

Caring Through Design: A Search for New Perspectives

In this issue of *Temes de Disseny* we focus on health and on the contribution of design in promoting caring for life in all its manifestations, including the balance of our biological systems, the environment and all living beings, whether human or non-human. In other words, the entire planet.

At a time when health is in the spotlight more than ever, we underscore the need to consider design within an interplay of different disciplines as societies worldwide strive to meet the Sustainable Development Goals (SDGs) (United Nations n.d.) while staying within the planetary boundaries that scientists have identified as the safe operating space for humanity (Steffen et al. 2015). We look to the One Health approach of the international conglomerate of world health organisations (One Health Global n.d.) for inspiration. Their vision encompasses fields such as environmental and ecosystem health, social sciences, ecology, wildlife, land use and biodiversity within a combined commitment to human and ecosystem health. This intermingling of concerns points to the need for multi-disciplinary and collaborative efforts at local, national and global scales, and the importance of recognising the interdependencies between human and ecosystem health if we wish to develop our societies to support a sustainable future for all. This intermingling also makes it clear that design needs to reach beyond its traditional borders to engage deeply with other disciplines. If design aims to contribute in meaningful ways to efforts such as One Health Global, support the SDGs and contribute to efforts to stay within the planetary boundaries, designers must be considering how environmental factors affect human and other than human health, including how human health efforts impact our environment. To do this, designers must develop their literacy across the manifold disciplinary entanglements at the cutting edge of related research.

Our planet is a complex and delicate ecosystem that uses self-regulating systems to achieve homeostasis and maintain balance among all of the elements, human and non-human alike. This conception of the planet, known as the Gaia theory, was first proposed by James Lovelock and Lynn Margulis in the 1970s. The Gaia theory (Lovelock and Margulis 1974; Lovelock 2016) considers the planet to be a superorganism, a single interrelated entity made up of ecosystems, living beings and other elements. In French philosopher, anthropologist and sociologist Bruno Latour's (2017) book *Facing Gaia*, the author stressed the importance of understanding that the diverse elements that make up Gaia do not necessarily live in harmony. The capacity of Gaia for self-regulation within this complexity determines the planet's ability to maintain its health. For more than 50 years, the Club of Rome has been providing evidence that Anthropogenic impacts can challenge this capacity and lead to systemic imbalances (Meadows et al. 1972, 1974, 1992, 2004).

Human health is a fundamental right that requires cross-cutting, multidisciplinary, inclusive and biodiverse action. In fact, when considering the determinants of health, only 20% are related to the health system; the remaining 80% are linked to socioeconomic conditioning factors, habits and behaviours and physical space.

To be healthy, people need access to information about their bodily health, about how to maintain healthy behaviours and about how their bodily health and behaviours

impact society and our natural ecosystems. This requires the design of communication channels that are appropriate for the full diversity of citizens, including cross-cutting curricular education. Programmes are also needed for incorporating health concerns in all of their complexity into policies following the recommendations of the World Health Organization. Within the geopolitical context of Elisava, this is done through PINSAP, the Interdepartmental and Intersectoral Public Health Plan implemented by the Catalan government (ASPCAT n.d.). To address this complexity and develop policies that are truly representative, in addition to scientific evidence, people's situated experiences must be accounted for. Therefore, design must increasingly engage with bottom-up action, agitation and calls for change. First person perspective design approaches can be useful to afford understanding and engaging with situated concerns. Such approaches include autoethnography, autobiographical methods, somaesthetics and other first-person approaches (Desjardins 2021).

The interplay between human health and the health of the natural ecosystem, as well as human health and the health of our societies, calls for urgent design action if we are to make progress on the SDGs, stay within the planetary boundaries and achieve dignity and justice for all. Designers must be sensitive to people's personal situated circumstances, of which they may or may not be immediately aware. They must also be sensitive to the social and ecological crises that increasingly challenge individuals, communities and society. These crises not only impact and are impacted by our bodies, but also impact and are impacted by societal infrastructures. Take, for example, the need to reduce energy consumption in buildings. A common approach has been to enhance the airtightness of a building's skin and use synthetic materials and advanced technologies to achieve a measurable (if artificial) balance. However, it has been demonstrated that this approach, while efficient and measurable, can degrade the quality of the indoor environment over time and cause discomfort and even serious health problems for the building's inhabitants. Often undiagnosed, this condition is otherwise known as "sick building syndrome" (World Health Organization 1983).

The rational approach to design, driven by efficiency and dictated by the logic of the market, is not able to care for life in all its dimensions. It depletes resources and exacerbates inequalities. If we are to respect the homeostasis of the Gaia system, we might prefer to learn from biological ecosystems as we design. We could, for example, choose biophilic design options that draw humans and the rest of nature closer to one another, or consider humanity's role on the planet as part of nature as opposed to prioritising the market, finance and trade above human and other-than-human well-being.

This issue of *Temes de Disseny* is presented within the context of these challenges. It proposes the skin as a common thread to unite design and art with life and health. Unlike Italian Arte Povera artist Giuseppe Penone, who considers the skin to be: "limit, border, reality of division, ... the extreme point capable of adding, subtracting, dividing, multiplying, annulling what surrounds us ... capable of physically enveloping immense extensions ... content and container", we consider

DANIELLE WILDE
Umeå Institute of Design, Umeå University
The University of Southern Denmark

ANNA DEL CORRAL
Elisava, Barcelona School of Design and Engineering
(UVic-UCC)

ELISABET SILVESTRE
Independent Researcher

RICARDO GUASCH CEBALLOS
Elisava, Barcelona School of Design and Engineering
(UVic-UCC)

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the skin, like our bodies, to be a porous key to our multiplicity (Alaimo 2018) and interconnection with nature. We use the notion of “The 5 skins”, proposed by artist, architect, designer and ecologist, Friedensreich Hundertwasser, as a benchmark in finding opportunities for a more sustainable balance between humans and the rest of nature (Jakobsen and Storsletten 2018). Hundertwasser visualised a way of creating and relating to the environment with interaction interfaces through five skins. These skins are formed by the epidermis, clothing, buildings and houses, identity and the planet. One might be tempted to return to Penone’s multi-faceted concept of the skin as a barrier or joining point to understand how to move between these five skins. However, taking a biophilic position suggests that we must resist this impulse. Rather, a porous understanding of the skin, of our different skins, affords better understanding of people in their relationality, from their most personal and intimate dimension to their social, cultural, aesthetic and environmental dimensions as part of nature—of Gaia—rather than separate from her. This idea is addressed in various ways in the articles included in this issue:

The body as the first skin, the epidermis, is approached through somaesthetics, which explores how all manner of bodily sensations are perceived and how people leverage bodily sensations—whether pleasurable or unpleasant—to learn to move, think and feel in different ways, become aware of their body and sharpen their faculties of awareness through their body.

The second skin is considered through clothing’s ability to care for sensations of well-being and comfort, linking design with such sensations, as well as with the feelings, emotions and values these sensations bring forth. This way of thinking underscores the need to reflect on how disability can be socially constructed. Disability is not only a medical definition. A person can be disabled by the environment that designers envision and construct. Designers must consider the economies and the exchanges between social representations and the body, recognising that they are reciprocal and thus complexly embodied (Siebers 2008).

The third skin links the exigency to design houses and buildings with the need for a quality indoor environment. Indoor environments must enable people’s biological systems to find their balance. They should not require radical adaptation from people, but simply spending time inside. Light, colour, materials, temperature, biophilia and more can be parameters with which to build better health for people and the environment as we design indoor spaces.

The fourth skin relates to identity and is approached from the perspective of giving value to diversity, whether social, cultural, physical, philosophical, emotional or intellectual and recognising that these traits are not isolated, but intersectional. Designing for this skin requires giving voice to different groups within the creative process of design: promoting listening as a tool to identify the needs of others and considering what they might contribute, how they might experience a design and what feelings are awakened in them by an object, material, environment, system or service. In a society that is increasingly in need of mental health care, this approach is key in the promotion of holistic care, both individually and for society’s health.

The fifth skin relates to the planet, including care for its cities and towns, of all living beings that make up the environment and of the environment itself. This skin brings us back to the theory of Gaia, of a living planet, which harbours diverse life that exists in agonistic harmony (Latour 2017; Mouffe 1999), is self-regulating, has finite resources and is home to pressing social, climatic and biodiversity emergencies.

By addressing all five of Hundertwasser’s “skins”, the objective of this special issue is to provide examples of design research, new options and responses for global health challenges and good practices in envisioning design as a tool to build life through the promotion of sustainable and healthy practices.

Making a commitment to spaces and objects that care, considering identity within social and biological diversity and caring for the environment with creative processes that include the entire life cycles of materials within the framework of the circular economy are key to incorporating the health vector in all phases of the creative process. Design and design research offer strategies for addressing some of the key challenges we face, and for finding holistic, justice-oriented responses to these challenges that, although as numerous and pluriversal as the professionals who practice design, share certain foundations and principles.

In the articles in this volume, readers can find vindications of these fundamentals and real-world cases of their application. The articles evidence an association between care and design and in doing so, they propose a multi-faceted ethical positioning for design that designers can draw on as they design ways of being, products, services, clothing, buildings, houses and networks. *An ethics of care* (Pujadas 2022) and Spinoza’s *ethics of affection* (Paez and Valtchanova 2022) are postulated as sensitive positions that recover feelings in the action of design. They acknowledge the influence of “the other” in our interactions, as well as one’s own vulnerability and the importance of letting oneself be affected. This ethical positioning places the individual within a relational network of being. It presupposes moral qualities such as responsibility and care and is based on the interdependence between humans, other beings and the environment and on the vulnerability of these actors. Furthermore, it considers exposure to “the other”, and a willingness to interrelate with this other—to interact, attempt to understand and respond—as a fundamental part of being both human and Gaia. Indeed, Roger Paez and Manuela Valtchanova (2022) argue for first person perspective approaches to foster intimacy and affect through the lens of a politics of care, exercising democracy through the human body as a radical relational unit that is enhanced by this care.

This focus on intimacy is echoed by Arife Dila Demir, Kristi Kuusk and Nithikul Nimkulrat (2022), who develop first person perspective methods to cultivate “bodily disturbing felt experiences” for ideation and for testing, effectively transposing sensations between the designer and “other” in a bi-directional flow. Nadia Campo Woytuk and Marie Luise Juul Søndegaard (2022) then take such concerns into the more than human realm, leaning on feminist posthuman theories to explore multispecies entanglement. The authors use research through design to investigate how



Seeds, by Sara Unzueta. Elisava Simultaneous Studies Programme, 2021.

design might engage with the nutritious value of menstrual blood, counter the polluting materiality of sanitary products and open up considerations about for whom menstrual fluids have value. In doing so, they critique the medicalisation of menstruation and women’s bodies, framing bodily transitions as problems to solve. This problematisation of the view and handling of women’s bodies are so important, as we reel from the draconian decision in the United States to not only repeal *Roe vs Wade*, which enshrines the right to abortion, but as many states in America go on to criminalise people who have abortions, perform abortions and assist others in gaining access to abortions.

The challenges we are facing are thus relational in their nature. Gaia is a complex system. Human society is no less so. In an attempt to increase health literacy, Elizabeth Shirrell, Daniel Verbit and Monique Chabot (2022) discuss seven student projects that use comics as a medium to communicate health information. Each addresses a different underinvested population at risk of poor health outcomes due to low health literacy. The students used strategies from Social Ecology Theory (McCormack et al. 2017) to develop their projects. This theory proposes that people are influenced by external factors that bring complexity to a person’s life, including supports, barriers, biases and opportunities (ibid., 9).

The predisposition to interact in complex relational systems is the basis for multidisciplinary approaches to challenges. Strategies that involve several disciplines are necessarily enriched with knowledge and skills that can bring dynamic responsiveness together. In Shirrell, Verbit, and Chabot (2022), visual communication designers and occupational therapists worked together to arrive at impactful results.

Anna Pujadas (2022) argues for the inclusion of caring values in design practice, following the examples of Joan Tronto and Bernice Fischer. As Fischer explains: “On the most general level, we suggest that caring be viewed as a species activity that includes everything that we do to maintain, continue, and repair our ‘world’ so that we can live in it as well as possible. That world includes our bodies, ourselves, and our environment, all of which we seek to interweave in a complex, life-sustaining web” (Fischer 1990). Tronto (1993) offers three criteria to define care: i) care is relational, ii) care is contextual and anti-essentialist, and iii) care is democratic and inclusive. These criteria should be associated with and embedded in design if it is to embody a commitment to care.

Inclusive design is addressed intensively by Tessira Crawford (2022). Her paper calls for architecture that considers the diversity of human bodies and the diversity of appreciation and experience of the context. This revindication sits in contrast to the architecture of what Gropius describes as “men of vision” (Gropius 1937) who continue to design for a standardised body type that belongs to no one.

Maria Araya and Ainoa Abella (2022) present an evidence-based redesign with a focus on people’s well-being. It is a scientific study of the refurbishment of a workspace that aims to promote the well-being of the people who inhabit it. The study is based on the evidence gathered on its current state using qualitative (e.g., biophilia or natural light) and

quantitative (e.g., light, air quality or noise) parameters along with the opinions of the people who work in that space. The result is a set of redesign guidelines based on scientific evidence and situated human experience.

With this collection of articles, the editors aim for this issue of *Temes de Disseny* to bring a number of design and research perspectives to the forefront to plant the seed for new ideas about what might help designers become agents of change in the global health landscape through small gestures as professionals and planetary citizens.

BIOGRAPHIES
<p>Danielle Wilde, PhD Umeå Institute of Design, Umeå University The University of Southern Denmark</p>

Danielle Wilde is a professor in design for sustainability at Umeå Institute of Design, Umeå University, Sweden, and conducts food system transformation research in the Department of Sociology, Environmental and Business Economics at The University of Southern Denmark, Esbjerg. Through this work, she seeks to understand how critical, collaborative and embodied engagement with the challenges of sustainability transition might assist us in finding new ways of living and designing that are intimately situated; personally, locally, regionally and globally sustainable and sustaining; and that recognise humans as multi-species events, a part of nature and intimately entangled with non-human others.

From the foundation of design research, Wilde collaborates with diverse societal stakeholders: municipalities, industry actors, policy makers and planetary citizens. She uses living labs as a mechanism for developing roadmaps for sustainable transition through situated, at-scale action and engages citizens in radically open co-creative citizen science processes and probiotic participations. Her work is grounded in embodied approaches to participatory research-through-design, aiming to: disrupt norms, support more-than-human flourishing and provide hands-on development to environmental citizenship. Beyond design, Wilde collaborates with STS researchers, human geographers, health systems researchers, molecular biologists and environmental and business economists.

<p>Anna del Corral, PhD Elisava, Barcelona School of Design and Engineering (UVic-UCC)</p>

Anna del Corral is an engineer who holds a PhD in Computer Science from the Universitat Politècnica de Catalunya and in Industrial Design Engineering from Elisava.

Between 1990 and 2004 Anna was a professor and researcher in the Department of Computer Architecture at the UPC in the field of memory architectures of vector processors. Subsequently, she moved on to the private sector to work as a design and product development engineer.

Anna is currently a lecturer and researcher at Elisava. Between 2010 and 2019 she was responsible for various areas within the Degree in Industrial Design Engineering. Since then, she has led the Decoding Well-being research line.

Her scope of research covers design methodologies that enable people to design healthy spaces, products and services for well-being though a global perspective that involves considering human well-being in all its facets that involves integrating the inescapable objectives of respect, conservation and the contextual recovery of the environment by appreciating all the living beings that inhabit it.

She has developed and integrated this perspective into both academic and research projects with companies and institutions such as Sant Joan de Déu Hospital, VIBIA, SEAT, Quadpack and CENFIM.

<p>Elisabet Silvestre, PhD Investigadora independent</p>

PhD in Biology from the Autonomous University of Barcelona (UAB), Master in Human Biology (UAB), and Master in Bioconstruction from the IEB-ITL of the University of Lleida. Elisabet has worked as a cytogeneticist in the field of public and private health. Subsequently, she has researched environmental health factors in indoor spaces. The fusion of genetics and environmental knowledge has been key to addressing the discipline of Biohabitability, or how to create habitable spaces through the norms of biology and global health.

Elisabet is a lecturer in Biohabitability for different master’s degrees and postgraduate courses, including at the Sert School with the Association of Architects of Catalonia (COAC), the International University of Catalonia (UIC), the University of Girona and others. She has co-organized six editions of the Architecture and Health Conference within the framework of the COAC; she is a member of the Health Working Group of the COAC; and she is member of the chair of industrialized building and environment at the UIC School of Architecture.

She has participated as an expert in PINSAP, the Interdepartmental and Intersectoral Public Health Plan of the Government of Catalonia, in the Subcommittee on University Curricula and the Housing and Urban Planning Committee.

She regularly participates in conferences and is a lecturer and author of various books including "Living without Toxicants" (RBA, 2014) and "Your Healthy Home" (RBA, 2021).

<p>Ricardo Guasch Ceballos, PhD Elisava, Barcelona School of Design and Engineering (UVic-UCC)</p>

PhD in Architecture from the UPC (2011). Degree in architecture from the UPM (1985). At Elisava, he is currently: Director of the Postgraduate degree in Workspace Design since 2002 and of the Master in Interior Space Design since 2005; Director of the Master in Interior Design for Hotels, Bars and Restaurants since 2014; Coordinator of the master’s area at ELISAVA; Professor of two subjects in the Degree in Design and a Final Degree Project Tutor. He is a member of the team responsible for the research line “Decoding Well-being” at ELISAVA. He was the Academic Director of ELISAVA between 2011 and 2014. He was an Associate Professor at the ETSAV-UPC, Department of Architectural Composition, between 1993 and 2011. He held a grant at the Centro Superior de Investigaciones Científicas (CESIC) between 1989 and 1993.

He has published several texts on the modern conception of space, workspace and housing. His publishing highlights include: "Indeterminacy, complementation, appropriation. Notes on the functional adaptation of the inhabited interior" (Temes de Disseny nº 30); "Espacio Fluido versus Espacio Sistemático" (UPC editions); "The Limits of the Office" (T18 Digital Architecture Magazine, nº 21, <http://www.t18magazine.com/>); and "The Office Works" (Inner. The Interior Architecture Magazine, <http://www.innermagazine.org/>; and nº 5 of the magazine Distrito Oficina).

He has been the Founder and Director of GS Arquitectura since 1998.

REFERENCES

Alaimo, Stacy. 2018. "Trans corporeality." In *The Posthuman Glossary*, edited by Rosi Braidotti, and Maria Hlavajova, 435-438. London: Bloomsbury Publishing.

Araya León, María José, and Ainoa Abella Garcia. 2022. "Strategies for well-being in new work spaces: a case study in a post-pandemic context." *Temes de Disseny* 38: 132-161. <https://doi.org/10.46467/TdD38.2022.132-161>

ASPCAT. n.d. "Interdepartmental and Intersectoral Public Health Plan (PINSAP)." 2014. *Catalan Public Health Agency (ASPCAT)*. [https://salutpublica.gencat.cat/ca/sobre_lagencia/Plans-estrategics/pinsap/index.html#googtrans\(calen\)](https://salutpublica.gencat.cat/ca/sobre_lagencia/Plans-estrategics/pinsap/index.html#googtrans(calen))

Campo Woytuk, Nadia, and Marie Louise Juul Sondegaard. 2022. "Biomenstrual: More-than-Human Design of Menstrual Care Practices." *Temes de Disseny* 38: 116-131. <https://doi.org/10.46467/TdD38.2022.116-131>

Crawford, Tessira. 2022. "What does colour look like?" *Temes de Disseny* 38: 46-63. <https://doi.org/10.46467/TdD38.2022.46-63>

Demir, Arife Dila, Kristi Kuusk, and Nithikul Nimkulrat. 2022. "Squeaky/Pain: Articulating the Felt Experience of Pain for Somaesthetic Interactions." *Temes de Disseny* 38: 162-178. <https://doi.org/10.46467/TdD38.2022.162-178>

Desjardins, Audrey, Oscar Tomico, Andrés Lucero, Marta E. Cecchinato, and Carman Neustaedter. 2021. "Introduction to the Special Issue on First-Person Methods in HCI." *ACM Transactions on Computer-Human Interaction* 28 (6): 1-12. <https://doi:10.1145/3492342>.

Fisher, Bernice, and Joan C. Tronto. 1990. "Toward a Feminist Theory of Care." In *Circles of Care: Work and Identity in Women’s Lives*, edited by Emily K. Abel and Margaret K. Nelson. Albany: State University of New York Press.

Jakobsen, Ove and Vivi M.L. Storsletten. 2018. "Friedensreich Hundertwasser – The Five Skins of the Ecological Man." In *Art, Spirituality and Economics: Liber Amicorum for Laszlo Zsolnai*, edited by Luk Bouckaert, Knut J. Ims and Peter Rona, 39-50. Cham: Springer.

Latour, Bruno. 2017. *Facing Gaia: Eight lectures on the new climatic regime*. Hoboken: John Wiley & Sons.

Lovelock, James E., and Lynn Margulis. 1974. "Atmospheric Homeostasis by and for the Biosphere: The Gaia Hypothesis." *Tellus* 26 (1-2): 2-10. <https://doi:10.3402/tellusa.v26i1-2.9731>.

Lovelock, James. 2016. *Gaia: A New Look at Life on Earth*. Oxford: Oxford University Press.

Meadows, Donella H., Dennis L. Meadows, Jorgen Randers, and William W. Behrens III. 1972. *The Limits to Growth: A Report for the Club of Rome’s Project on the Predicament of Mankind*. New York: Universe Books.

Meadows, Dennis L., William W. Behrens III, Donella H. Meadows, Roger F. Naill, Jorgen Randers, and Erich K.O. Zahn. 1974. *Dynamics of Growth in a Finite World*. Cambridge, MA: Wright-Allen Press.

Meadows, Donella H., Dennis L. Meadows, and Jorgen Randers. 1992. *Beyond the Limits: Global Collapse or a Sustainable Future*. London: Earthscan.

Meadows, Donella, Jorgen Randers, and Dennis L. Meadows. 2004. *The Limits to Growth: The 30-Year Update*. White River Junction: Chelsea Green Publishing.

McCormack, Lauren, Veronica Thomas, Megan A. Lewis, and Rima Rudd. 2017. "Improving Low Health Literacy and Patient Engagement: A Social Ecological Approach." *Patient Education and Counseling* 100 (1): 8-13. <https://doi:10.1016/j.pec.2016.07.007>.

Mouffe, Chantal. 1999. "Deliberative Democracy or Agonistic Pluralism?" *Social Research* 66 (3): 745-58. <http://www.jstor.org/stable/40971349>.

One Health Global. n.d. "What Is One Health?." *One Health Global Network*. <http://www.onehealthglobal.net/what-is-one-health>

Paez, Roger, and Manuela Valtchanova. 2022. "Affective Bodies: Intimate Design Practices to Reinvent the Everyday." *Temes de Disseny* 38: 92-115. <https://doi.org/10.46467/TdD38.2022.92-115>

Pujadas, Anna. 2022. "Designing from the perspective of care, or how to repair the world." *Temes de Disseny* 38: 20-45. <https://doi.org/10.46467/TdD38.2022.20-45>

Shirrell, Elizabeth, Daniel Verbit, and Monique C. Chabot. 2022. "Visual Communication Design Collaboration with Occupational Therapy to Create Health Literacy Projects for Community Needs." *Temes de Disseny* 38: 64-91. <https://doi.org/10.46467/TdD38.2022.64-91>

Siebers, Tobin. 2008. *Disability Theory*. Ann Arbor: The University of Michigan Press.

Steffen, Will, Katherine Richardson, Johan Rockström, Sarah E. Cornell, Ingo Fetzer, Elena M. Bennett, Reinette Biggs, et al. 2015. "Planetary Boundaries: Guiding Human Development on a Changing Planet." *Science* 347 (6223). <https://doi:10.1126/science.1259855>.

Tronto, Joan C. 1993. *Moral Boundaries: A Political Argument for an Ethic of Care*. New York: Routledge.

United Nations. n.d. "The 17 Goals | Sustainable Development." *United Nations*. <https://sdgs.un.org/goals>

World Health Organization. 1983. *Indoor Air Pollutants: Exposure and Health Effects: Report on a Who Meeting; Nördlingen, 8-11 June 1982*. Copenhagen: World Health Organization.

Friedensreich Hundertwasser, como punto de referencia para encontrar oportunidades de un equilibrio más sostenible entre los seres humanos y el resto de la naturaleza (Jakobsen y Storsletten 2018). Hundertwasser visualizó una forma de crear y relacionarse con el entorno, como interfaces de interacción a través de cinco pieles. Estas pieles están formadas por la epidermis, la ropa, los edificios y las casas, la identidad y el planeta. Uno podría estar tentado de volver al concepto multifacético de Penone de la piel como barrera o punto de unión para entender cómo moverse entre estas cinco pieles. Sin embargo, la adopción de una posición biofílica sugiere que debemos resistir este impulso. Más bien, una comprensión porosa de la piel, de nuestras diferentes pieles, permite entender mejor a las personas en su relacionalidad, desde su dimensión más personal e íntima hasta su dimensión social, cultural, estética y medioambiental, como parte de la naturaleza –de Gaia– y no como algo separado de ella. Esta idea se recoge de diferentes vías en los artículos incluidos en este número: el cuerpo como primera piel, la epidermis, se aborda a través de la somaestética, que explora cómo se perciben todo tipo de sensaciones corporales y cómo las personas aprovechan dichas sensaciones –ya sean placenteras o desagradables– para aprender a moverse, pensar y sentir de diferentes maneras, tomar conciencia de su cuerpo y agudizar sus facultades de conciencia a través de su cuerpo.

La segunda piel se considera a través de la capacidad de la ropa de cuidar las sensaciones de bienestar y comodidad, vinculando el diseño con dichas sensaciones, así como con los sentimientos, emociones y valores que estas provocan. Esta forma de pensar pone de relieve la necesidad de reflexionar sobre cómo se construye socialmente la discapacidad. La discapacidad no es solo una definición médica; el entorno que los diseñadores prevén y construyen puede discapacitar a una persona. Los creativos deben tener en cuenta las relaciones, los intercambios, entre las sociedades y el individuo (su cuerpo), teniendo en cuenta que son recíprocos y, por tanto, complejamente vinculados y personificados (Siebers 2008).

La tercera piel vincula la necesidad de diseñar casas y edificios con la necesidad de un entorno interior de calidad. Los ambientes interiores deben permitir que los sistemas biológicos de las personas encuentren su equilibrio. No pueden requerir una adaptación radical de las personas para pasar tiempo en el interior. Al diseñar los espacios interiores, la luz, el color, los materiales, la temperatura, la biofilia... pueden ser parámetros con los que construir una mejor salud, para las personas y el medio ambiente.

La cuarta piel está relacionada con la identidad y se aborda desde la perspectiva de dar valor a la diversidad, ya sea social, cultural, física, filosófica, emocional o intelectual, y reconocer que no se encuentran aisladas, sino que son interseccionales. Diseñar para esta piel requiere dar voz a los diferentes grupos dentro del proceso creativo del diseño; promover la escucha como herramienta para identificar las necesidades de los demás y considerar qué podrían aportar, cómo podrían experimentar un diseño, qué sentimientos despierta en ellos un objeto, material, entorno, sistema, servicio. En una sociedad cada vez más necesitada de atención a la salud mental, este enfoque es clave para promover la atención holística y la salud individual y social.

La quinta piel –el cuidado del planeta– incluye el cuidado de sus ciudades y pueblos, de todos los seres vivos que componen el entorno y del propio medio ambiente. Esta piel nos remite a la teoría de Gaia, de un planeta vivo, que alberga vida diversa que coexiste en una armonía agónica (Latour 2017; Mouffe 1999), que se autorregula, con recursos finitos y emergencias sociales, climáticas y de biodiversidad acuciantes.

Atendiendo a las cinco “pieles” de Hundertwasser, el objetivo de este número de Temes de Disseny es ofrecer ejemplos de diseño y de investigación en diseño, nuevas opciones y respuestas a los retos de la salud global, buenas prácticas para vislumbrar el diseño como herramienta para construir vida, a través de la promoción de prácticas sostenibles y saludables.

Apostar por espacios y objetos que cuidan, considerar la identidad dentro de la diversidad social y biológica y cuidar el medio ambiente con procesos creativos que incluyan los ciclos de vida de los materiales en el marco de la economía circular son clave para incorporar el vector salud global en todas las fases del proceso creativo. El diseño y la investigación en diseño ofrecen estrategias, holísticas y justas, para abordar algunos de los principales retos a los que nos enfrentamos, y, aunque pueden ser tan numerosas y plurales como los profesionales que diseñan, comparten algunos fundamentos y principios.

En los artículos de este volumen se pueden encontrar reivindicaciones de estos fundamentos y casos reales de su aplicación. Los artículos

ponen de manifiesto una relación entre el cuidado y el diseño, y al hacerlo proponen un posicionamiento ético polifacético para el diseño al que los diseñadores pueden recurrir cuando crean estilos de vida, productos, servicios, ropa, edificios, casas y redes. La ética del cuidado (Pujadas 2022) y la ética del afecto de Spinoza (Paez y Valtchanova 2022) se postulan como posiciones sensibles que recuperan el sentimiento en la acción del diseño y que reconocen la influencia del “otro” en nuestras interacciones, así como la propia vulnerabilidad y la importancia de dejarse afectar. Este posicionamiento ético sitúa al individuo en una red relacional del ser, presupone cualidades morales como la responsabilidad y el cuidado y se basa en la interdependencia entre los seres humanos, otros seres y el medio ambiente y en la vulnerabilidad de estos actores. Además, considera que la exposición al “otro” y la voluntad de interrelacionarse con este otro –interactuar, intentar comprender y responder– son una parte fundamental del ser humano y de Gaia. De hecho, Roger Paez y Manuela Valtchanova (2022) defienden los enfoques de la perspectiva en primera persona para fomentar la intimidad y el afecto a través de la lente de una política del cuidado, ejerciendo la democracia a través del cuerpo humano, una unidad relacional radical, que se ve reforzada por este cuidado.

Este enfoque en la intimidad se repite en el proyecto de Arife Dila Demir, Kristi Kuusk y Nithikul Nimkulrat (2022), que desarrolla métodos de perspectiva en primera persona para cultivar “experiencias corporales perturbadoras” para la ideación y las pruebas, transponiendo efectivamente las sensaciones entre el diseñador y el “otro” en un flujo bidireccional. Nadia Campo Woytuk y Marie Luise Juul Søndegaard (2022) llevan estas preocupaciones al ámbito “más que humano”, apoyándose en las teorías feministas posthumanas para explorar el entrelazamiento multispecie. Las autoras utilizan la investigación a través del diseño para investigar cómo el diseño podría comprometerse con el valor nutritivo de la sangre menstrual, contrarrestar la materialidad contaminante de los productos sanitarios y abrir consideraciones sobre para quién tienen valor los fluidos menstruales. Al hacerlo, critican la medicalización de la menstruación y del cuerpo de las mujeres, que enmarca los cambios corporales como problemas que hay que resolver. Esta problematización de la visión y el tratamiento de los cuerpos de las mujeres es muy importante, ya que no solo nos encontramos con la draconiana decisión de Estados Unidos de derogar el caso Roe vs. Wade, que consagra el derecho al aborto, sino que muchos estados de Estados Unidos criminalizan a las personas que abortan, que realizan abortos y que ayudan a otras a acceder a ellos.

Los retos a los que nos enfrentamos son, por tanto, de naturaleza relacional. Gaia es un sistema complejo y la sociedad humana no lo es menos. En un intento de mejorar los conocimientos sobre salud, Elizabeth Shirrell, Daniel Verbit y Monique Chabot (2022) analizan siete proyectos de estudiantes que utilizan el cómic como medio para comunicar información sobre salud. Cada uno de ellos se dirige a una población distinta, que corre riesgo de malas actuaciones en temas de salud por falta de conocimientos. Los estudiantes utilizaron estrategias de la teoría de la ecología social (McCormack et al. 2017) para desarrollar sus proyectos. Esta teoría propone que las personas están influenciadas por factores externos que dan complejidad a su vida, incluyendo apoyos, barreras, prejuicios y oportunidades (ibid. p. 9).

La predisposición a interactuar en sistemas relacionales complejos es la base de los enfoques multidisciplinares de los retos, y las estrategias que implican a varias disciplinas se enriquecen necesariamente con conocimientos y habilidades que, en conjunto, pueden permitir una capacidad de respuesta dinámica. En Shirrell, Verbit y Chabot (2022) los diseñadores de comunicación visual y los terapeutas ocupacionales trabajaron juntos para llegar a resultados impactantes.

Anna Pujadas (2022) defiende la inclusión de los valores del cuidado en la práctica del diseño, siguiendo a Joan Tronto y Bernice Fischer. Como explica Fischer: “En el nivel más general, sugerimos que el cuidado sea visto como una actividad de la especie que incluye todo lo que hacemos para mantener, continuar y reparar nuestro ‘mundo’ para que podamos vivir en él lo mejor posible. Ese mundo incluye a nuestros cuerpos, a nosotros mismos y a nuestro entorno, todo lo cual tratamos de entrelazar en una compleja red que sostiene la vida” (Fischer 1990). Tronto (1993) ofrece tres criterios para definir el cuidado: i) el cuidado es relacional, ii) el cuidado es contextual y antiesencialista, y iii) el cuidado es democrático e inclusivo. Estos criterios deben asociarse al diseño, e integrarse en él, si se quiere encarnar un compromiso con el cuidado.

El diseño inclusivo se trata intensamente en el artículo de Tessira Crawford (2022). El artículo reclama una arquitectura que tenga en

cuenta la diversidad de los cuerpos humanos y la diversidad de apreciación y experimentación del contexto. Este llamamiento contrasta con la arquitectura que Gropius describe como de “hombres de visión” (Gropius 1937), que siguen diseñando para un tipo de cuerpo estandarizado que no pertenece a nadie.

Maria Araya y Ainoa Abella (2022) presentan un rediseño basado en la evidencia y centrado en el bienestar de las personas. Se trata de un estudio científico sobre la remodelación de un espacio de trabajo que pretende promover el bienestar de las personas que lo habitan. El estudio se basa en las pruebas recogidas sobre su estado actual utilizando parámetros cualitativos (por ejemplo, biofilia o luz natural) y cuantitativos (por ejemplo, luz, calidad del aire o ruido) y en las opiniones de las personas que trabajan en ese espacio. El resultado es un conjunto de directrices de rediseño basadas en la evidencia científica y la experiencia humana.

Con esta colección de artículos, los editores pretenden que este número de Temes de Disseny ponga en primer plano una serie de perspectivas de diseño e investigación para sembrar nuevas ideas sobre lo que podría ayudar a los diseñadores a convertirse en agentes de cambio en el panorama de la salud global, a través de pequeños gestos, como profesionales y ciudadanos planetarios.

	BIOGRAFÍAS	
	Danielle Wilde, PhD <p>Umeå Institute of Design, Umeå University, The University of Southern Denmark</p>	
		

Danielle Wilde es profesora de diseño para la sostenibilidad en el Umeå Institute of Design, de la Umeå University de Suecia. Investiga en el ámbito de la transformación del sistema alimentario para el Departamento de Sociología, Medio Ambiente y Economía Empresarial de la University of Southern Denmark de Esbjerg. Con su trabajo intenta determinar cómo una participación crítica, colaborativa y personificada en los desafíos que plantea la transición hacia la sostenibilidad puede ser de ayuda para descubrir nuevas formas de vivir, y de diseñar, que estén totalmente situadas, que sean sostenibles y sostenedoras a nivel personal, local, regional y global y que reconozcan a los humanos como acontecimientos multispecies, como una parte de la naturaleza, como seres estrechamente implicados con otros seres no humanos. Desde los cimientos de la investigación en diseño, Wilde colabora con una gran variedad de actores de la sociedad: ayuntamientos, industrias, legisladores y ciudadanos del mundo. Utiliza laboratorios vivientes como mecanismos para crear hojas de ruta hacia una transición sostenible mediante ciudadanos situados, a escala de la acción y comprometidos en participaciones probióticas y procesos científicos ciudadanos cocreativos radicalmente abiertos. Su obra, que se basa en planteamientos personificados en la investigación participativa a través del diseño, pretende: desbordar las normas, fomentar que prospere lo que es más-que-humano y ofrecer avances prácticos a una ciudadanía medioambiental. Fuera del ámbito del diseño, Wilde colabora con investigadores de STS, geógrafos humanos, investigadores en sistemas sanitarios, biólogos moleculares y economistas medioambientales y empresariales.

	Anna del Corral, PhD <p>Elisava, Facultad de Diseño e Ingeniería de Barcelona (UVic-UCC)</p>	
		
		

Anna del Corral es ingeniera y doctora en Informática por la Universitat Politècnica de Catalunya e ingeniera en Diseño Industrial por Elisava. Entre 1990 y 2004 Anna fue docente e investigadora del Departamento de Arquitectura de Computadores de la UPC, en el ámbito de arquitecturas de memoria de procesadores vectoriales. Posteriormente, pasó a la empresa privada para ejercer de ingeniera de diseño y desarrollo de producto. Actualmente, Anna es docente e investigadora de Elisava. Entre 2010 y 2019 ha sido responsable de diversas áreas del grado en Ingeniería de Diseño Industrial y desde entonces, lidera la línea de investigación Decoding Wellbeing. Su ámbito de investigación son las metodologías de diseño que permiten idear espacios saludables y productos y servicios para el bienestar, desde una perspectiva global que implica considerar el bienestar humano en todas sus facetas, integrando los objetivos ineludibles de respeto, conservación y, contextualmente, recuperación, del medio ambiente, apreciando en él todos los seres vivos que lo habitan. Dicha perspectiva, la ha desarrollado e integrado en proyectos tanto académicos como de investigación con empresas e instituciones como Sant Joan de Déu, VIBIA, SEAT, Quadpack o CENFIM.

	Elisabet Silvestre, PhD <p>Investigadora independiente</p>	
		
		

Elisabet Silvestre es doctora en Biología por la Universitat Autònoma de Barcelona (UAB) y tiene un máster en Biología Humana (UAB) y un máster en Bioconstrucción del IEB-ITL de la Universitat de Lleida.

Ha ejercido como citogenetista en el ámbito de la sanidad pública y privada. Posteriormente, ha investigado los factores de salud ambiental en espacios interiores. La unión del conocimiento de la genética y el ambiente ha sido clave para abordar la disciplina de

la Biohabitabilidad, que estudia cómo crear espacios habitables desde las normas de la biología y la salud global.

Es docente de Biohabitabilidad en diferentes másteres y posgrados, como los de la Escola Sert del Colegio de Arquitectos de Cataluña (COAC), la Universitat Internacional de Catalunya (UIC) y la Universitat de Girona, entre otros.

Es coorganitzadora del Congreso de Arquitectura y Salud en el marco del COAC, con 6 ediciones; miembro del Grupo de Trabajo de Salud del COAC; y miembro de la cátedra de Edificación Industrializada y Medio Ambiente de la Escuela de Arquitectura de la UIC. Ha participado como experta en el PINSAP, el Plan Interdepartamental e Intersectorial de Salud Pública de la Generalitat de Catalunya, en la Subcomisión de Currículums Universitarios y en la Comisión de Vivienda y Urbanismo.

Participa en congresos y es conferenciante y autora de diversos libros como *Vivir sin Tóxicos* (RBA, 2014) y *Tu Casa Sana* (RBA, 2021).

	Ricardo Guasch Ceballos, PhD <p>Elisava, Facultad de Diseño e Ingeniería de Barcelona (UVic-UCC)</p>	
		
		

Doctor en Arquitectura por la UPC (2011). Arquitecto por la UPM (1985). En Elisava actualmente es director del Posgrado en Diseño del Espacio de Trabajo desde 2002 y del Máster en Diseño de Espacios Interiores desde 2005, director del Máster en Diseño de Interiores para Hoteles, Bares y Restaurantes desde 2014, coordinador del Área de Másteres, profesor de dos asignaturas del grado en Diseño y tutor de proyectos de final de grado. Es miembro del equipo responsable de la línea de investigación “Decoding Wellness”. Fue director académico entre 2011 y 2014. Fue profesor asociado de ETSAV-UPC en el Departamento de Composición Arquitectónica entre 1993 y 2011. Gozó de una beca del Centro Superior de Investigaciones Científicas (CSIC) entre 1989 y 1993. Ha publicado varios textos sobre concepción moderna del espacio, espacio de trabajo y vivienda. Entre sus publicaciones destacan: “Indeterminación, complementación, apropiación. Notas sobre la adaptación funcional del interior habitado” (*Temes de Disseny* nº 30), “Espacio fluido versus espacio sistemático” (ediciones UPC), “Los límites de la oficina” (*T18 Digital Architecture Magazine*, nº 21 http://www.t18magazine.com/) y “The Office Works” (*Inner. The Interior Architecture Magazine*, http://www.innermagazine.org/ y el nº 5 de la revista *Distrito Oficina*). Es fundador de GS Arquitectura y su director desde 1998.

	REFERENCIAS	
		
		

Ver listado completo de referencias en la página 13.

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