In the waiting room of the smartphone doctor
Chez Ibrahim Adjamé, Washington Market, Gao

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Based on notes from my last stay in Gao, 21 September - 9 October 2017

Right after my arrival in Gao, I inquired about telephone repair shops in town and found out that my research assistant knew places of different levels of skill. Most are located in the two markets downtown. So I followed him the next day. Gao counts two central markets where most trading still gets done. Traditionally, the lower market, located nearer the bank of the Niger River is the place for foods, spices and products for household use. It used to be called the "OCINAM Market" after the state-owned network of movie houses created after independence. Nearby there used to be the SOMIEX, the erstwhile state-owned import-export company that once held a sort of monopoly on consumer goods coming in and out of the country until the mid-1980s. It was the old days of socialist central planning. During the colonial era, the riverfront was built as a network of multistory stone brick buildings that had belonged to a few families of French and Lebanese-Syrian traders. A block south of this compact commercial district was another chain of public buildings including the city hall, post office, governor's palace, and the telecommunication building. Further south there used to be two parishes and a military camp. This basic geography of the riverfront has survived to date, despite the repeated disasters and dramatic events that have visited over the last twenty years. Indeed both markets were severely damaged by fire in the last few years. Makeshift power connections were blamed for the destructive outbreaks.

The upper market is still called "Washington" and lies just a few hundred meters to the north. It was built like an aircraft hangar with elevated corrugated iron roofing. There is a stretch of platforms occupied by dozens of tailors mostly sewing on foot-pedaled machines. In my childhood memories, I still remember distinctly the eves of holidays, when customers besieged their tailors in order to get their dresses in time for the fete. Sometimes, the happy denouement would come in the very last hours.

We decided to start with the lower market though my companion held one repair shop on Washington in particularly high esteem. He considered him the best smartphone doctor in town. It was Friday and here working hours are unpredictable even in the morning. He took me to a shop in front of which several young men sold calling cards. Inside there was a small and neat display of new telephones for sale. We found the main repairer busy fixing a device. He looked engrossed in the operation, so I let my companion approach him. His response was friendly but wary. After being introduced as a researcher working on the repair of smartphones, I asked him if he would be ready to answer a few questions, maybe on another day. Yes, we could talk. But he had a rush job to finish, then he would be gone for the rest of the day.

I asked him if I could observe for a while before moving on. He wasn't particularly enthusiastic but didn't prevent us to stay. The place was narrow and we just stood in front of him. He had taken off the screen of a smartphone and was testing the circuit. In other words, not much was happening, so we decided to go to another shop.

The second shop was just steps away but it presented a very different face. No street vendors hanging out in front, just four young men inside and a very basic

repair station with a cardboard box full of parts and basic tools like screw drivers and glue tubes. My companion was judgmental, quite harsh really, even before we set foot in there. These were just youth who tinkered around. They might fix your device or ruin it irremediably. The outcome is an open affair. Just like the repairers in the village. He himself wouldn't go them with any telephone of value. Indeed they didn't show any particular interest in our presence. I asked him if they worked all day on Friday because we might come back in the afternoon, and they said yes.

We walked to the next station. Sékou worried that it was already mid-morning, and the shop in Washington might not even open on Friday. Inside the market, we walked through rows of clothing and fabric. Near the exit, we stopped at a shop that actually looked empty from the outside. To say the least, it was dark and seemed, at first sight, unattended. But as we stood at the doorstep, someone rose from behind the counter. The sight immediately reminded me of the scene with the young repairer in Bamako. The counter was protected by wire mesh grid with a square opening in the middle. The place was crowded with stacks of plastic containers piling up to the ceiling. There was only a small entrance through which one could squeeze in and out.

There were two men inside, young enough but no teens anymore. Sékou asked after the one called Ibrahim, though he knew all the others, I later found out. He had left but would come in the afternoon. We talked with the two present. They said that they worked all day Friday, as usual. But it was not the right time. They were very busy at that moment. We decided to come another day. We actually didn't have a choice. This shop has the most reliable repairers in town I kept hearing. So they are in high demand, I heard over and over again.

Our next visit wouldn't be simple either. We came in late the afternoon but still had to wait more than an hour to speak to the team. They were courteous but very busy with a relentless flow of customers who dropped or picked up devices. I myself brought along a Samsung device that my sister said "drowned" once. It was a common occurrence with people working and living near the river. Telephones regularly fall into water, and depending on the building and the exposure, they may or may not be redeemable. She had brought this telephone to a repairer in the village, but the latter found the "motor" hopelessly flooded. Maybe in town the service shops would be better equipped to cope with such an extreme case. I took it to the star repairers as test case.

While handing out the telephone, Sékou reminded them that we had visited them previously to talk about their work – repair jobs and the reuse of old devices. I also told them I would really be happy if I could take a few pictures of their workstation, especially with their hands at work. They bid us to sit on a bench outside. Two young shopkeepers held us company. They prepared tea and shared it with the service men and us. Market people began to pack their wares and close shops as daylight waned. Soon all the gates were closed, except for one door left for pedestrians and motorcyclists. The last customers picked up their devices one after the other. Some emerged from within the market. Apparently they had dropped them earlier in the day for one reason or another.

We were finally called in. The shop owner looked more relaxed at that point, but he sounded businesslike and quizzed me about the aim of our

project, and how it would present them. He sounded like there were other people who had come to them for information. I had taken one picture when we first talked to them on our arrival. He allowed it but right after the first picture, he asked me to wait until the customers were gone. To be sure, I would rather take spontaneous snapshots through the waiting period but this wouldn't be convenient for him, as he let us know. He wanted to explain things quietly; we could then take pictures of the objects while he described them. Now, behind the counter, Ibrahim and his two colleagues listened to my explanation of the project rationale. I told them that colleagues at the University of Applied Sciences in Basel were doing research on the use, repair and reuse of smartphones in Mali. They had been conducting research in Switzerland and collecting a sizable documentation on the waste coming from smartphones. Since they knew my interest in mobile technologies and my own writings on their expansion in Mali, they asked me to bring them stories and images of people who work on these devices. It sounded a bit rehearsed, but again I didn't expect to ask me to defend a thesis. I reverted to a simpler image. So, it would be like sitting with blacksmiths and mechanics, I would like to know more about their work, their tools, the routes that brought the different elements to them. My assistant also threw in a couple of anecdotes about the objects I had collected or photographed in the village: pieces of telephones, mostly discarded batteries. One of the three interjected that he knew the book I wrote about the village and the region. His mother had family in Bagoundié. The atmosphere got quite relaxed at this point. Ibrahim, who acted as the leader of the team, asked me to step inside. I got to squeeze through the small doorway and Sékou handed me my camera and voice recorder over the counter.

Inside, the shop looked quite tidy. He pulled first a hard plastic case in front of me. It contained a great variety of hard parts of telephones: tangled circuitry, fragments for the most part, supports for screens, all sorts of pieces of metal. As I took the first picture, he plunged his hand deep into the pile and mixed it all over. He did this several times, explaining: "These come from old telephones. We use parts of some to repair others." Then he pointed to clear plastic cases stacked up in such a way that they could be pulled in and out like drawers. The grips had different colors and each drawer was labeled with the initials of telephone marks and models. Popular names like Samsung, LC and Tecno were assigned several drawers. Then there were more drawers containing parts that would go with any device: internal circuitry units, plastic covers for screens, adhesive tapes.

"So we also have new parts that we put in when we can't find them in old telephones. These pieces are often damaged, so we find replacements here or elsewhere," he said, glancing at both the case of used parts and the layers of new components in drawers. He explained that they ordered most of the supplies from Nigeria. A smaller quantity comes from Bamako. The growing insecurity on the Gao-Bamako road forced them to diversify their supply base.

The neat and professional organization of the workstation surprised me, and Ibrahim noticed it. He told me that they didn't have all the equipment and material of bigger shops in Bamako but they tried hard to get the tools and parts needed to do a decent job in Gao. They were striving to do their best here.

He turned to a metal piece lit by a powerful desk lamp. One colleague sat on a small swivel chair, in the delicate pose of a pianist. Ibrahim asked him to start working so that he could explain a few things to me, and I could take pictures. The other picked a kind of scalpel with a "beak" and started cutting and filing a tiny piece out of a smartphone circuitry board. In the meantime, Ibrahim switched on an electric welding device used to glue the part onto a new surface. The operation lasted just about a minute. The other stopped, and the guided tour continued with the different tools placed at different spots of the continuous workplace formed by the tables put end to end against the wall. Some tools were fixed to the mountings of the shelves holding the plastic containers. As we neared the counter to the right, the arrangement appeared less elaborate. New transparent plastic cases with mixed content were stacked up against the wall, then right toward the door, piles of used devices covered the boards forming a shelf under the counter. The workers vacated the room so I could take pictures through different angles. At the right end of the counter, there was a desktop computer with the picture of a smartphone on the screen.

The computer was running more like a databank. Internet connection turned out to be nearly impossible during my stay in Gao. Every now and then I could send or receive an email on a telephone but the mobile Internet modem for the computer never worked in two and a half weeks. Surprisingly enough, last year the same device worked flawlessly and the connection seemed even faster than in Bamako. As in many such situations, there was a great deal of speculation about the root causes. Many people in town thought that the deterioration of online services was caused by the military machinery and electronic equipment operated by the UN and French forces who built their main bases around Gao. Only folks who worked on these fortified compounds had a functional access to Internet. For the rest, the signal would be constantly jammed. This was one note in the increasing resentment against these military forces. On a daily basis, those who did not worry about Internet complained bitterly about the ongoing low flights over the city and villages. There had been protests against the fact that one could hardly hear a phone call at times and the mud-brick houses had cracks everywhere as a result of the vibration caused by low-flying helicopters and jets.

But near the end of my stay, there was a report on local radio saying that the national company Malitel-Sotelma had reported acts of sabotage against its installations near Douentza, in central Mali. The area had become very unstable and insecure over the last two years. In any case, Internet connection had collapsed long ago without much communication from the two providers. Local users too seemed resigned about the state of affairs. The worsening insecurity was used to explain all breakdown and malfunction happening at the moment.

Casting a final look around the workstation, I remembered Sékou's appreciation of its tenants as serious and competent. Whether they were the best as he insisted was another matter. But even as a subjective evaluation of the repair shops in town, it held a grain of truth. Their inability to fix my sister's Samsung damaged by water wouldn't totally damp my own positive astonishment. To be sure, the phone was a sort of alibi, to avoid coming empty handed. If they had fixed it, I would have been happy to bring it back its owner. But Ibrahim's colleague who handed it back said that they had no remedy. The circuitry was so battered that he couldn't find any workaround for it. However, his statement reminded me our stop at the technician to whom we showed the JBL speaker with the damaged USB power slot. The definitive sentence in Basel, that there was no way of fixing the device, would be overwritten by

the ingenuity of the young Mohamed in his modest backroom repair shop in Bamako. I took back the Samsung though I was tempted to leave it there for further dissection and reuse. However, another little voice told me to keep it and bring to Mohamed the next time I land in Bamako, in the third week of November. The test will continue, and I should find out if Mohamed would again dare tell me that he could repair it but it would cost me a fortune.

The afternoon and evening at Ibrahim Adjamé's shop had opened my eyes to a hidden face of the smartphone business. This has little to do with the allure of slick devices, inseparable lifestyle accessories, objects of desire and distrust. Mobile telephones started arriving in Gao in February 2004 and immediately cut the ground from under the feet of a recent telecommunications revolution, the telephone booths installed across the city to make telephony at last accessible to ordinary citizens. The belated initiative became equally outdated overnight. The simple phones that filled pockets dealt a fatal blow to the telephone booths. This episode also illustrates the hapless adventure of the landline in Mali and Africa. The home phone remained a rare and short-lived object. In contrast, the portable phone immediately became an unmistakable artifact of popular culture, a fixture in the practice of daily life. Thus it constitutes a forceful agent of the material culture that it helps shape and reshuffle.

Ibrahim Adjamé's team deals with the material fragility and unpredictability of the object that is carried along and endures physical damage due to immersion, fall, or short circuit. The devices display the broadest possible range of defects. The repairers have learned to look at the right spots to determine whether a phone can be saved or not. After the first diagnosis, they set out to fix the damage and bring the device back to work. They seem to succeed for the most part by combining hands-on technical know-how and common sense. For the rest, there is no trace of romanticism about the objects themselves. The defective devices can either be repaired or used to repair others. The remains of scores of used phones piled up in containers and over tabletops illustrate this point. In a way, the workstation reminds me of an operation room for anatomists in the 19th century, at the height of the fascination for the mechanics of the human body. In their own way, the ailing and defunct phones look like exquisite corpses on display. They may be resurrected or not, but, especially in this part of the world, their parts are likely to outlive them, migrating into new bodies, sometimes worn on new bodies.

Beyond this corporeal dimension, the repair shop itself is a self-organized ecosystem in which each person seems to know his place, to possess a skill to his advantage and recognize complementary skills in others. Certainly, it would take more observation time with the craftsmen at work to make a definitive statement in this regard. Nonetheless, the team appears to defy the lack of technical know-how decried in many crucial areas. A few years ago, the exasperation over unrepaired technical equipment motivated the government to create technical training centers to raise a critical mass in this area. This meant training technicians who could confidently and safely repair medical devices, fix or replace electronic components in complex machinery. Or, more down to earth, the country lacks skilled electricians, mechanics, plumbers, masons, and bakers. Competent Malian handworkers are too few to fill the available job openings. This is a paradox in a country with extremely high unemployment among young graduates. The technical training centers were intended to be a fast-track solution to the lack of specialized technicians. The only problem is that the plan is yet to be implemented. In the meantime, repairing a machine or a

device confronts one is done by tinkerers ("bricoleurs"), without any certainty that the thing will be fixed or broken at the end of an intervention.

The smartphone workstation has succeeded in implementing its own fast-track training apprenticeship, with people who not only have learned by working with more experienced repairers, but also by using the knowledge banks available online to pass dead-ends. Even with erratic connectivity in Gao, they manage to gather useful information on devices and software, as well as tips on how to fix them. This hands-on know-how has its strengths and limits. Yet, under the circumstances, it is rather reassuring about broader perspectives; that is, the ability to use shortcuts to fill in gaps in needed skillsets and even develop a new skill base. I can imagine a technical training center not created ex nihilo but actually recruiting self-taught technicians for more systematic training. They could thus neatly marry their "embodied" knowledge or ingenuity with conceptual processes; that is, to be able to plan and carry out technical or creative projects that go beyond the fixing of defective devices.

I left the repair shop with the image of the three young men standing at the door across the mesh screen fencing off the counter. For a few minutes, they had handed me their tiny but altogether tidy workroom. I took my last pictures with them in the background. A few times I turned the piercing life of the desk lamp used for detailed work like chiseling, welding or gluing small and delicate pieces.

By the time I stepped out, darkness had engulfed the market. Only a few lit points showed the way out. I realized that the three young men had worked all day long, now into the night. The elastic working day is a usual feature in both public and private sectors. But here the setup recalls the early stage of the industrial age in the West and then Asia. Their shop itself is in a way a production workshop tucked in a namely corner of Washington, the international market of Gao. This is the place where generations of trading families from Nigeria and Mauritania built their businesses and created routes for goods that crisscross the Sahel from east to west, north to south. Moorish and Yoruba merchants continue reshape the existing routes lately damaged by violent conflict and growing insecurity. Still, Ibrahim and his team rely on the shipments coming from Lagos and Bamako, by difficult and unpredictable roads.

Now, they too were ready to close shop and return home. We thanked them for their time, with the hope of returning another day. One of them offered to walk us through the maze that led to the open door. On the street, a long truck was being discharged under the cover of the darkness. The laborers were taking down 100-kg sacks of dates imported from Algeria, one could say, over even more dangerous roads.