moments of crisis as well as fostering a sense of community that can be tapped into for technical knowhow or partnerships to improve the businesses. The formal Information Technology (IT) businesses in Nehru Place, are fewer than the number of independent repair entrepreneurs working together through strategies of rent-sharing as well as occupying less-accessible parts of the buildings such as the basements and upper floors (**Figure 2**).

“Nehru Place consists of about a hundred buildings, out of which approximately 70% are occupied by the electronics market, 10% is textiles, rest is travel facilitation and others”, says a refurbisher based in the market. The Buildings range from four storeys, six storeys to a maximum of nine storeys. The ground floor and the first floor of the central buildings have an arcade with shops looking out to the plaza in front. There are a total of three to four hundred repair shops here. There are more than hundred mobile repair shops. Nehru Place is regarded as the biggest market for laptop and desktop repair. It is also considered ‘one of the biggest’ for mobile repair.



Figure 1: Nehru Place Repair Market;
Source: Author



Figure 2: Nehru Place Buildings with arcades in front of the Ground and First Floor;
Source: Author

“The rents in large shops of up to eight hundred square feet, fronting on the plazas, facing the metro stations can go up to eight lakhs per month”, says one of the entrepreneurs managing a counter in such a shop. In such cases, the high rents for the shops are shared by the counters who occupy the space. There are at least four to five counters in each shop. Each counter specializes in laptop or mobile repairs, accessories and in some cases, sale of new products.

The Electronic Repair Cluster

The repair and sales of laptops and mobiles are concentrated in the ground floor. The repair of desktop, some laptop repairs as well as refurbishers are in the first floor and above. The upper floors have authorised dealers of electronics equipment, some repairers, accessories, offices (travel facilitation agencies, visa facilitation agencies, banks, Chartered accountants) and some other corporates.



Figure 3: Nehru Place Backyard where the scrap shops are located; Source: Author

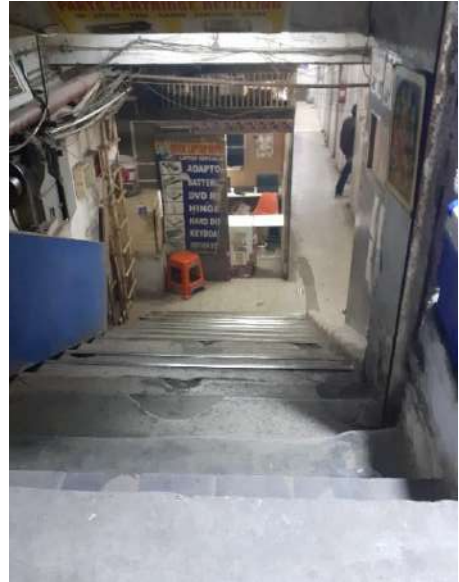


Figure 4: The way to the basement where a majority of the repair shops are located; Source: Author

The basement is a warren of passageways with small rooms of ten to twenty five square feet, where there are repair shops, courier and packaging shops, as well as some second's' laptop showrooms (**Figure 4**). The rooms are divided using wooden partitions and often artificially ventilated using exhaust fans. Lastly, there is the redi-patri (footpath) market of

informal vendors selling a range of things including food items, tempered glass replacement, ready to wear clothing, and rubber stamps used for official work (Figure 3).

The 'Reuse Industries' at Nehru Place

L was in an IT job at a media house in a northern city. While there, he started out by supporting retired individuals in the neighbourhood with sundry IT related services, to earn an extra income. During the course of his work, he needed to check for postings in OLX (a second's sale online portal). He would pick up the parts or machines from OLX and resale it to his customers in the neighbourhood. It was then he says, *"The first time I saw the word 'recycled' was on a sticker from OLX"*. As he dug deeper, he understood the potential to start such a business. Today he is a certified refurbisher with offices in Bangalore and Delhi.

L says that many of the boys in Nehru Place were working in one firm or the other. He adds, when the market is down they lose their jobs. They start their own business to earn a living to survive. When I ask him why Nehru Place? He gives three solid reasons:

1. All the spare parts are available in Nehru Place. This is a critical factor in a refurbishes' business.
2. He gets extra business from retail customers for repair and refurbishing.
3. In Nehru Place there are resources to arrange repair or refurbishing for any number of products. This can be a great advantage when it comes to 'economy of scales'.

Learning all the Time, Keeping 'Ears on the Rails'

V runs his repair business from an obscure space at the end of a corridor on the second floor. He doesn't need visibility. His reputation as a mother-board repairer brings him work. He has a pile of mother-boards, tools, monitors, spares etc. strewn across his table. But one cannot see a single complete laptop. He says, *"I get only dismantled mother-boards as I specialize in repairing those. I don't have to hire hands to pack or open laptops"*. V says that the market is very competitive and everyone drives a hard bargain. There are many who claim to be chip level repairers. He says, *"Many scammers here, they claim to be 'chip' level repairers when they are actually card level repairers"*.

A is a relatively successful repairer and he operates from two shops. Both in the ground floor. In one, he has a repair counter and the other in a passageway a bit on the inside, he has his large, well-equipped repair shop. When I ask him, about how he upgrades his knowledge? He simply says, *"I sit with my friends and discuss. We exchange notes. There are at least two hundred and fifty shops here"*.

Y started as a young helper at the age of sixteen. He proudly declares, that he is tenth-class fail but adept all kinds of repairs including tape recorders, TVs, computers, fans, medical

equipment, servers and even CNC machines. He was taught by his uncle and learnt by the dint of experience. He gets another entrepreneur to vouch for him in the market. The other man says, *"He is truly an engineer"*.

Y says, *"Repair work is less in Nehru Place nowadays because other markets are coming up at NOIDA sector 18, Faridabad, Laxminagar, Lajpat-Rai market"*. He says, *"The big-dealers are sitting there, parts need to be brought here from such places"*.

Not a 'Binary' of Formal and Informal

R has a shop in the basement. He says, *"People come to the basement only by reference, all the walk-ins happen on ground floor and first floor. That's why the rents are so high there"*. For the repairers in the basement, they have to depend on commission agents or touts. These are typically young boys looking to make a quick buck. They wait for customers as far away as the exits of the metro station or sometimes in the plazas of Nehru Place. Their job is to bring customers to the repairers sitting in the market. Sometimes these repairers are sitting in locations deep inside the basement where customers do not venture on their own.

S has a shop in the basement too. He says, *"We get only fixed corporate clients for repair in the basement, retail in mobile and laptop is on ground floor and first floor"*. He adds that social media doesn't help them connect with the customers. It's only fixed clients after the CoVID-19 lockdown. He says that business desktop repairs is down. Most of the work he gets, is of replacement, as newer products are designed to be scrapped and replaced. He does acknowledge that business in refurbishment has improved.

F runs a shop deep inside the basement. He says, *"We don't keep visiting cards as the boys (touts) take them and keep roaming around. If they are picked up by the police, they come investigating here in the basement"*. However, F is highly recommended by a customer who has come presently to repair an old laptop. This customer is an African national, who has been visiting Nehru Place for his repair needs since his university days in Delhi. But he has come today with the help of an agent.

The 'Hybrid City' has Something for Everyone

V has more than thirty years of experience in this business. He has a B.Sc. degree from Banaras Hindu University, a reputed institution. He also has a diploma from a poly-technique. He runs a tiny shop that occupies an unused part of a staircase in the basement. He says, *"Repair has nothing to do with buying new, everything¹ has a market"*. He explains, someone earning five thousand rupees to six thousand rupees needs to live as much as someone earning twenty thousand rupees but they don't look at each other for inspiration. They live according to their own means.

¹ Every type of repair

D started spending days here in the market to make pocket money while he was still a student at the university. He says, *“Here even if I am not earning that much money, I am earning trust. I started here to earn pocket money. Started as a delivery boy and used to do minor tinkering with printers. Used to spend one day at college and five days here.”* Those days at the age of eighteen he was earning three thousand rupees a month, it was a lot for pocket money. Today a laptop and printer repairer, he and his colleague share the twenty six thousand rupees for rent of the small shop in the basement.

D says, *“Gaffar market and Lajpat Rai market are the main markets for selling of mobiles, tabs, TVs, other electronic goods and accessories but Nehru Place is for repair”*. He says, *“Generally, companies stock parts for one to three years but here you can refurbish laptops from 1996. He says, “The customer is lazy now”*. He doesn't want to come to the market or doesn't have the time. He adds, *“The customer depends on online but there are many scams there”*.

The 'Bazaar Economy' of the Repair Cluster

M runs a repair shop for monitors, projectors and SMPS. He is an employee but manages the shop for his employer who is much younger in age. M has many years in the jewellery business before he moved to this business. He feels, the creators of Nehru Place may not have imagined or even aware of what it has become today.

He says, *“Only when people buy new things will the demand for repair increase. Nothing becomes obsolete in this market. Repair has takers in all sections of society just like in selling. High earners demand looks, features and design. Middle earners go for value for money and perhaps less features. Low earner are ready to take things which are even a bit defective”*.

Y has been in this business for more than 30 years. The scrap business was in paper, *loha* (iron) and *ruddi* (waste) earlier but today it is laptop, desktops, printers and air conditioners. He doesn't do mobiles. He says, *“There are six to seven such scrap shops in Nehru Place”*. Y belongs to the particular caste who dominate the scrap business in different parts of Delhi (Perczel, 2022) (Corwin J. E., 2017).

Y has boys coming around and weighing the scrap. They have taken rounds in the market with loads of segregated waste from desktop and laptop parts. They carry bags full of salvaged plastic or metal parts from the market. He says he employs some and some of the boys just sell to the highest bidder. He sells salvaged parts to customers, laptop screens for as less as ten rupees, a hard drive for a hundred and twenty rupees and a whole laptop for just a thousand rupees only.

Learning

The decision to take up repair-entrepreneurship seems to be an outcome triggered by the wide range of opportunities the repairer confronts in the bazaar economy of the repair cluster. The voices confirm the observations of scholars such as Julia Corwin and Maitrayee Dekha that the bazaar or repair cluster is an opportunity for those who have very less formal education and much less any technical diploma or degree from Institutes. Most of the repairers have 'learnt by doing' on the job. But interestingly, they are all competing with each other in the same market. The reputation of the repairer is made by 'doing the work' rather than from education they might or might not have obtained. They stay competitive by learning from their peers. While small jobs of packaging, tinkering, couriering are the entry points into this vast market. As the jobs become more complex repairers acquire specialization that are characterised by division of labour rather than by discipline. So a chip level repairer only repairs motherboards making it unnecessary for them to hire labour dismantle and assemble full computers. Updating to new technology happens not only from information gleaned from the internet but also by working on repair of products. The moment repairers open up products to understand the components, the knowledge spreads. Many repairers declare that it is not as difficult as it sounds because the technology 'at the base' is mostly the same, it is the colours, features and some components that change. There is a constant process of discovery and re-emergence as the old businesses fold up, new ones emerge. The businesses survive by adapting to the new conditions. This form of hybridization or re-emergence is also enacted in the spaces within and in the foreground of the buildings at Nehru Place.

The study shows how there is an innate interdependence between the formal and informal, as the process of hybridization or re-emergence follows its natural course irrespective compliances and regulations. The study highlights, how the space of the market is adapted to create specialized markets for repair. It is reflected in the wide variation of rentals among shops located in the basement, ground floor and first floor. The fact that there is a prevalence of repair shops in the basement, there are those sharing spaces inside shops on the ground floor and finally some off-passageways or mezzanines in the first floor. In terms of regional location, the epithet of 'hub of repair markets' still holds true for Nehru Place. However, there is a wide spread agreement of the fact that the market is coming down. Many reasons are offered but primary among them is the emergence of 'online repairs' and opening of repair shops in different states and cities that used to be the hinterland for Nehru Place earlier. Repairers albeit, do not want to leave yet, as Nehru Place still holds the position of the 'hub' while there are many new clusters that have already come up in the city of Delhi itself.

This study and the voices it brings forth are a critique on the role of planning and governance of the city. More importantly of such clusters that operate in the city and provide a livelihood to a large number of people.

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