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The Social World of Copying: Entrepreneurialism in Genealogical Networks

Introduction

Through an ethnography of a software disc shop along Hanoi's Computer Street, this chapter argues that copying comprises an important dynamic to entrepreneurialism in genealogical networks. Among the trade in computer repair and maintenance, networks and hierarchies form such that new members are created as former employees venture out to establish shops on their own. This chapter argues that copying makes entrepreneurial sense for many of the global South as an expression of distance from global circuits of distribution and consumption.[1] By entrepreneurial sense, not only do I mean that copying provides income, but rather that copying conforms to ideals of appropriate entrepreneurial practice. Copied software discs however do not fit within Western models of creativity and innovation, in spite of the current language of "remix" in current discourses of open access and free culture (Condry 2004; Jenkins 2006; Lessig 2004). From this view, copying is defined as a form of thievery and piracy. Acts of pure copy—that is, reproduction without substantive transformation—are illegitimate as they do not confer additional value (Philip 2005; Sundaram 2011). Recent ethnographic studies of copied discs challenge this view to describe the cultural complexity of copied discs (Dent 2012; Larkin 2008). Building from these ethnographic studies, this chapter challenges the piratical frameworks that continually haunt critical analysis of copied discs. Through an ethnographic account of copied

[1] I further develop this notion of distance in the preceding chapter

discs, I show that copying comprises a logic that upholds an entrepreneurial network within Computer Street. Such a network has its roots in Vietnam's history of craft and guild commerce.

This chapter describes the social world of copying and identifies two forms in particular. First, this chapter describes the copying of software discs to describe the work and material forms of transferring bits across discs, cables, and people. Such an approach demonstrates the substantive labor of copying. Secondly, this chapter describes the copying of shops and argues that such reproduction performs visibility, continuity, and stability among entrepreneurial networks. Such stability is vital for people in the global South who are removed from global circuits of consumer goods (Jackson, Pompe, and Krieshok 2012). These entrepreneurial networks of repair and maintenance reproduce as genealogies, as former employee apprentices venture on their own and create new shops. Among the trade in software, copied discs operate as condensations of these hierarchical and networked relationships. The notion of genealogy underscores the extant hierarchies in long-standing trade communities in Vietnam and highlights the ways that copying, in fact, operates as an entrepreneurial logic in its own right within networks replete with material, history, and time.

Histories of Craft and Commerce: Computer Street in Entrepreneurial Context

In the fall of 2010, Hanoi celebrated its one thousand year anniversary. Government officials designated celebratory events to culminate on the auspicious date of October 10th, 2010—10/10/10—during which national and international tourists alike flooded the capital to celebrate with local residents. Celebrations started at the park of Lý Thái Tổ. Regarded as the

father of Hanoi, he moved the capital from a mountain marshy outpost to the flat Red River Delta, situated at the confluence of several rivers. According to official history, the emperor Lý Thái Tổ established the imperial capital on the grounds of Hanoi's current citadel. Over time, merchants surrounded the areas of the imperial palace in service to the emperor, providing his court with silk, paper, food, and other services and sundries. This area evolved into a commercial center, eventually forming Hanoi's now famous Old Quarter and 36 Guild Streets (Nguyen 2002). Bustling with street vendors, shops, cafes, and restaurants, the Old Quarter remains the commercial heart of the city.

Along these streets, commerce and craft concentrated over time such that the streets eventually became associated with particular trades. Walking along the narrow roads, signs read Silver Shop (*Hàng Bàc*), Salt Shop (*Hàng Muối*), Cotton Shop (*Hàng Bông*), Drum Shop (Hàng Trống), Fabric Shop, Mattress Shop. The peculiar naming convention of "shop" to mean streets refers to the early forms of trade and commerce that shaped the urban organization of the city. Regular traders from Hanoi's surrounding craft villages established storefronts, workshops, and guilds that surrounded the capital's imperial walls. The names of the streets thus referred to the specific trades and goods that were made there. The peculiar naming convention of Hanoi's Old Quarter thus embodies the craft and commercial history of the region. Nowadays, the names remain, however the trades and goods on the street have changed. Over time, these trades and their locations have changed significantly. Shoes are no longer sold on Shoe Street but can be found instead on Wooden Bridge Street. The wooden bridge from which this particular street derives its name is also gone, paved over to ease traffic. Shops on Chicken Street sell the latest fashions from Thailand and Hong Kong.

Similar to the Guild Streets of the Old Quarter, other kinds of trade concentrate along urban streets throughout the rest of Hanoi. As an entrepreneurial system, this craft-based production and commerce undergirds the trade in software discs. The craft and workshop modes of production underscore the importance of relationships within this entrepreneurial system (Elyachar 2005). Similar to the village kinships that bound urban traders with village craft producers, software discs are similarly produced through intricate networks of relationships. The trade in software discs is not constituted through guilds and other formal institutions, nevertheless, discs shops and their shopkeepers form genealogical connections as former apprentices venture out on their own and train other individuals seeking their livelihoods.

Software shops cluster on several streets in Hanoi, most notably on one street that runs parallel to the historic citadel on the outskirts of the Hanoi's old commercial quarter. The street is known informally as Computer Street *(Phố máy tính/Phố hàng tính*) while its official name celebrates an ancient leader who expelled Chinese imperial invaders. The street itself runs a short kilometer and is lined on either side with lean trees. During the 1980s, local residents referred to this same street as Military Street. Given the street's proximity to the national citadel, only military and high-ranking officers were allowed to live on the street and in the surrounding neighborhoods. Over time, this military affiliation has attributed to the street and its residents an aura of social prestige and rank. Residents on the street regularly boasted of the neighborhood's social pedigree. To this day, only families with the proper military credentials are allowed to own property in the surrounding vicinity.

Under French colonial rule starting in the late 19th century, the street was contained inside the citadel's walls (Nguyễn, 2002). After Hanoi's independence from the French in 1954, the street remained within the citadel. Only until the 1980s, did the street become accessible to

public traffic (Nguyễn, 1995). This timing coincided with the national government's economic liberalization policies. These policies allowed the residents on the street to transform their living rooms into small shops that serviced and repaired electrical devices and appliances. Such transformations were notably recorded in a collection of short stories titled *Military Street* (Lai, 1992). Over time, these repair shops began to fix computers, altering the complexion of the street. Like geological layers, Computer Street slowly grew atop Military Street. Driving along Computer Street nowadays, the military history of the street is still visible in myriad ways. Towards the northern start of the street are the offices for several of the military's publications, including their daily paper *Capitol Security*, their arts magazine, and their academic publisher. Towards the end of the road are gated compounds to additional military office buildings. These compounds are immediately recognizable with their foreboding gates in front of which young soldiers in their faded green uniforms silently stand guard.[2]

Up and down the street are a variety of computer shops. One can find all kinds computer merchandise, including keyboards, mice, cooling fans, hard drives, custom-made cords and cables. Large signs mark these shops: "Computer Super Market," "Computer Hospital," "Computer Repair," "Computer World." Other signs advertise additional services, "Hack Wii," "Eliminate Viruses," "Repair devices." The density of the computer trade has waned over the years on Computer Street, slowly giving way to new and trendy shops. A beer salon sits across from the military newspaper office. Inside the salon, the walls and floors are covered in dark wood panels and serves imported European beers. Further down the road is a Korean-style coffee shop that caters to Hanoi's young and fashionable.

[2] The role the military in developing Vietnam's computer and information technology industries is worthy of careful attention however beyond the scope of this dissertation.

Image 2.1: Computer Street

Software Shop on Computer Street: The Work and Networks of Copying

Halfway down Computer Street is a short stretch where several software shops cluster next to one another. All three shops are part of a larger building complex, each distinct store cramped in part of a larger web of inter-related spaces. Over the course of several months, I bought discs at several of these shops, eventually becoming familiar with one shop, whose owner was named Thuy.[3] Thuy's shop is small, about ten feet wide and ten feet deep, crammed and cramped with display shelves. Faded images of video games line most of the wall surfaces.

[3] All names I provide here are pseudonyms.

Thuy's shop specialized in selling software discs but the perimeter of her shop was lined with glass display cases in which she stored additional paraphernalia for sale including keyboards, computer fans, blank discs, headphones, memory cards, and memory sticks. A thin layer of dark dust coated the merchandise in these shelves.

Thuy kept the shop open from early morning until late evening. The shop was most busy during the morning before customers headed to work, before dinner, and during the later evening. She employed three additional employees who worked differing shifts. Thuy typically worked every day, along with one younger employee, and myself. One employee was her niece while the two other were young college students. Thuy referred to the two other employees as her *cháu,* suggesting that they were her niece, nephew, or younger cousin. However, both the two *cháu* employees eventually quit during my time there leaving Thuy and her niece to handle the work of the shop for the rest of the hot summer months. She often complained about the difficulties of finding employees.

Thuy described her work as disc running: "All day, I'm running discs!" (*Suốt ngày em chạy đĩa*). Discs littered the shop. Stored in soft plastic sleeves, discs were piled in stacks on the shelves, on the tables, and on the desks. Discs were stuffed in boxes on the floor of the shops. Discs were stored in plastic drawers that drooped under the accumulated weight. Thuy's shop primarily sold software intended to work with Windows operating systems. During the time of my fieldwork, Thuy was slowly building her catalogue of Apple software based on growing customer requests. Thuy also sold video games for proprietary consoles (Sony Playstation, Nintendo Wii), document applications (Microsoft Office suite), design software (3D architectural rendering software, Adobe CS4), foreign language tutorials (Rosetta Stone), and Vietnamese

learning games for children. Other popular discs included stock image libraries and game collections for iPhones. Her shop neither sold music discs nor movie discs.

To organize the work of selling these discs, Thuy relied on several documents. One document consisted of a spreadsheet that listed the software titles sold within the shop. The document did not keep track of the shop's disc inventory. Thuy also relied on several binders in which were pages containing printed images of the software titles and their catalogue number. These binders were organized into six categories of discs: Windows software stored on CD discs, Windows games stored on CD discs, Windows games and software stored in DVD discs, games for Playstation, games for Wii, and Games for Xbox, and Apple software stored on CDs. The binders were orienting devices. Customers typically thumbed through the binders, staring at the images before making their selection after which Thuy or one of her employees would retrieve the disc from a shelf in the back of the room, place the disc in a small translucent plastic bag before handing it to the customer. To reproduce discs, Thuy and the employees copied existing discs from her computer using Nero, a popular disc burning and video editing software. To obtain new discs, Thuy regularly bought them from other shops. Buying and burning discs were the primary method of production and reproduction. Discs were categorized as copy discs and origin discs (*đĩa gốc*), where origin discs were those reserve discs used to produce additional copies when stocks were low.

Thuy had three computers in her shop. One computer was placed near the front entrance on a low table while the other two were crammed along the back display cases. Thuy often sat at the front computer burning discs while anxiously gazing out to the street, in anticipation of customers. I and the other employees often worked on the back computers, taking blank discs, slotting them in the disc drives, and waiting for task bars to complete on the screen. Copying was

thus pervasive in the shop and served as the primary backdrop for all other activity. Second only to attending to customers, burning discs was constant, a vital part of running discs in and out of the shop.

The transfer of bits across discs, computers, and people required a great deal of physical labor. The process of copying discs started with the elaborate task of rummaging through the plastic shelves in which the discs were stored to generate a list of disc titles that needed restocking. The discs were organized numerically and crammed in shelves. To make this restocking list, I pulled each shelf from the cabinet, placed it on the ground, squatted low while running my fingers through the plastic sleeves, scanning for missing discs in the sequence, or discs with low stocks. Those numbers that were missing from the sequence, I wrote down. Or, those discs that had few copies, I pulled them from the shelf and placed them on a stack, from which they would be copied. The work was fatiguing and caused my knees and back to ache. This stock check typically was conducted once every week or two and was not the purview of any one person within the shop. Because the work was cumbersome and could not be performed all at once, other employees would pick up where another had left off. After these restocking shifts, I placed a piece of paper among the discs to indicate where the next person should continue. Typically, the work of restocking the discs took place over several days.

In the back corner of the shop, Thuy had a large box. After I had finished the restocking list one afternoon, Thuy brought out the box from under a pile of sweaters and several motorbike helmets and dropped it onto the shop floor. She said that in the box were the origin discs. With the restocking list in hand, Thuy asked me to find those discs that needed to be copied. I sat down and began to rummage through the box. One by one, I grabbed origin discs and placed them among one of the many stacks along the desks. If the source discs were not available in the

box, Thuy or an employee then looked through a spreadsheet file to identify the corresponding title. This work in turn would generate a secondary list of software titles and with this list in hand, Thuy put on her helmet, hopped on her bike and drove to another shop to purchase the discs. Thuy never mentioned the names of these other shops to me. She occasionally entrusted her niece with the responsibility of purchasing additional origin discs, however neither I nor the other employees were able to do so.

One evening, a nosy neighborhood teenager came into the shop. He was tall with short and wispy hair. Bored during the lull of the afternoon heat, the teenager sauntered into the shop and proceeded to make conversation with Thuy. As he continued, he began to pester her for free equipment. Thuy simply ignored him, quietly eating her dinner while waiting for more customers to arrive. The teenager complained about her discs, saying they were faulty *(có lỗi).* He threatened to go to another shop to get better discs. This statement caused her to react. She replied, “No, all shops buy them from the same origin, same source, they are all the same.”

The teenager continued with his complaint, saying that if this was so, he wanted to go to the source and tell them himself. He demanded further, “How can they operate such a business, selling low quality products?”

Thuy refused to reveal the source of her discs, saying instead that the source seller was quite large. Thuy’s remark about the man’s physical stature was meant to scare the lanky teen. However, this statement caused the teenager’s eyes to light up in recognition. “Ah, I know exactly who it is! I had a friend who once worked for him a while ago!”

At that moment, Thuy’s niece got up from her stool and left the shop, heading out to the supplier to replenish the shop’s stocks. The teenager jumped up, following her out of the shop which caused Thuy to frantically run outside and shout to her niece to turn around. Thuy clearly

did not want this pesky teenager to annoy her disc source.

Copying is largely dependent on larger networks of relationships among the shops along Computer Street. Although Thuy lacked the ability to download software, many other shops regularly downloaded software with ease. As a customer of another shop on Computer Street, I saw young men searching and downloading files from Russian websites. Unlike in that shop, Thuy and her employees did not downloaded software. Instead, they relied on other sellers along Computer Street to replenish her stocks when needed. Thuy lacked the ability to download software however this did not prevent her from selling discs. Shops were not isolated commercial units but part of webs of relationships. In part with working with faulty discs, improperly copied software often caused her customers' computers to break down. In these instances, Thuy grabbed her phone and in several minutes a outgoing man with a dyed mohawk arrived at the shop. Hong specialized in fixing computer hardware and was Thuy's primary repairman both for her customers' computers as well as hers. If customers sought software she did not have, she asked the customers to write down the software names on a slip of paper after which she would climb onto her motorbike and disappear down Computer Street to purchase them elsewhere. As a former customer in her shop, Thuy once directed me to an online catalogue of another software shop down the street. Once I had made my selections, again Thuy disappeared down Computer Street and returned with the discs in hand.

The production, reproduction, and circulation of discs required substantive labor and elaborate networks. At first blush, the circulation of discs appears as acts of retail however on closer inspection, the social world of copying within Thuy's shop demonstrates the complex networks of relationships with other disc producers and computer repair processes. Such networks suggest that copied discs are situated within broader forms of repair and maintenance

along Computer Street. As a locale that condenses a trade community onto a singular site, the figures of the street and the shop were intimately connected. Shops in proximity to one another formed a trade network such that Thuy regularly relied on other shops on Computer Street to maintain her business. She regularly purchased discs from other shops when her stocks were low or when customers demanded discs she did not have. She turned to other shops to repair computers when she was unable to address her customers' problems. Rather than view software shops and copied discs are part of a retail economy alone, Thuy's networks of relationships demonstrates that software discs are entangled within processes of computer repair and maintenance.

Copying as Tending to and Mending Error

Early one evening, just after dinner, a pair of twin brothers arrived at the shop. The two were identical with skinny legs, cropped hair-cuts, and shy smiles. They were regular customers and Thuy and the other female employees often cooed when they came into the shop, complimenting them on their manners and good behavior. They came to the shop on bike, with one brother pedaling while the other stood on mounted pegs. Once there, the two quietly studied the images in the weathered binders. They traded whispers, consulting with one another as they tried to discern which game was worth the small bills in their pocket. This evening, however, they arrived with a recently purchased disc in hand. One brother spoke up, "The disc doesn't work." He handed the disc over to Thuy who promptly placed it into her disc drive. Pursing her lips at the screen, after a moment she exclaimed that the disc worked fine. The twins glanced at each other and smiled sheepishly. Thuy turned to them and said that she would show them how

to install the game. The twins moved closer to the computer screen, focusing their eyes as Thuy began navigating her mouse.

The twins only spoke Vietnamese and the text on Thuy's computer was in English. Thuy was adept in navigating through her computer interface in spite of her own limited English skills. As she clicked with her index finger and continued with her explanation. Thuy paused at regular intervals to ask them, "Can you remember that?" At each turn, the twins slowly nodded, their eyes wide and their attention fixed. For the last step, Thuy asked the twins to pay careful attention. She pointed her mouse to a text file within the disc data, opened the document, and highlighted a long numerical string. Again, she turned to the twins to see if they would remember this and again they nodded. She then navigated her mouse through several layers of screens and folders before finding the appropriate location where she then pasted the software's registration key. She turned to the boys and asked if they understood how to do this. They nodded silently. Thuy then navigated back to her desktop screen, clicked on the game icon and suddenly, an image of Garfield the cartoon cat appeared as the game started. The twins broke into wide smiles and looked again at each other with new confidence. Thuy handed them back their disc and the boys happily left the store.

Many of Thuy's customers had difficulty installing software. They often thought the data on the discs were corrupted because of the difficulties they faced at home as they tried to run the discs on their computers. These difficulties were often due to the complications of installing software with illegitimate registration keys. However, the possibilities for breakdown were numerous. Occasionally discs were accidentally left blank or mislabelled. During one short period, a particular batch of video games regularly brought angry customers back to the shop demanding their money back. Thuy was usually able to install the games herself, assuage the

customers, and explain to them how to install the discs themselves, or simply exchange the faulty discs for different software altogether.

Customers with new computers also experienced breakdown. One day, a customer came into the shop and purchased a large stack of video games. His computer was exceptionally new, installed with the latest operating system. Thuy complimented him on his computer, describing it as *xịn.* The term connotes a meaning of novelty coupled with high quality and is used primarily to describe consumable status objects, like motorbikes, computers, and handbags. Novelty with this term connotes temporal dimensions whereby these artifacts are of the latest fashion, up-to-date and of superlative quality and performance associated with global commercial chains. Thuy's own networks were often incompatible with such chains. This very customer with the *xịn* computer returned the next day, unable to install and run the games. Thuy subsequently spent the next two hours trying to install the video games, eventually to no avail. Thuy diagnosed that the disc was incompatible with the computer's video card, tossed his discs onto a stack on the counter and told him to pick out other games in exchange. The customer eventually left without complaint.

Breakdown was thus not only an expression of material decay but also of rupture and disconnections. Breakdown occurred in the decay of material form, when software discs were improperly copied. Breakdown also occurred when customers did not know how to copy and place registration keys within the appropriate prompts. Breakdown also took place when incompatible *xịn* machines were brought into the repair networks along Computer Street. Breakdown was an expression of rupture across incompatible networks.

Amid this broader breakdown and rupture, the discs were central artifacts of stability. Discs cemented and affirmed the relationships between Thuy and her customers. Insistent on

holding onto the bills her customers paid, she never once returned their money in return for badly copied discs. In one instance, one careful customer bought a large stack of software discs. However, before leaving the shop, he sat down at Thuy's computer and tested each disc, one by one. He spent nearly thirty minutes at the shop. He complained loudly that her discs were faulty and said further, "If they don't work, I'm returning the discs!" She quietly corrected, "If they don't work, I'll exchange the discs for new ones."

More than just a mere process devoid of friction, installation was charged with uncertainty for which Thuy's expertise was continuously on call. Installation became moments of intervention and negotiation. Copied discs come to life as a result of the zigzag of the cables, connectors, formats, machines, discs, and people. Moments of installation thus become a condensed articulation of these myriad data travels and threads. During an exceptionally time-consuming installation interlude, Thuy loudly joked to a customer "You should pay me one hundred thousand dong! This here is a lesson!" This joke highlights the cost and labor of installation. This customer had bought several discs and returned the next day, complaining of being unable to install any of the discs. At these critical moments, Thuy either made one of two decisions: she either installed the software herself for the customer or she provided a lesson and explanation so that the customer could install the software herself. Thuy later explained further, "Installation is very time-consuming. I just do it for them, but next door, they charge twenty-thousand dong for each service. That's more expensive than the price of discs!" When I pressed further to ask why she performed such services without charge, she simply shrugged and said she wanted return customers.

Copying and installation are thus discrete moments of possible rupture. Discs are artifacts that rearticulate the multiple and constitutive connections. Through the work of selling discs,

copying discs, and installing software, Thuy mends the moments of breakdown. Discs that are faulty or improperly copied could always be replaced with others of their kind. When replacing such copies, Thuy never checked to see whether or not the new discs were in fact correctly copied. She simply looked through the shelves, found another disc and handed it to her customers and while faulty discs *(có lỗi)* were subject to complaint and debate, they were neither contested nor challenged. As a result, moments of breakdown and rupture provide opportunities to cement social relationships. Thus, the work of mending connections condensed within copied discs. Within the software shop and among the trade of Computer Street, copied discs were a vital link in these networks of maintenance and repair. So, while discs themselves were prone to error, they simultaneously served as stabilizing entities; that through their reproducibility, no matter their faults and errors, the discs allow for constant and replenishing connections. Stability was the result of continual disconnection and reconnection.

Discs also served as stabilizing artifacts through forms of reinstallation, as part of broader strategies of renewal and repair. Customers regularly came into the shop to purchase discs of older operating systems. In fact, discs for Windows XP were so popular that they merited their own special place within the array of shelves and were half the price of the other discs, selling for seven thousand dong while typical discs were more than double the price at fifteen thousand dong.[4] The three computers in the disc shop were in varying states of breakdown. Several USB ports for the front computer worked inconsistently. The computer often stopped working as a result of the use of these ports. The use of USB ports on this machine became a point of contention between Thuy and her employees. While attending to hurried customers, the other

[4] At this time, Summer 2010, one US dollar was approximately equivalent to twenty-thousand Vietnamese dong.

employees used the troublesome USB ports in their haste. This caused Thuy to yell, accusing them of carelessness and contributing to the breakdown of the machine. When these moments of breakdown did occur, Thuy grabbed a Windows disc, placed it in the computer's disc drive and wiped clean the harddrive to reinstall the operating system. Reinstallation was a process of renewal, a strategy to contend with broken machines. In part with this strategy, Thuy kept near her computers Windows discs and anti-virus compilation discs. Reinstallation and renewal were common strategies for her customers as well. Customers reinstalled their computers when their computers became bloated with viruses, when the machines ran too slow, when drives stopped working. In this manner, reinstallation was like a technical cure-all for the myriad reasons computers stopped working.

Copied discs thus play an important role in contending with machine breakdown, in spite of their own forms of error. Fault, error, and breakdown can be viewed as the constitutive counterpoints to the networks of repair and maintenance along Computer Street. Such co-constitution is an expression of Vietnam's distance from global circuits of consumption goods. A foreign executive of a software multi-national company in Hanoi explained that after extensive searching his employees were only able to locate one shop in which to buy a licensed copy of Windows. This experience led him to lament that Vietnam was a place where piracy was intrinsic. However, this view ignores the ways that copying in fact makes entrepreneurial sense, conforming to ideals of appropriate action. Piracy, defined as the unauthorized circulation of goods (Dent 2012), comes into being only through the recognition of the gap between those with the authority to produce and circulate goods and those without such authority. While deeming such copying as piratical only emphasizes the way it which it violates legitimate tracks of circulation, I argue instead that copying and circulating software discs is an expression of long-

standing distance that only becomes problematic with increasing proximity to global chains of distribution. Copying amidst conditions of error and breakdown and their attendant networks of repair and maintenance makes entrepreneurial sense in Vietnam and also comprises an entrepreneurial logic on its own right.

Copying as Entrepreneurial Logic

The work within the shop consisted of a wide range of activities. Participants sold discs to customers, burned discs, searched the internet for cracked registration codes, repaired broken equipment, installed and reinstalled software and computer games. Overall, the work within the shop comprised strategies of repair and renewal in conditions of material breakdown. Copying emerged as an overall tactic within this broader arc of strategies and consisted of several forms. First, disc copying was the primary activity that grounded all other work in the shop as described above. More importantly, copying emerged as a habit (*thối quen*) in professional training and the production of new shops. This copying had the effect of performing similarity, proximity, and continuity among the genealogical networks.

During the period of early encounter, I frequented software shops throughout the city. I regularly frequented these shops to build long-term rapport. One day, while driving around the Old Quarter running errands, I decided to return to one particular shop with a friendly female owner. As I unfastened my helmet and climbed off my motorbike, I was surprised to see a new

face. The owner was not there and instead was a younger woman with a chiseled bob and steely glare. I vaguely recognized her from previous visits to the shop.

I asked about the other woman, "Wasn't there another woman who worked here? What was her name?"

She replied, "Her name was Thuy."

"When will Thuy return?"

"In about two to three days. What did you need from her?"

I explained that I had previously requested Thuy to look for some specific software. I explained that I had not heard word from her so wanted to come and see. As I left, I saw a young man from the shop next door waving excitedly at me. Several days later, I returned to the shop. Driving by slowly on my motorbike, I peered in and still did not see Thuy. I was perplexed. I had never known her to take a day off. Instead, I saw two men in dark coats, none of whom I recognized. Only many months later did I realize that I had made a mistake. After I had worked at Thuy's shop for several weeks, she mentioned that the shop next door was, in fact, run by her former employee.

She said, "We used to work together. She worked in my shop, but she decided to branch out her own shop *(tách ra tiệm riêng)*. Everything in her shop she copied exactly like here. She even bought the same table set as mine."

I had mistaken the other shop for Thuy's. Her former employee had copied Thuy's shop so precisely I did not realize that I had walked into a different shop altogether. Thuy continued, saying that customers typically became accustomed to specific people, specific sellers. She pointed towards me, "like you." Those who were accustomed to her would keep coming back to her shop. Those who were accustomed to the other woman simply did not note the mistake and

would continue with the other shop. Thuy explained that since the new shop had opened about a month ago, people were often confused. Customers came into her shop looking for her former employee while customers went into the shop next door looking for her. I then realized that the young man waving at me must have recognized me as a previous customer and tried to catch my attention. Thuy's shop was now situated in the middle of two other software shops. Thuy's former employee copied every aspect of Thuy's shop—from the display tables, to the pictures on the wall, to the positioning of computers. However, Thuy insisted that those customers who had a direct relationship to Thuy would remain so. Those with direct relationships to the other woman would remain buying discs next door. By replicating Thuy's shop, her former employee and new competitor played on forms of likeness and proximity. Not to be seen as an act of duplicitous reproduction, this kind of copying logic serves to maintain the relationships Thuy's new neighbor cultivated and maintained as an employee apprentice in Thuy's shop.

Thuy herself describes her previous working experience as "learning the trade" *(học nghề).* Before embarking on her own, Thuy worked for a man who also owned a shop on Computer Street. She stated that her former boss' shop sold primarily computer hardware and later on began selling software. She worked for him for seven years and explained that during this early period, several other men worked in the same shop, learning the trade like herself. These men eventually also started their own shops. One such friend came to the shop one day. They sat talking cheerily for a long while. While I sat organizing and burning discs, I overheard the two friends talking about their spouses, parenting styles, their businesses. When he eventually left, she turned to me to share some gossip.

"Lots of these men open shops much larger than mine, not tiny like this. Like that guy who just left, he used to work with me and he opened a huge store on this street where the rent is

over ten million dong a month. He has three shops on this street alone and another on [another street]. They sell computer merchandise, not software. Their shops aren't tiny like mine. But if you sell a lot of discs, software makes more money than computer merchandise."

I asked, "Did your old boss mind that you opened your own shop?"

She replied without hesitation, "Since he paid too low wages, I had to open my own shop after learning the trade."

As a former employee apprentice herself, Thuy's own experience mirrored those of her new neighbor. While this additional competition was a source of Thuy's anxiety, Thuy did not express feelings of resentment towards her former employee. Thus, through these processes of apprenticeship and copying, social relationships were not only maintained but also dynamically generated. The notion of copying as a generative dynamic became only more apparent as I continued to work in the shop. One day, I arrived at the shop and before I was able to settle in, Thuy came to me, saying in an urgent voice, "Lilly, I'm so worried. I have to copy (*bắt chước*) my neighbors. She repeated this several times. She was emotional and complained that for the past two days she had not made more than one hundred thousand dong while the month before business had been very busy. She vented in frustration, "There's so much competition, I have no customers!" (*cạnh tranh quá, không có khách*). She continued explaining that two days ago, her other neighbors placed two large signboards boards by their doorway. On these boards were photocopied images of software and video games. The images were placed in clear plastic sleeves and mounted on a white board.

I walked out to my parked motorbike to get a better look and was surprised to see a new sign with easy to read lettering and carefully arranged images. The neighboring shop owner had placed two boards on either side of his large doorway. The board on the right had written across

the address of the shop in even red vinyl cut letters. Below this were the words “Software + Newest Games” in blue vinyl cut letters. Below that was an even grid of software images. The images themselves were high resolution downloads, with vibrant crisp color, suggesting that the owners printed them from a laser printer. Glancing back on Thuy’s shop, her signs looked weathered. One little sign hung askance from the front tree. She had two whiteboards that were placed on the uneven sidewalk. On these boards Thuy had handwritten the names of various software. Thuy’s signs carried the worn patina of time and weather. Looking back at the neighboring shop, the alluring signboards stretched the entire height of the doorway. This signboard brought new visibility to the shop with its bright surface, even arrangement, and colorful images. While standing there, I saw a small boy pause in front of a photo for a video game before rushing into the shop. I turned and walked back inside Thuy’s shop. As I sat down, she turned to me earnestly and said that for the past several days she was so worried she was unable to sleep. She repeated, “I have to copy their sign.”

Over the next two and half months, Thuy and I worked on this copy project. What I initially thought would be a straightforward job of reproduction slowly became much more complex. Planning and designing the sign was crammed in between moments of attending to customers, copying discs, and other more pressing work. During moments when the shop was empty of customers, Thuy talked with me about how to proceed with replicating the sign. One afternoon, she came to me with a small sheet of paper in hand and began sketching boxes and letters. She wrote down some words and handed the sheet to me. I saw the words “CD - DVD Room” scribbled at the top.

She asked, “What do you think?”

I hesitated. I did not understand the word “Room” in this context. I asked her what the word

meant, explaining that in English the word "room" translated to "phòng" in Vietnamese.

She replied, "In Vietnam, every shop does as such, it's a habit" (*Ở Việt Nam đây mỗi cửa hàng có đề như vậy, là thối quen)*.

We walked out to the front of her shop where she pointed to her signs on which the phrase "CD – DVD Room" was clearly marked. She motioned to another sign, however quickly became embarrassed when she saw the words "CD – DVD ROM." I quietly returned to the shop, not wanting to point out her mistake.

Once back inside the shop, Thuy continued with a sigh. "We still have to plan the colors!" She asserted that since red was the brightest color, thus all the text on the sign should be in red. She walked outside again and pointed to a previous sign we had just looked at, as proof of seeing red text. Her use of her current signs as justification for decision-making struck me as odd. She turned to ask for my opinion.

Again, I paused before asking, "Why not green or purple?"

She immediately countered while shaking her head, "No, green is not strong enough."

I explained to her that I didn't think that green was necessarily the best color but if everyone else had red lettering, perhaps she could differentiate her shop from the others. She paused for a long time and we sat there in silence while staring across the street. My eyes landed on a particular sign across the street. I pointed to it and explained that while I had never been inside that shop, I always remembered it. It was distinct with bold backdrop of maroon and one single word in the center. She quietly stared and I grew increasingly concerned that I may have offended her. I recoiled, "Perhaps it's because I'm a foreigner so I don't know what Vietnamese prefer, but I just want to share my opinion." She hurriedly reassured me that she was not offended and that she understood that in my saying so she might have a different perspective *(có*

hướng dòm khác hơn). Over the next few weeks however, I realized that my interjection had little effect and we continued with the project of copying her neighbor's sign.

Copying this sign thus became an exercise of enrolling customary habits in the production of similarity. It was several weeks before Thuy hung two completed signboards on either side of her storefront. When she finally tied them to the metal railing, I stepped outside to look back on her storefront and get a better view. Her signboards looked absolutely nothing like the sign next door. As a result of Thuy's desire to place as many images as possible on the boards, they butted against each other. Along the left-hand side the images had been modified to fit within a particularly narrow column. This visually conveyed a feeling of jumbled compression. The images were fuzzy and pixelated, a result of the low resolution of the image files Thuy's employees had downloaded. The images laid uneven on the board's surface. The rolled tape that adhered the print-outs onto the board bunched and created lumpy surfaces around the edges. Thuy herself printed the images from the shop's ink-jet printer. Several days later when a heavy storm blew into Hanoi, the colors immediately ran down the page, leaving streak marks on the board. Thuy had a nephew cut and apply the vinyl lettering at the top of the board and as a result of his uneven hand, tiny bubbles lay trapped under the sticky plastic.

Regardless of the final outcome, Thuy's anxiety about the signboard demonstrates deeper ideals of likeness and similarity in entrepreneurial activity among the software shops. Thuy's signboard ended up looking completely unlike her neighbors as a result of the visual composition and material form of the images. Nevertheless, the effort and work of copying provided a window into the way that Thuy understood the importance and value of copying altogether. Through Thuy's experiences, copying emerges as a rooted logic in entrepreneurial practices that can be understood through the metaphor of genealogy.

Typically, notions of copying when decried as acts of valueless reproduction do not take into account the possible relationships among the copiers; that is, this devalued and voided understanding of copying does not take into account existing relationships across these people, agents engaged in acts of copying. The concept of genealogy reverses this, looking the ways that copying in the case of the software shops in Hanoi, are expressions of relationships in the place of the street, over time. The concept of genealogy within the context of Computer Streets helps to think about how copying acts as an entrepreneurial habit that is generative, whereby relationship are maintained without disrupting extant hierarchies, such hierarchies that are vital to learning and the securing of livelihoods.

Regardless of the final outcome of the copied sign, processes of copying had demonstrative value in the social world of discs because copying made visible what otherwise was unseen. While Thuy's sign eventually looked nothing like her neighbor's, the act of copying brought a visibility that was dependent on the proximity of shops. In the same manner that her other neighbor fashioned her shop in the exact image of Thuy's, this logic of copying had the broader effect of rendering her shop visible by demonstrating a similarity in kind. Whereas, difference was understood as leading to invisibility, copying was thus the antidote that rendered Thuy's shop similar to her neighbors and thus visible to those passing by.

At one point Thuy explained another quirk of national habit, "Vietnamese are strange. If a place is crowded, Vietnamese people think it is of high quality. Doesn't matter if it's true or not." What she described as a unique quality of a national character may not necessarily be true, however, this statement taken together with the broader social world of copying suggests that likeness is valued as an index for stability. Concerns of quality extend to all consumer domains—motorbikes, make-up, clothing, food, including computer devices. These concerns of

quality often have geographical dimensions whereby brand and locations of production serve as varying indices for quality and reliability such that, for example, motorbikes of the same brand but manufactured in different countries would be viewed of differing quality (Vann 2005). In environments of continual breakdown, consumption is fraught with risk. Particularly as Vietnam becomes increasingly connected to global distribution chains, this anxiety is exaggerated as increasing commercial inroads from different places open up even more possibilities for unforeseeable risk. In day-to-day conversation, Vietnamese regularly exchange stories of harmful goods manufactured in China while newspapers report on nefarious street vendors treating food with harmful chemicals. The subject of goods and their states of quality are the subject of everyday complaints and regular conversation. This general moral anxiety leaves people continuously searching for signs of reliability such that popularity and similarity become convenient indices.

Copying thus helped to produce continuity in uneven technological networks. Copied discs served as stable points in unreliable networks of machines and devices but also as stabilizing points across social networks of repair between shop-owner, customer, and sites of repair. Copying, as a broader entrepreneurial logic in the economy of Computer Street, produced continuity in genealogical networks of hierarchy as people learned new trades and branched out on their own. Copying established likeness and similarity, important qualities as people developed their entrepreneurial lives over time within established networks of hierarchy. Copying in this entrepreneurial environment was thus generative, not merely imitative. These networks of maintenance and repair were specifically grounded in the locale of the street in which mutual proximity of the shops conveyed quality and helped to establish the value of their businesses.

Through this examination of the software disc shop, I attempt to lay out the social world of copying. In a software shop along Hanoi's Computer Street, copying takes on several forms, through the work of reproducing discs and the generation of new shops. For the latter, copying is a key dynamic that permits novelty in the form of new shops within extant hierarchies of production. Copying is thus an important part of the entrepreneurial logic of trade networks that originate from shopkeeping modes of production. The effect of copying is visibility of shops, continuity of relations, and stability of trade networks of repair and maintenance. Copying thus performs a social scaffolding among disparate connections. The networks on Computer Street comprise a trade community of repair and renewal. In part with this, breakdown and repair are expression of Vietnam's peripheral place in relation to global chains of distribution. As a result, networks of repair are mutually constituted with error and breakdown as a result of such distance and marginalization. By looking at the entrepreneurial forms that sustain the circulation of copied discs, this chapter challenges current debates of piracy that merely frame software copying as an illegal act. By describing the work of copying discs, this chapter demonstrates that way these seemingly simple acts of mundane reproduction, in fact, require substantial work while also entangled within networks of computer repair and renewal. Copied discs are thus produced within larger trade communities, a genealogical system in which people are arranged hierarchically amid long-standing relationships and histories. Copying as an entrepreneurial logic that produces shops also performs visibility, continuity, and stability across these trade networks.

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