Log

44°2'21"N, 10°14'44"E
Cervaiole Quarry, Monte Altissimo, Seravezza, Italy
Carrara marble, or *marmo*, is 99.999 percent pure calcite,
with a grain nearly imperceptible to the human eye. It
formed over eons as sediment from the floor of a prehistoric
ocean was pushed deep into the earth and then up, crystal-
izing into the "snow-capped" peaks of the Apuan Alps. This
gleaming white marble has been excavated at the behest
of emperors and popes for over 2,000 years. Michelangelo
described the stone as "reminiscent of sugar," but with each
quarried cube weighing roughly 20 tons, it is more aurous
than sweet – its value almost *in essentia*. Carrara marble is
well known as the stuff of art museums, classical antiquity,
and the Italian Renaissance – Michelangelo's *David*, for
example. Today, it is quarried not as a small-batch artists'
medium but as a bulk construction material, primarily for
luxury development on the Persian Gulf – itself a relatively
young geological formation, at only 15,000 years old, and,
coincidentally, the fountainhead of another natural wealth
stream, crude oil.

42

$15.00

Rachel McCann

Breached Boundaries

Transformative interaction is central to Maurice Merleau-Ponty's phenomenology of the flesh, a philosophical system that structures existence around perception. So-called "phenomenological" architecture, which focuses on sensory encounter, draws inspiration from the highly material nature of Merleau-Ponty's work. Yet, although it is rarely recognized, the flexible responsiveness of parametric architecture and the inclusive principles and techniques of humanitarian architecture are no less phenomenological.

The Flesh: An Intertwining of Kinship and Difference

As Merleau-Ponty describes it, we live in a state of constant, dynamic exchange – the flesh, an inescapably material milieu with none of the clean separation between mind and matter that dialectical systems posit. The flesh can be characterized as a rich, ever-becoming field of interaction that we access through embodiment, with perception as the vehicle for every relational act – and Merleau-Ponty writes at length about vision, touch, movement, and their hidden supports. We are immersed in the flesh, mired in its carnality, a situation that denies us a clear outside view of its workings. This immersive condition transforms space from a uniform grid to a field in which each of our bodies is the origin point of space. It also causes gaps or lacunae in our vision that can be filled only from the perspective of others.

The flesh is a field of reversibility, or mutual influence. The sensory world invades our boundaries as light strikes our retinas, sounds vibrate our eardrums, and anything we touch touches us back. The voice of the other also transgresses our boundaries and comes to inhabit and influence the deepest recesses of our carnal schemata. This constant interchange, encountering difference, provides us an unceasing opportunity to learn and transform, and summons us to act in an attitude of openness and even wonder.

Merleau-Ponty warns against appropriative acts: if we try to grasp a thing completely, we will remain shut out from its deepest recesses. He says that perceived things "offer themselves . . . only to someone who wishes not to have them,

1. Maurice Merleau-Ponty, *The Visible and the Invisible*, ed. Claude Lefort, trans. Alphonso Lingis (Evanston: Northwestern University Press, 1968), 101.

2. Maurice Merleau-Ponty, "Dialogue and the Perception of the Other," in *The Prose of the World*, ed. Claude Lefort, trans. John O'Neill (Evanston: Northwestern University Press, 1973), 136.

3. Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. Colin Smith (London: Routledge & Kegan Paul, 1962), 412.

4. Maurice Merleau-Ponty, *Signs*, trans. Richard C. McCleary (Evanston: Northwestern University Press, 1964), 15–16.

5. Merleau-Ponty, *Phenomenology of Perception*, 459.

but to see them . . . to let them be and to witness their continued being – to someone who therefore limits himself to giving them the hollow [*le creux*], the free space they ask for in return, the resonance they require."[1] Similarly, when we approach another human being in a spirit of opposition rather than of mutual growth, we abandon any chance for real encounter, and learning and growth escape us.

One of the finest balancing acts of the flesh is its reconciliation of the contradictory urges toward kinship and difference. We share a common embodiment, or intercorporeality, with material things, and a common subjectivity, or intersubjectivity, with others, yet some difference always remains. This gap (*écart*), like the lacunae in our vision, is fundamental to the flesh and keeps a degree of contingency and openness in every experience.

Merleau-Ponty describes the urge toward intersubjectivity through a scene of embodiment in which we see another person move to avoid the heat of the same sun that is burning us.[2] On seeing another person affected by the same natural forces, suffering the same discomfort, we are struck with a sense of common carnality and thus understand that we are each an "ever-renewed trace" of a general style of embodiment that "inhabits both bodies simultaneously."[3]

Our commonalities, however, never give us the right to subsume another being. Our own perspective, limited by position and personality, is always partial, and a subtle offset (*décalage*) supplements this point of view with the perspective of others. Acknowledging this irreducible difference engenders respect for others and enlarges our own knowledge of the world. Describing something as simple as multiple subjects viewing a table, Merleau-Ponty underscores our mutual dependence in arriving at truth.[4]

Both people and things invite us to dialogue; sensuous interaction with the world and social interaction with others are closely linked manifestations of the relational flesh that help us understand ourselves, others, and the differential structure of the flesh itself. The flesh distributes space as a charged, relational interval between us and the world, as a field of interaction between us and others.

Finally, the world's structure has breadth, suggesting a variety of pragmatic and ideational responses to its ambiguity. Things are never just one way, and Merleau-Ponty sees our conceptual and practical schemes as "concrete acts of taking up and carrying forward by which, through time's accidents, we are linked in relationships with ourselves and others."[5]

His vision of the flesh as a fertile field of interdependence is instructive to the practice architecture.

Reversibility

In "Eye and Mind," Merleau-Ponty explains how the mirror shows us our lived bodies as externally observable objects. The experience of seeing our bodies as objects, while simultaneously feeling them as subjects from the inside, helps us to understand the intertwined nature of the flesh. The mirror makes visible the relation between body as agent and body as thing. As philosopher Alia Al-Saji describes it, the mirror reveals "the reversible structure of the body – that blending and indivision of sensing and sensible, that fire that will make me a living body." As such, the mirror image unites the perceived world "and its invisible lining for the first time before my eyes."[6]

6. Alia Al-Saji, "Vision, Mirror and Expression: The Genesis of the Ethical Body in Merleau-Ponty's Later Works," in *Interrogating Ethics: Embodying the Good in Merleau-Ponty*, ed. James Hatley, Janice McLane, and Christian Diehm (Pittsburgh: Duquesne University Press, 2006), 47.

7. See Al-Saji, "Vision, Mirror and Expression," 52, 57.

Hidden supports of vision include the affective and psychological depths of being, an invisible lining that haunts and animates the visible world. The mirror, where we see ourselves simultaneously as subject and observable object, inverts the experience of seeing someone avoid the sun, which shows that an observable thing has an inner spark similar to our own. This double existence as subject and material thing is, for Merleau-Ponty, the seam in the flesh that illuminates its entire mystery. And for us as architects and citizens, it is the seam along which we find an axis and an ethical imperative to act.

Yet it is important to acknowledge the flesh's *décalage*, its offset. We architects need to understand that something in the clients for whom we design will be forever inaccessible to our imagination. As long as we resist speaking in a universalizing voice or responding formulaically – as long as we resist the urge to think that we *know* – then we can truly see, truly hear the voice of the other, hold open the difference, and act ethically in the face of it.[7]

Reversibility within Oppressive Systems

Ideally, two perceivers approach each other with a nonappropriative sense of wonder, the same way Merleau-Ponty describes our nonappropriative apprehension of the sensuous world. Seeking to interact rather than to possess, we open ourselves fully to the transformative potential of the flesh. However, cultural systems worldwide manifest the human potential for oppression and violence, and the sense of wonder is often a luxury afforded only to the rich and empowered.

8. Fredric Jameson, "Is Space Political?," in *Rethinking Architecture: A Reader in Cultural Theory*, ed. Neil Leach (London: Routledge, 1997), 266–67.

9. See my essay, "A Sensuous Ethics of Difference," *Hypatia* 26, no. 3 (June 2011): 497–517. I connect the sensory openness of the flesh to social justice and explore this pairing in architectural design. There is no question that the socio-political implications of Merleau-Ponty's work have been left largely untouched by some architects drawing from phenomenology. However, the work of these architects is not inherently less socially responsible than that of the larger architectural field. Steven Holl, for example, proposed porous boundaries in his Simmons Hall scheme for MIT and insisted on the lower floors of his Horizontal Skyscraper – Vanke Center complex in Shenzhen being public rather than private.

10. Merleau-Ponty quoted in Mary C. Rawlinson, "The Contingency of Goodness," in *Interrogating Ethics*, 70.

11. Rawlinson, "The Contingency of Goodness," 74.

12. Merleau-Ponty, *Visible and Invisible*, 143.

The privileged, as literary critic and theorist Fredric Jameson points out, are free to experience the flesh as a rich sensory domain – a wonderland of the senses that sensory-based "phenomenological" architecture exploits.[8] Jameson criticizes both Merleau-Ponty and the architects who follow him. In "A Sensuous Ethics of Difference," I explain how Jameson mischaracterizes the flesh as a nostalgic, arcadian vision, and I discuss why architects, on initial exposure to Merleau-Ponty's work, tend to gravitate toward the sensuousness of the flesh. Architecture, after all, is a material and spatial medium, and designing with the flesh in mind takes full advantage of architecture's material and spatial depths.[9]

But sensory engagement per se falls short of Merleau-Ponty's full vision. Further immersion in his work leads us to a manner of engagement with others, an ethics of inclusion that then leads us to imagine and fight for socially just cultural systems and architecture. But the pursuit of justice does not happen as a matter of course. As philosopher Mary C. Rawlinson explains in "The Contingency of Goodness," goodness does not "ineluctably [unfold] in all things, but [is] the effect of certain strategies of experience, certain 'espousals of the situation.'"[10] Rawlinson acknowledges the Merleau-Pontian idea that our actions are influenced by others and taken up in turn by still others, but she maintains that "goodness requires both the technique and the will to think from the other's situation."[11] Architects design by imagining the situations of their projects' inhabitants, so we would presumably be good at this. But because our designs are funded primarily by wealthy individuals and institutions, and because most of us occupy a position of relative privilege ourselves, too often our imagination is inadequate to the task of imagining the situations of the less privileged, and we badly misjudge the needs of those who are different from us.

Merleau-Ponty's mirror works differently within oppressive systems. Reversibility, the perceptual, pragmatic give-and-take within the flesh, is our means of understanding both the world and ourselves, as the differing perspectives of other perceivers round out our perception and help fill in our own subjectivity. Merleau-Ponty writes, "Through other eyes we are for ourselves fully visible; that lacuna where our eyes, our back, lie is filled, filled still by the visible, of which we are not the titulars." Indeed, when others see me, "I appear to myself completely turned inside out under my own eyes."[12] In another construal of reversibility, the other (whom we have observed sheltering from the sun) now becomes a mirror that

13. Janice McLane, "The Boundaries of a Victim-Life," in *Interrogating Ethics*, 137.
14. Frantz Fanon, *Black Skin, White Masks*, trans. Richard Philcox (New York: Grove Press, 1967), 109.
15. Merleau-Ponty, *Visible and Invisible*, 143.
16. McLane, "Boundaries of a Victim-Life," 139.
17. Fanon, *Black Skin, White Masks*, 114–15.

makes our innermost aspects visible to us. Merleau-Ponty maintains throughout his work that we are social beings from the outset. Philosopher Janice McLane further elucidates this point: "Only the combination of my eyes *and* the eyes of others, my voice *and* the voices of others, makes my existence fully real. . . . What I experience of myself and the world is partly available because others have made it so. Human beings form a unity in difference, a complete if open-ended world that depends upon the existence of us all."[13]

Typically, in Merleau-Pontian thought, reversibility is an affirmation of the other, but in oppressive cultural systems it becomes a means of domination by which certain groups are denied control over their own subjectivity. Psychiatrist Frantz Fanon writes, "I came into the world imbued with the will to find the meaning in things, my spirit filled with the desire to attain to the source of the world" – exactly as Merleau-Ponty describes existence in the flesh, where we approach the world with an interrogative and open spirit – "and then I found that I was an object in the midst of other objects." In being mirrored in an oppressive environment, Fanon's existence in the flesh is inverted, his subjectivity shattered. Defined by a social system that casts him as inferior, "I burst apart. Now the fragments have been put together again by another self."[14]

All forms of domination, from racism to sexism, ageism, ableism, and classism operate similarly. Many authors of color describe how they must adopt a double existence to survive in a world of white privilege, and women worldwide carry in their bodies a lifetime of being belittled, underestimated, and limited in professional and societal endeavors. Fanon's account bears out Merleau-Ponty's statement, "Through other eyes we are for ourselves fully visible."[15] When the eyes of others objectify us, deem us less worthy of adequate housing, characterize us as undependable, lazy, or too emotional – particularly when these characterizations extend to entire subsets of humanity through constructions of race, gender, orientation, religion, age, or ability – then our deepest, most hidden bodily recesses are occupied by an alien and inimical vision. According to McLane, a double violence occurs, and individuals in oppressed groups are at once denied their irreducible difference, subsumed into a false universal norm constructed for others, and set apart as an object, "a phantasmagoric projection" that reinforces stereotypes of inferiority.[16] As Fanon describes it, "I shouted a greeting to the world and the world slashed away my joy. I was told to stay within bounds, to go back where I belonged."[17]

18. Ibid., 110.

19. Ibid., 116.

20. Jean Lhermitte, *L'Image de notre corps* (Paris: Nouvelle Revue Critique, 1939), 17, cited in Fanon, *Black Skin, White Masks*, 111.

21. Fanon, *Black Skin, White Masks*, 111.

22. Ibid.

23. Alisa Bierria, "Missing in Action: Violence, Power, and Discerning Agency," *Hypatia* 29, no. 1 (November 2014): 131–34.

24. McLane, "Boundaries of a Victim-Life," 140.

25. bell hooks, *Feminist Theory: From Margin to Center* (Cambridge: South End Press, 2000), 92.

26. Devonya N. Havis, "'Now How You Sound': Considering a Different Philosophical Praxis," *Hypatia* 29, no.1 (November 2014): 238–46.

27. Havis, "'Now How You Sound'," 239, 244–45. See also Lisa Jones, *Bulletproof Diva: Tales of Race, Sex, and Hair* (New York: Anchor Books, 1995).

28. Greg Lynn, "Architectural Curvilinearity: The Folded, the Pliant, and the Supple," *Architectural Design* 63, no. 3/4 (March/April 1993): 8, 10.

Hence, the oppressed person is forced to live a dual existence, submitting to the dominant social narrative enough to survive while holding a hidden, truer self open inside. Fanon writes of difficulty in developing his own bodily schema, which a "third-person consciousness"[18] causes to be "overdetermined from without."[19] He observes that he must construct his corporeal schema not using elements from his own physical embodiment as sensed from the inside – "tactile, vestibular, kinesthetic, and visual,"[20] but using elements provided by a system of white oppression that "had woven me out of a thousand details, anecdotes, stories."[21] Existing as a caricature places an extra burden on his daily existence as a human being: "I thought that what I had in hand was to construct a physiological self, to balance space, to localize sensations, and here I was called on for more."[22]

Philosopher Alisa Bierria points out the very real dangers of imposed subjectivity as black subjects' intentions are rewritten by the dominant narrative and their everyday actions are routinely criminalized.[23] The traps and dangers of outwardly determined subjectivity are legion. McLane writes that the weapons of domination are not only psychological but physical – "chained hands, the bars on a prison door"[24] – and cultural theorist bell hooks contends that self-determination of one's identity against the narrative of power is one of the most essential elements of self-actualization.[25]

Deforming Established Patterns

If distortions of the corporeal schema in systems of oppression are commonplace, how do they affect the experience of being at home? The physical artifacts of domination extend to substandard housing and to the inability of women to occupy public spaces without being catcalled. The solutions to these problems are not wholly architectural, but architectural design can perpetuate as well as challenge them.

Philosopher Devonya N. Havis advocates for multiple voices and sources of knowledge to bring about a more equal society.[26] She calls for creative negotiations within oppressive power structures, where oppressed individuals exercise unexpected acts of power that shake the connective web around them.[27] This notion of pattern deformation brings to mind the parametric design process.

From Greg Lynn's account of parametric architecture as a participant in dynamical flows that adapts and deforms without failing under the "stress of difference"[28] to Paul Andersen and David Salomon's description of the architect's creative

29. Paul Andersen and David Salomon, *The Architecture of Patterns* (New York: W.W. Norton, 2010), 73.

30. For a longer discussion of this subject, including how parametric architecture draws from pattern theory, open system thermodynamics, and Deleuze's manifold, and how it aligns with central tenets of feminism, see my essay, "Crafting Contingency," in *Feminist Phenomenology Futures*, ed. Helen A. Fielding and Dorothea E. Olkowski (Bloomington: Indiana University Press, 2017), 66–90.

31. Rennie Jones, "Ban vs. Schumacher: Should Architects Assume Social Responsibility?," *ArchDaily*, March 28, 2014, www.archdaily.com/490850/ban-vs-schumacher-should-architects-assume-social-responsibility/.

32. Ibid.

33. Maurice Merleau-Ponty, *The World of Perception*, trans. Oliver Davis (New York: Routledge, 2004), 93.

34. Maurice Merleau-Ponty, "Eye and Mind," in *The Merleau-Ponty Aesthetics Reader: Philosophy and Painting*, ed. Galen A. Johnson (Evanston: Northwestern University Press, 1993), 133.

process as "productive misalignment" of elements within given systems,[29] architects seem equipped to lead society toward change. After all, they are making designs that are born of flexible responses to a milieu of complex, intersecting systems and that balance internal logic and outside forces, deforming as needed while maintaining overall formal coherence.[30] Thus it is all the more problematic that parametric architecture is affordable only to the rich, manifesting the same failure that Jameson criticizes in sensory-based "phenomenological" architecture.

Architects work to understand the material and cultural systems in which inhabitation takes place and creatively manipulate patterns within those systems through the act of design. This creative deformation can take place in parametric design, where the physical and spatial form itself challenges existing expectations, or in humanitarian design, where the architect deforms the expected social and economic parameters of building and inhabitation just enough to allow a point of humane intervention into the larger cultural fabric.

Although they operate with vastly different resources, both parametric and humanitarian architecture work, according to architect and critic Rennie Jones, with "the creation of deployable systems" and "mass customization." She points out further methodological parallels that "identify relevant cultural and geographical factors, establish parameters, allow for divergence."[31] Parametric architecture exploits the potential for divergent interpretations of ambiguous form, while humanitarian architecture allows the inhabitant to manipulate the architect's design parameters. Inhabitant input "may be as simple as the length of pegs and the width of wall panels to allow for custom configurations, or exist in the form of ideas and participation."[32] In any case, it challenges traditional patterns of power.

Cooperative Architecture

Architects are seen as the ultimate agents – the subjects of the verb *to design*. They are expected to understand, to live imaginatively in place of and act on behalf of, a building's ultimate inhabitants. The flesh allows for this imaginative inhabitation, but architects must be mindful not to design according to universal norms and overdetermine the occupants' subjectivity from without. Merleau-Ponty warns against settling too comfortably into perceptual or representational habits "in the guise of objects we 'know well.'"[33] Rather, he encourages us as both creators and experiencers of art to hear the "uncertain murmur" of indistinct and unfamiliar voices.[34]

The Norman Foster Foundation, Droneport, Rwanda, 2016. Image © Nigel Young/Norman Foster Foundation. Opposite page: Gans Studio / DARCH, Plum Orchard, New Orleans, Louisiana. Site plan. Image courtesy Gans Studio.

35. Kenny Cupers, "Where Is the Social Project?," *Journal of Architectural Education* 68, no. 1 (March 2014): 6–8.
36. For example, on Brad Pitt's "Make It Right" New Orleans housing see Lydia DePillis, "If You Rebuild it, They Might Not Come," *New Republic*, March 13, 2013, https://newrepublic.com/article/112620/brad-pitts-make-it-right-houses-drag-new-orleans; http://thearchitectstake.com/editorials/new-orleans-post-katrina-making-right/; Raja Moussaoui, "Crime in the community: when 'designer' social housing goes wrong," *The Guardian*, January 4, 2016, https://www.theguardian.com/cities/2016/jan/04/crime-community-designer-social-housing-winnipeg.
37. Emily Nonko, "Sharon Davis designs buildings that look good and do great," *Curbed*, November 15, 2016, https://www.curbed.com/2016/11/15/13600386/sharon-davis-design-architect.

The flesh calls us to hold open a space where we admit that we cannot truly know the other beings whose voices begin to inhabit us. In architecture, this openness can take the form of a move from individual agency to a collective structure of design as architects move their focus "from the manipulation of form and material to the development of procedures and the creation of models of engagement."[35] Participatory design is not a new idea; the public press is rife with accounts of failed humanitarian architecture,[36] and even the successes are not unqualified. The humanitarian process involves listening in order to meet unanticipated needs, patient accumulation of ideas, and, crucially, accommodation of *le creux*, that hollow the world before us needs in order to resonate.

Sometimes it is the proposal of novel building types, like Foster + Partners' low-cost prototype for a droneport – a mixed-use facility for delivering urgent medical supplies and an e-commerce hub – in the Central African Republic using local raw materials and assembly.

Sometimes humanitarian architecture is empowering, by involving the community in the planning process, or hiring local residents for construction. For example, Sharon Davis Design's Women's Opportunity Center in Kayonza, Rwanda, is designed to educate and train women in eastern Rwanda. Davis's NGO client hired local women to make 450,000 clay bricks for the structure, and a roof rainwater collection system provides potable water for the women to sell at the market.[37] Many of the women hired to make bricks were able to gain subsequent employment as brick makers; other women use the center to learn business skills, animal husbandry, and food processing techniques.

Other humanitarian projects embrace the principles of flexibility and contingency central to parametric design but in low-cost schemes, expanding the design process to view the site as a field and the scheme as a set of systems. Working together, Deborah Gans (Gans Studio) and James Dart (DARCH) used these principles to plan the New Orleans neighborhood of Plum Orchard for the return of its original residents after Hurricane Katrina. Their conversations with residents revealed a number of planning elements that would benefit the community, including social elements such as public transport, schools, and markets, and the physical accommodation of drainage, refuge, and evacuation routes.

Instead of looking at individual plots, the architects considered both horizontal and vertical axes as a three-dimensional field for locating amenities that range from housing and playgrounds to bioswales and seasonal ponds. Mechanisms for accommodating flooding are integral to the plan and aim to "help the community learn to live with water." The architectural scheme allows residents to choose from a range of housing types, manifesting the parametric principle of flexibility in the confluence of interior logic and exterior forces.[38] This approach echoes Lynn's description of architectural pliancy, in which the design functions as "a participant in [literally, in this case] dynamical flows."[39]

Still, for all their innovation, Foster, Davis, and Gans and Dart are all designing in the traditional model of architect as agent, even though they sought design input from the inhabitants. Anupama Kundoo challenges this model, devising a low-income housing prototype with modular elements that inhabitants can assemble however best suits their needs. Kundoo's firm focuses on affordable, low-impact architecture

38. Gans Studio Architects, Plum Orchard, http://www.gans-studio.net/new-orleans/6aij9qhb5nzgm3cqaxjjzb0927e7em. See also Houses for New Orleans, Gans Studio Architects, http://www.gans-studio.net/nola-prefab/34q6sd079k390pipty6bckx3jls9cw.
39. Lynn, "Architectural Curvilinearity," 8.

Anupama Kundoo Architect, Full Fill Homes, Auroville, India, 2015. Exterior view. Image courtesy Anupama Kundoo Architect. Opposite page: Left: ELEMENTAL, Quinta Monroy, Iquique, Chile, 2004. Exterior view as initially completed. Image © Tadeuz Jalocha 2004. Right: Quinta Monroy, Iquique, Chile, 2004. Exterior view as completed by owners. Image © Cristóbal Palma.

40. Anupama Kundoo Architect, "Full Fill Homes," https://www.anupamakundoo.com/full-fill-homes/.
41. "Quinta Monroy," ELEMENTAL, http://www.elementalchile.cl/en/projects/quinta-monroy/. See also "Villa Verde," http://www.elementalchile.cl/en/projects/constitucion-i-villa-verde/.

featuring vernacular techniques and engages in a number of innovative projects that make beautiful sense out of the complex task of building affordably for the disenfranchised in India. Full Fill Homes is a scheme for modular construction that allows a house and foundation to be assembled in six days and dismantled in one. The walls are ferro-cement cases reinforced with "chicken mesh, welded mesh and small diameter steel reinforcement" that can be made in a local mason's yard, bringing construction jobs into the community. Each ferro-cement "container wall" module has an open interior face, creating space within the wall deep enough to store the inhabitants' belongings and freeing interior rooms of the need for furniture. As the architect observes, "Small spaces are often burdened by the way furniture occupies them," and the building system maximizes space at minimum cost.[40] Kundoo's modular system is also in accordance with the larger principles of flexibility and coherence underlying parametric design: inhabitants can arrange the components in a number of ways that suit their individual needs, yet each assembly expresses a coherent idea due to a system of proportions and material unity.

Alejandro Aravena (ELEMENTAL) employed a similar strategy in two Chilean social housing projects. For the Quinta Monroy project in an Iquique barrio, he designed 93 narrow row houses, each filling only half its spatial allotment. As designed, each unit contains a kitchen, bathroom, circulation, and two rooms, leaving space for future expansion by their owners. The scheme allows each family to double the size of their unit when they can afford it, with design and construction of their own authorship. Aravena designed a variation on the Quinta Monroy scheme with 484 units at the Villa Verde project in Constitución.[41] His approach

42. Nonko, "Sharon Davis designs buildings."
43. Sukjong Hong, "Can Half a Good House Become a Home?," *New Republic*, June 14, 2016, https://newrepublic.com/article/134223/can-half-good-house-become-home.
44. See my essay, "Wild Beauty: A Sensuous Ethics of Architecture," Paper presented at the Reconciling Poetics and Ethics in Architecture conference, at the Canadian Center for Architecture and McGill University, 2007, www.arch.mcgill.ca/theory/conference/papers/McCann.doc), which sets up the connection between beauty and ethical treatment of the earth in architecture and the flesh.

manifests the Merleau-Pontian principle of intersubjectivity, engendering agency rather than passivity on behalf of the units' occupants.

Humanitarian projects often fall short of their goals, and many of the political and social problems architects seek to resolve are profoundly interwoven and seemingly intractable. In Davis's Women's Opportunity Center, inhabitants unaccustomed to a system of running water habitually left taps running and showered at the center instead of bathing at home, depleting the center's collected rainwater.[42] Gans and Dart's Plum Orchard neighborhood remains unbuilt due to unanticipated political and financial roadblocks (although the client subsequently commissioned the architects to design housing for adjacent neighborhoods). Even Aravena's scheme has drawn criticism for answering only to the problem of housing and leaving aside questions of infrastructure, job training, and debt mitigation.[43]

Architecture as Transformative Interaction

Architecture today is operating in a deeply phenomenological way. With its broad emphasis on sustainable design and the development of new materials and techniques in this realm, it embodies an ethic of care toward the material, sensuous world suggested by the reciprocal nature of the flesh.[44] With its emphasis on sensory richness, architecture practices and encourages awareness of our kinship with the world and our wonder at its irreducible alterity. With its emphasis on complex and adaptable patterns in space, surface, and form, it manifests the transformative interaction so central to Merleau-Ponty's phenomenology.

Yet architecture largely remains the handmaiden of moneyed interests, and as such it unwittingly perpetuates a

harmful imbalance in the flesh. Humanitarian architects are by necessity redrawing boundaries and reconfiguring existing patterns of inhabitation and design, forming unexpected alliances and creatively deforming traditional systems to move society forward incrementally. They seek to create in a world constantly taking shape via multiple viewpoints and voices.

Just as architectural design aims to be receptive to the sensuous world, it can aim to be receptive to and transformed by the voices of others. This practice of reversibility is especially important when encountering others whose voices have been silenced and corporeal schemata overwritten by oppression. It is important that architects listen as well as act. Merleau-Ponty writes, "If I am close enough to the other who speaks to hear his breath and feel his effervescence and his fatigue, I almost witness, in him as in myself, the awesome birth of vociferation."[45] In hearing the voices of others rather than speaking for them, and in allowing those voices to become agents of change for themselves – and even for the larger world – our architecture will more fully manifest the depths of Merleau-Ponty's flesh.

45. Merleau-Ponty, *Visible and Invisible*, 144.

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