

Reparatory Design:  
Sustainable Ecologies of  
Embodied Practices, Vulnerable  
Knowledge, and Resilient  
Methodologies in Barcelona

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The ecological crisis we are all globally experiencing is almost indescribable. It touches all the aspects of our survival and has exposed us to the fragility and fracturability of our world.<sup>1</sup> Through their practices, artists and designers worldwide engage with multiple forms of damage. They search for solutions, create reparations that answer to and challenge the disciplinary institutional responses, and enable new processes of adaptation, rethinking, healing, and care.

This chapter reflects on a new perspective that critically and creatively interrogates and rearticulates our cultural notions of art and design. This new framework focuses on reparatory design practices and draws attention to their related methodologies, models, and practices hitherto misjudged by the disciplinary regimes of academia. The chapter aims to show how these practices enable the constitution of spaces of radical emancipation where resilient methodologies and vulnerable knowledge can grow; it draws primarily from three initiatives in Barcelona, Spain.

Design is a culturally situated phenomenon. The material and formalized form of its practices, its media and technological contingencies, its modes of perception and scope of expectations, as well as the functions, modes of action, and purposes of design have been and are being constantly confronted with historical, political, economic, and even spiritual changes in the societies they happen to occur. Design is a form of cognition of the world, which is why its cognitive perspective and way of understanding are fundamental to the kind of world it makes known.

A reparatory design approach aims to think of design practices from an inclusive, contributive, regenerative, transitional perspective as forms of critical-cognitive, reflexive, and experimental spacing. Hence the need to compose sustainable research ecologies—nodes of analysis that can include existing procedures but that are also open to new procedures.

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1 Elizabeth Spelman, *Repair: The Impulse to Restore in a Fragile World*, Beacon Press, 2002.

More specifically, a reparatory design approach focuses on the networks and relationships built between communities, design practices, and everyday lives. In doing so, it recognizes that design has been, and is, a fundamental agent in the industrialized transformation of the context of social production. This chapter thus explores a reparatory design approach in so far as it is able to deal with the current conditions and the acceleration of social changes happening at different levels (emotional, economic, political, and relational). It asks: To what extent is a reparatory design approach in tune with models of social justice, democratization, and participatory inclusion? Where does thinking about design from a reparatory perspective lead us?

This chapter focuses on the way specific design initiatives (in Spain) are adapting a reparatory design perspective—answering material and immaterial needs, extending the reparations toward social relational bounds, emotional fields, communicational performativities, poetics of attention, and ecologies of collective affection. In doing so, it contributes to a worldwide paradigm shift in the field of design practices and those around them, from technology to politics, from identities to public policies. This reparatory perspective implies strengthening a conception of creation that assumes the necessity of answering different global and local problems through new approaches that reflect the multiplicity and complexity of our societies and acknowledge our historical and culturally diverse roots, languages, and ways of life.

### To Repair

To repair is to recognize the world's vulnerability and respond to it, enacting a collective commitment towards its actual damages.<sup>2</sup> In her book *Repair*, Elizabeth V. Spelman defines the scope of the 'impulse to restore' in humans. She even coins the term *Homo reparans* to acknowledge that the impulse to

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2 'Understanding vulnerability as not something we must (or can) defend against, but instead as a constitutive fact of our lives, a world-shaping mattering, offers us something', Alexis Shotwell, *Against Purity: Living Ethically in Compromised Times*, University of Minnesota Press, 2016, 86.

repair seems a fundamental feature of the human animal.<sup>3</sup> But she also states a significant differentiation within the realm of reparation. Repair is acting towards something that has been broken or damaged by accident, by the force of natural causes, because of the object's materiality or the intensity of its use. However, there is a substantial difference between repairing an object (such as a computer, watch, washing machine, or a piece of furniture) and repairing a relationship.<sup>4</sup> To repair a relationship requires:

(...) a complete understanding of the relationship between the victim and the wrong-doer, the nature of the conflict, the full range of harms that the victim received, what can be done to repair the harm and an understanding of what prompted the offender's behaviour and what can be done to prevent this behaviour from occurring in the future.<sup>5</sup>

As humans, we are bodies in relational condition to our environments. Our bodies are, in fact, vulnerable, breakable. We are subjects of damage, fracture, and wounds. As collectives, we are subject to potential harms, injuries, and pains that exceed the mere parameters of our individualities. Moreover, the reparation of these harms cannot be just repaired by ordinary tools. What types of tools have been created to repair these kinds of damages? Reparatory justice is one of the main tools that human societies have developed to confront these relational injuries.

Reparation has to do with the civil responsibility condition of every society member. Reparation constitutes an indispensable aspect in constructing equitable, fair, and democratic societies. The concept of reparation can be traced to the first human legal code, the Hammurabi code, where the

3 'The Human Being is a repairing animal. Repair is ubiquitous, something we engage in every day and in almost every dimension of our lives. *Homo sapiens* is also *Homo reparans*', Spelman, *Repair*, 1.

4 'To repair is an act on the world: to engage in mending and fixing entails a relational world-building that materialises affective formations. It also settles endurance, material sensitivity and empathy, as well as more altruistic values oriented towards the sustainability of life'. Francisco Martinez and Patrick Laviollete, *Repair, Brokenness, Breakthrough: Ethnographic Responses*, Berghahn, 2019, 2.

5 Law Commission of Canada, *From Restorative Justice to Transformative Justice Discussion Paper*, Catalogue no. JL2-6/1999, 28, accessed 10 August 2022, [www.antonioacasella.eu/restorative/Canada\\_1999.pdf](http://www.antonioacasella.eu/restorative/Canada_1999.pdf).

270 law contemplated the possibility of monetary compensation for damages other than personal injury, as, traditionally, personal injury was considered non-compensable. In the Hebrew law, ‘eye for an eye’ is the commandment that expresses the idea of a reciprocal or equivalent justice measure. The law of retaliation, in Roman law, assumes the same direction: the person causing the damage must be penalized at an equivalent level to the damage injured.<sup>6</sup> The modern concept of reparation deals with damages of different scopes: the magnitude of the damage, the number of affected victims, and its gravity make the definition of reparation more complex regarding a community or group.<sup>7</sup> Faced with possible damage, every person is obliged to compensate for the damage caused. The notion of reparation in the legal design of society constitutes a fundamental element through which not only to hold responsible whoever infringes the rights or property of another or others, but also establishes as a necessity the care of those who have been direct or indirect victims of a harmful action, such as in the case of global ecological reparation justice. This acquires fundamental relevance in our contemporary interconnected world, where the responsibilities of states, corporations, industries, and communities contribute to all forms of life and their survival on the planet.<sup>8</sup> Reparatory justice is a philosophy and method for settling conflicts, seeking to restore these through a process that involves the victims, the

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6 Juliana Nanclores and Ariel Gómez, ‘La Reparación: una Aproximación a su Historia, Presente y Prospectivas’, *Civilizar Ciencias Sociales y Humanas*, 17: 33, July 2017, 59–80, [www.doi.org/10.22518/16578953.899](http://www.doi.org/10.22518/16578953.899).

7 As stated by Professor Margaret Urban Walker: ‘The field of application for reparations is broad, comprising cases where wrongs are discretely episodic and the concrete means of repair (for example, monetary compensation) are fairly straightforward, cases of gross and murderous violation of massive numbers of human beings during a specific period of political repression or persecution, and group histories of destruction, dispossession, subjugation and degradation of status that span centuries’. Margaret Urban Walker, ‘Restorative Justice and Reparations’, *Journal of Social Philosophy*, 37: 3, Fall 2006, 377–395, [www.doi.org/10.1111/j.1467-9833.2006.00343.x](http://www.doi.org/10.1111/j.1467-9833.2006.00343.x). For further discussion on Restorative Justice: Federico Lenzerini (ed.), *Reparations for Indigenous Peoples: International and Comparative Perspectives*, Oxford University Press, 2008. Also: María del Refugio Macías, Gloria Puente, and Isaac de Paz, ‘La Justicia Restaurativa en el Derecho Internacional Público y su Relación con la Justicia Transicional’, *IUSTITIA*, 15, 2018, 9–30, [www.doi.org/10.15332/iust.v0i15.2084](http://www.doi.org/10.15332/iust.v0i15.2084).

8 Olufemi Táíwò, *Reconsidering Reparations: Worldmaking in the Case of Climate Crisis*, Oxford University Press, 2022.

victimizers, and the community.<sup>9</sup> Different communities and countries have been demanding or developing reparation, care, and healing processes. Examples of such processes can be found in Colombia's peace process,<sup>10</sup> U.S. Black people's demands for reparations from the United States of America, caused by slavery and its aftermath,<sup>11</sup> Australia's reparations for the stolen generations,<sup>12</sup> the Māori of New Zealand,<sup>13</sup> American Indian nations from North and South American countries demanding the return of their tribal lands, the South African Truth and Reconciliation Commission after the end of apartheid in 1996, the Truth and Reconciliation Commission of Canada documenting the impacts of the Canadian Indian residential school system (2008–2015), or the National Commission on Political Imprisonment and Torture Report (2004–2005) documenting testimonies of those who suffered illegal imprisonment and tortures under the Chilean dictatorship. It is impossible here to unfold the entire and relevant discussion on the critical aspects of this legal concept, but it is an introductory approach to a debate to be had within design practices and their involvement in social, political, and ecological spheres.

### Reparatory Design Practices

Reparation should be an essential concept in today's processes of understanding and thinking about design practices, and reparatory practices in design are an important way to enact sustainable changes in the world. In the face of existing damage, the act of reparation seeks restitution that does not entail forgetting the origins of the damage caused. Nor does reparation imply restitution of the original state. On the contrary, it understands that the transformation produced by

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9 Pablo de Greiff, 'Justice and Reparations', in Pablo de Greiff (ed.), *The Handbook of Reparations*, Oxford University Press, 2006, 451–477.

10 Macías et al., 'La Justicia', 9–30.

11 J. Angelo Corlett, *Race, Racism, and Reparations*, Cornell University Press, 2018.

12 Julie Cassidy, 'The Stolen Generations—Canada and Australia: The Legacy of Assimilation', *Deakin Law Review*, 11: 1, 2006, [www.doi.org/10.21153/dlr2006vol11no1art230](http://www.doi.org/10.21153/dlr2006vol11no1art230).

13 Lenzerini, *Reparations for Indigenous Peoples*.

272 the damage has created a different reality to which it must adapt. However, this adaptation supposes transformative, relational, sustainable learning. To repair is to heal. Healing is a process of intense care, a period of accompaniment, recovery, and re-bonding.<sup>14</sup> It is a learning process of a reweaving, of an interweaving that, arising from damage, gives shape to new knowledges.<sup>15</sup>

The current global crisis is not a singular and isolated event but the manifestation of a fundamental systemic crisis: a crisis of our relations with nature—that is, with everything that continues to be defined as an externality to our anthropocentric conception of reality, but also a crisis of our interpersonal, social, economic, and political relations.<sup>16</sup> On all these levels, it is undeniable today that the way humans relate to each other and other living and non-living entities is not sustainable; it is not viable in the medium and long term.<sup>17</sup> Consequently, all our efforts should focus on transforming these relationships.<sup>18</sup> How can we focus on transforming these relationships, if not by acknowledging the already existing wounds and the necessity of repairing those injured relational structures? Before further describing the reparatory perspective, it is crucial to understand the grounds from which it relates to a relational perspective.

A sustainable relationship is a performative form of connection that is beneficial for the entities it connects.<sup>19</sup> This means, at a basic level, that a sustainable relationship provides

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14 Marcia Krawll, *Understanding the Role of Healing in Aboriginal Communities*, Report Ministry of the Solicitor General of Canada, 1994.

15 Liliana Parra-Valencia, 'Prácticas y Experiencias Colectivas Ante La Guerra y Para La Construcción De Paz: Iniciativas Sociales De Paz En Colombia', *Agora U.S.B.*, 14: 2, 2014, 377.

16 Bruno Latour, *Facing Gaia: Eight Lectures on the New Climatic Regime*, Polity, 2017.

17 Arturo Escobar, 'Sustainability: Design for the Pluriverse', *Development*, 54, 2011, 137–140, [www.doi.org/10.1057/dev.2011.28](http://www.doi.org/10.1057/dev.2011.28). Also, Enrich Hörl, 'Introduction to General Ecology. The Ecologization of Thinking', in Erich Hörl and James Burton (eds.), *General Ecology: The New Ecological Paradigm*, Bloomsbury, 2017.

18 Zach Walsh, Jessica Böhme, Brook D. Lavelle, and Christine Wamsler, 'Transformative Education: Towards a Relational, Justice-Oriented Approach to Sustainability', *International Journal of Sustainability in Higher Education*, 21: 7, 2020, 1587-1606, [www.doi.org/10.1108/IJSHE-05-2020-0176](http://www.doi.org/10.1108/IJSHE-05-2020-0176).

19 Peter Harries-Jones, *A Recursive Vision: Ecological Understanding and Gregory Bateson*, University of Toronto Press, 1995.



the right conditions for the related entities to maintain their identities and specific forms of existence.<sup>20</sup> A relationship must maintain a mutual and beneficial quality over time to become sustainable. Sustainability here is a porous continuity between situated conditions, organisms, and their environments open to potential contingencies. Therefore, a sustainable relationship is a dynamic connection that adaptively changes over time. Changes in the relationships and the connected entities must evolve in mutually positive adaptation among themselves and the environments they create. Sustainable relationships are, in this sense, the surfaces upon which we must look when we configure reparatory procedures.

Reparatory design practices respond to damages, needs, and existent lacks in the relational spheres of lives. The hypothesis here is the following: reparatory design refers to all those embodied practices that, from a diverse range of materialities and performativities, aim at the composition of spaces of vulnerable knowledge and of resilient methodologies of care, healing, and repair.<sup>21</sup>

Embodied practices are forms of investigative, productive, and prototyping know-how that assume an enactive approach to the manifestation of cognition and creation.<sup>22</sup> The enactive approach understands cognition as arising from a dynamic interaction between any acting organism and its surrounding environments.<sup>23</sup>

Vulnerable knowledges are those fragilized in hierarchical contexts. The cultures of care, for example, so evident in the

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19 Peter Harries-Jones, *A Recursive Vision: Ecological Understanding and Gregory Bateson*, University of Toronto Press, 1995.

20 Humberto Maturana and Francisco Varela, *Autopoiesis and Cognition: The Realisation of the Living*, Springer, 1980.

21 Regarding these three elements of care, healing, and repair, I have heavily relied on three-research works: Tiina Seppälä, Melanie Sarantou, Satu Miettinen (eds.), *Arts-Based Methods for Decolonising Participatory Research*, Routledge, 2021; and Girija Kaimal and Asli Arslanbek, 'Indigenous and Traditional Visual Artistic Practices: Implications for Art Therapy Clinical Practice and Research', *Frontiers in Psychology*, 16 June 2020, Sec. Psychology for Clinical Settings, 10.3389/fpsyg.2020.01320. And Heather L. Stuckey and Jeremy Nobel, 'The Connection between Art, Healing, and Public Health: a Review of Current Literature', *American Journal of Public Health*, 100: 2, 2010, 254–63, 10.2105/AJPH.2008.156497.

22 Francisco Varela, *Ethical Know-How: Action, Wisdom, and Cognition*, Stanford University Press, 1992.

274 work of the medical professional bodies during the pandemic, but also exposed in other fields such as the educational professional bodies (teachers, assistants, managers), have demonstrated their silent importance in the sustainability of social fabric.<sup>24</sup> The changes in progress evidence the lack of and the need for recognition and development of forms of knowledge that consider relations, languages, and performativities as their territory of democratic production.<sup>25</sup> Resilient methodologies are those that assume the plasticity of the environment as a response to the conditions of damage in which eco-social, geopolitical, human, and non-human migration environments may be found. Creating resilient methodologies implies a reparative design process that assumes beforehand the condition of care for the social, psycho-ecological body in which we operate.<sup>26</sup>

### Fake System, Truth Clothes

Manteros is the trademark of a group of street traders in Barcelona. The name comes from the *manta* [blanket]<sup>27</sup> they use to offer their products on Barcelona's streets. The history of street traders is long, but it certainly changes when a ravaging urbanist intervention consumes a city like Barcelona. Although

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23 'The term enactment underlines the growing conviction that cognition, far from being the representation of a pre-ordained world, is the joint advent of a world and a mind from the history of the diverse actions that a being performs in the world'. Francisco Varela, Eleanor Rosch, and Evan Thompson, *The Embodied Mind*, MIT Press, 1992. Also in Evan Thompson, *Mind in Life: Biology, Phenomenology, and the Sciences of Mind*, Harvard University Press, 2007. And Ezequiel Di Paolo and Evan Thompson, 'The enactive approach', in Lawrence Shapiro (ed.), *The Routledge Handbook of Embodied Cognition*, Routledge, 2014.

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

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

26 María De Mater O'Neill, 'Developing methods of resilience for design practice', PhD diss., Northumbria Department of Design, Northumbria University, 2013, accessed 20 August 2022, [www.academia.edu/12864324/DEVELOPING\\_METHODS\\_OF\\_RESILIENCE\\_FOR\\_DESIGN\\_PRACTICE](http://www.academia.edu/12864324/DEVELOPING_METHODS_OF_RESILIENCE_FOR_DESIGN_PRACTICE).

27 The Manteros' logo was based on both the shape of a blanket, as many Manteros lay their wares on blankets, and the shape of a canoe, meant to symbolize the way many of the union's members arrived in Spain. 'Original Pirate Material: Barcelona's Street Sellers from Own Fashion Label', *The Guardian*, 7 July 2017, accessed 6 March 2021.

it is beyond the scope of the chapter to unveil the entire landscape of street vendors, suffice it to mention two main elements that converge in the case of Barcelona.

Barcelona is a city that has suffered profound changes particularly since the urban and economic intervention produced by the Olympic Games in 1992. The ‘Barcelona model’ was born under the auspices of dotting the city of quality public spaces. A massive transformation was performed by the local and national governments with the support of economic powers. That change provoked an arrangement of the use of the city. From this modification emerged a city for tourism, open to world trade by air and sea. This provoked a significant shock to the inhabitants, who observed the city takeover. One visible aspect directly linked with street trade is the number of tourists, which has produced the emergence of more informal labour in Barcelona.<sup>28</sup> The second element is that Barcelona is a city many immigrants use as a first stage to enter Europe. Even though the city has labelled itself as a Welcoming City for immigrants,<sup>29</sup> they confront the limitations of the existent laws, which push them to take action to support their lives. Street trading is one of the easiest ways to get

28 In 2021, Barcelona closed the year with 4,5 million visitants. ‘Barcelona cerró el 2021 con 4,5 millones de turistas con una “clara tendencia” a la recuperación’, *Europapress*, 27 January 2022, [www.europapress.es/catalunya/noticia-barcelona-cerro-2021-45-millones-turistas-clara-tendencia-recuperacion-20220127185713.html](http://www.europapress.es/catalunya/noticia-barcelona-cerro-2021-45-millones-turistas-clara-tendencia-recuperacion-20220127185713.html). In 2019, before the pandemic, the cypher was of 11 million. This situation changed during the pandemic, but after the end of the restrictions, the city became an important target for low-cost tourism again. Just until last July 2022, Barcelona had received 5,4 million visitants. Xavier Marcé, Councillor of Tourism and Creative Industries of Barcelona, considered these cyphers to confirm Barcelona’s recuperation as an international spot. He also stressed that the return of tourism would directly impact the creation of stable jobs and that the Barcelona model would continue to commit for quality and sustainability, [www.elpais.com/espana/catalunya/2022-08-25/barcelona-supera-el-millon-de-visitantes-en-julio-y-consolida-la-recuperacion-turistica.html](http://www.elpais.com/espana/catalunya/2022-08-25/barcelona-supera-el-millon-de-visitantes-en-julio-y-consolida-la-recuperacion-turistica.html).

29 ‘What is special about Barcelona is that the city has been a space of experimentation, in which the politics of welcoming have come to the test. The presence of a strong social and political will to solidarity has not abolished the contradictions solidarity city activists and city councillors face elsewhere but created a space of learning. Why, for instance, has the city government that wanted to close the detention centre seen itself pressured to act against migrant street vendors?’ Bue Rübner Hansen, ‘Barcelona - City of Refuge and Migration’, *Solidarity Cities in Europe*, 2019, [www.academia.edu/38377339/Barcelona\\_City\\_of\\_Refuge\\_and\\_Migration](http://www.academia.edu/38377339/Barcelona_City_of_Refuge_and_Migration).

276 daily money. Other supporting informal labour comes from the metal rubbish collection, which is later sold informally.<sup>30</sup>

City councils of different party lines have combated street trading. In 2015, the popular street vendors' union was born. The act was celebrated at the Art Santa Mónica Centre, one of the State's public cultural spaces in Barcelona, where at least eighty 'Manteros' attended.

In July 2017 the Manteros Association launched its trademark Top Manta 'with the aim of improving our living conditions as a collective'.<sup>31</sup> This is an essential premise of Manteros' demands. By producing their own products, they will also loosen the hold of the market of imitation products. The creation, design, and production processes allow them to legitimize their activity, which is a form, as they used to say, of getting off the streets and ending their marginalization. Top Manta aims to become a social enterprise working within the Fashion industry. This first process was possible thanks to the support of a crowdfunding campaign.<sup>32</sup> As they explain in the promotional video, for nine months, with the support of PlayGround Do, they were formed in fashion design and tendencies. The first six models were based on their own experiences narrating their travel from Senegal. This first collection starts their collective project as a legal association. They also highlight in their publications and interviews that the Top Manta project is a way to legally obtain the right to work.

The reparatory design practice of the Manteros and Top Manta case convokes the materials' use as the continent of

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30 The Manteros are mostly immigrants from Sub-Saharan countries, such as Senegal, Côte d'Ivoire, Tanzania, and Gabon. As Professor Papa Sow exposes, the 'emigration to this country (Spain) had only interested migrants from former colonies, especially from the American continent. In reality, black Africa, apart from the only former colony present, Equatorial Guinea, was not part of the framework of migration to Spain. This destination was more a place of passage or transit to northern Europe'. Papa Sow, 'Prácticas Transnacionales y Espacios de Acción (wáar) de los Senegaleses en España' in Ángeles Escrivá and Natalia Ribas (eds.), *Migración y Desarrollo*, Colección Politeya, CSIC, 2004, 235–254.

31 'El oro negro de la ciudad', Sindicato Manteros, accessed 15 August 2022, [www.manteros.org](http://www.manteros.org).

32 'Top Manta · Ropa legal hecha por gente ilegal', Sindicato Popular de Vendedores Ambulantes de Barcelona, accessed 19 September 2022, [www.goteo.org/project/top-manta-bcn](http://www.goteo.org/project/top-manta-bcn).

their narratives. The products reflect both the organizational response to their necessities, in terms of both labour rights and more urgently in terms of life. The designs and products are composed under a resilient methodology. The design activity embodies the potential change they are forming for themselves without forgetting their past. In this sense, the products of Top Manta are politically engaged. They express their memories as registers of what lives within them as a community, but it also expresses the struggle of human lives considered illegal in the current structural system:

(the Manteros) must connect a common cultural baggage translated into *moodu-moodu*<sup>33</sup> knowledge, generate an intergenerational link between migrants and newcomers, essential to transmit the know-how of the manta; but it is also necessary to sustain an extensive support network (especially affective but also material) that extends as far as Senegal, where the families of the Manteros often depend on the work of the latter, in whose migrant children they have placed their hopes.<sup>34</sup>

The Manteros develop a vulnerable know-how based on the situated knowledge they build through their daily adaptive experiences. They have developed strategies and skills based on how they use the streets to avoid the authorities, learning to reinhabit urban infrastructures as a refuge. At the same time, they had to learn and master the languages of politics, institutions, and organisations, finding ways to manage their disadvantaged state to their benefit: ‘This wisdom, which is neither systematised nor “visible” (...) has the power

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- 33 The concept of ‘moodu-moodu’ refers, in Wolof, to the ‘the illiterate and pious informal migrant’ as proposed by Vincent Foucher and Tarik Dahou, ‘Senegal since 2000. Rebuilding Hegemony in a Global Age’ in Lindsey Whitfield, *Turning Points in African Democracy*, ed. Abdul Raufu Mustapha, Boydell and Brewer, 2009, 13–30. For the Senegalese sociologist Malick Ndiaye, the moodu is not only a mechanism of redistribution of goods but an economic rational, see Malick Ndiaye, ‘Les Moodu Moodu ou l’Ethos du Développement au Sénégal, Tome II’, *Presses universitaires de Dakar*, 1998, 355. Also Christine Ludl, ‘To Skip a Step’: New Representation(s) of Migration, Success and Politics in Senegalese Rap and Theatre’, *Stichproben, Wiener Zeitschrift für kritische Afrikastudien* 14, 2008, 97–122, [www.stichproben.univie.ac.at/fileadmin/user\\_upload/p\\_stichproben/Artikel/Nummer14/Nr14\\_Ludl.pdf](http://www.stichproben.univie.ac.at/fileadmin/user_upload/p_stichproben/Artikel/Nummer14/Nr14_Ludl.pdf).
- 34 Horacio Espinosa, ‘El Mercadillo Rebelde de Barcelona. Prácticas Antidisciplinarias en la Ciudad Mercancía’, *Quaderns-e de l’Institut Català d’Antropologia*, 22:1, 2017, 67–87, [www.raco.cat/index.php/QuadernseICA/article/view/329856](http://www.raco.cat/index.php/QuadernseICA/article/view/329856).

278 to transform structures as visible, institutionalised and systematised as the design of a city and its urban planning'.<sup>35</sup>

The latest news regarding the Manteros is their future participation representing Catalonia and the Balearic Islands within the collateral events of the eighteenth Venice Architecture Biennale in 2023. The winning project is entitled 'Following the Fish' and will address, through the vision of the Manteros, issues such as 'migratory transits, the privatization of public space, feminism, the fight against racism and food sustainability'.<sup>36</sup>

### Autofabricantes

The collective Autofabricantes<sup>37</sup> was created in 2015 by a group of designers as a community research project to research and develop open source myoelectric and mechanical hand prostheses for children. Autofabricantes facilitates the community to design, produce, and maintain hand prostheses; its approach puts emphasis on care of both the formation of social ties and between communities as well as in the repair of these—restoring and producing new ways of collective empowerment. I suggest that the reparatory perspective, in this case, does not correspond only to the material technology of the prostheses. It happens instead through the increasing autonomy it provides to people with functional diversity—in this case, children who are invited to creatively participate and get involved in the design processes of the prostheses themselves. The reparatory dimension happens through the productive capacity Autofabricantes creates for nearby communities and materials, giving the autonomy of knowledge, manufacturing,

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35 Espinosa, 'El mercadillo'.

36 Antoni Ribas Tur, 'El Sindicat de ManTERS Representarà l'Arquitectura Catalana a la Pròxima Biennal de Venècia', *Ara Balears*, 21 September 2022, [www.arabalears.cat/cultura/sindicat-manters-representara-l-arquitectura-catalana-proxima-biennal-venecia\\_1\\_4495764.html](http://www.arabalears.cat/cultura/sindicat-manters-representara-l-arquitectura-catalana-proxima-biennal-venecia_1_4495764.html).

37 'Comunidad Autofabricantes', Autofabricantes, accessed 15 August 2022, [www.autofabricantes.org/](http://www.autofabricantes.org/). Autofabricantes is formed by a group of designers coming from different fields. I will mention here just two of the members: Francisco Díaz is the coordinator and promoter of Autofabricantes, and Camila Maggi, Architect and Designer, has worked in citizen laboratories such as Medialab Prado (Madrid) and LABIC (Colombia).

and care back to local social networks and connecting with the rest of the communities to exchange what has been learned in the process.

**Autofabricantes** seeks to redefine the conceptual framework of what a normal body is or even what a standard body should be. Currently, the model is dominated by a Modernist view that sees health as a domain to be treated by, from, and through the state. Once an individual's health situation was considered under the responsibility of the state, public institutions and procedures were created that allowed the treatment and care of unhealthy bodies. The aim was the reparation of the 'broken or ill' body in order to facilitate its return or rehabilitation to a productive society. Although the historical analysis of biopolitical parameters is beyond the remit of this chapter, suffice it to say that the creation of the notion of the 'sick' is a foundational element in the construction of the Modern project. The anomaly, and therefore its counterpart, normality, ideologically define the differences between those who are productive within the modern State (as full participants within it) and those who are not (and who therefore represent a problem to be solved).

**Autofabricantes** works within this broader referential scope, essentially endorsing the autonomy of a body that can decide upon the characteristics and qualities of those biopolitical functional necessities within its conditions. In our health and care system, the 'patient' cannot participate in technical assistance's functional, aesthetics, and formalities.<sup>38</sup> Capacitation and rehabilitation have been under the responsibility of the State care system, which assumes preconceived and standardized notions of what it means to

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38 Camila Maggi and Francisco Díaz, 'Hacer el Cuerpo Común. Autofabricantes: Diversidad, Tecnología y Afectos', *Inmaterial: Diseño, Arte y Sociedad*, 4: 8, 2019, 13–31, [www.doi.org/10.46516/inmaterial.v4.60](http://www.doi.org/10.46516/inmaterial.v4.60)

39 'a traditional vision of the medical model of functional diversity, in which a different person is presented as someone biologically imperfect who needs to be restored and "fixed" in order to reinstate theoretical patterns of "normality", which have never existed, and which are not likely to exist in the future either, precisely due to medical progress', Javier Romañach and Manuel Lobato, 'Functional Diversity, a New Term in the Struggle for Dignity in the Diversity of the Human Being', *Independent Living Forum*, 2005, accessed 3 March 2022, [www.disability-studies.leeds.ac.uk/wp-content/uploads/sites/40/library/zavier-Functional-Diversity-Romanach.pdf](http://www.disability-studies.leeds.ac.uk/wp-content/uploads/sites/40/library/zavier-Functional-Diversity-Romanach.pdf).

**280** have (or to be) a normal (and productive) body. Everything that lies outside of this standard is considered something that should be repaired but conditioned to the given structures of sociality and environment.<sup>39</sup>

Autofabricantes' projects and processes expose questions that go beyond the narrow understanding of a design practice existing to 'solve problems'. Beyond developing technical support for functional operability, Autofabricantes' approach allows for the communities involved to begin questioning the biopolitical relations hidden between the uses of technologies, methodologies, and bodies. This vulnerable knowledge, produced in situ by the participants and the designers, emerges as a blurred capacity of autonomous imaginaries that feeds the creation of resilient methodologies. Autofabricantes has developed critical research work through their research space *LATE* Laboratorio Tecnología, Arte, Cuerpo y Dispositivos Extracorporales [Technology, Art, Body, and Extracorporeal Devices Laboratory], which as they state is 'a new programme of research, reflection, experimentation and artistic creation focused on the body, functional diversity and technical assistance or extracorporeal devices, with technology as a working vector'. Autofabricantes considers its work a community-thinking space where design, technologies, performance, and politics intersect; it aims to produce alternatives towards collective creativity, autonomy, and quality of life.<sup>40</sup>

### Participatory Art-Design and Urban Sustainability

DUAE is a collective of two Italian artists based in Barcelona: Luna Coppola and Silvia Campidelli. In 2018, they embarked on a multidisciplinary research project at the intersection of art, ecology, and science focused on urban sustainability.<sup>41</sup> This

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40 'LATE. Laboratorio Tecnología, Arte, Cuerpo y Dispositivos Extracorporales', Autofabricantes, accessed 18 August 2022, [www.autofabricantes.org/investigacion/late/](http://www.autofabricantes.org/investigacion/late/).

41 'Besòs: A Noble Ecosystem' was a project that participated in the European Escape programme promoted and developed by CICLO Platform of Photography (Portugal) and Triennial of Photography Hamburg, accessed 22 September 2022, [www.duaecollective.editorx.io/mysite-2/besosanobleecosystem](http://www.duaecollective.editorx.io/mysite-2/besosanobleecosystem).



artistic and design research project worked explicitly with a non-human living body, a natural entity, the Besòs river. DUAÉ explored and researched the river and its surroundings for two years, considering it a crucial threshold where social, political, environmental, and emotional elements were interconnected. The Besòs river is a natural frontier separating Barcelona and Sant Adrià del Besòs. Between the 1970s and 1980s, it was considered one of the most polluted rivers in Europe. In 2004, during the first *Fórum Universal de las Culturas*, which focused on sustainable development, the conditions for peace, and cultural diversity, the urban remodelling plan began the transformation of Besòs river into a public park.

DUAÉ considered the importance of the river as a connecting ecosystem, as a sentient witness of social and political changes in the region. Herein lies the reparatory aspect of DUAÉ's actions. The main initial framework of their research was the environmental sustainability of the Besòs river. This led them to take a scientific approach, which produced the amazing discovery of a universe of creatures living and composing the river. They found that the river itself had an immune system based on its bacterium environment, which was a natural tool against pollution. This opened the research to a New Materialist approach, considering the different entities conforming and organizing the river beyond human factors. What DUAÉ developed was a cultural study of the river's body. They listened to, recorded, and lived the river, collecting natural objects and producing different forms of data. They searched for support and help from scientific and academic institutions and local cultural entities, with which they designed a learning landscape of conversations to interpret their newly sedimented knowledge. The process became a design of organizational relationships within the river system, the organisms living with it, and the human cognitive environment. At the end of a colossal journey that took them two years of research, DUAÉ exposed the artistic process.<sup>42</sup> But that exposition was not just an exhibition. This exposition considered a complex network of

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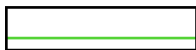
42 The exposition was titled 'Besòs: A noble Ecosystem', and it was held at Fabra i Coats Centre d'Art Contemporari, Barcelona, 24 January–3 March 2019, [www.barcelona.cat/fabraicoats/centredart/es/content/bes%C3%B2s-noble-ecosystem](http://www.barcelona.cat/fabraicoats/centredart/es/content/bes%C3%B2s-noble-ecosystem).

**282** archaeological and artistic pieces, arrangements, installations, sounds and images, as well as social actions and participatory events where a new audience could grasp the complexity of the studied entity. It is mostly here that the reparatory aspect of their artistic and design practice is verifiable. They do not participate in any material reparation of or intervention in the river. Nevertheless, they produce a reparatory process of the entity beyond its given human understanding, creating a network of cognitive approaches following a new relationship between humans and the river. In other words, it was a reparation of our very relationship with the river. It is a reparation of the relational forms between humans and the non-human microcosmos embodying the river as a whole, in constant change. Through a set of cultural tools, DUAЕ reconstitutes and reframes and redesigns the methodologies and procedures to be used in the necessary new deals with our environmental entities. It provokes reflection on how we should repair our relationships to facilitate sustainable relationships and how we should critically engage and connect with each other.

### Conclusion

One of the areas that the recent global health crisis has most severely shaken is probably the very concept of society itself. Contemporary societies have been tested in all areas of their productive, epistemic, political, and economic relational organization. Life forms, in all their connective complexity, have been disrupted. A post-pandemic society appeared, demanding cultural and practical changes that are still in progress. What kind of societies are we becoming through such radical changes in fundamental areas such as energy, geopolitics, and ecology? Moreover, how will they affect areas like education, social psychology, cultures, customs, living spaces, and our bodies? If these changes are in progress, if we feel this way, how and in what way must design and the art respond? What are the epistemological, scientific, and technological tools that design practices must prototype, explore, and investigate? I argue that some of the projects described above effectively respond through design practices. What reparation means

for them is not just a way of fixing something bad or broken. Through their actions, these projects go beyond the formality of production, creating methodologies that enact social changes. These design practices are prototypes tacitly impacting our cultural environments. The relationships established in their design processes are embedded and embodied in the memories and experiences of the communities involved. A reparatory design perspective is one that focuses on the networks and relationships built between communities, design practices, and everyday lives.<sup>43</sup>



<sup>43</sup> Guy Julier, Mads Nygaard Folkmann, Niels Peter Skou, Hans-Christian Jensen, Anders V. Munch (eds.), *Design Culture: Objects and Approaches*, Bloomsbury, 2019.