

## 8 CARE IN FRAGMENTS: ECOLOGIES OF SUPPORT BEYOND REPAIR

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If “the world” is to be saved, this will be in each of its fragments. As for the totality, it can only be *managed*.

—the Invisible Committee, *Now* (2017)

Writing almost two years into a global pandemic response gone wild (ripe with vaccine colonialism, securitarian nationalism, and blatantly unequal exposure to the virus), with public infrastructures in shambles, amid the splintering effects of decades of neoliberal policies and centuries-long settler and white supremacist violence, it seems pretty safe to suggest that care is falling to pieces. Care, a series of practices by which life is supported and made to thrive, is in fragments. When dealing with such a state of affairs, care thinking can become complicit with a tendency to subsume care, and indeed the organization of collective life, under a project of repair understood narrowly as a mere recovery of lost function. But what if taking care beyond repair entailed attending to fragmented lives without any hope of return to a lost unity or to a retrieved “normality”? Even in fragments, care demands to be defended—perhaps, even, *especially* in fragments.

The often disempowering or weakening effects of fragmentation are well documented. In this chapter, however, we examine how fragmentation may also give rise to, intensify, and pluralize the relations that hold and support lives—precariously composing what we call “ecologies of support” (Duclos and Criado 2020). When referring to fragments, we have in mind neither ruins nor parts of a whole that could be stitched back together. Rather, we

are interested in the shattered parts that remain after wholes implode or are destroyed, be it by sheer violence, carelessness, or inattention. Against the persistent charms of unity, caring in fragments, bit by bit, activates a politics of groping for the appropriate supports: gauging whether singular forms of life might emerge, persist, and grow without compromising their life-supporting efficacy.

By exploring fragments and their afterlives, we aim to contribute to thinking about fragility not merely in the negative form of a loss, as the notions of ruins, degradation, or decay tend to pose. Rather than drawing from the reparative and restorative approaches that often haunt maintenance and repair studies, this chapter focuses on the endurance of fragments and how they may multiply and unfold in unexpected ways. In this sense, the language of the afterlife offers a powerful alternative to other terms that suggest a certain fall from a primordial unity. It opens up a way of thinking about fragility that allows us to see it as potentially—but not necessarily—generative and as something that can be embraced rather than avoided or fixed.

Hence, expounding the power of or rather lying within fragments, this chapter raises the question: How can continuity between fragments be cultivated? How do fragments endure? To examine this practical question, this chapter tells the story of two different ecologies of support, sharing similar concerns to articulate singular forces and situations with demands for continuity. The first story discusses MOS@N, a mobile health (mHealth) initiative that was implemented in Nouna, rural Burkina Faso. MOS@N was a network infrastructure that used mobile communication to improve medical follow-up and care. Central to MOS@N was the work of godmothers, who were selected and equipped with phones and bicycles to act as “community relays,” following up with pregnant women in their respective villages. As is often the case with mHealth networks, MOS@N did not deploy as planned. Its everyday activities relied on a series of practices and relations of care that were gradually improvised over the course of three years—the most significant of which was the expansion of the role of godmothers to include the physical accompaniment of pregnant women to local primary care centers. MOS@N ran out of funding and was terminated in 2018. However, three years later, godmothers still carry care work in their communities. The project is over, but some of its most demanding activities endure and have taken on a life of their own—without any kind of formal or institutional support.

This chapter explores the afterlives of MOS@N, with particular attention to the continued work of godmothers and the related obligations. In this case, the notion of the afterlife is helpful to understand how a decaying project remains alive through the diffracting and diverging work of its fragments, not desiring to return to or restore a lost unity.

The second story features a particular form of design activism that emerged in Spain in the early 2010s, a time of a profound crisis of public care infrastructures: namely, harsh austerity cuts affecting the provision and the scope of private–public care technology markets as a result of the 2008 financial crisis. Activating a wide variety of embodied experiences and knowledge practices from do-it-yourself (DIY) amateurs, these initiatives, coagulating around a collective called *En torno a la silla*, didn't wish things to go back to where they were. Their workings appeared as the nemesis of standardized technical aids portfolios and of the ableist notions undergirding welfarist markets. In this chapter, we ethnographically follow traces of their inquiries and interventions that started after the *indignados* movement in the city of Barcelona. Discussing in particular the attempts at building a Tinkering Network, self-managing the making and repair of technical aids, we describe the challenge of ecologies addressing the almost impossible task of sustaining bodily diversity with fragmentary forms of DIY making. Although the Tinkering Network formally ceased in 2016, perhaps suggesting a process where nearly nothing remains, in this chapter, we also discuss the afterlives of its traces, through which some of its fragments endure, still being generative and productive in their own right.

Anthropology and science and technology studies (STS) scholarship have shown how infrastructures and networks tend to evolve slowly over time, and “how ‘formal,’ planned structure melds with or gives way to ‘informal,’ locally emergent structure,” which may take hitherto unimaginable forms (Star and Ruhleder 1996, 409). Improvisation, tinkering, and open-endedness have been central to recent work on care practices (Mol, Moser, and Pols 2010), showing how togetherness or stability—technical or otherwise—is contingent on the continuous labor of social and material ordering (Denis and Pontille 2015; Simone 2004). As Annemarie Mol has suggested, care entails a continuous process of “attuning the many viscous variables of a life to each other” (2008, 54)—a task of handling life as a perpetual work to be done, which “goes on and on, until the day you die.”

Very much in tune with these works, in the stories that follow, care entails learning how to cultivate continuity between fragments. However, in both stories, fragments only endure to the extent that they do not merely prolong or preserve past iterations of care. Rather, their afterlives generate openings and interstitial movements from which something new, still indeterminate, can grow. In either case, it is not possible to subsume the singularity of what care gathers under a larger totality or identity, to be managed by troops of experts and technocrats. In these stories, care appears as a process whereby disenfranchised actors seek to find endurance in uninhabitable domains—not an endurance that is about the “resilience of human life” but rather one that “entails the actions of bodies indifferent to their own coherence” (Simone 2019, 19). Care in fragments, to again borrow from Simone, “isn’t just leaving things unfinished, it is not giving in to the constant of being incomplete or under duress, but rather creating conditions in which the disparate might stick together” (2019, 33). In telling these stories, our aim is to explore the stickiness of fragments and their afterlives, paying special attention to shared singularities, to confederacies of existence enabling the dissimilar to endure in its collective non-wholeness.

#### THE AFTERLIVES OF GLOBAL HEALTH (BURKINA FASO, 2014–)

We are told that the project is finished but we cannot stop this work, we love this work, it is the village that chose us and it is not because the project is stopped that we will stop too.

—Godmother E, Labarani

The next few pages discuss the implementation and afterlives of MOS@N, a mobile health project that monitored maternal and child health in the district of Nouna in rural Burkina Faso. MOS@N was implemented in a context where the proportion of women attending at least two antenatal care visits and delivering in a health facility remains relatively low. High maternal mortality rates also remain a major public health challenge in Burkina Faso. MOS@N aimed to use mobile technology to improve the medical monitoring and follow-up of pregnant women. Designed and launched by the Centre de Recherche en Santé de Nouna (CRSN), MOS@N was implemented in 2014 as a modest socio-technical infrastructure. It involved building a mobile network, including an electronic medical record system, which would send

automated voice medical appointment reminders of upcoming (or missed) antenatal care visits. Central to MOS@N—and to this vignette—was the work of “godmothers”—community relays who would receive the appointment reminders and follow up with pregnant women in their respective villages. Until early 2018, MOS@N formally connected five health centers (CSPS) to twenty-eight villages in the district of Nouna in the Kossi Province in the western part of Burkina Faso. But as we shall see later, although the project is formally over, fragments of MOS@N have endured, maintaining and pluralizing relations that hold and support lives.

Over the past seven years, one of us (V.D.) has been working closely with researchers from the CRSN to document MOS@N. They have followed the design and implementation of the project, with particular attention to its impact on care infrastructure and practices in Nouna.

From its implementation, it was evident that people, devices, and data did not circulate smoothly along the network. Among many other challenges, MOS@N struggled particularly with technical issues. Phones, mobile connectivity, solar panels, and bicycles were frequently broken or failing. Sustainable communication required a constant additional effort of repair. When repair was not possible, godmothers had to come up with alternative solutions: charging their phones in local shops, for example, when the solar panels failed. Erratic network connectivity also plagued the mHealth infrastructure, leading godmothers to miss calls or delaying their access to voice messages.

As a response to these technical challenges, MOS@N's field coordinator, along with godmothers and health workers, altered the network. This was the case of the role of godmothers, which was considerably modified and extended in the course of MOS@N's implementation. In the initial design of the project, godmothers would receive the voice messages with automated reminders of antenatal consultations and then follow up with pregnant women. To do so, they were equipped with a mobile phone, a portable solar charger, and a bicycle to facilitate the communication of health information, as well as their own circulation, between the CSPS and villages. But as the automated reminder system faltered over broken equipment and poor network connectivity, the role of godmothers shifted from merely communicating information to pregnant women to *accompanying* them physically. A few months into the project, godmothers indeed started to accompany pregnant women for their medical visits at the CSPS, including being there for delivery. Godmothers and pregnant women started walking miles together,

at times crossing watercourses on pirogues or on foot. But accompaniment meant more than just walking with pregnant women to the CSPS. When women gave birth, godmothers washed them, their clothes, and the room. They stayed with them through the night and called relatives to keep them updated. In case of complications, they accompanied women to the hospital in the nearest city (Nouna), sometimes for days. In the process, they learnt how to assist health workers in deliveries as well—none of which was part of their original job description. Accompaniment involved a great amount of labor.

Care relationships, not only between godmothers and pregnant women but also between godmothers and their phones, transformed MOS@N in ways that redesigned it altogether. Phones remained instrumental in the expansion of godmothers' roles, but they did so in unforeseen ways. Godmothers and pregnant women often traveled long distances together, often on foot. Under these circumstances, the phone's flashlight proved to be instrumental for walking in the dark. Godmothers would also use their phone to call ahead to the CSPS to make sure health workers were actually present or to be certain that the dispensary had the medication they needed. Not infrequently in Nouna, pregnant women would end up needing medical attention while on the road. On these occasions, phones were used to alert health workers and family. However, phones, batteries, and solar chargers often broke down and needed to be repaired. To perform their duties, godmothers cared not only for the women they accompanied but also for *things* that composed the network. Care, as anthropologists and STS scholars have shown (e.g., Mol, Moser, and Pols 2010), entails tinkering with what is present in a given situation, including the messy details of a socio-technical infrastructure: unstable network infrastructure, broken phones, or pregnant women walking down dirt roads on their own. In MOS@N, care materialized in fragments out of not only fragile, makeshift connections but also demanding, time-consuming work.

After three years of operations, MOS@N was discontinued in early 2018. Like the majority of mHealth projects, MOS@N had from the start been designed and funded as a pilot project, with a fixed beginning and ending. However, more than three years after the project was officially shut down, most godmothers are still accompanying pregnant women to the CSPS. They do so without institutional support—and without pay. One godmother summarizes the current situation, as follows:

The project is finished but according to me the activity is not finished. Even tomorrow if I am not handicapped by any illness, if a woman comes to ask for my help, I will do what I can do. That is why I say that the activity continues. If I say that the project is finished and that everything is finished, and she was intending to ask for my support, she will not do it anymore.

—Godmother D, Dara

The distinction between “activity” and “project” is important. Activity, for godmothers such as D, refers to a set of relational practices that do not follow any clear instructions as to how care should be practiced. Godmothers do not try to maintain the project as it used to be. They know well enough that MOS@N is not coming back in its previous form. They are not trying to fix or repair MOS@N as a project. They are working from some of its fragments to generate singular practices and relations, emerging yet diverging from MOS@N.

Commitments and habits do not magically evaporate as projects terminate. Care work carried out by the godmothers came with important affective and ethical implications. While some godmothers invoke moral or religious principles to explain their continued commitment to the accompaniment of pregnant women, most instead suggest that they aim to sustain relations of support that were developed over the past few years. For them, the ethical obligation to care relates to the material conditions of reproductive health in the district of Nouna. “Childbirth is a difficult thing, so if the woman asks for you, it is like an obligation for you to go with her, you can’t refuse. Our communities consulted before choosing us, they believed in us, so we must take up this challenge,” explains godmother N in Lekuy. Any formal contract linking godmothers to MOS@N is now terminated. Godmothers, however, feel that they remain responsible for life in their communities.

The obligation of care should be situated within the wider social structure of everyday life in Nouna. Accompaniment transformed the relationship godmothers had with fellow village dwellers. For many, being a godmother has brought a new social status, especially since accompaniment was introduced. They might be referred to as “Woman Doctor” (*dôgtôro mouso* in Dioula), and the family of patients might bring them small presents such as soap, meat, peanuts, maize, fish, or candies:

Many of us receive great consideration and respect thanks to this project. It has strengthened our collaborations, our friendships with many people and even

among us godmothers. It is thanks to the project that we have known each other well enough to strengthen our relationships with respect. Before you could go a few years without seeing a person, but thanks to the project that person now might think of you and visit you to discuss. In my opinion this project has been very beneficial especially in our collaboration with each other and in the community. It has brought understanding and strengthened friendships. Anyone you have ever accompanied for childbirth, wherever she meets you, she will appreciate and respect you. This is very common now.

—Godmother E, Dara

For some godmothers, the end of the financial compensation earned from MOS@N came with improved relations with women in their village. Compensation sometimes came with a sense of envy or resentment toward godmothers. Other godmothers noted that even when they disclosed the project's termination at the village level, many villagers still believed that they were being paid for their work. In some cases, this also led to conflict with extended family members, who considered that godmothers should not neglect their household duty to carry out their work, or that they should otherwise share the money that they, in fact, no longer receive. Other godmothers have simply not disclosed the termination of the project to people in their village, thinking that they would hesitate to ask them for accompaniment to the CSPS if they knew.

Care, notes María Puig de la Bellacasa, “is a force distributed across a multiplicity of agencies and materials and supports our worlds as a thick mesh of relational obligation” (2017, 20). This seems like a fitting description for the work of care in and beyond MOS@N. MOS@N's afterlives, in particular, invite us to attend to a craftwork that disrupts dominant modes of knowledge production in global health. For example, the production of scientific knowledge about mHealth is primarily concerned with finding models, or at least features, that can be scaled. Global health interventions generally come with identifiable criteria for success, as well as clear beginnings and ends. Imagined futures often make things seem whole. But what is interesting in MOS@N is not so much how the project could be scaled or how a better project could be designed. Rather, it is what could be learned from that which *escapes* the project per se (Savransky and Tironi 2021, 19). There was always, in MOS@N, a surplus that was not accounted for: habits, labor, and affective relations that exceeded the technical configuration of the project. This surplus is not simply waiting to be fed back into the system, making it more productive,



better designed, or otherwise. MOS@N's fragments are not broken parts of a whole. As a matter of fact, the persistence of the godmothers' work suggests that fragments in MOS@N were not as fragile as one might think. Against the charms of unity, they exist and endure in their own way, taking on a life of their own. MOS@N draws attention to the messy and unsteady material ecologies—the labor, the bicycles and cell phones, the CSPS, and so on—that support life. These ecologies of support are not all-encompassing environments. Their protective effects are discontinuous, unevenly distributed, and cannot be taken for granted (Duclos and Criado 2020).

Then again, it is important not to romanticize the godmothers' commitment while neglecting the harsh material conditions under which they operate. Improvisation and the transformation of MOS@N should not be seen as a DIY success story, music to neoliberal ears, in which empowered actors can "do more with less." Care work in MOS@N's afterlives (re)produces gendered forms of social obligation. For example, the termination of MOS@N came as a huge financial blow for godmothers and their families. Money gained as godmothers was often used to buy soap, condiments, or kitchen utensils. But it was also often used to repair the equipment provided by MOS@N. Almost three years later, materials are in shambles. Most phones are out of service. Others are lost. Some godmothers still use a phone, sometimes borrowed from their husband or purchased with their own money. To keep their phone working, they need to constantly buy credits, as well as pay to recharge the phone in local shops. Most phones do not use the SIM card that was provided by MOS@N. Solar panels are also all broken. Bicycles are broken too, with punctured tires and inner tubes. Godmothers have always taken good care of the things provided as part of MOS@N. This care of things has kept MOS@N from falling apart. But the conditions under which this maintenance is now taking place, now that MOS@N has ended, appear to be exceedingly demanding, which might compromise godmothers' activities in the long term.

#### THE TINKERING NETWORK: BEYOND THE CATALOGUE OF TECHNICAL AIDS (SPAIN, 2011–)

The following pages tell the story of a very peculiar strand of collaborative work that emerged in Spain in the aftermath of the 2008 financial crisis: an underground network of low-cost prosthetic makers, DIY menders, and tinkerers—connected to the Spanish disability rights and independent living

movements—who started politicizing themselves around design and making practices. Between 2011 and 2016, one of us (T.C.) was actively involved in this fleeting network, connecting existing elements—whose somewhat opaque existence was made visible by the crisis—with people who felt appealed by these challenges for the first time. This temporary endeavor gathered practitioners engaged in diverse material adaptations, knowledge sharing, and the production of networking events, while continually searching for a more stable way of operating. Ultimately, the aim of this collective was to tinker with various forms of mutual support in the midst of smashed public and collective care infrastructures.

Recounting the complex story of events that unfolded over more than five years is not easy. In attempting to do so, let us begin with a video that was shot for a mid-September 2015 TEDxMadrid talk starring Xavi Duacastilla, one of our associates at that time.<sup>1</sup> As is peculiar in TED-inflicted formats, in the talk, Xavi spoke with an autobiographical tone, incarnating the experience of being a post-polio syndrome sufferer and a wheelchair user. Besides, he was also speaking with a collective voice, describing attempts at building a network of care and support. Together with a group of people, T.C. had participated in co-writing the discourse and had traveled from Barcelona for that purpose. This had entailed working alongside Arianna Mencaroni to help script the talk and assist Xavi so he could learn it by heart, commenting on how to stage it, and watching him endlessly rehearse his shocking entry onstage from one of the sides: driving at great speeds, the DIY add-on engine gadget he had designed to “motorize” his manual wheelchair. The connection between the autobiographical and the collective element of Xavi’s discourse was attempted by a repeated use in the talk of the notion of *trasto*, which in Spanish has an interesting double meaning: when addressed at children, it means “rascal,” but when describing objects, it usually means something like “gadget” or “contraption.” After his entry, Xavi excused himself for taking some time in removing the *trasto* he was wearing in his wheelchair and began his presentation while moving the wheelchair with his hands:

Speaking of *trastos*, I was one when I was little, because I was naughty, but also because, if I got hold of a toy, I would take it apart completely. I would always put it back together. This tendency to take things apart today can be included within the “maker” movement . . . And, as it turns out, in the 1980s, well, I was a little bit of a “punk.” And since I didn’t have a cent to go to London, I made my own wristbands and belts. I had a little workshop with a friend. (0:19–1:35)

Xavi laughed as he showed a picture of himself looking like a Catalan Sid Vicious with crutches before continuing with his story: “And this characteristic of being a craftsperson . . . a customizer . . . has always come to me from the need to repair, in situ, the orthopedic devices that I’ve used since I was four years old” (1:38–2:00). He then went on to share many other references to that punk attitude he indeed embodies: “I wasn’t born in a wheelchair. My mother didn’t give birth to me and the wheelchair together . . . If you’re ‘weird’, like I am, you find yourself subject to the orthopedic catalogue, the state portfolio of technical aids. If, for example, you need a wheelchair, you’re subject to the ones that are in the state catalogue, if you want any refund at all, that is. But what if you don’t like what they offer you?” (03:41–04:24). And calling universal design a “fairy tale,” he proposed instead a more hands-on take: “The truth is, we need to make things pivot around our own needs and measurements [*hacerse la vida a nuestra medida*]. This is how my technical skills developed” (04:50–5:01). He described the reasons that impelled him to create the *Handiwheel*, the gadget he devised. As a performative dancer, he needs to travel very long distances, but he cannot afford, doesn’t like, and cannot put a motor wheelchair into his flat. At that point, the story had jumped from the individual to the collective, in expressing the need to remake our *trastos*, our material supports, to live in diversity.

The whole talk resonated with the long tail of 2008’s financial crisis. The situation was harsh for many, but austerity cuts especially impacted care infrastructures and hindered the workings of a largely publicly funded market of care technologies addressed at older and disabled people: a system allocating heavily standardized gadgets and contraptions to individuals “in need,” whose purchase in privately run prosthetics shops is subsidized, subject to full or partial refunds from the state. These technologies are also subject to public production incentives, since they are created for a market segment of customers without purchasing power. The crisis led to payment delays or cuts. But what’s more important, the crisis also made visible the cracks in a market-driven public system that was far from perfect: personal and urban technologies that are far too standard to be adapted to the needs and desires of singular bodies and which are always in need of many trials, tweaks, and adaptations, as amply made evident by Myriam Winance’s (2010) work, but also gadgets and infrastructures produced in a technocratic fashion, many times conceived with ableist grounds (to “include” the “excluded” without changing much in that gesture).

Presenting himself as a “maker,” Xavi was also signaling a different approach to this, where care as a practice of tinkering—as Mol (2008) has it—takes a more insurgent and nonconformist tone as a form of “critical making” (Criado, Rodríguez-Giralt, and Mencaroni 2016): taking the design and mending of these gadgets into one’s own hands to alter them beyond what is given. But Xavi was also a “punk” in his disability politics. The network he helped construct wove together sparse and splintered activist initiatives: “It all started in 2011, with the *indignados* movement, in Barcelona’s Plaça de Catalunya . . . There I found a group of people who were very tuned into my beliefs” (06:42–6:56). These diverse people—many of them long-time disability rights activists or professionals of health and social care sectors, as well as craftspeople and designers—felt mobilized around the concept of “functional diversity.” The term acted as a democratic operator in many struggles against existing disability-specific organizations, whom they deemed too ableist and connected to biopolitical segmentations (forms of organizing the social deriving from medical readings of distinct bodily “impairments”). This notion signaled the pride of diverse bodies and their nonconformist forms of being and expression and was vindicated when engaging in devising alternative services in a country where residential care is still the norm. For instance, the term allowed the creation of a series of initiatives not “caring for the same,” a wording that Domínguez Rubio uses to address “the mimeographic work of creating sameness by constantly regenerating and extending the life of something as a particular kind of object” (2020, 40). Indeed, something emerged in the *indignados* encampments. Life in common at the public sites of the encampment brought about many conversations on how to intervene in these urban arenas so that they would pivot around the needs of diverse bodies. Participants took these affairs into their own hands. This led to the creation of the Barcelona-based collective called *En torno a la silla* (a wordplay in Spanish, hinting at the need to situate around—*en torno*—wheelchairs—*sillas de ruedas*—to alter their environments—*entornos*). *En torno a la silla* did not only prototype and engage in material explorations. The attempt was, in the words of Alida Díaz, architect of the collective, to create *tecnologías de la amistad* (technologies of friendship): material interventions not only to get to know others across social and material divides but also to be able to prolong their relations in a world where everything has been conceived for that not to happen.

Beyond being simply functional “solutions,” these technologies of friendship mostly elicited care as a “politics of wonder” around the design of our *trastos*, very much in tune with the work of Sara Hendren (2020)—that is, an interrogative mode of approaching disability-related design and making, speculating with the adaptations needed to forge collective and collaborative links, crafting forms of “mutual access,” however difficult that might be. To ease up things a bit, Xavi mentioned one important aspect of *En torno a la silla's* work on opening up design: “We reckon the importance of spreading these ideas, through thorough documentation, creating tutorials with building diagrams, with the most detailed diagrams, photos, and maps possible so that whoever could replicate them, improve them . . . take advantage of them” (15:38–16:02). But these technologies of friendship exceed the range of the objectual. *En torno a la silla's* interest in these processes led the collective on many occasions to organize events, such as hackathons and public presentations or exhibitions, where the attempt was to mobilize the experiential knowledge and the small inventions of a collective used to needing many hacks to go on, not just to give them value but also to create a network of mutual support around making and repair. At some point, the idea emerged to put together a Tinkering Network (*Red Cacharrera*), a Barcelona-based workshop space to democratize bit by bit the making and remaking of personal and urban environments. In all of those events, to which Xavi also made extensive reference in his talk, we created gadgets and collected many ideas. These were powerful, energetic, and perhaps a tad hyperbolic times.

Although the attempt was to create a “care web”—an alternative space to enable “collective access” (Piepzna-Samarasinha 2018), asking after one another and making sure all needs and desires are addressed—this open and makeshift infrastructure broke into pieces. We envisioned a brand-new world, but we failed in all of our attempts at carrying it further: the city administration, to whom we requested funds, was not ready for something like that (as we found out, corporate and medical powers were always thwarting any attempt at stabilizing the co-creation of technical aids), and perhaps more importantly, in spite of the initial energy and enthusiasm, bodies many times didn't accompany the hard work of institutionalizing a workshop space where we wanted to start operating. After devoting great efforts to the project, now decimated, hope abandoned us. The aspirations

and the fall of the Tinkering Network left *En torno a la silla* wounded to the point where the collective slowly and progressively deactivated.

Yet, fragments of what we experienced remain available, such as Xavi's. Beyond being an ethnographer through all these endeavors, T.C. also acted as *En torno a la silla's* documenter. A better way to put this would be to say that *En torno a la silla* was the way he did collaborative fieldwork. Together with Arianna Mencaroni, T.C. curated the digital and audiovisual platforms of the collective, searching for the traces of what it had been doing, so that it could remain and last. Thanks to that work of constant maintenance and curation of those documents in an extremely volatile world with many platforms and social media dying—with stored knowledge and experiences being erased with them, perhaps forever—the traces and knowledge generated are still online, available for others. Fragments endure through the traces left by the things and people in the past.

*En torno a la silla's* digital platforms—webmail, website, social networks—have continued to exist, being regularly checked, even though no new information has been added for years. However, the open documentation that was gathered has continued to be consulted and downloaded according to the website's metrics. Indeed, in the winter of 2020, in the midst of the pandemic that was having a devastating effect on our independent-living friends, the collective received an invitation by Makea—an upcycling, reuse, and recycling design collective from Barcelona we knew from the time, and with which *En torno a la silla* always felt very much in tune—to contribute to their last project. Makea was updating its online platform: an open archive of DIY reuse “recipes” called *El recetario*. Beginning in fall 2021, it became part of the permanent exhibit of Barcelona's Museum of Design, and they requested our help to include several of *En torno a la silla's* gadgets, tutorials, and documented processes. These traces will now perhaps be inspiring not just for activists, amateurs, and tinkerers but also for professional designers.

Although the end of the network crushed its collective aspirations, its existing fragments continued to operate in their traditionally underground manner. Some moved on to do other things, others remained tinkering as they had always been doing, resourcing to local craftspeople or developing their own contraptions to live by. For instance, Alida has continued to embody the knowledge and resources derived from these years in her work as an architect, becoming specialized in accessibility interventions and arrangements. She now services independent-living activists and promotes the smooth

integration of accessible concerns in any private or public building project. For some time, Xavi became a local TV superstar, joining a popular morning show where he started going to different places in the city and speaking about everyday life and in/accessibility issues together with many of the functional diverse activists and colleagues he met at the time. So, while some of the relations that composed the network waned, some of the friendships remain, against the odds. Others were not so lucky, and many in such a frail movement have sadly disappeared. In fact, *En torno a la silla's* archival remains have served on at least three occasions to put together obituaries for some of our colleagues, using traces where we wanted to celebrate their life and their joyous, struggling presence. The last one we worked on was Nacho's, better known in the Spanish disability rights scene from his Facebook page *Actúa con tu diversidad funcional* (act with your functional diversity). For a day, Alida and T.C. went through *En torno a la silla's* materials to put together a collection of pictures and events in which Nacho had participated, reminding us of the words from Bakunin (or so he said—we never really verified) that he used to quote: “uniformity is death, diversity is life.”

The Tinkering Network didn't last long, as activists and tinkerers didn't manage to create the supports needed at a local level to reclaim the industrial market of technical aids, which is still up and running. Who knows, maybe one day. But all of these traces nevertheless open onto another perspective: What if all of these remnants in our practices and ways of doing, as well as the traces of our undertakings, were nothing other than the operations of such a Tinkering Network, but in an underground mode, still enduring in us, between us?

## CARE BEYOND REPAIR

“The fragment is what does not break, what remains when the whole is broken,” suggested Javier Lezaún in discussions that informed this chapter. But perhaps, as geographer Colin McFarlane (2021, 3) suggests in a recent book, fragments are not to be treated just “as nouns but as verbs. Not just as things but as processes, doing different kinds of work, and sometimes in surprising ways.” In this chapter, we've been particularly interested in the politics of care that fragments, as material processes, carry in their endurance—one that rather than addressing the negative contours of fragility, therefore inviting us to repair or restore, wishes to remain attentive to the generative and divergent

prospects of fragmentary afterlives, what endures against the odds. As we hope our stories have shown, fragments are not conceptual abstractions. Personal, relational, technical, and knowledge fragments make life possible, or not. In both our stories, they constitute partially enduring, precarious ecologies of support—a precarity that has to be situated within broader normative and material forces.

In both our stories, fragments are not the parts of a whole in need of being fixed or restored back to unity. The fragment is not a faction or a group but rather the irreducible singularity of a broken existence, requiring a contradictory mixture of divergence and persistence. In our stories, fragments are better understood as singularities in connection with others (a relation of difference as difference). They are not to be confused with an act of identity boundary making, whose connection with others could only happen through the concertation of parts and wholes (a distributed relation premised on a certain degree of sameness, at least at a conceptual level). By contrast, we like to think that a politics of care in fragments is one of building interstices where the terms of the relation are not there ready-made. As Stengers and Pignarre signal in *Capitalist Sorcery*, “An interstice is defined neither against nor in relation to the bloc to which it nevertheless belongs. It creates its own dimensions starting from concrete processes that confer on it its consistency and scope, what it concerns and who it concerns” (2011, 110–111). Or, as John Holloway wrote in a similar spirit in *Crack Capitalism*, “The only way to think of changing the world radically is as a multiplicity of interstitial movements running from the particular” (2010, 11).

Exploring interstitial movements and spaces entails keeping a lookout for generative and divergent practices of care for the fragile that often go unnoticed. Let’s take the example of MOS@N. Godmothers’ makeshift accompaniment in Nouna, for example, remains invisible to the institutional stakeholders (whether in Nouna or in Ottawa) that were originally involved in the project. Fragments were salvaged from MOS@N that no longer fit the parameters of the project, with objectives, beginnings, and ends. They are also not enduring toward any predefined futures. Underlying godmothers’ commitment to their work, there is a refusal, implicit but unequivocal, of the project’s order of things. Funds, knowledge, and materials have stopped circulating between Ottawa and their communities. Godmothers’ doings, in MOS@N’s afterlives, are not accounted for in the production of global health



knowledge. Yet, godmothers refuse to subordinate their activity to such considerations. For them, accompanying women to the CSPS appears as an immediate necessity, as the thing to do. Godmothers do not refuse mHealth projects such as MOS@N. However, they certainly are refusing to be enclosed by the temporality of the project, by a “projectification” offering only transient opportunities, which is dominant in global health (Prince 2013). The singularity contained in godmothers’ doings, in their caring in fragments, is a world in itself.

Something similar can be said of the amateur designers that gathered in the Tinkering Network. Operating as fragments, living in the shadows of the standardized technical aids market, they tried to find ways of addressing how their bodily diversity could enable singular encounters. Activating frail and precarious technologies of friendship—in the form of tailor-made making endeavors, but also presentations, hackathons or workshops, and open documentation digital archives—the aspiration was to go beyond what is being offered to them as market segments of institutional welfare projects and infrastructures. The insurgent “punk” attempts Xavi embodied in his presentation, however, were not addressing survival. Rather, they meant to replenish or reimagine what living a good life in bodily diversity might practically mean, and what types of relations and technical supports would be needed for that to materialize.

To care in fragments might entail the need of constituting weird and precarious alliances that sometimes not only live through the ruins of caring wholes but also ruin and unmake those very wholes, as Rafanell i Orra (2018, 37) forcefully puts it. Caring in fragments hence refers to the processes by which the boundaries of the whole are disrupted, are unmade, implode, or are made to implode, enabling many possible afterlives. As we see it, caring in fragments means learning to inhabit the remains *as remains*, remnants supporting other remnants to endure in their divergence. In the stories we have told, fragments gesture toward underground, discounted forms of knowledge, as well as possibilities for caring and living otherwise that tend to go under the radar of dominant groups and actors. Ultimately, our stories show attempts at ensuring a certain degree of continuity between fragments, while refusing to subsume this continuity under a larger totality, inevitably waiting to be managed and repaired. By focusing on fragments and their afterlives, we wish to hint at a care politics for the fragile beyond repair, foregrounding

emergent modes of crafting interdependences, interstitial movements, or ecologies of support that depart not from sameness but from the iridescent shape of singularity.

#### NOTE

1. The video can be seen here: [https://www.youtube.com/watch?v=OY-0tG9bD-c&ab\\_channel=TEDxTalks](https://www.youtube.com/watch?v=OY-0tG9bD-c&ab_channel=TEDxTalks). In what follows, we include fragments of the discourse, bracketing the times. For this, we have adapted the English captions, originally translated by Leyre Bastyr (shared with CC license).

#### REFERENCES

Criado, Tomás S., Israel Rodríguez-Giralt, and Arianna Mencaroni. 2016. "Care in the (Critical) Making. Open Prototyping, or the Radicalisation of Independent-Living Politics." *ALTER—European Journal of Disability Research* 10 (2016): 24–39.

Denis, Jérôme, and David Pontille. 2015. "Material Ordering and the Care of Things." *Science, Technology, Human Values* 40 (3): 338–367.

Domínguez Rubio, Fernando. 2020. *Still Life: Ecologies of the Modern Imagination at the Art Museum*. Chicago: Chicago University Press.

Duclos, Vincent, and Tomás Sánchez Criado. 2020. "Care in Trouble: Ecologies of Support from Below and Beyond." *Medical Anthropology Quarterly* 34 (2): 153–173.

Hendren, Sara. 2020. *What Can a Body Do? How We Meet the Built World*. New York: Riverhead Books.

Holloway, John. 2010. *Crack Capitalism*. New York: Pluto Press.

McFarlane, Colin. 2021. *Fragments of the City: Making and Remaking Urban Worlds*. Los Angeles: University of California Press.

Mol, Annemarie. 2008. *The Logic of Care: Health and the Problem of Patient Choice*. London: Routledge.

Mol, Annemarie, Ingunn Moser, and Jeannette Pols. 2010. "Care: Putting Practice into Theory." In *Care in Practice. On Tinkering in Clinics, Homes and Farms*, edited by Annemarie Mol, Ingunn Moser, and Jeannette Pols, 7–25. Bielefeld: transcript Verlag.

Piepzna-Samarasinha, Leah Lakshmi. 2018. *Care Work: Dreaming Disability Justice*. Vancouver: Arsenal Pulp Press.

Prince, Ruth J. 2013. Situating Health and the Public in Africa. In *Making and Unmaking Public Health in Africa: Ethnographic and Historical Perspectives*, edited by R. J. Prince and R. Marsland, 9–51. Athens: Ohio University Press.

Puig de la Bellacasa, María. 2017. *Matters of Care: Speculative Ethics in More than Human Worlds*. Minneapolis: University of Minnesota Press.

Rafanell i Orra, Josep. 2018. *Fragmenter Le Monde*. Paris: Éditions Divergences.

Savransky, Martin, and Martín Tironi. 2021. "Decolonizing the Imagination in Times of Crisis. Gestures for Speculative Thinking-Feeling: Interview with Martin Savransky." *Diseña* 19: 1–22.

Simone, AbdouMaliq. 2004. "People as Infrastructure: Intersecting Fragments in Johannesburg." *Public Culture* 16 (3): 407–429.

Simone, AbdouMaliq. 2019. *Improvised Lives: Rhythms of Endurance in an Urban South*. Cambridge: Polity Press.

Star, Susan Leigh, and Karen Ruhleder. 1996. "Steps Toward an Ecology of Infrastructure: Design and Access for Large Information Spaces." *Information Systems Research* 7 (1): 111–134.

Stengers, Isabelle, and Philippe Pignarre. 2011. *Capitalist Sorcery: Breaking the Spell*. London: Palgrave Macmillan.

The Invisible Committee. 2017. *Now*. Cambridge: Semiotext(e).

Winance, Myriam. 2010. "Care and Disability. Practices of Experimenting, Tinkering with, and Arranging People and Technical Aids." In *Care in Practice. On Tinkering in Clinics, Homes and Farms*, edited by Annemarie Mol, Ingunn Moser, and Jeannette Pols, 93–117. Bielefeld: transcript Verlag.



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