



CRIPPING ARCHITECTURE

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Crippling Architecture: Architecture's Place in Ontology

Shaina Yang

Heidegger famously opined upon building and dwelling as modalities of being in *Building, Dwelling, Thinking*¹ – and thus inadvertently gave advent to architecture's love affair with the word “phenomenology”. Most notably, Norberg-Schulz, Pallasmaa, and other architectural theorists have used it to argue for a new mode of architectural analysis and evaluation which is rooted in the human experience of it².

This adoption did successfully capture one of Heidegger's aims: the dismantling of a Cartesian understanding of reality, and the values frameworks that necessarily followed. Heidegger worked hard to overthrow Descartes and then Kant³ in their insistence on the idea of subjective rationality (man) and the objective field of entities (world); he created a reality which did away with subjectivity altogether, rooting an ontological framework for human existence in the everyday existing of humans themselves⁴.

It follows then that Norberg-Schulz, Pallasmaa, Frampton and others were able to cast serious counterpoints to the hierarchical values of rationality that lasted Western architecture

through almost its entire history from the Classical to the Modern – form, order, organisation, style, function – and instead centre newfound values of authenticity, primary experience, “place”ness, and critical regionalism⁵.

Yet this introduced into architecture the very subjectivity that Heidegger himself sought to undo in his understanding of reality. Even more ironically, the architectural discourse stemming from Heidegger's fundamentally *ontological* project has so far limited itself to what Heidegger himself would view as woefully *ontic* – concerned with the specific manifestations of descriptive worldhood rather than the nature of being itself⁶.

In addition, the state of phenomenology in architecture has recently been critiqued on its own terms, not just Heidegger's – described by architecture phenomenology scholar Muhammad Shirazi as “a fragmentary and collaged phenomenology, in which fragmentary interpretations of different works are produced in order to present and illustrate a preconceived theme ... the result [of which] is an inarticulate understanding [of architecture]”⁷.

This short paper returns phenomenology to its rightful home in the realm of existential ontology – while keeping the “architectural” descriptor in tow. It argues that the most crucial conclusion for the discipline to take from phenomenological theory is that architecture has a real and fundamental hand in existence itself.

Methodologically, this is achieved through the *cripping*[†] of architecture and theory. Taking the non-neurologically[‡] wheelchair-using body as a focal point[§] and exploring its fraught relationship

[†] First proposed by Robert McRuer in his 1966 book *Crip Theory*, the act of “cripping the discourse” is to apply a disabilities lens to able-privileged conversations. This reclamation of the slur “cripple” has stemmed crip culture, movements like #CripTheVote, and most recently the Netflix documentary *Crip Camp* with the Obamas as executive producers. The term is not without its own controversies within the community. It is reserved for use only by those who have a disability.

[‡] I have specified non-neurological to respect the distinction between those who use a wheelchair for neurological reasons (ALS, cerebral palsy, etc) and non-neurological reasons (limb loss, spinal cord injury, etc). It is in many ways a contrived classification; the aim in drawing it nevertheless is to make as few accidental claims of universality as possible.

[§] I have chosen to centre this body explicitly, for two reasons. 1. Disability is an incredibly broad spectrum of experiences and attributes and thus cannot be addressed meaningfully without specificity, even if wider conclusions are to be derived from those specifics. 2. I am familiar with it, and thus have both some authority and also (perhaps more importantly) some right to use it as an example. I use a wheelchair periodically, the longest stretch full-time of which lasted several years. It is worth noting, however, that I am bipedal and able-passing much of the time.

to architecture as architectural theorists conceive of it, the paper shows through this flawed marriage the relationship of architecture to deeper ontological questions.

Heideggerian phenomenology is instrumental in this analysis, as are recent discussions in disabilities study – and these sources are read in the spirit of their home disciplines of philosophy and sociology rather than strictly the architectural lens (this latter approach being the habit of architectural theorists prior mentioned). There are implications for both discourses independent of architecture. Nevertheless, the conclusions look to and implicate architecture as a crucial piece in the puzzle of human existence and the ontology of disability.

Disability, architecture, and Heidegger's ontological difference

Before we attend directly to Heidegger, it is worth setting up how the tripartite of disability, architecture, and ontology relate and why they are instructive to one another.

In current and especially academic architectural discourse, architecture's relationship to the societal (housing, institutions, ADA, environmental justice, etc) and architecture's relationship to the existential (embodied gaze, simulacra, theory of place, monadology, etc) have remained largely parallel – at two different strata of academic inquiry that struggle to bridge between themselves.

Questions of disability provide a unique focal point to centre such a bridge, because of its own uncomfortable chasm that has only recently begun to be addressed.

Since the awakening of the disability movement in the 1970's, *the social model of disability* has entered common consciousness and been the primary driver of disability activism and thought⁸. The social model – a direct and radical overthrow of the medical model – holds that it is not the body which is inferior or flawed, but society and the way it is shaped. For the wheelchair-user, the analogy is straightforward: I

am only “disabled” if the building I'm in only has stairs, or if the city I'm in doesn't feature curb cuts to sidewalks. If a bipedal able-bodied person were transported to an alien planet where all people had wings and buildings were designed accordingly, that same able-bodied person would then become “disabled” instantaneously by virtue of the society around them.

There are powerful implications for architecture here, of which only the surface has been scratched with the monumental yet still-flawed ADA. For architecture to be told that it holds the keys most fundamental to the social classification of disability – that, effectively, it could theoretically eradicate the existence of disability itself – is an extraordinary boon of power, and a power that the discipline so often laments that it lacks at that.

Architecture has largely shirked this responsibility, of course – relegating it to the space of regulation and code to spawn an ugly multitude of detached ramp and railing products, rather than anything that resembles an earnest embrace of design constraints.

Yet architecture has largely been able to do very little and get away with it because of an inherent weakness of the social model – one that ultimately allows its most exciting implications to be easily dismissed.

The elephant in the room is the empirical quality that disability specifically holds – much more so than any of its counterpart identities in cousin frameworks of race, gender, sexuality and so on. It is the fact that on a base level, there exists a gamut of bodily statuses that simply cannot be adjusted for; that, even in a hypothetical perfectly adjusted and perfectly accommodating world, some bodies would still experience more physical pain than others at the very least. Pain perhaps is the most fundamental of what the social model strains to account for, collapsing disability back into the medical model; as an early critique arising in the 90s put it, the social model has conceded the body itself to medicine in its quest to centre the social experience⁹.

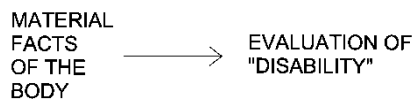


Figure 1: Classical medical model of disability, where individual bodily status is assumed to lead to an objective evaluation of “disability”

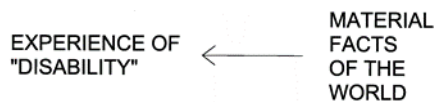


Figure 2: Social model of disability, where directionality is reversed, and externally imposed structures lead to the subjective experience of “disability”

This is not to critique the social model to the point of dismissal. For too long disability was trapped in the medicalised framework of brokenness, natural tragedy, and inferiority. Ontologically, the disabled man was the broken version of the natural man¹⁰. The social model has done extensive work to unburden disabled bodies of this charge, and locate that brokenness and tragedy in society and infrastructure – thus doing away with a definition that was attached to an arbitrary concept of how man ought to be, and what level of deviation from that ought then be termed “disability”. It has correctly identified that who ‘counts’ as disabled is a socially defined group of individuals who are effectively othered and excluded from the world.

But neither the social or medical framework addresses the entirety of the extremely complex and unfathomably diverse experience of the disabled – one where the disabled are the ontological equal of the abled, but also one where the physically painful and empirically disempowering realities of disability are also acknowledged¹¹. Having both frameworks in play yet operating separate to each other – the current status quo – leaves much to be desired.

We seek, therefore, a framework for disability which acknowledges and gives due weight to these difficult realities – but without it leading to the conclusion that disabled people are inherently worse versions of able-bodied people. There is of course a philosophical mandate for this enquiry already – but I argue that it is also necessary for

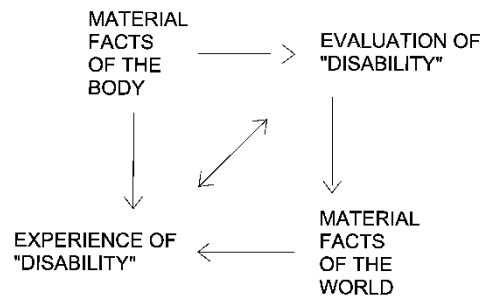


Figure 3: Proposed model of disability, where both the objective presence of bodily status and subjective impact of structural biases affect the phenomenological experience and ontological evaluation of “disability”

architecture, if architecture is to take up its role in ontologically shaping humanity, and to bridge that gap between socially-relevant architecture and theoretically-abstract architecture.

This is where Heidegger enters.

In his magnum opus *Being and Time*, Heidegger outlines his theory of existence itself. He posits that we as humans exist through the fundamental mode of *care* – encompassing relevance, attention, convenience, relativity, but not subjectivity – and that we thus understand all things, including existence itself, in terms of how we care about them¹². To Heidegger, “objective” or “substantial” reality is simply not that – we understand other things in the world in terms of their proximity to us, and the “measurable” number of inches away they may be is a post-product of analysis and abstraction rather than any indication of underlying reality¹³. Similarly, he differentiates time from what he calls “clock time”, pointing out that we experience time in terms of care and convenience, and that clock time is merely a method of communication rather than evidence of any existence¹⁴.

It is crucial to understand that Heidegger is doing more than just applying subjectivity and relativity – ie, he is not claiming that there is an absolute measurable time that could be described by many subjective systems like non-Gregorian calendars or ancient Chinese *shi-ke*. Neither is he offering a sort of solipsism-lite – because he firmly asserts the existence of humans and the world around them, and attempts to wrest them

from conceptions of Cartesian dualism rather than negate or render infinitely subjective their existence in the first place¹⁵.

Instead, he asserts that this conception of time as a freestanding entity is a construction that we have been forced to create for ourselves – which has no bearing on whether or not time actually exists, or how and in what way it does. He asserts that time, at its most fundamental, exists as “short”, “long”, “tomorrow”, “someday”, “never”, and so on¹⁶.

This is particularly striking for disabilities studies, for whom the concept of *crip time* has been seminal. Crip time, as described by Alison Kafer, “is flex time not just expanded but exploded; it requires re-imagining our notions of what can and should happen in time, or recognising how expectations of ‘how long things take’ are based on very particular minds and bodies ... rather than bend disabled bodies and minds to meet the clock, crip time bends the clock to meet disabled bodies and minds”¹⁷.

This overlapping of thought has led to new inroads into frameworks of disability using Heidegger as a source – often begrudgingly, it must be said, given his disgusting personal beliefs that would no doubt recoil at the idea of using a phenomenological ontology to humanise the disabled (and at that, the non-cis, non-Aryan, non-male, non-hetero, non-blond-haired-blue-eyed) body¹⁸. His Naziism cannot be divorced from his thinking – and indeed, the most salient critiques of his philosophical proposals implicate his deeply flawed belief system as the source of his most easily-dismantled claims¹⁹. Instead, by including his Naziism as context and using it as a tool with which to analyse and critique his work, various areas of sociology have been able to use Heidegger for their own ends²⁰.

The most salient development from Heidegger for disability studies is offered by Thomas Abrams, whose book *Heidegger and the Politics of Disablement* offer a viable framework to supplement the social model²¹. Abrams outlines an account of Heidegger’s ontological

difference from a disabilities lens, and in doing so provides a way for us to understand the realities of the disabled experience while also conceding no ontological ground between individual humans regardless of their level of ability.

The ontological difference is the crucial concept that true being – *Dasein*, being-in-the-world – is a distinct and fundamental mode of being from presence. For Heidegger, being-in-the-world and simply being a present body are separate; being-in-the-world means care, which adds meaningfulness to existence. To exist meaningfully, one must be-in-the-world – and this is a capacity which is intrinsic to humanity.

Being present – and any other qualifier – is thus a modality of being, rather than being in itself. Abrams points out that disability and ability are thus modes of being rather than ontologically-defining characteristics inherent to individuals; disability is the coming together of multiple factors that create a certain mode of being-in-the-world²². But inasmuch as a disabled body or able body both participate in the *structure of care* – they both exist meaningfully in an identical way, even if those cares are materially different between them. Regardless of whether they run on time or crip time, both bodies be-in-the-world by caring about what time it is and how long things take, and this fundamental capacity makes them ontologically identical. In Abrams’ own words, the ontological distinction allows us to separate humanity and human existence – *Dasein* – from cultural distributions of personhood²³.

This sounds deceptively obvious. One might wonder – “isn’t that how we think about things anyway?” But this framework does not require that we suspend a certain level of disbelief on moral grounds – taking for granted that all people are equal on the grounds that all people ought to be treated equally. Nor does it attempt to equalise different manifestations of experience through subjectivity and social constructivism. By introducing the structure of care and *Dasein*, it allows for the experience of disability to

completely over-embody someone's experience of existence without defining the nature of that existence in itself.

Heidegger's hammer

But in order to appreciate the full implication of the ontological difference for architecture – not just the disabled body – we must fully understand the mechanics of care.

To Heidegger, in its most basic form, being is care and care is the literal living and undertaking of everyday tasks in our lives and the interactions with other things and people as follows²⁴.

Abrams helpfully summarises it:

*Heidegger argues that the fundamental structures of existence can be uncovered by reflecting on our everyday practices. ... To see things as mere objects, divorced from our meaningful dwelling in daily life, is to fail to consider the relevance they have for us as things. To explore the pen in my pocket, for example, as a hunk of materials extended in three-dimensional space is to fail to understand how it is bound with meaning when applied in tasks; in short, it fails to see the relevance gathered through it. ... To reduce things of the world to mere objects "out there" occupying this or that much space, is to pass over being-in-the-world. To reflect on the way that we use the pen in daily modes of concern, however, gives us a window into the structures that make it possible to be human.*²⁵

According to Heidegger, care-as-being defines the meaningfulness of that which exists around us; an object is in no fixed place aside from how it relates to us, being either ready-at-hand or not. A pen is either "in reach" or "over there" – a property that Heidegger calls at-handed-ness (variously *vor* or *zu* -*handenheit*)²⁶.

His example is the hammer. A hammer is intrinsically *ready-to-hand*, and we use it without abstraction or theorising; in fact, if we were to regard it as *present-at-hand*, we might make a mistake and use it incorrectly. Only when the hammer breaks do we see it as present-at-hand – in terms of its simply being there as a lump of material*. Even then, the "primordial" quality of its readiness-at-hand is evident – we understand it still in terms of its *unreadiness*²⁷.

As the primary tools implicated in everyday acts of care, *things* are thus an important part of Heidegger's phenomenology. He ultimately establishes the "unpretentious thing" as the site of "gathering" for meaning, the primary way we interact with the world²⁸. As Abrams explains, "wine, in ancient times, gathered divine favour, a gift from the Gods. Today's wedding toast gathers more liquid and glassware; it celebrates the union of lovers. As we dwell with it and as it deals with us, the thing gathers meaningful life"²⁹. Through gathering, the thing is what unites meaning together with human care, and thus allows for the world to be disclosed to humans³⁰.

This implicates architecture directly in the fundamental act of existence that ontologically distinguishes humans from other entities – care – because architecture is in many ways a thing, a confluence of things, a gathering of things which in turn gather meaning and yield world-ness³¹.

Shirazi defines the Heideggerian thing in his framework of an architectural phenomenology: "a thing 'things', ... and 'worlds' the world. A work of architecture, as a true thing, gathers [the world], preserves it, and establishes a place by which true dwelling becomes possible"³².

Heidegger himself states that "things, which as locations that allow for a site, we now

* This analysis of objects is familiar to architectural discourse, but usually from the source of Bill Brown's influential "Thing Theory" – an extrapolation upon the Heideggerian concept. Brown's distinction – that objects are objects, but once broken, become things – is helpful to bear in mind, but for this essay, Heidegger's original framing which focuses on the handed-ness of objects themselves is more useful. Because of this, the word "thing" is used in the strictly Heideggerian sense within this essay, rather than Brown's – and is used interchangeably with "object".

anticipatedly call *buildings* ... because they are created through the erecting of structures”³³.

Taking architecture as a “true” thing, it follows that architecture must retain the same fundamental property of handed-ness as all other things – the primary property through which we understand things in the structure of care.

Thus material world-things like architecture impact the experience of human existence specifically through the structure of care – via the ready-at-handedness/unready-at-handedness of the architecture itself.

Returning to our revised model of disability (see Figures 3 and 4), we recall that a key component is the material impact of structures and its effect upon the phenomenology of disability; Heidegger provides us the precise mechanism by which this takes place. Through Heidegger, we understand that the existential experience of disability (and thus disabled-ness itself) is caused directly by the constant, unending flow of unready-at-handedness that the disabled body confronts. What else then, is a common staircase to me when I am in my wheelchair – if not a broken hammer?

Merleau-Ponty’s body

But as critics of the social model have pointed out, the world surrounding the body is only part of the equation.

Here, phenomenology still offers us a useful framework, but we must turn to Merleau-Ponty – a post-Heideggerian, who addressed the latter’s conspicuous and oft-criticised lack of attention to the body itself³⁴. Heavily influenced by Heidegger and Husserl’s phenomenologies but also by the increasingly influential French psychoanalysts contemporary to his generation,

he made the body the central focus of his phenomenological framework of human existence – stating that “the body is the vehicle of being of being in the world ... [the] body is the pivot of the world”³⁵.

Merleau-Ponty’s core treatise is that the body is the site of being and is marked by its dual constitution: as the vehicle for humans to relate to objects through care, but also as an object in and of itself³⁶. This dual quality greatly affects being itself, as bodies ‘body’ forth through the world; it is the constant brink of awareness that nevertheless never becomes actual consciousness of this duality which marks being.

He states that “the spatial determinations of the perceived, and even the presence or absence of a perception are not effects of the factual situation outside of the [body], but rather represent the manner in which the [body] comes to anticipate stimulations and in which it relates to them”³⁷ – explicitly locating interactions with things-in-the-world as being a product of sensorial mechanisms within the body rather than material facts outside of the body. The “anticipation” to which he refers he further elaborates on as the presence of an effective “habitual body” which overlaps with but is distinct to the “actual body” – the habitual body being our preconceptions of senses, muscle memory, and embodied expectation of experience rather than a strict awareness of the body as a machine-like combination of organs and parts. Accordingly, Merleau-Ponty explores the relationship between habitual and actual in different forms and contexts.

In a somewhat comparable spirit to this essay[†], he illustrates his general proposition for the body’s role in being – as well as its intrinsic

[†] This is meant somewhat ruefully. Whilst Merleau-Ponty’s methodology – taking the disabled body as the exceptional subject with which to prove a generalisable rule – does parallel the methodologies employed in this essay, his attempt was deeply problematic for familiar reasons to many 20th-century thinkers, and particularly those French ones who wrote during the height of psychoanalysis’ intellectual inquiry. His assumptive knowledge of the disabled person’s experience, the condescension of the psychoanalyst, the objectification of disability – are all grounds for just and valid criticism. His characterisation of disability falls squarely in the classical medical model – being an inferior version of the ‘normal’ body – and he uses morally evocative characterisations such as ‘mutilation’ to refer to disability and injury. I hope to at least partially depart from it in my work by centring any such claims around my own lived experience – the one bodily experience over which I have any authority.

dualism – by using the twin cases of the amputee and the asomatognostic*. Put more didactically, he effectively does to the body what Heidegger did to the hammer.

For Merleau-Ponty, both disabilities present a case of being which defies both physiological explanation and psychological explanation – because both explanations (separately and together) require the assumption of an “objective world where there is no middle ground between presence and absence”³⁸. He points out the immediate paradox: “it is only because [the asomatognostic patient] knows where he risks encountering his deficiency that he can turn away from it ... [he] puts his arm out of play in order not to have to sense its degeneration, but this is to say that he as a preconscious knowledge of it”³⁹.

Merleau-Ponty then sets up his proposition of what he calls the “habitual body” and the “actual body” – locating the body-as-experience inside of habit and locating the body-as-object outside of that. As put by Edward Casey, habit is “knowledge by acquaintance in the form of *familiarity*”⁴⁰; to Gilbert Ryle, it is “a matter of knowing how rather than knowing that”⁴¹. Existence thus happens on two levels: this precognitive perception of our own body which encases the expected perception of the world around us, and then our body which actually receives stimulus both from our brain and the outside world. He articulates the phenomenology of disability – the mechanics of what makes a body feel disabled for reasons internal to the body itself, rather than external – as the disjoint between our habitual body and our actual body.

There is plenty to critique here. For one, Merleau-Ponty only seems to address disability that is a result of injury – and arguably for someone who was born with a disability, who never developed a “habitual body” that worked according to able-bodied expectations, this

framework falls flat. Advancements in neuroscience within the last hundred years no doubt would also have a total reframe of his distinction between “physiological” and “psychological” that he then proceeds to reject⁴².

Nevertheless, the core phenomenal proposition – that disability as experienced inside the body is located in a sense of disjointedness between what one would expect to feel and what one actually does. Secondary literature also points out crucial ramifications of the “habit” in culture that are particularly relevant for our line of enquiry. Casey notes that many of our habits reflect us as members of larger communities⁴³, and that the body incorporates “cultural patterns into basic actions ... culture [thus] carried into places by bodies ... [and the] body inhabiting places that themselves are culturally informed”⁴⁴.

Thus the actions and movements of the body itself are heavily related to both the being of place-inhabiting and being of place-making; Merleau-Ponty addresses this link between the body its surroundings explicitly by likening the phenomenological body to potential action and power. To him, the body is “the power of determinate action whose field and scope I know in advance”, and that “we never move our objective body, we move our phenomenal body, and we do so without mystery since it is our body as a power ... that already rises up towards the objects to grasp and perceive”⁴⁵.

Manipulability is thus a precept of existence, and of being – as is power. He states that “I can thus – by means of my body as a power for a certain number of actions – settle into my surroundings as an ensemble of *manipulanda* ... my body [is] the power of determinate action whose field and scope I know in advance, and my surroundings [are] the collection of possible points for this power to be applied”⁴⁶ – inadvertently giving a definition of ability itself.

* Merleau-Ponty uses the term “anosognosia”, which today is commonly understood as the generalised condition in which a patient with a disability is unaware of having it. However, the specific manifestation which he discusses – a person with a paralysed limb who denies the limb’s existence altogether or attributes its ownership to someone else – is considered a specific case of anosognosia called asomatognosia. I have used the latter term for clarity’s sake.

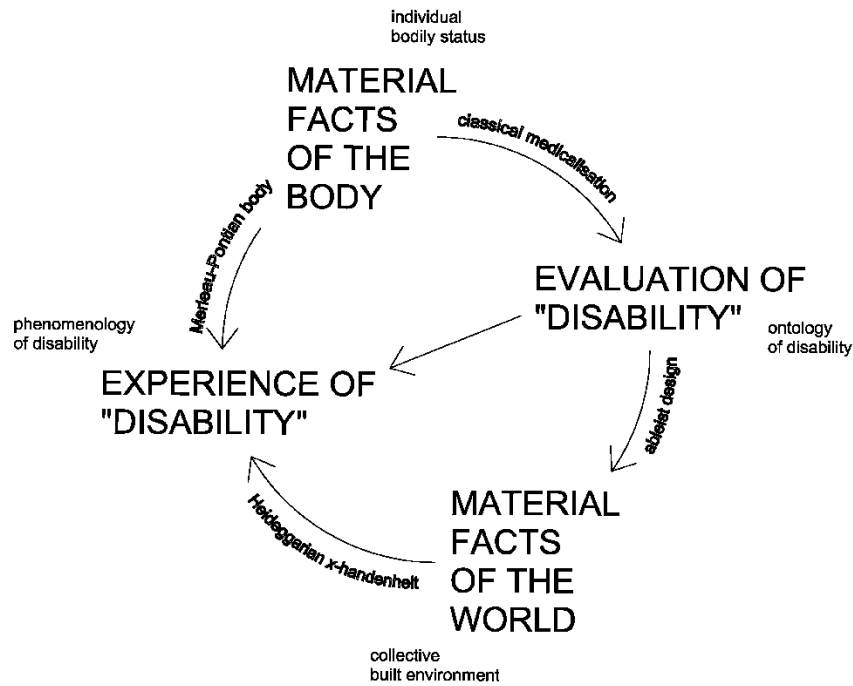


Figure 4: Diagram of disability, showing both the conditions - phenomenology of disability, ontology of disability, medical reality, built reality - and the mechanisms that relate these conditions to each other to create disability

Architecture's direct influence here is smaller – this section simply completes the analysis of a framework for understanding disability under the lens of phenomenology with rigour. But it is instructive: it is a mandate for architecture to centre the body, and to centre *manipulability* of objects along with their convenience, accessibility, or other form of ready-at-hand-ness.

We see that there is a threshold where the object ends and the body begins, and at that threshold is readiness, manipulability, and habit. The threshold can be flexed and negotiated from two directions: the body, which can undergo medical treatment, rehabilitation, technological intervention, or otherwise; and the design of objects and surroundings that can or cannot allow for the creation of a “habitual body” that aligns with the actual body.

Building, dwelling, being

Edging on these concepts of manipulability and power is the looming concept of agency, which is a growing focus of disability studies⁴⁷. Here, we go back to Heidegger to examine how contemporary conceptions of agency work

within a phenomenological framework – and find that it is deeply relevant to architecture.

In *Building, Dwelling, Thinking*, Heidegger states that dwelling is a fundamental mode of being – and that building is one of the primary extensions of dwelling⁴⁸. He is careful to explicitly rule out the literal architectural aspect of “building” – this no doubt being the source of much of the criticism taken by architectural interpretations of phenomenology⁴⁹ – saying within his second sentence that “this thinking about *building* does not presume to discover architectural ideas ... this thought experiment does not represent *building* from the point of view of architecture or technology, rather it traces *building* back to the realm to which everything that *is* belongs”⁵⁰.

We thus take building in a more abstract sense of creating that in which we dwell, as Heidegger indicates when he says “to build is in itself already to dwell”⁵¹ – focusing on the deeply entwined relationship between building and dwelling explained by Tobias Holischka as “the relation of man to his being at the place where he builds and thereby makes the world inhabitable”⁵².

We take dwelling, meanwhile, as what Heidegger succinctly declares “the manner in which mortals are on the earth”⁵³. Dwelling is the fundamental act of being that in the same gesture gives rise to building; “dwelling is the activity of producing the world not in the sense of creating new, previously unknown elements, but in *locating* the world by rearranging the existing” and thus has a fundamentally spatial aspect⁵⁴. This reciprocity between building and dwelling is rooted in his assertion that “*dwelling* itself is always an inhabitation among *things* ... dwelling keeps the [world] [▲] in *things* among which mortals reside”⁵⁵.

Thus building is dwelling is being; dwelling and being taken in the literal sense, and building being taken in the able-centric sense that buildings are a product of the significations and rearrangements of “man”. Heidegger, of course, has an entirely flawed conception of “man” – and not least because the idea of any universal “man” of humankind has been thoroughly dismantled by contemporary scholarship.

But his observation is still useful for our framework: from a phenomenological standpoint which places the structure of care at the centre of *Dasein*, that humans practice being through the act of dwelling and that there is no dwelling without building. We see that there is a fundamental mode of being – dwelling – which is partially inaccessible or at the very least cheapened because we the disabled body are unable to build; we are unable to make the surrounding *things* for ourselves amongst which true *dwelling* can be truly done.

To truly be included in the act of “building” and thus replete in our being-as-dwelling – or, in more standard terms of disabilities studies, to have agency over our lives – the disabled body must factor into the scope of design. By being

excluded from the image of humanity in the architect’s eye, Heidegger’s analysis implies that the fundamental mode of our being itself – dwelling – is being impugned upon.

Recalling previous passages, we emphasise again that the ontological difference shields us from the bleakest of outcomes – it is impossible for our being to be impugned on so deeply that it is an inferior form of being to “normal” being, thanks to the mechanism and structure of care and *Dasein* – but the next-worst outcome is still in play. From the standpoint of social construct and what Abrams earlier called “cultural distributions of personhood”, the disabled body effectively does not exist under the gaze of architecture – or the world as *built* by the *dwellers* of humanity.

Here, we see the true power of architecture within the scope of ontology – that it has the very power to shape what disability *is*, what humanity *is*, and what deserves to exist (or not exist) in the scope of cultural distribution.

Therefore we do not ask architecture to *improve* the experience of the disabled body – we ask architecture to help alter the very nature and definition of disability itself.

In brief, we have found that architecture needs to do three things:

1. Create a material reality which is ready-to-hand for the disabled body
2. Understand the role of the body itself in existence and the role of habit and manipulability
3. Give agency to the disabled body and allow it to build

It is in the following and final section that we use these precepts alongside the analysis and framework laid down, to guide a true-blooded design inquiry and redefinition of architecture’s scope and responsibility altogether.

▲ The actual quote is “fourfold”, a Heideggerian concept of world that this paper does not have the scope to properly address in part because of its unique esoterism bordering on mysticism; the four are sky, earth, divinities, and mortals. Some of Heidegger’s textual definitions of dwelling rely heavily on invocations of the fourfold. However, for the purpose of this paper, I have used supporting secondary literature to excuse a slightly less hermeneutic analysis.

Echoing Merleau-Ponty a final time, who used the exceptional cases of the amputee and the asomatognostic to elucidate a wider point on phenomenological existence – we show that if architecture is able to have such ontological power over disability, it follows that it does over wider personhood as well. Intuitively, we know that architecture – canonical, socially-validated, discursive architecture – has enshrined the existence of the most privileged throughout history; the framework outlined here gives light to *how* and *why* this has happened, and hints at what is needed to expand that ontological validation to more than Heidegger’s “man”.

Crippling architecture

This final section explores some initial inquiries into an ontologically-impactful architecture. It seeks to reframe the currently deficient framing of architecture and disability away from ADA – acknowledging that whilst this landmark piece of legislation has of course afforded greater rights to the disabled, especially in public space, it has had very little impact on the cultural practices within architecture itself. In essence, it suggests not overarching rules for design, but examples of design itself in the most generic, ‘unpolitical’ sense.

In part because of the desire to move away from the ADA conversation, but also in light of our discoveries around phenomenology and being, we focus on private, domestic space. On dwelling space. For at a most basic level, it is undeniable: public space provides all sorts of challenges of compromise, universality, standardisation, and social responsibility, and thus has the oft-exploited but still inescapable limitation that it cannot be all things to all people; but when it comes to private space, there is theoretically no excuse. There is no immaterial reason why the sanctity of someone’s home should not be perfectly ready-at-hand to them.

What, then, is a ready-at-hand home that unites the habitual and actual body? Our first hint comes from Koolhaas’ Maison a Bordeaux,

currently the only canonical project which truly attempts to treat the disabled body as a design motivator. He intervenes at multiple scales – the round hand-crank window, the room-scale lift⁵⁶.

The following explorations similarly feature different levels of scale: namely the hammer, the body, the home, and the community aggregate. These in turn suggest new morphologies based on the body, as well as new typological additions to the existing canon; as noted, these studies conscientiously centre the wheelchair body.

The scale of the hammer

At the scale of the hammer we have architectural features that deal with the earlier-established trait of *manipulability* – things at the scale of the arm, hand, and eye. Particularly in recent decades, architectural condescension to the smaller and interior scale of design has rightfully receded; great attention is now paid to the design of these so-called ‘details’, and this scale in particular contributes to this wider conversation in the discipline.

In the wheelchair-dweller’s dwelling, we expect assumed eye level of architectural features – windows, fixtures, shelves – to exist around 48” from the floor. Manipulable fixtures such as door handles, light switches, railings, and appliances exist between 30”-36” from the floor. Less obviously, the morphology of assumed components also changes. The very concept of “railing” as a separate element unto itself belies an assumption of occasional or situational use; an addendum to “wall” *as needed*.

By eliminating this distinction, we arrive at a new morphology of wall:

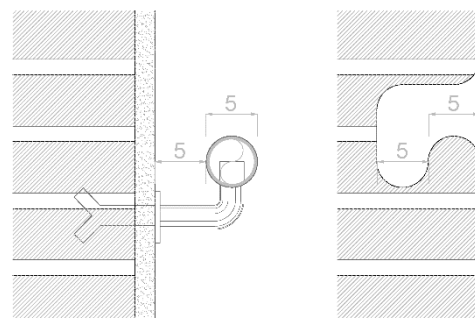


Figure 5: Typical detail for ADA-complaint wall-mounted railing (left) and integrated wall-as-railing (right)

The scale of the body

Reach ranges from a wheelchair are vastly different, and rely on an entirely different set of variables. Not only are fewer parts of the body allowed to participate in extension – leaning forward or to the side is restricted, turning around is an entirely different proposition on wheels, vertical extension or contraction is a stricter range – but there are added variables to contend with. The volume of the wheelchair and its various parts as new parts of the “body” – the foot rests determining the distance from eye-to-wall, the arm rests determining how close one can get to countertops or sinks, the wheels precluding the option of having one’s back truly against a wall – must also be contended with.

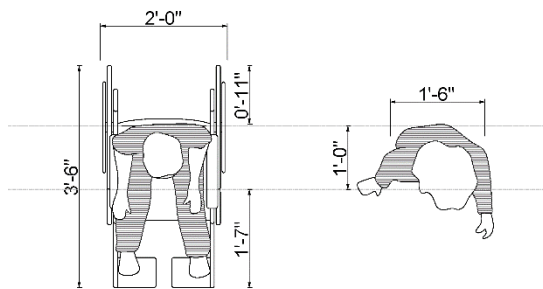


Figure 7: Two forms of the human body, dimensioned

Again, there is a line of questioning that asks us to undermine existing assumptions of what is what it is, and why – some more obvious than others. Examining the window, we must look to its function in terms of the phenomenology of the body to gain insight: in addition to its passive functions of providing natural light and a sense of locational context to the inhabitants of a room, it also serves the active function of ventilator, and of viewport.

Immersion is acknowledged as a distinguishing factor for “enjoying the view”; wall-to-wall windows that allow for ease of immersion at greater distance are common for this very reason. For a person in a wheelchair, however, accessing this immersion – getting their face up against the glass, to put it in practical terms – is impossible or at very least extremely

uncomfortable because of the dimensions of their wheelchaired body.

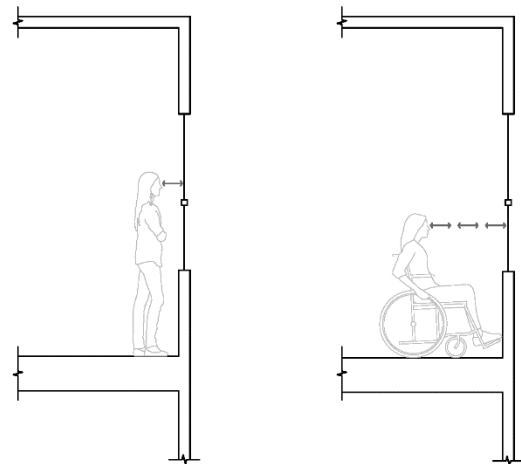


Figure 6: Difference in visual immersion for window viewings between different bodies

The construction and profile of the window – parallel to the standing upright form – quickly can be recognised as nonsensical for the wheelchaired dweller. We extrapolate an intervention into this profile through a window framing technology that includes the framing of an additional ‘toe-box’ element, understanding that this additional element is necessary for the window to serve its full function and thus part of “window” and “windowness”.

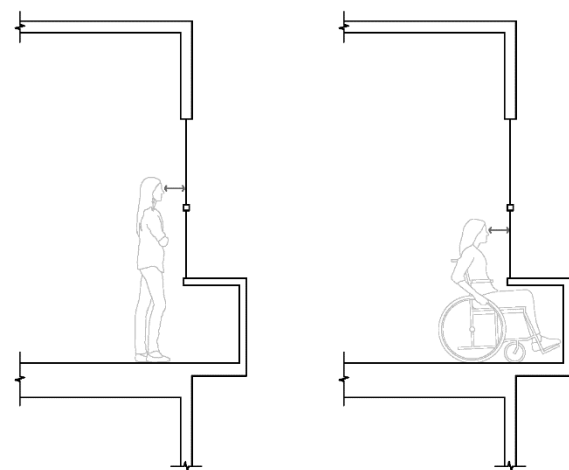


Figure 8: Window design for multiple bodies' visual immersion

Given the relative permanence of the sitting posture, questioning the wall profile in the opposite direction to the window profile also occurs naturally. Particularly in the bathroom,

where the body must assume the same seated shape – but without the support of the wheelchair in the cases of using the toilet or bathing – walls may be shaped to aid this.

This design moulds the wall into a continuous bench that houses the toilet and stretches into the shower. By creating an additional surface, the relatively tediousness transferring from chair to toilet or shower is mitigated; with a surface for arms to hoist against, and “bench” space to hoist onto before moving laterally in either direction, this operation is considerably simpler.

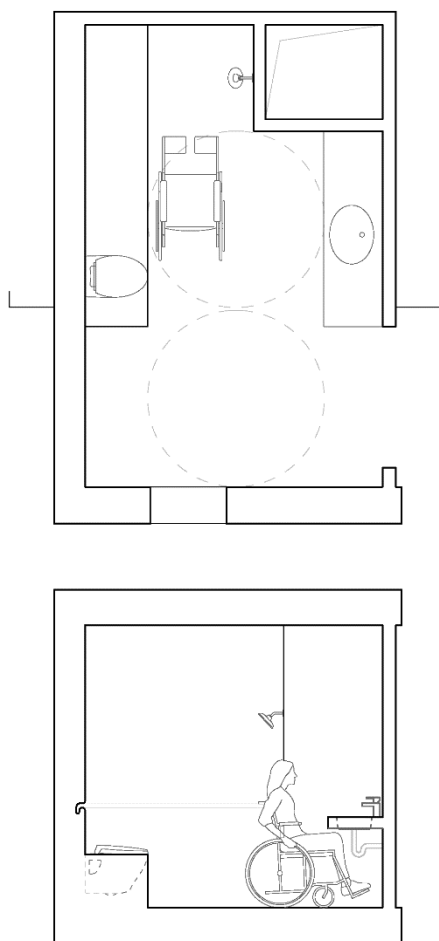


Figure 9: Bathroom walls shaped for wheelchair use

The scale of the home

At the scale of the home – or in other words, the aggregate of rooms, and the general logic of circulation – little work has been done to question organisational assumptions. Adaptive-style thinking has typically yielded homes which

are retroactively fitted with fixtures to aid use by different bodies. Yet conceptual developments equivalent to the shift from the hallway-and-room home to the free plan are hidden within the wheelchair body’s specific phenomenology.

Stairs, the ultimate unready-at-hand “thing” in circulation, clearly have no place in the wheelchair dweller’s home – and this comes with natural extrapolations.

The first implication for organisational type is thus relatively straightforward: embracing a “pancake” type of organisation, and examining various circulation strategies accordingly.

The flatness of a pancake strategy already has well-explored implications; the depth of the plan requires the inclusion of punctures equivalent to skylights or internal courtyards. If the organisation is linear, it must be sequenced, perhaps from most public to most private; in the more likely organisational logic of a free plan type or even a radial one, clusters of related rooms might arise (kitchen/dining, bedroom/bathroom, and so on).

But specific to the wheelchair body is the wheel – which causes differing assumptions in relative speed and distance that the body can travel. In this respect, certain wheelchair bodies (that do not have chronic pain or similar barriers) are considerably more “able” than the upright body – particularly in the case of a powered wheelchair, but even in the case of a manual one – going further and faster with a similar amount of energy expended.

Distances might be thus measured in wheel circumference lengths, and programme accordingly dispersed – marrying well with the requirement for courtyards and light wells. Given the greater assumed distances travelled, minor differences in topography could also be accommodated with 1:20 ramped hallways.

Convex corners also become particular points of irritation; wheels naturally desire rounded corners as we see on roads.

However, any pancake type proposition is contingent upon the availability of land.

Significantly more interesting is the second extrapolation of a stairless home: the new logic of a vertical hallway.

Even the largest, most extravagant homes tend to be no taller than three stories – a testament to the tiresome quality of stairs even for the able-bodied, after a point. But for a wheelchair body – which, in the current world, must retrofit some kind of mechanised lift either in the form of a stair-side chair lift or elevator – the introduction of a *necessary* mechanised lift removes this three-storey assumption. In other words: if you’re already going through the trouble of installing an elevator into a home anyway, there’s no reason why it can’t be as tall as it likes.

This introduces an interesting vertical axis of circulation. If we imagine the most basic form of single-loaded room aggregation – one of the most efficient forms of organisation – a simple axis rotation yields the same organisation vertically.

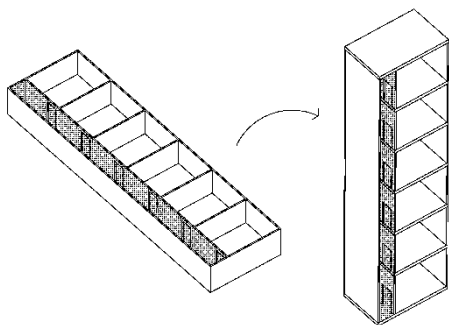


Figure 10: Elevator-as-hallway circulation type

In this elevator-as-hallway scheme, an extremely efficient form of pencil-like organisation is achieved. Recent advancements in elevator technology allow for small, quick elevators inside the home. More, the phenomenological framework above allows us to identify precisely where able-bodied assumptions come into play: any able-bodied perception of “inconvenience” of elevators in the home, or of how long it might take to use an elevator to get from one room to another, are entirely irrelevant to the wheelchair body. The wheelchair

body exists within phenomenological space – in a state of ‘being’ – that *must* contend with elevators. In addition, the phenomenological definition of time is instructive; to the body that moves to the schedule of crip time rather than abled time – even moving between rooms that are not directly adjacent to each other becomes easy and efficient. The existence of a discomfort and sense of disproportion suffered by the able-bodied – a parallel discomfort to that suffered by the wheelchair-user in all other built spaces – is if anything testimony to the authorship of the dwelling. It is proof in many ways that it was built to dwell to be in their own body, rather than the upright ghost of someone else’s.

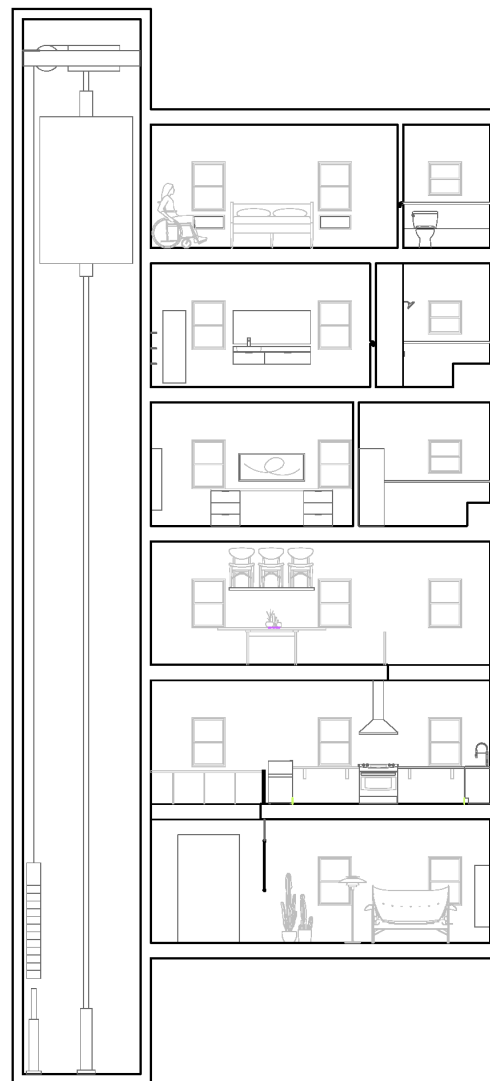


Figure 11: Stacked house - turning the specific needs of wheelchair circulation into an organisational type that is efficient both in terms of footprint and circulation

A linear sequence of public to private may still be appropriate. In the study presented, living, cooking and dining are situated on the lower floors, while sleeping and bathing are at the top; a study mitigates in between. Relative area from room to room may also differ according to need; in this instance, ample room is given to dressing in the form of a roll-in closet, but a different user might allocate the space according to their need.

Regardless of the particulars, this stacked arrangement has the advantage of allowing for rooms to increase in typical area to accommodate the footprint and turning circle of the wheelchair body while still keeping the overall footprint of the home smaller than even the traditionally slim terraced house – thus in some part making up for its increase in height.

The scale of the community aggregate

Scalability of any disabled-built dwelling is challenging given the variance between differing needs of differing disability profiles. This is made all the more challenging by the absence of flexible types with which to work with in the first place, and the prevalence of adaptive thinking. Creating purpose-built structures has its own flaws; the owner of Bordeaux House infamously passed away only three years after it was completed, leaving behind a house with such specific features that it was difficult to find a next owner⁵⁷.

Lower-profile examples have suffered similar fates. The Grove Road project in Nottinghamshire spearheaded by married couple Maggie and Ken Davis who, after suffering caretaker abuse in disabled hospices, created a small collective of two-level homes purpose-built for wheelchair users wanting to live relatively independently – the second level was for live-in assistants, while the first was entirely wheelchair accessible, but one of their learnings was that they *overestimated* the level of assistance and care they would need in a truly accessibly-designed home⁵⁸. The project, while a small-scale triumph for disability rights in England at the time, was unable to be maintained long-term; despite great

interest both locally and internationally, and a long waitlist at its peak, its location and other funding factors ultimately resulted in closure⁵⁹.

The following design experiment at aggregate scale – a re-thought terraced house – bears several factors in mind accordingly, directly related to the typology of housing it engages with. Firstly, in the terraced house it finds an urban, high-density type of housing as reference point, asking the open question of whether it is actually easier for disabled bodies to live outside of the city – the current status quo assumption.

While this is born of very real challenges including high cost of living and lack of accessibility in city infrastructure, the hypothetical advantages are plentiful: a higher number of people with common disability needs in accordance to population density; a wider homeseekers market to mitigate the repurposability issue with Bordeaux and Grove Road if truly necessary; a diversity of job industries to allow those with accessibility needs a choice of occupation they often lack access to; greater social links to combat isolation; in general a liberal-leaning local polity who are likely to be more supportive of disabled rights; and quite pragmatically, superior hospitals and general healthcare.

A second factor addresses the cultural aspect of type, and with it the implications for habit and being. Particularly with the home, comfort and familiarity are inescapable needs – and as current architectural phenomenology notes, particularly in the cases of Pallasmaa and Frampton⁶⁰, there are strong arguments for critical regionalism and similar discourses of design.

In a different arena, Britain again serves as a cautionary tale; exceedingly well-intentioned efforts towards social housing from the post-war era led to unmitigated consequences, in some part due to architectural flaws and poor planning, but in other due to the stark contrast in architectural *style* that these new builds introduced and inadvertently sentenced lower-income households to⁶¹. The resultant stigma –

which saw vicious classist structures pre-existing in Britain suddenly architecturalised into the superior ‘traditional’ (Victorian, Georgian, etc) and inferior ‘modern’ (Brutalist, Reconstructionist, etc) categories of style⁶².

For the disabled community, a similar level of alienation is a huge looming threat. As the movement is so sensitively attuned to the very concept of ‘normalcy’ – treading the line between wanting frank acknowledgement of their disability (rejecting outdated notions of ‘special needs’ or ‘differently abled’) whilst still rejecting classifications that needlessly exclude them from any semblance of normalcy and belonging just because of their condition – having an architecture which is similarly attuned to this is vital. Put in terms of the phenomenological framework outlined above, it is a question of habit and expectation – a collective bodily expectation of what the home looks and feels like – as well as a question of *belonging* to the ontological group of those who ‘build’, not just creating a separate one altogether.

The perfect type is thus at once compatible with those aspects and innovations stemming from the wheelchair body, while also offering a cultural frame of reference so as to avoid the architecturalisation of isolation and othering.

Between these factors, terraced housing is an excellent candidate. Taking the example of the typical “two up two down” house so common in London (and with typological cousins around the world, from Shanghainese lane houses to New England brownstones), it is immediately apparent – and especially phenomenologically, when one visits such a house and experiences its unique and often claustrophobic scale – that it follows a single-loaded, linear organisation split in two by a stair. When the plans are laid out and the main circulatory vein highlighted, the single-loaded strip diagram becomes immediately apparent:

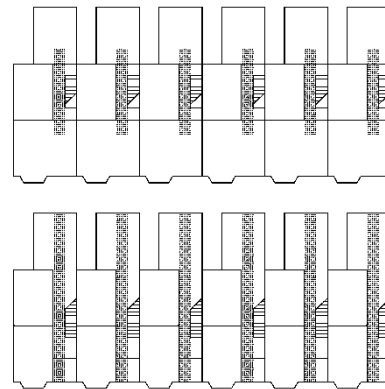


Figure 12: Typical “two up two down” terraced house in plan, showing an effectively single-loaded circulation (shaded) cut in two parts and stacked

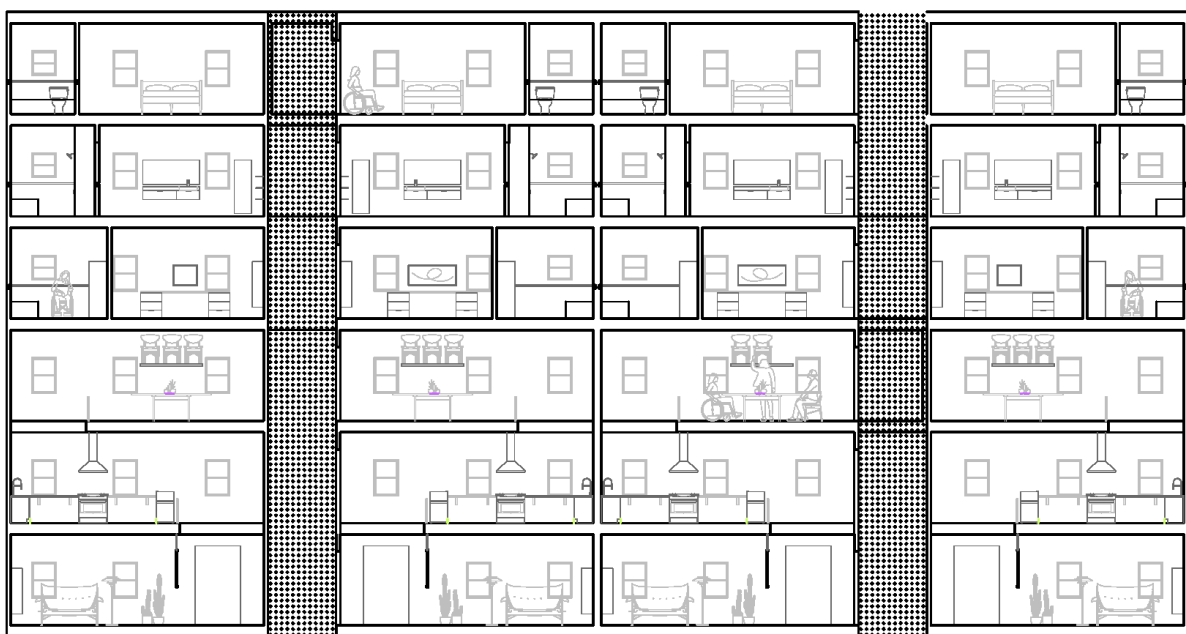


Figure 13: New terraced house in section, showing an elevator-based vertical single-loaded circulation (shaded)

Returning to the analogy of the axis-rotated hallway – the elevator-as-single-loaded-corridor vertical house – we see a certain diagrammatic similarity between the traditional terraced house in plan and an aggregation of the vertical house in section (see Figures 12 and 13). While the number of floors clearly differs, the footprint of each unit itself is similar – resulting in an easier fit, particularly within a dense urban context which is unaccommodating to large plans.

With historically familiar typological roots and friendliness to a more urban context, the unit is also relatively flexible to different site conditions, making it potentially deployable at an atomised scale of multiplication rather than the classical aggregation.

But ultimately, it provides the possibility of a ready-to-hand, body-informed, and disability-authored architecture for the wheelchair dweller. And in that – through the literal and concrete architecture itself – it changes the fundamental phenomenology of disability, expanding it to dwelling and building. It does not cancel out disability itself – for no architecture has complete power over the body, and our revised model of disability acknowledges the material reality of bodily status and pain – but it does alter its manifestation, definition, and positioning of disability within the larger context of human *being*.

The salience of its impact brings a final point to bear: architecture’s inarguable hand in the ontology of being. That architecture has been able to exclude disabled bodies from such a fundamental mode of being as dwelling is testimony to how well it has served the able-bodied – not only in being a creation in the able-bodied’s own image, but in defining able-bodiedness and thus the historic understanding of humanity and worth as well. Architecture can perhaps thus lay claim to having a hand in such lofty questions of existence and being – core questions that have occupied thinkers for as long as we have built. That architecture could then expand this ontological imperative – to deeply impact the existence and definition of other groups – is a serious mantle.

¹ Heidegger, Martin. “Bauen, Wohnen, Denken”, 1951. (trans. Bobeck, Adam).

² Pohl, Dennis. “Heidegger’s Architects”, *Environmental & Architectural Phenomenology Vol 29*, 2018. 19.

³ Feingold, Elliot. “Ontogenetic Difference: Heidegger and Nietzsche”, *Pratt Journal of Architecture*, 1988.

⁴ Abrams, Thomas. *Heidegger and the Politics of Disablement*, 2015.

⁵ Shirazi, Muhammad Reza. *Towards an Articulated Phenomenological Interpretation of Architecture*, 2014.

⁶ Pohl, 2018. 19.

⁷ Shirazi, 2014.

⁸ UPIAS, *Fundamental Principles of Disability*, 1975.

⁹ Hughes and Paterson, “The Social Model of Disability and the Disappearing Body: Towards a sociology of impairment”, 1997. 326.

¹⁰ *Ibid.* 326.

¹¹ Glackin, Shane. “Grounded Disease: Constructing the Social from the Biological in Medicine”. 2019. 259.

¹² Heidegger, Martin. *Being and Time*. Trans. Stambaugh. 1996.

¹³ *Ibid.*

¹⁴ *Ibid.*

¹⁵ Abrams, 2015.

¹⁶ *Ibid.*

¹⁷ Kafer, Alison. *Feminist, Queer, Crip*, 2013.

¹⁸ Abrams, 2015.

¹⁹ Abrams, 2015

²⁰ See Sara Ahmed’s *Queer Phenomenology*, 2006, and Kevin Aho’s *Heidegger’s neglect of the body*, 2009 for two seminal works reappropriating Heidegger’s phenomenology.

²¹ Abrams, 2015

²² *Ibid.*

²³ *Ibid.* 32.

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- ²⁴ Feingold, 1988.
- ²⁵ Abrams, 2015. 3.
- ²⁶ Heidegger, 1996.
- ²⁷ Heidegger, 1996.
- ²⁸ Heidegger, 1996. 157.
- ²⁹ Abrams, 2015.
- ³⁰ El-Bizri, Nader. "Phenomenology of Place and Space in our Epoch: Thinking Along Heideggerian Pathways", *Phenomenology of Real and Virtual Places*, ed. Champion, Erik. 2018. 126.
- ³¹ Ibid. 126.
- ³² Shirazi, 2014.
- ³³ Heidegger, 1951.
- ³⁴ Abrams, 2015.
- ³⁵ Merleau-Ponty, Maurice. *Phenomenology of Perception*, 1945. Trans. Landes, Donald A. 2012. 111 (line number).
- ³⁶ Bredlau, Susan. "The Place of Others: Merleau-Ponty and the Interpersonal Origins of Adult Experience", *Phenomenology of Real and Virtual Places*, ed. Champion, Erik. 2018. 191.
- ³⁷ Merleau-Ponty, 1945. 103.
- ³⁸ Ibid. 110.
- ³⁹ Ibid. 109-110
- ⁴⁰ Casey, Edward S. *The Fate of Place*, 1997. 232.
- ⁴¹ Ryle, Gilbert. *The Concept of Mind*, 1949. 16-20.
- ⁴² Carman, Taylor. "Foreword", *Phenomenology of Perception*, Trans. Landes, Donald A, 2012. XV.
- ⁴³ Bredlau, 2018. 192.
- ⁴⁴ Casey, Edward S. *Getting Back Into Place*, 1992. 336.
- ⁴⁵ Merleau-Ponty, 1945. 135.
- ⁴⁶ Ibid. 135.
- ⁴⁷ See James Berger's "Rethink: Agency, theory and politics in disability studies" (2019), Najma Al Zidjaly's *Disability, Discourse and Technology: Agency and Inclusion in (Inter)action* (2015), and Kevin Timpe's "Executive Function, Disability and Agency" (2016) for a wide array of approaches to unpacking agency in the context of disability
- ⁴⁸ Heidegger, 1951. 1,
- ⁴⁹ Pohl, 2018. 19.
- ⁵⁰ Heidegger, 1951. 1.
- ⁵¹ Ibid. 3.
- ⁵² Holischka, "Heideggers Building Dwelling Thinking in terms of Minecraft", *Phenomenology of Real and Virtual Places*, ed. Champion, Erik. 2018. 170.
- ⁵³ Heidegger, 1951. 4.
- ⁵⁴ Holischka, 2018. 171.
- ⁵⁵ Ibid.
- ⁵⁶ Futagawa, Yoshio, Koolhaas, Rem, and Office for Metropolitan Architecture. *OMA : Villa Dall'Ava, Paris, France, 1985-91 : Maison à Bordeaux, Bordeaux, France, 1994-98*. 2009.
- ⁵⁷ Böck, Ingrid, and Koolhaas, Rem. *Six Canonical Projects by Rem Koolhaas*. 2015.
- ⁵⁸ Davis, Maggie and Davis, Ken. *To and From Grove Road: independent living, disabled people, social care, activists fighting segregation and abuse*. 2019.
- ⁵⁹ Ibid.
- ⁶⁰ Shirazi, 2014.
- ⁶¹ Long, Paul. *Only in the Common People: The Aesthetics of Class in Post-War Britain*. 2008.
- ⁶² Ibid.