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POSTCARDS FROM ABROAD: INTRODUCTION

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Postcards from abroad

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Postcards from Abroad

If with the call for articles for ‘repairing design’, through the articulation of knowledge and experiences of designers and repairers, we aspired to review and expand the ‘visions’ that design has of its own practices and products, in this section called ‘postcards from abroad’ we propose to diversify and open up the understandings and practices of repair itself. Thus, if design can engage in a dialogue with the repairment of things and all kinds of material devices, why not engage material repair in conversation with other types of repair, coming from fields of creation and knowledge other than design?

Drawing from a mix of intuition and desire, we asked eight ‘repairers’ from different disciplines to briefly describe:

- how they identified damages in their specific objects of intervention,
- how they defined repair,
- how they repaired in methodological terms,
- what tools, materials, skills, and knowledge were necessary for repairing within their fields,
- a selection of keywords, and an image to illustrate their field of practice.

The purpose was to provide a plurality of visions and actions on repair that might lead to resonances, inspirations, and cross-fertilizations among the various forms of repair.

Although there could be many other ‘postcards’ from different reparative places, here we invited:

- DNA repair in the field of genetics,
- soil bioremediation from the perspective of edaphology,
- psychotherapy as a form of emotional and psychological ‘repair’,
- memory repair from the field of restorative justice and human rights,
- home maintenance and cleaning as a form of domestic infrastructure repair and care,
- repair of electrical and electronic devices by activist collectives for waste prevention,
- repair of scientific observation instruments in the field of astronomy, and
- neuro-rehabilitation and physical rehabilitation from the first-person experience of long COVID.

These postcards can be read individually, one by one, delving into the specific details of each field and unique repair experience. Alternatively, they can be read as a connected series, one after the other, trying to identify some kind of interdisciplinary transversality among them all. The latter is what we, as the editorial team, tried to do below, after an attentive and thorough reading of each postcard, to: identify common points, differences, and possible inspiring images, gestures or metaphors that could be transferred from one field to another (including design), or towards



sustaining life in general and its specific forms, which do not understand separate disciplines or isolated fields.

Therefore, a note of caution: what we present next is a particular systematization—by the editorial team—of the eight postcards we collected. It should never be read as a final, closed, or complete outcome, but as a partial and singular proposal: open, expandable, debatable, and always situated within reparatory understandings and practices. We suggest, therefore, the possibility of not continuing to read this introductory text (or postponing its reading) and going directly to the postcards. This way, you can generate other cross-readings and alternative connections, personal and particular to you, that may open up new meanings and lines of escape from what we propose here.

On Damage and its Identification

Damages take diverse and multiple forms and indicate the modification, alteration, breakage, loss, deterioration, failure, deficiency, degradation, infringement, violation, exploitation, impossibility, diminution, or loss of something, its results, or expected or foreseen (multi)functions.

The causes that provoke damage are also multiple and specific, but could range from accidental or ‘natural’ situations, linked to mere existence: “It is impossible to live without having experienced it to some extent” (postcard sent by González San Emeterio from the field of psychotherapy); to intentionally inflicted damage and structural causes related to systems of oppression, injustice, and violence (capitalism, colonialism, patriarchy, etc.). The latter will result in unequally distributed and historically accumulated and crystallized damages and, therefore, persistent, inheritable, and more difficult to repair. Damage can thus be linked to the constitutive fragility or vulnerability of all existence—the simple passage of time, material deterioration, natural wear and tear, or decomposition. But it can also result from harmful compositions and relationships, such as incorrect uses and manipulations (in a literal and metaphorical sense), dirt and lack of maintenance, or inadequacy to the contexts and conditions of use and action. These differences in the origin of damage make it necessary to distinguish between the acceptance and normalization of ‘natural’ damage and the denunciation and rejection of that imposed or intentionally inflicted; although in both cases, there can be responses aimed at their repair.

There are also multiple ways to detect damage:

- perceived pain operates as an indicator of bodily and psychological damage,
- attentive sensory experience linked to the use of something (devices, objects, etc.) also provides information about possible damage, because its operation is perceived differently, or because abnormal signs (smells, appearances, textures, etc.) are detected,



- technical evaluation through tests, often amplified by technical instruments, allows for the identification of damage, its extent, or even its causes,
- and it is also possible to identify it indirectly, through its derived effects.

Regardless of the diverse systems and forms of damage detection, a common point appears in almost all the postcards: identifying damage requires pausing and stopping. However, damage is not always detectable, either because it goes unnoticed or because it is normalized. This means that it cannot always be repaired or overcome, leading to a series of accumulated damages.

On Repair

Repair is singular and situated: it depends on the type and extent of the damage and, obviously, on what is damaged. In turn, repair involves different types and levels of action or intervention. And even non-action (which also requires a certain effort) can be reparative. Repair does not necessarily have to be total or definitive, but it can be partial and momentary, just as it is not merely conservative or reactive. It does not always seek—or achieve—a return to a previous, original, or standard state. Repair can imply (re)creation and inventiveness, intentional improvisation, bringing with it new or different characteristics and functionalities: for example, two damaged devices can be combined into one; to maintain one function, others may be surrendered; a slight inaccuracy and minor injury during antibodies generation could even be beneficial for recognizing a greater number of pathogens.

The types of possible repairs would range, then, from a simple and punctual action, often carried out through the mechanisms and capacities that the organism, system, or device has, as in the case of the healing of wounds and small injuries—including cellular ones—through the ‘cycle checkpoints’ (see the postcard from genetics, by Elsa Callén); to the repair of more complex damages or deeper and more serious aftereffects. In the latter, repair would require broad alliances between transdisciplinary knowledge and teams, the collectivization of discomfort, or more complex repair techniques. In the case of deep and structural damage, repair tends to be partial and unfinished, and often involves palliative responses, such as the mere recognition of irreversible damage and compensation for it, or the softening, mitigation, or reduction of the related injustices. But repair could also aim for completeness and integrity, involving deep, transformative, and radical responses, such as elimination, interruption, abolition, ‘burning’ (real and symbolic), and degradation of what is damaged and its cause, even to the point of sacrifice, as seen in apoptosis or cell death. Not everything is repairable, nor can it always be repaired.

The concrete forms of repair include and point to multiple possible nouns. Throughout the eight postcards, the following actions appear as synonyms for repair, or as an inescapable part of the act of repairing:



- expression (of pain and damage);
 - identification (of what, how, degree, and extent of damage), and recognition (of the experience of damage and what is damaged, of the victims);
 - understanding, clarification, and explanation (of the truth);
 - rejection and condemnation, reduction (of damage), redress and compensation;
 - reinstatement (of tranquility), restoration (of dignity, of original, personal, or expected functionality), and restitution (of qualities or functions);
 - reconstruction, restoration, or rehabilitation;
 - cleaning, burning, and purification; abolition or elimination, but also prevention (so that the damage does not occur again);
 - assurance and future guarantees (of coexistence, operability, etc.);
 - and the preservation and maintenance of what has been repaired.
- Without them, although not necessarily all, or at the same time, reparation would not be possible.

On Repair Methods

Depending on the type, scope, and abundance of damage, as well as the context, timing, conditions, and availability of resources, different repair methods will be applied. What seems clear and is common to different fields is that, in order to repair, it is important to prevent and detect damage quickly enough: either because there is a design with adequate mechanisms for detection, because there are operation and maintenance tasks that facilitate monitoring and anomaly identification, because efficient diagnostic protocols are available, or because information systems are accessible. On a preventive level, damage can also be avoided if there are different ways or systems, including redundant ones, to operate or perform a function.

Another common point across various fields is that, before or parallel to the act of repair, the necessary conditions must be met to make it possible. Many of the postcards speak of 'pausing' momentarily until repair has been achieved, 'stopping' to 'listen to the rhythm and respect it', or even 'downtime' (see the postcard from Astronomy, by Noelia Martínez). In the case of the telescope, until repair is achieved or completed, optical measurements could be distorted; or, in the case of genes, the reproduction of a damaged cell could lead to the development of diseases.

So, once these two previous points—detection and pause—have been considered, it seems that the repair method would go through (more or less, not always the same, not through all of them, and not necessarily in that order) the following moments or phases:

1. Understanding of the functioning and knowledge of the systems to be repaired. Thus, based on this knowledge and previous verifications, a preliminary



assessment could be made, from which possible causes of the damage could be deduced or even intuited.

In novel or unknown situations, as is the case of long COVID, efforts and energies are concentrated at the very moment when the effects are occurring (see the postcard from the rehabilitation of long COVID, by Oscar Martínez-Rivera). This requires ‘humility’ and listening skills (to understand the experiences of affected individuals); recognition of diverse expertise; dialogue and collaboration to share and articulate multiple, partial, and situated knowledge that can shed some light on the damage.

2. Detection, identification, and signaling of damage: through ‘sensors’ (of all types: cellular, technical, corporeal...) that attentively perceive and collect information that could be significant (from first-hand, from diverse, verifiable, and contrastable sources, etc.) to verify the (adequate) functioning of systems and their parts.

3. Diagnosis of the damage (or deterioration) in order to recognize and understand it: in terms of its scope and severity, its dimension and levels, its possible causes and effects, etc., through the triangulation of information; the selection and evaluation of information sources (their relevance, reliability, coherence, clarity, sufficiency, and depth); damage indicators (such as breakages, odors, discolorations, textures, hardness, and resistance); measurements (often through technical devices); or performance verifications (by testing them, moving them, using them, etc.).

All of these actions would then allow for a better understanding of the damage and the distinction, for example, between pains that signal damage, or ‘growing pains’, linked to mere existence. This distinction could be useful for determining to what extent ‘repair’ or intervention is possible or necessary, as in psychotherapy, where there are significant ‘existential’ pains (not necessarily caused or unjust) from which we cannot escape and can only ‘go through’—without interrupting, pathologizing, or medicalizing them.

This in-depth diagnosis and understanding of the damage should allow us to comprehend it in its uniqueness, considering the particular conditions in which it occurs, as well as its entirety and complexity.

4. Careful (restorative) intervention in the composition, relationships, and balance of forces that make functioning possible, in an attempt to overcome, reduce, or get out of the damage situation.

Such repair, as we saw earlier, depending on the fields and types of damage, would involve:

- revisiting pain (to understand it, process it, and narrate it, as in therapy);
- recognizing and valuing damage (asserting solid, consistent, traceable truths, etc.) to generate ‘one’s own narrative’ of what happened, as in restorative justice;
- recognizing and valuing (care and repair jobs and workers);



- cleaning and sanitizing, to try to reestablish the components and adequate conditions (such as ‘sponging’ soils to achieve porosity, ‘seeding’ neighboring ‘good’ soil, or ‘copying’ ‘complete’ undamaged DNA chains to attempt to reproduce and restore them);
- replacing components or parts with others (depending on availability or cost, as in electrical and electronic devices);
- changing the habitual use (until the balance is restored);
- extracting damaging or damaged elements (such as pollutants);
- inoculating or introducing new elements that eliminate, reduce, or prevent the spread of damage (such as vegetation or microorganisms that decompose or sequester pollutants);
- eliminating or abolishing the source of damage (such as immigration law and borders);
- reintroducing lost or original elements, increasing their abundance (until the initial balance is achieved);
- compensating for damage (through political measures, in the case of structural historical damage and injustices);
- or, in cases of critical damage situations, building and creating anew from scratch (as in the case of ‘engineered soils’).

5. Once the damage has been repaired, it is necessary to carry out checks that ensure and guarantee, to the greatest extent possible, the continuity and sustainability of the repair, in order to continue reproducing (a system, a function, a device or object, the body, etc.) and to continue (with) life. A life that, in terms of rights, translates into justice. Then, the transitional ‘end’ of repair connects with the starting point: because it is necessary to establish mechanisms for preventing, detecting, and monitoring potential future damage. And because repair, as a form of sustained care, is continually happening whenever possible, incorporating memories, marks of present interventions, and ideals of future paths.

On Repair Tools, Materials, Skills, and Knowledge


Despite the disciplinary differences in the origin of the postcards, we found that several of them shared repair tools, practices, and materials:

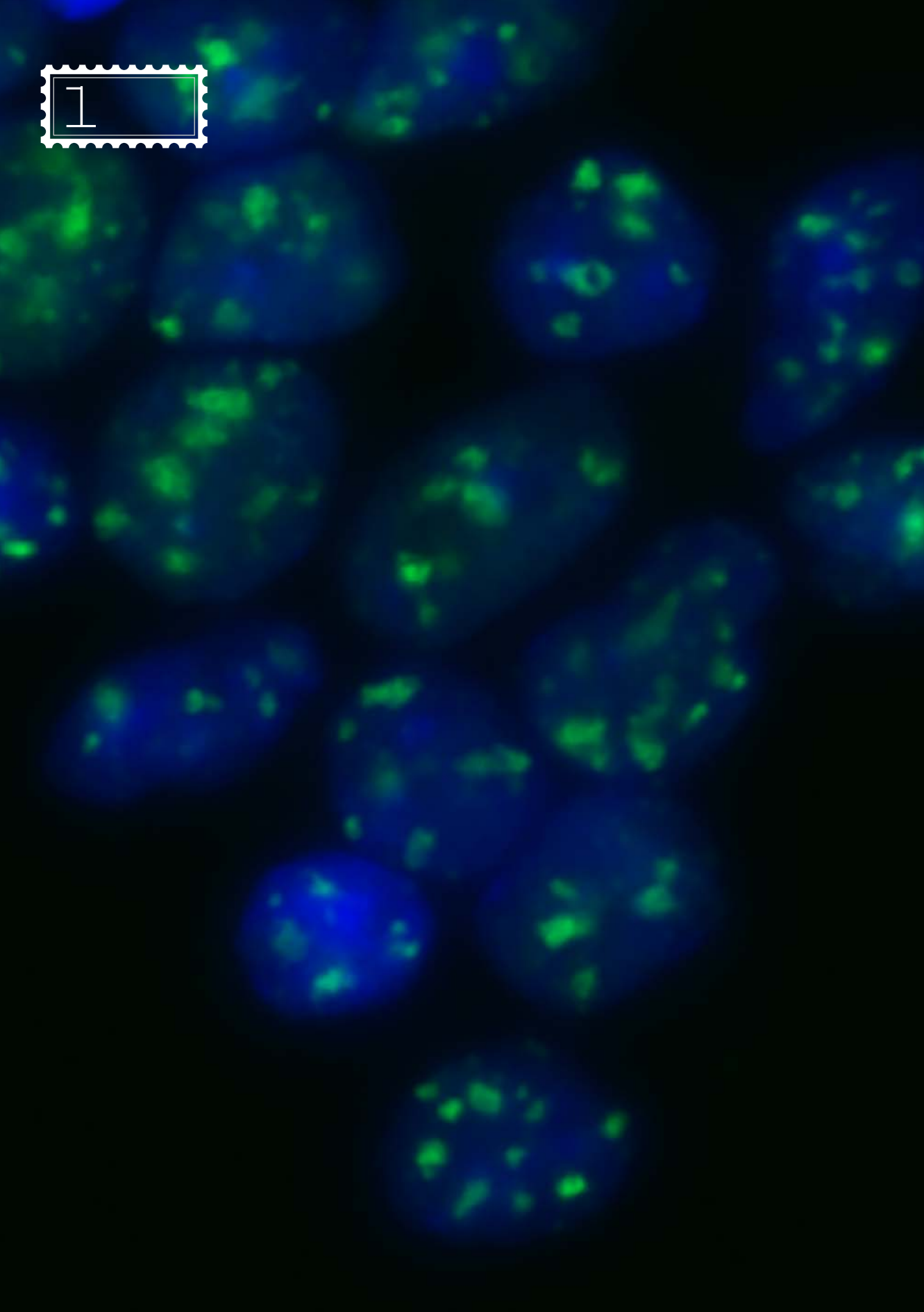
- the willingness to care;
- multi-sensorial and affective observation;
- attentive listening to the explicit and implicit; or
- collaborations between complementary knowledge, feelings, and makings between people, things, tools, and allied living beings or entities.

In addition to sharing qualities and capacities such as courage, patience, and perseverance to face the discomforts and pain of repair processes they embark on, without guarantees of results, and accompanied by the certainty



of uncertainty. Nevertheless, repairing will rarely waste time or effort, as it could be slow, inefficient, wearing, and costly, but in the long run, due to what is learned during the practice, repair will always be revealing.

To conclude, and just before moving on to each of the postcards, we invite each reader to ask themselves: what would you respond to the common questions posed by the postcards from your discipline? What would the design discipline and practice 'read' in these postcards sent from your 'exterior'? Or, whether you are a designer or not, what other questions would you ask the repairers who sent these 'postcards from abroad'? 





Previous page: The image shows neuronal cell nuclei (in blue) in which 53BP1, a mediator of the DNA repair response (in green), has accumulated in those regions of DNA that have been damaged, forming visible foci under the microscope.

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POSTCARDS FROM ABROAD: DNA REPAIR

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Postcards from abroad

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How is damage/brokenness defined in your discipline and field of work? How do you identify it?

DNA damage could be defined as a modification or alteration in its structure that will consolidate as a mutation or lesion if not adequately repaired. This damage could induce loss of viability, cell death, and, at a more global scale, being the underlying cause of aging, cancer development, or other diseases. The sources of these alterations can be endogenous (through cellular metabolism mechanisms) or exogenous (from external agents). The agents causing this damage can be chemical, physical, or environmental. Their consequences, as well as the type of damage they cause, are also very diverse: from damage at the level of a single nucleotide to breakages in one or both strands of this molecule, including loss/insertion of fragments in the DNA or even loss of entire chromosomes. These lesions interfere with the machinery and basic functioning of the cell, affecting its division and integrity. Even worse, this damage could be inherited by the daughter cell and propagated to future generations with fatal consequences.

Detecting genetic damage is not an easy task, especially depending on the type of damage, but currently, there are several molecular techniques, ranging from highly complex ones that are more accurate to microscopy-based methods, that allow us to detect breakages in the DNA chain globally, although without precise information about their location.

How is repair defined in your discipline and field of work?

When we talk about 'repair' in the field of DNA, we are referring to all the mechanisms or processes deployed at the cellular level to identify and fix those lesions, mutations, inaccuracies, or damage accumulated in the DNA chain. The repair strategies or pathways activated by the cell to deal with this damage and prevent the accumulation and persistence of potential injuries affecting their structure and function vary depending on the type of damage and the phase of the cell cycle in which it happens. Most lesions are repaired in a coordinated series of steps involving a large number of proteins with different and finely orchestrated functions. In most cases, these proteins manage to repair the damage without errors and with precision. To achieve this, the ideal approach is to use the complementary DNA strand (sister strand) as a template to copy and recover the original information reliably. The primary error-free repair mechanism that uses this strategy is called 'homologous recombination', but it is not the only one. There are other repair mechanisms such as non-homologous end joining, base excision repair, and nucleotide excision repair, among others. However, some of these methods are not as accurate and, although the main lesion may have been restored, there is a possibility of a small error occurring during the process, in most cases without major consequences.



Paradoxically, in some occasions and specific contexts, such as during the generation of antibodies, the immune system benefits from these small inaccuracies because they allow us to generate a larger repertoire of antibodies, enabling our immune cells to recognize a larger number of pathogens. Typically, when a lesion is detected, the cell activates the so-called 'cell cycle checkpoints' to pause its division and allow time for repair. Once this goal has been achieved and the DNA breakage or defect is no longer detected, the cell will exit this pause and continue dividing normally.

What methods support diagnosis and repair processes?

The cell has the ability to initiate a variety of mechanisms to repair damage, but it chooses one repair method over another depending on different factors, such as the type of lesion, the number of lesions (and thus the availability of the necessary resources to repair them), or the phase of the cell cycle it is in. Generally speaking, the first step is the detection of the damage, and this is carried out by a cohort of proteins known as 'sensors'. They come into contact with the injury by identifying it, triggering damage signaling pathways, and then activating a second set of factors called 'mediators'. These are usually proteins that amplify the damage signaling through their kinase function. In other words, by adding phosphate groups, they instruct a third type of agents (known as 'effectors') to activate the repair of the damage. These 'effectors' participate in a wide variety of essential processes for maintaining genome integrity, such as DNA repair, DNA replication control, or cell cycle activation and regulation. The effectors are the ones that act at the end of the repair pathway and, if it occurs successfully, the cell can continue dividing and perform its normal function. If not, in most cases, it will undergo cell death or apoptosis.

In the case of DNA double-strand breakages, one of the most important and deleterious existing injuries, it is essential for these effectors to bind to the broken ends and keep them very close together, to facilitate easy and efficient repair. Meanwhile, other factors will open these strands or, in some cases, even slightly degrade the DNA so that it can then be reconstructed by copying information from its sister strand, thus preserving the genetic code intact.

What tools, materials, skills, and knowledge characterize these processes?

The primary tools and materials that the cell has at its disposal to repair the damage are all the aforementioned enzymes and proteins, as well as nucleotides, which are like the 'building blocks' with which these enzymes will reconstruct the damaged DNA. The challenge for the cell is to know how to detect these lesions, recognize the type of damage, and coordinate a global response by activating the appro-



appropriate pathway and players so that the repair can be carried out successfully and without major consequences for the organism. In parallel, it will have to activate other mechanisms that create the necessary conditions, or temporarily halt the cell cycle until the DNA has been restored. In the event that something goes wrong, either because the DNA has not been repaired or because one of the mechanisms involved in its repair is defective, it is crucial that the cell sacrifices its own existence and activates the cell death pathway to prevent this damage from spreading. This way, it avoids unwanted scenarios, such as the outbreak of diseases, tumors, or premature aging.

Five key repair concepts in your field:

- detection
- damage signaling
- recruitment of repair proteins
- accuracy
- cell cycle reactivation



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Previous page: Image of fieldwork
'always looking at the ground'.
Photograph: Pilar Andrés.

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POSTCARDS FROM ABROAD: SOIL RESTORATION

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Postcards from abroad

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When the Soil is Damaged, Life is Damaged

Soils provide most of the environmental services on which humans depend for survival and progress. Directly or indirectly, they produce 95 percent of the food we consume; moderate the climate by removing carbon from the atmosphere; regulate the hydrological cycle; purify water; provide wood, fiber, and all kinds of goods; and are the richest habitat in terms of biodiversity that we can find in the terrestrial environment. Soil is also a source of medicinal resources and plays an important role in protecting human health. High-quality soil is multifunctional, meaning it has the capacity to supply, to a greater or lesser extent, all the environmental services mentioned above, so soil degradation can be defined as the reduction or loss of its multifunctionality.

Approximately one-third of the world's soils are damaged due to a variety of factors, including erosion (by rain or wind), loss of organic matter, compaction, salinization, loss of biodiversity, nutrient imbalance, pollution, acidification, and sealing, which occurs when soil is covered with sterile materials such as asphalt. The causes of degradation vary depending on the geographical area, but beyond the inevitable natural factors—among which an unfavorable climate for primary production stands out—human action is a significant driver, primarily through accelerated population growth and intensive land exploitation in activities such as agriculture, urbanization, or mining.

To repair soil means restoring its ability to perform all its inherent functions. Soils have physical, chemical, and biological components, all of which are intimately related. A damaged soil is one in which at least one of these components has deteriorated. Repairing soils involves identifying which component is affected, how, and to what extent. Physical degradation affects the spatial structure of the soil, which, when magnified, resembles a sponge rich in interconnected pores through which water, air, and creatures circulate, and whose shape conditions water storage and circulation. Repairing the physical structure, often damaged by compaction, involves sponging the soil to restore the porous space.

Chemical degradation takes various forms. In intensively exploited agricultural and livestock soils, nutrient depletion and organic matter impoverishment are common. Remediating these issues involves changing the management strategy to restore the lost balance. Soil contamination, often associated with water pollution, is common in agricultural soils treated with agrochemicals and in soils where contaminated materials have been deposited (sludge from water treatment plants, mining debris, slurry, hydrocarbons, etc.). Remediating these soils requires removing the pollutants or stabilizing them so that they cannot be taken up by plants—or enter the food chain.

Biological degradation refers to the loss of soil biodiversity, which is responsible for most of its functions. Repairing this disaster requires not only

reintroducing lost elements, but also repairing the quality of the physical and chemical environment in which they must thrive.

Soil Repairers: First Aid

During the maturation of an ecosystem, soil, soil microorganisms, and plants act so coordinately that they practically behave as mere organs of a single and complex soil-microbiota-plant organism. Like holistic physicians, those of us who repair soils look at this organism as a whole, and can manipulate plants to remediate soils, to infuse life into vegetation through soils, and restore soil-plant balance with soil microorganisms. To repair soil, it is necessary to ensure that its physical support is healthy, allowing air circulation and the storage and movement of water, while acting as a framework onto which organic matter and nutrients captured by plants and microorganisms will be deposited. In this sense, plants build their bodies with the carbon they capture from the atmosphere, which, at some time or another in their life cycle, they will deliver to the soil through their roots, when they lose leaves, and finally when they die. Soil microorganisms, whether free or associated with roots, capture nutrients that their associated plants do not easily obtain (nitrogen, phosphorus, etc.), and transfer them while recycling dead plant debris and reconverting them into nutritious forms for vegetation.

To repair soils, we carefully intervene in the balance that allows the functioning of this complex organism. Depending on the cause of deterioration, we introduce plants that provide organic matter to a mineral matrix that we can also enrich with microorganisms. Or we provide high-quality organic materials that support soil biodiversity, which, in turn, facilitates the establishment of vegetation. In contaminated soils, we introduce specialized vegetation that captures the contaminants in their biomass, and must be removed from the site later. Or we inoculate microorganisms that break down specific contaminants. Sometimes, if the situation is critical, we can build from scratch soil-microbe-plant systems that we call 'engineered soils', which we will help to evolve until they mimic neighboring natural systems.

Just like the soil-microbe-plant system, soil remediation teams consist of a variety of specialists who are only efficient in symbiosis with other complementary experts in knowledge. Diagnosing deterioration and monitoring the effect of our actions requires specific laboratories and all kinds of microscopy, because what happens beneath the soil is not visible from the outside and can only be investigated using specific analysis methods and observation pathways. The composition and functions of underground microbiota were a black box until the advent of molecular biology techniques that are beginning to allow us to know who lives there and what functions they perform. Manipulating these microorganisms to reintroduce them into soils to be repaired, or to increase their abundance



requires specialized treatments; although in some cases, if the soil is not excessively degraded, 'broadcasting' good soil collected from neighboring areas can be successful. Alongside all this technological sophistication, excavators, soil probes, trucks loaded with compost, and muddy pots and boots are familiar objects to all of us who deal with soil health.

Discovering Buried Treasure

Soil is the substrate of life on Earth, from which we feed, and to which we will one day return as food, forming part of the endless cycle of water and nutrients that drives the biosphere. Soil, this complex organism composed of a mixture of minerals, water, air, and a myriad of living beings and their organic products, has a life of its own. However, overexploitation to feed the population and sustain human constructions has deteriorated it to such an extent that our food, the quality of the air we breathe, and the Earth's climate are at risk. Those of us who repair soils have no rest today. From dawn to dusk, we interrogate that dark box that operates miracles silently and elusively beneath our feet. □



Previous page: "Engaging in Kintsugi, the traditional Japanese art of ceramic repair, led me to an intriguing experiment involving the time-worn 'boro' indigo fabric, once adorned by Japanese farmers. Given my history of mending and repairing clothing, seamlessly integrating textiles felt like second nature. These broken porcelain bowls could be discarded. However, I find joy in bestowing renewed purpose upon an object I painstakingly crafted. The principle of 'care' remains at the forefront of my daily pursuits." Design: Keiko Matsui. Photograph and caption: Keiko Matsui.

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POSTCARDS FROM ABROAD: PSYCHOTHERAPEUTIC REPAIR

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How is damage/brokenness defined in your discipline and field of work? How do you identify it?

Damage can be understood as the consequence of an action, an impact that psychically impairs or deteriorates. In psychotherapy, we address emotional and moral damage. The harm suffered can leave more or less of a mark, cause a wound that heals on its own, or produce emotional after-effects. We feel it in the body.

Damage is accompanied by pain. We feel pain that indicates something threatening and harmful has happened to us. A pain that warns us and comes with sadness, anger, fear, etc. Sometimes, it includes more social emotions (guilt, shame) which often complicate the processing of the pain. Damage happens to us. It is impossible to live without having experienced it to some extent.

Such damage can occur accidentally, like in a fire, or in a fall that puts life at risk and leaves psychological damage (post-traumatic stress, a fearful attitude towards life, etc.).

It can occur in contact with other people, as we usually are, and they hurt us, intentionally or unintentionally. Punctually and explicitly (an insult, a humiliation) or more generically and diffusely (work harassment, a racist attitude).

There are occasions when structural conditions harm us, either more explicitly (living through a war) or more generically (instrumental violence, positions of subalternity within the culture in which we live).

We may be unable to escape from the situation that causes damage. Also, we may not be able to identify the pain that warns us, or we may normalize it and overlook it.

How is repair defined in your discipline and field of work?

Repair will depend on the type of damage, how exposed we are to it, and the specific configuration it has for each person. In all cases, the expression of pain and the recognition of the damage are necessary.

It can have a punctual character, and then the reparation will mean to heal the wounds, the emotional injuries provoked. In this case, to repair means to intervene in order to reestablish emotional tranquility, so that the experience of damage/pain does not determine life; so that what you think, feel, and do is not conditioned by the wound. And it implies the expression of pain and recognition of the damage.

But, if there are emotional sequelae, the repair is more complex and may not end in the same way; it may not be completely resolved. It may involve using more resources than merely therapeutic ones, relying on other tools. It is necessary to build alliances, to collectivize the discomforts, and to learn from them.

The same happens if the damage is a consequence of the structural: the reparation is always partial and unfinished. How to repair the damage



produced by living in a capitalist society? How to repair the damage produced by being a lesbian in a lesbophobic society? In these cases, the expression of pain and recognition takes on a social dimension.

In some cases, the recognition of the damage implies an atonement, something concrete that compensates for what has been suffered, and eases the feeling of injustice from the experience. It may not happen in the therapy itself, but support can be provided in the search for it if deemed necessary.

What methods support diagnosis and repair processes?

Repairing implies *paying attention, looking carefully*. It is important to distinguish the pain that warns of damage from other pains that result from growth-related transformations.

Pain is part of life. It is not good to run away from some pains: it is necessary to go through them (like the pain of a desired breakup). Sometimes, we suffer or stay in situations of suffering, because of the fear of damaging ourselves, and this can harm us. Additionally, what makes us hurt in relationships with others does not always have to be understood as intentional or unfair. Not everything that hurts is meant to harm us. So, it is important to distinguish it from the outset and not to interrupt, pathologize, or medicate significant existential pain.

Also, we must distinguish *the individual characteristics* of the people we accompany and pay attention to the differences. We look at different levels of experience to assess the damage, to understand it:

- We may be born with some somatic characteristic that makes us more vulnerable to certain things, more psychologically susceptible to damage (e.g., a greater tendency toward anxiety).
- We may be more vulnerable due to having suffered harmful experiences throughout our lives that condition somatic responses (e.g., trauma).
- We may live in more or less harmful environments, either punctually (being in a toxic affective relationship) or more chronic (being a woman in a patriarchal society).
- And we may have traits that help or hinder us in processing experiences of damage; namely, a fixation of more or less rigid responses that may hinder or facilitate the ability to recover after experiencing harm.

That is how we consider the person in all their dimension.

Sometimes, the work involves *realizing the damage*. Understanding that we have experienced or are experiencing things that harm us. In these cases, repairing may mean getting out of the damaging situation. Other times, it is not possible to escape from the environment.

We pause *to revisit the pain*. When the person is ready, without haste, with care. It does not have to be all at once; the narrative of pain can be completed



gradually. It is important to listen to the peace and respect it.

It is necessary to pay attention to:

- The somatic dimension, sensations, sensory and motor responses; to support self-regulation, find tools to provide calm.
- The emotional and cognitive dimension, for the person to understand what happened, how they felt, to be able to integrate the emotion into the narrative or to put words to the physical sensations.
- What has been emotionally interrupted. It is necessary to understand if the pain has found or is finding a channel of expression that reverses it and restores the balance that was broken.

Lastly, throughout the whole process, facilitate the recognition of the damage. Ideally, this recognition should come from the person who caused it or from the environment of the person who has suffered it. If this is not possible, the therapeutic relationship can support it with the dynamics of recognition that are present in therapeutic work. Also, in some cases, it is necessary to promote or accompany the search for material and/or symbolic restoration and redress.

What tools, materials, skills, and knowledge characterize these processes?

Many hours of study, a wealth of theoretical knowledge. Having experienced it personally, having undergone therapeutic processes, having been supported in the repair of personal damage.

I can specifically highlight a few things: the presence that implies being available for the therapeutic encounter. Active listening that pays attention to what is said (including the silences) and what is expressed non-verbally. The emotional resonance that occurs in the encounter. In other words, being attentive to both the inner and outer aspects.

Also, the use of language itself to explore ways of naming, possibilities of expressing, that include pains or hurts that may not otherwise be named.

Opening ourselves to the experience of other bodies and other lives, including a dynamic of recognition of the other and the search for alliances, beyond therapy, that complete or pursue the repair of personal and/or collective damages.

Five key repair concepts in your field:

identification

expression

recognition

presence

alliance building

□

4



Previous page: The intimate garment of a missing person. Source: Attorney General's Office, *Rastros*, Issue 18, Bogotá D. C. https://www.fiscalia.gov.co/colombia/wp-content/uploads/Rastros_Edicion_18.pdf

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POSTCARDS FROM ABROAD: BROKEN FABRICS. DAMAGE AND REPAIR IN THE TRUTH COMMISSION EXPERIENCE

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Postcards from abroad

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“Leave it as it is, don’t keep on doing it, don’t get involved, what’s the point?” Those were the words someone said to a woman who had been searching for her husband for several years, disappeared by armed groups in the Valle del Cauca department, in Colombia. It is the same advice that many victims of the Colombian armed conflict received throughout much of the 20th century. However, beyond what these apparent pragmatic suggestions imply, victims not only demand punishment for those responsible for the committed violations, but also yearn for clarity about what happened to them or their family members. In many cases, the pursuit of understanding (and the possibility of constructing their own narrative) goes beyond the desire for revenge or material reparation.

In the 2016 Final Agreement for “the termination of the conflict and the construction of a stable and lasting peace”, signed by the Government of Colombia and the Revolutionary Armed Forces of Colombia-People’s Army (FARC-EP), the creation of a Commission for the Clarification of Truth, Coexistence, and Non-Repetition was stipulated. This was a *temporary* and *extrajudicial* mechanism whose purpose was “to discover the truth about what happened in the framework of the armed conflict, contribute to clarifying the violations and infractions committed during the armed conflict, and provide a comprehensive explanation of its complexity to society as a whole.” Over six years, the Commission held numerous events with victims and perpetrators of the Colombian armed conflict, and its most ambitious product was the preparation of a final report composed of more than ten volumes, totaling over five thousand pages. From different perspectives, the report provides answers to what happened during the conflict, who was responsible for what occurred, what were the impacts on the victims, and what must be done to prevent violence from recurring in the country. The report was published in June, 2022.

For the Truth Commission, the victims of the armed conflict are those individuals who were subjected to human rights violations or infringement of international humanitarian law. These violations and infractions resulted in mental, physical, economic, and political damage to individuals, families, and communities. They include homicides (massacres, selective assassinations, and extrajudicial executions, among others); indiscriminate attacks on the population; forced disappearances; threats; kidnappings; arbitrary detentions; torture; cruel, inhuman, and degrading treatment; sexual violence; recruitment of girls, boys, and adolescents; forced labor; forced displacement; land dispossession; confinement; attacks on protected property; looting and extortion.

The ‘reparation’ pursued by the Truth Commission is partial and is part of a broader, comprehensive system that includes two other mechanisms: the Special Jurisdiction for Peace and the Unit for the Search for Missing Persons. Thus, the Commission does not seek to ‘punish’ the perpetrators (a matter that



falls under the Special Jurisdiction for Peace), but to 1) contribute to the clarification of what happened during the conflict; 2) promote and contribute to the recognition of the victims as citizens whose rights were violated, and of the violations and infractions as events that deserve society's rejection; and 3) promote coexistence in the territories.

The violations and infractions committed in the Colombian armed conflict reveal a broken social fabric that deteriorated even further due to violence (although there are stories of individual and community resistance, the Commission's emphasis was on what happened *and should not have occurred*). The reparation sought by the Commission, therefore, targets two levels: the individual—by giving relevance to the victims' experience and attempting to restore the dignity that was taken from them by violence—and the social—as a deeper understanding of what happened allows all of us, as a society, to rebuild ourselves and prevent history from repeating itself.

The primary source of the Truth Commission was the voluntary testimony of victims, perpetrators, witnesses, and experts. The Commission conducted 14,937 individual and collective interviews. In these, it listened to 28,394 people within and outside the country, covering events dating from 1958 to the present. It also compiled and received a significant number of databases with diverse quantitative information related to the armed conflict. Most of these databases were related to violations and infractions, and allowed for the creation of statistics and maps. Civil society, state entities, and international organizations submitted 1,221 reports and 732 cases. Additionally, national and international judicial decisions served as sources for cross-referencing and reliability. Academic publications, for their part, offered valuable insights into understanding the violations and infractions, and even press information served as a secondary source to support specific aspects of events and cases. Furthermore, the Commission had access to classified information: different judicial authorities' procedural documents—especially those from the Attorney General's Office and the Special Jurisdiction for Peace—were consulted, and some documents were received from the Armed Forces.


Based on this body of information, the Commission followed methodological criteria for the verification, contrast, and deepening of the research process. It began with listening and gathering information; then sources were selected and evaluated, with a specific analysis of their typology (oral and documentary primary sources and secondary sources). The attributes of these sources were then assessed using criteria such as relevance, reliability, coherence, clarity, sufficiency, and depth. Next, the information was triangulated and, finally, the findings were evaluated in order to propose solid, conducive, and probable truths, validated through the consistency and traceability of the process.



The scope of the work carried out by the Commission was monumental, given the amount of information collected over its years of operation. The social researchers who participated in the investigation and writing of the final report came from various fields of knowledge: political scientists, historians, social workers, journalists, writers, data engineers, psychologists, philosophers, anthropologists, sociologists, and lawyers. The report attempts to bring together the complexity of their perspectives, but always prioritizes the voices of the victims: that is where its greatest richness and specificity lies in relation to previous works on the armed conflict. In this sense, concepts such as 'listening', 'empathy', 'balance', and 'tact' are key in the Commission's attempt at reparation.

On December 21, 1997, the FARC-EP carried out the attack on Patascoy, between the departments of Nariño and Putumayo, where there was a military base. Sergeant Libio José Martínez Estrada was kidnapped in that attack and remained in captivity for fourteen years, until he was killed by the guerrillas in a rescue attempt on November 26, 2011. During his time in captivity, Libio José wrote seventeen letters to the son he never met, as his partner was pregnant at the time of the attack. After his father's murder, Johan Martínez wrote a letter of mourning to the whole country:

Since I was very young, I had to face my father's kidnapping, set aside my childhood, and go out in search of his freedom [...], I always had faith, morals, and hope that my father would be released alive; no matter how many years it took, because we were about to complete fourteen years of captivity [...], unfortunately, my tears were not enough to move this guerrilla group [...], my dream is to turn that page on war and start writing a new future.

The Truth Commission desires that, through its work, a different future becomes possible for Colombia. 

To the memory of Karim Ganem Maloof.





Previous page: The red corner. Drawing:
Samu Céspedes.

Samu Céspedes

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POSTCARDS FROM ABROAD: NOT ALL OF US ARE PRESENT SOME OF US ARE LOCKED UP

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Postcards from abroad

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1 an uncomfortable body / is detained / is taken to the deposit / of the disturbing bodies / (...) / but as its exploiters find out / suddenly enriched / the locked up disturbing bodies / are very convenient / lock it up, bury it

2 "Not all of us are present, some of us are locked up," shouted by the Household Workers and Care Union, Sindihogar, when they take to the streets. It reminds us that even though live-in workers cannot go out to protest, they are part of the mobilization for their rights.

3 Throughout the text, we will continue to quote slogans and demands coming from various active migrant collectives in Barcelona.

4 In-home workers and caregivers demand the repeal of the Immigration Law, which places countless obstacles in obtaining residence and work permits, thus violating the fundamental rights to decent housing, employment, education, and quality healthcare for migrants. It is a racist and xenophobic law that endangers the lives of migrants from countries affected by extractivism and European colonial intervention. *The Immigration Law kills people every day!*

5 Until last year, in-home workers were registered under a special social security regime, a status that deprived us of fundamental labor rights available in the general regime, such as the right to unemployment benefits, sick leave, and coverage for occupational hazards, thereby saving the public treasury significant, albeit difficult to quantify, amounts. Since this regime primarily affected migrants and racialized individuals, we denounced it as racist and xenophobic.

a una *cuerpa* incómoda
se la detiene
se la lleva al depósito
de las *cuerpas* que incomodan
(...)
pero como lo descubren sus *explotadores*
enriquecidos súbitamente
las *cuerpas* incómodas encerradas
son muy convenientes
intérnala, entiérrala¹

Versioned fragment of the poem Una canción popular (19th-20th centuries), by Angélica Freitas (emphasis added)

No estamos todas, faltan las internas²

We know very well the damage they have done to us, the damage they continue doing to us...

Currently, in the Spanish State, household and care work falls on migrant bodies, mostly women, but also gender-not conforming people, as well as some men.

Even if you don't want to see it,
gender-not conforming people
have always been part
of the networks of care
and reproduction of life.³

Our racialized bodies support an essential part of society: without us, there is simply no life. We do all this with unjust wages, precarious or miserable working conditions, and often in underground economies and subjected to illegalized migration. This situation is not the result of mere carelessness on the part of the State and society in general. On the contrary, it is a structural issue, expressly created for the benefit of capitalist, patriarchal, and extractivist-colonial interests.

**The Immigration Law⁴ and the special regime⁵
are instruments of the Spanish state
for the exploitation of migrant bodies.**

I wish that while cleaning, I could bring to the surface the dirty secret that Europe hides beneath layers artistically coated, varnished, enameled, finely carved, brimming with intricate patterns of color and form. Artifices to forget all the death and dispossession that sustains it. I wish I could reveal that rotten core with my touch.



I want to have the Midas touch, but in reverse! May everything my hand reaches out turn to shit, to compost, to fertile soil!

**The binary, racist, and colonial regime
wants us to be submissive
to exploit us with no end.**

What they did not know when they looked at our grandmothers with disdain while fanning the flames to heat the house, to cook, to boil the clothes, is that they knew the secrets of fire, and how to set the forest ablaze from time to time to purify and cleanse. My cleaning sisters and I, movers of molecules, caressers of the world, preserve the pyromaniac knowledge that consumes, razes, burns, to make things grow and give life. The female ancestors knew it: once a year, we must burn, we must become a ritual pyre that purifies and cleanses.

**I'm not, I'm not, I'm not domesticated
I just clean your house and I'm very poorly paid.⁶**

We know how to clean, care, and conserve, but we can also be slowly corrosive.

**Give me, give me, give me the gasoline.
What for? What for?
For the Immigration Law.
And if there's extra, and if there's extra
also for the police.⁷**

Last year, the government celebrated and boasted of finally implementing the law that ends the special regime for in-home and care work in the social security system. The regime change has not yet taken effect, and the new conditions are yet to be seen. But what is clear is that it will not be retroactive: that is, the thousands of people who have been contributing under this regime for years, will not receive the benefits they are entitled to for their work. Miserable retirements await them

**The looting continues:
Set fire to the colonial order.⁸**

Abolishing the Immigration Law, establishing a compensation policy for exploited workers, ensuring them a life with full rights, and recognizing the incalculable value of in-home and care work are the only possible forms of reparation.

**The cis-hetero colonial patriarchy
we migrant bodies
will overthrow it.⁹**



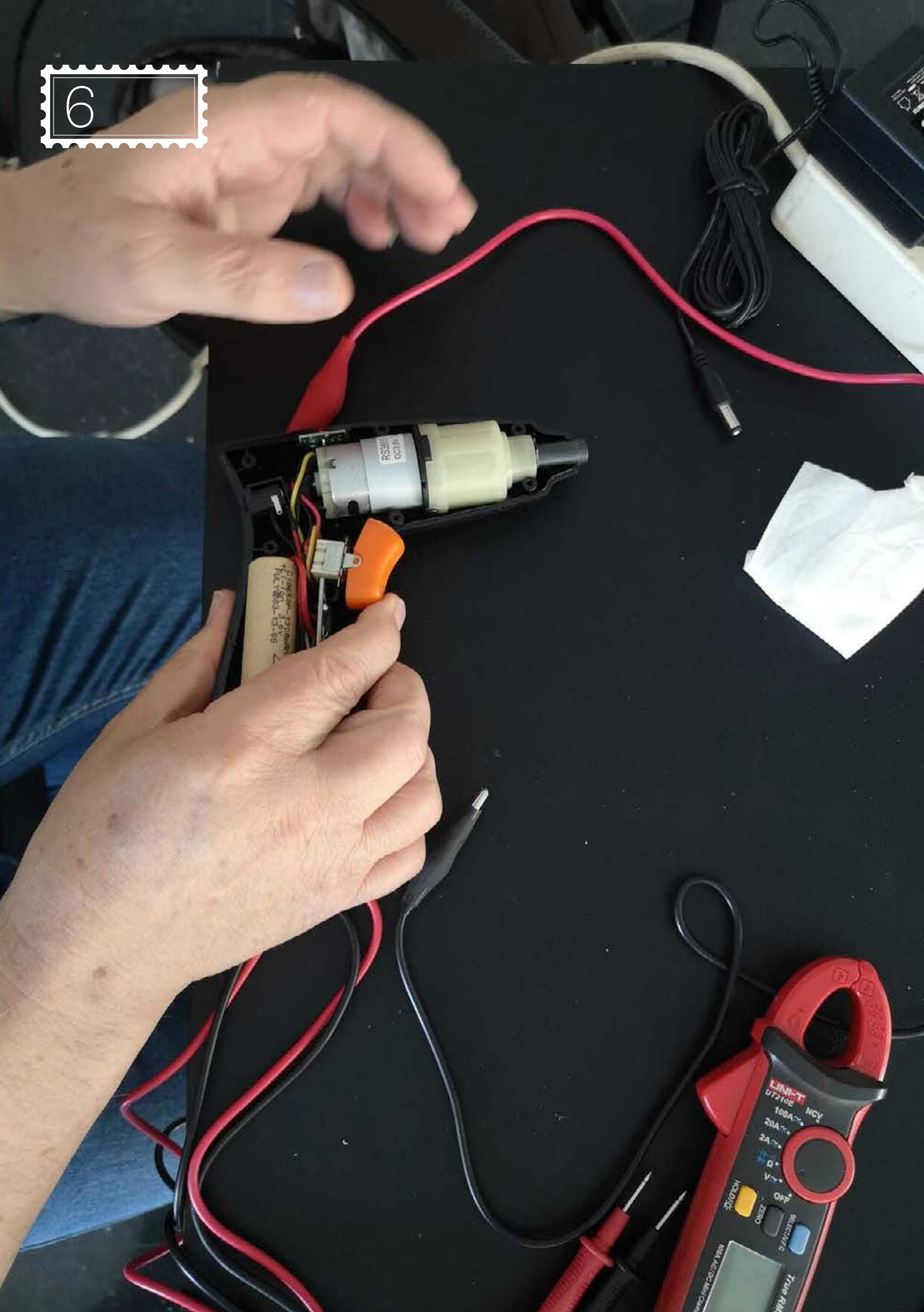
⁶ Slogan of the in-Home Workers and Caregivers Union Sindihogar.

⁷ Slogan of migrant collectives in Barcelona.

⁸ Slogan of migrant collectives in Barcelona.

⁹ Slogan of the sex-gender-dissident and migrant collective Montras Diaspóricas.

6





Previous page: Repairing during a Restart Party. Source: https://restartersbcn.info/wp-content/uploads/2022/04/IMG_7529-4536x4054.jpg. Photograph: Morena Bellini.

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POSTCARDS FROM ABROAD: REPAIR OF ELECTRICAL AND ELECTRONIC DEVICES

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Postcards from abroad

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How is damage/brokenness defined in your discipline and field of work? How do you identify it?

In the case of the repair of domestic or personal electrical/electronic devices, damage, commonly referred to as a 'breakdown', is understood as the inability to achieve the expected result. That is to say, when the device or machine in question does not perform any or some of its functions, or performs them inadequately.

Since these appliances typically lack any form of preventive maintenance, the user identifies the damage through performance or obtained results, such as noises, odors, etc. In the best-case scenario, from the perspective of waste generation, the user will try to repair the machine or seek assistance for its repair.

Normally, qualified or trained personnel (in the case of Restarters Barcelona, volunteer repairers) will conduct their own tests and checks—beyond what is evident and what is communicated by the user—to verify that the device is indeed faulty and to what extent, as well as to form an initial idea of the possible cause. These first tests typically involve only attempting to operate the appliance to witness the failure and pinpoint the damage, paying attention to any intermittent issues related to position or power, noise, how the machine makes the attempt, etc. This often requires having all essential parts of the appliance available, or at least those that may be relevant to its operation.

Sometimes, during this technical evaluation, it is discovered that the device is not really broken, but was not being operated correctly, or some important issues had not been taken into account. Occasionally, the device is not working properly simply due to accumulated dirt, which can be removed without the need for tools.

How is repair defined in your discipline and field of work?

With the same logic as before, repair is the restitution of functions that have disappeared or deteriorated, bringing them back to a level similar or identical to the expected or original state.

If it becomes impossible to fully repair all functions, sometimes partial repairs can be carried out—always with the approval of the appliance owner—, allowing continued use of the device, while potentially sacrificing a minor function or purely aesthetic aspect. Therefore, to a certain extent, it could be considered that an appliance is (sufficiently) repaired based on what is expected of it, even if it does not have all the original functions.

What methods support diagnosis and repair processes?

The repair of (more or less) complex machines typically requires understanding their operation and checking their relevant parts until identifying what is damaged. During the initial evaluation mentioned earlier, previous experience and observa-



tional skills can sometimes allow for speculation or intuition about the possible cause, which can save repair time.

In many non-professional appliances, a significant challenge often lies in gaining access to their interior. The lack of indications on the device itself (such as arrows) or the absence of repair manuals, typically contributes to this difficulty. This may be intentional to some extent, aimed at complicating the repair process, or it could be due to prioritizing designs and fastening systems that are cheaper to manufacture but more challenging to disassemble.

Once the device is opened and with the information gathered during the previous checks, the process of visual inspection begins (for example, detecting breaks or discolorations indicating damage); electrical measurements are taken using measuring instruments; and the proper functioning of parts or components is verified by moving them to detect stiffness, or by checking them separately.

The previously mentioned lack of technical information often complicates the checking of complex parts, such as electronic boards, which is necessary to identify the damaged component or subpart, sometimes leading to the replacement of the entire part.

After the damaged component or part is identified, the next step is to search for a replacement, considering relevant issues such as availability, delivery time, and cost. If an appropriate replacement cannot be found, or if the price is excessive compared to a similar new product, the owner may opt to discard the appliance. A common, cost-effective, and quick alternative can be to source replacement parts from another identical appliance that has already been declared dead or irreparable, and serves as a 'donor'. This method may require some luck or having access to a good supply of 'organs' or 'cadavers'.

If the disassembly was carried out in an organized manner without breaking any fastenings during the process, the assembly is typically straightforward, though not necessarily less labor-intensive.

Finally, it is essential to perform a final functional check to ensure that the repair is effective and that no new issues have arisen.

What tools, materials, skills, and knowledge characterize these processes?

The tools required for repairs can vary significantly among different types of appliances, between brands and models, or even for different defects within the same appliance. In the worst-case scenario, the use of specific and exclusive tools or fixtures may be essential, which can increase the cost and complexity of the repair.

Certainly, the knowledge required to repair complex machines also varies among appliances and their technologies, although most of the exper-



tise can be categorized into the fields of mechanics, electricity, electronics, or informatics. In state-of-the-art devices (with the definition of 'state-of-the-art' constantly evolving), continuous training becomes essential to address new challenges effectively.

Regarding skills, it is beneficial to have a basic level of fine motor skills, as well as visual acuity, although the latter can be compensated by using magnifying glasses. Additionally, it is often helpful to possess the composure and even the patience required to identify and resolve certain hidden or less obvious faults.

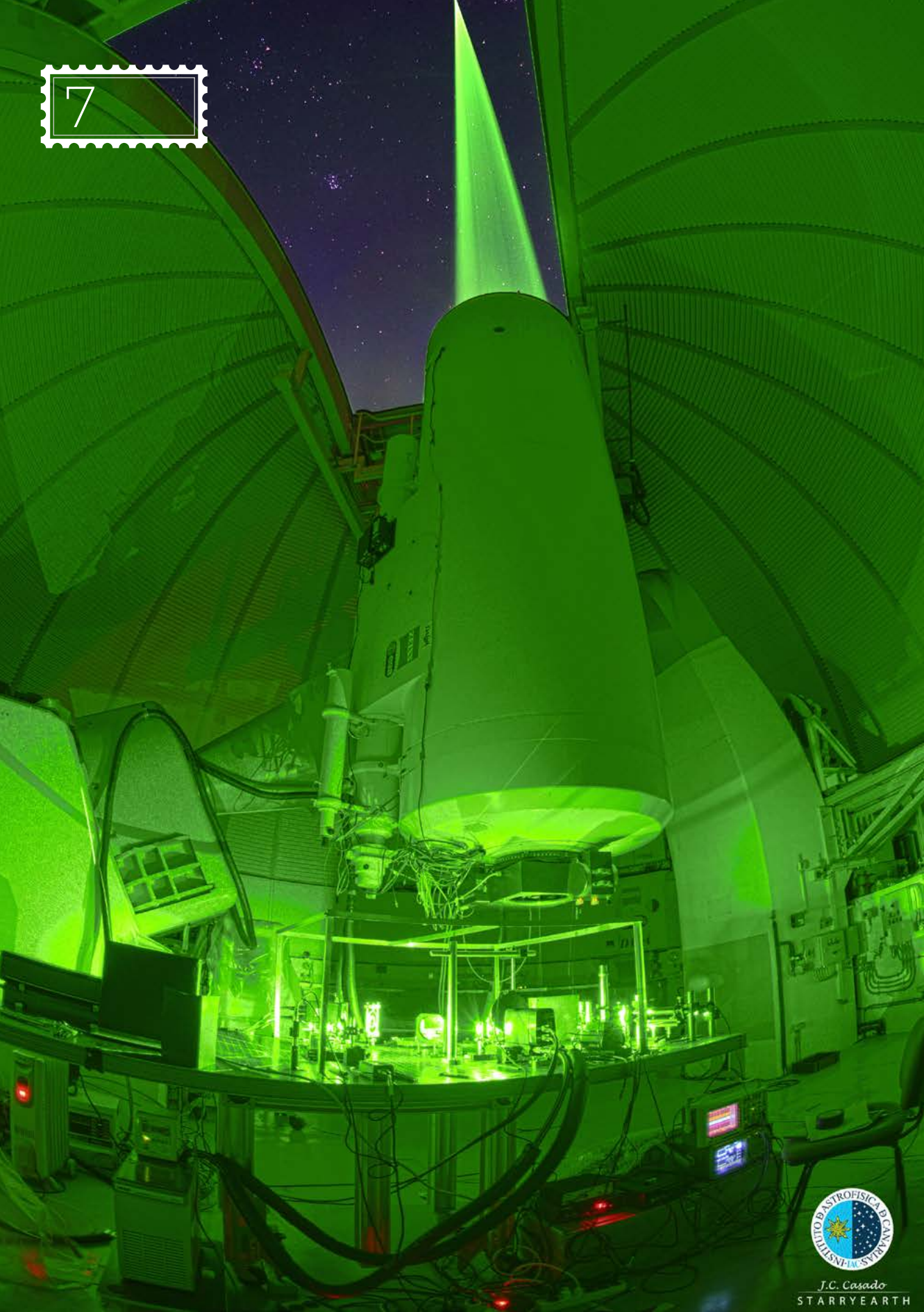
A fundamental part of the repair process is having compatible spare parts for that particular model, without which disassembly, diagnosis, and defect location efforts can become futile.

Five key repair concepts in your field:

willpower
analysis
knowledge
skill
perseverance



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Previous page: Laser Guide Star Facilities are telescope instrumentation used to create artificial stars on the sky and measure the atmospheric turbulence. Information about the turbulence is then extracted from the scientific observation and thereby, the resolution in the science instrument (degraded due to the atmosphere) is restored. ESA Optical Ground Station. Photograph: Instituto de Astrofísica de Canarias.

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POSTCARDS FROM ABROAD: REPAIR IN ASTRONOMICAL INSTRUMENTATION

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Postcards from abroad

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As a professional engineer and researcher, I build telescope instrumentation for astronomers seeking to answer the mysteries of the Universe. Specifically, I design laser guide star facilities to measure the atmospheric turbulence that affects scientific observations. Often, when progressing from design phase to assembly and integration, things do not go as expected.

How is damage/brokenness defined in your discipline and field of work? How do you identify it?

In astronomical instrumentation, damage refers to anything that affects the performance or accuracy of the equipment used to observe celestial objects or phenomena. Damage to instrumentation for ground-based telescopes can have a significant impact on the quality and reliability of scientific data collected by the equipment and therefore, directly affect a potential big discovery for humankind.

Damage can occur in several forms, and identification is often based on the effects on the instrument performance. Optical damage, like scratches or chips on the components, and contamination from exposure to dust and moisture, affect the quality of images produced by the telescope, causing distortion and blurring. Misalignments in the optical elements due to mechanical stress or vibrations can cause aberrations in the images produced by the telescope. Electronic or electrical damage can cause malfunctions in sensors, control systems, or other electronic components of the telescope.

How is repair defined in your discipline and field of work?

Repair consists in restoring performance in malfunctioning instrumentation. The main goal of repair is bringing the telescope back to its optimal functional level, and to ensure that it can continue to operate effectively in the future.

What methods support diagnosis and repair processes?

Repair processes can vary largely, and their complexity is directly proportional to the scale of the instrument. Repairing a small amateur telescope may involve simple tasks such as cleaning lenses or replacing a damaged eyepiece, which can be done relatively quickly and easily by the telescope owner. On the contrary, repairing a laser facility in the 8 meters Subaru telescope in Hawaii (USA), or in the ESA Optical Ground Station in Teide Observatory (Spain) will imply a large technical team and telescope downtime for the astronomers, who will not be able to use the facility until the repair tasks are completed.

Designing, building, operating, and maintaining telescopes adequately is crucial to ensure that malfunctions can be diagnosed quickly and accurately. The design must include redundant systems and fail-safe mechanisms to minimize the risk of malfunctions. The use of high-quality materials and



construction techniques that are adequate to the site where the instrument will be installed are required. Regular maintenance is crucial to identify and diagnose malfunctions. Established operating procedures, monitoring weather conditions, and using appropriate observing techniques during the telescope operation prevent malfunctions from occurring in the first place. And finally, having a well-established diagnostic protocol can help ensure that malfunctions are quickly identified and addressed.

What tools, materials, skills, and knowledge characterize these processes?

Repair processes in telescope instrumentation are typically performed by trained professionals, such as instrument engineers, technicians, or observatory personnel. In some cases, repairs may be performed on site at the observatory or research facility, while in other cases, the equipment may need to be transported to a specialized repair facility.

Tools and skills depend on the type of instrument and the nature of the repair. Some examples could include: precision instrumentation like interferometers and alignment equipment that are required to diagnose optical malfunctioning; and a variety of hand tools and heavy machinery needed to handle, disassemble, and reassemble components after repair. Likewise, skills are very specific for each repair task. Large instrumentation always needs multidisciplinary teams (with optical, mechanical, electronics, software, and systems knowledge) to carry out the repair process successfully and in the shortest time, to minimize observing downtime. □





Previous page: 'La Herida' (The Wound), a work by Alberto Bañuelos-Fournier situated on a cliff in the municipality of Muxía (Galicia, Spain). The 400-ton monolith with a large crack serves as a reminder of the ecological disaster caused by the oil spill resulting from the sinking of the Prestige oil tanker in November 2002. It was a tragedy that inflicted economic, environmental, and emotional wounds that lingered for a long time among the fishing communities along the Galician coast. The handling of the crisis by the authorities received much criticism, as the initial oil spills from the tanker were underestimated for too many days. The accident resulted in the discharge of 70,000 tons of fuel into the sea. Photograph: Oscar Martínez-Rivera.

Oscar Martínez-Rivera

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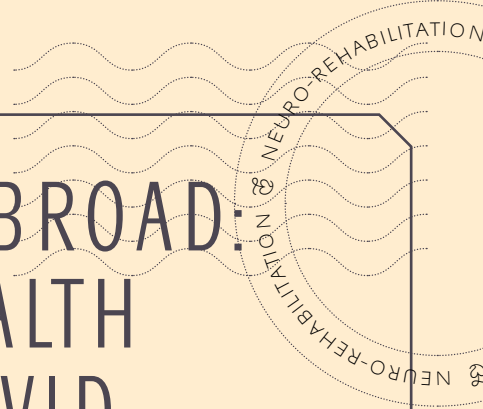
POSTCARDS FROM ABROAD: THE SOCIAL AND HEALTH WOUND OF LONG COVID

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How is damage/brokenness defined in your discipline and field of work? How do you identify it?

As a patient, the definition of damage varies over the course of the illness, especially in a condition like long COVID, which carries with it the uncertainty inherent in a new and unknown disease. After three years of COVID, the concept of damage is very close to that of rupture. Life shatters when you have to live it with the uncertainty of the possibility of recovering, or not. Furthermore, damage entails characteristics related to both physical and existential pain. In any case, the journey during this time has involved a lot of harm related to the relationship with the healthcare system, as it is not providing the expected response to a situation like the one posed by this illness.

Specifically, in most cases, damage focuses on fatigue, on the impossibility of maintaining a daily and professional pace of life as you did before. But it also manifests itself in moments when you literally have to stop because the fatigue is overwhelming. Furthermore, it is a peculiar kind of harm because it is fluctuating. At different times, you might believe that permanent repair has been achieved, without being able to identify the repair method. But shortly thereafter, the body deteriorates again with more fatigue and, for many people, with palpitations, pain, difficulty concentrating, impairment in memory, language difficulties, mental fog, and so on.

How is repair defined in your discipline and field of work?

Repair, from the perspective of remedying harm, is not currently feasible for most people with long COVID. However, in many cases, there is the possibility of implementing a harm reduction strategy. But the public healthcare system should be responsible for this damage reduction, as well as of the affected individuals. Repair involves being cared for by individuals who can address your needs comprehensively and not just partially, which is not typically considered by the public healthcare system.

On the other hand, in some cases, a healthcare professional creates rehabilitative spaces for the patient to feel a sense of control and empowerment over what is happening to them. In this case, repair is related to one's personal stance toward the illness. This rehabilitative approach can be positive as long as the individual does not interpret that the responsibility for what is happening lies solely with them. Because it is the entire social, political, and healthcare system that needs to provide answers to seek a solution for the harm in order to repair it. And in any case, it is worth noting that the healthcare system should acknowledge that we don't have sufficient tools to achieve complete repair, and perhaps we are facing the possibility of improving the current situation without real probabilities of returning to a body in the same condition as before the COVID-19 infection.



What methods support diagnosis and repair processes?

The method for the rehabilitation of individuals usually relies on evidence from experiences with other patients. In the case at hand, long COVID initially had no scientific track record of rehabilitative practices. Therefore, the ability of the healthcare system to respond based on limited knowledge or similar ailments was emphasized. However, in this case, one of the key problems and peculiarities to consider is the multi-organ nature and the various manifestations that long COVID generates in individuals, taking into account the more than 200 symptoms described in scientific literature.

The initial repairs were carried out through the creativity and intuitions of various professions and professionals, although in general, they did not result in a significant percentage of restoration to the pre-COVID-19 impact state in several individuals. From the patient's perspective, especially during the first year of the pandemic, it was not clear that different healthcare organizations (hospitals, specialized rehabilitation centers, primary care, etc.) had common ground for designing solutions based on different experiences. Considering the infinite complexity of the human body, repairing damage caused by long COVID is not possible from a singular viewpoint, but requires multiple perspectives that interact with each other.

One of the fundamental methods for repair has been listening to the patients themselves. The most knowledgeable individuals about the effects of long COVID are those who experience it twenty-four hours a day, some of them for more than three years. In this regard, professionals accustomed to the 'power' of repair had no choice but to listen, because there were no manuals or scientific articles to refer to. This experience has underscored the importance of listening, transcribing, and organizing first-person narratives for this or any other disease.

What tools, materials, skills, and knowledge characterize these processes?

The fundamental skill for carrying out this repair is empathetic listening to individuals who have been harmed, along with an attitude of honesty in the face of the uncertainty posed by a new disease. It also requires knowledge and attitudes related to the ability to work collaboratively. The tools include all the evidence available to date that has led to the repair of similar damages, or has managed to reduce harm without complete repair. To use these tools, we need scientific knowledge in the form of openly published materials, but also knowledge about human relationships in situations of illness where people are particularly vulnerable. Lastly, repair requires the organization of affected individuals, as has occurred with the emergence of advocacy groups for those affected worldwide.



Five key repair concepts in your field:

- teamwork
 - networking
 - collaboration
 - open science
 - listening and humility
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