

Opening up Bodyspace: Perspectives from Posthuman and Feminist Theory

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Introduction

The field of architecture has long been dominated by the human body as the measure of things.¹ Situated in the single room, the home, the neighborhood, the city and moving on to larger and larger scales, the human body takes centre stage in the design process. As several scholars have critically noted, this is the normalised and normative white male body, as exemplified in Le Corbusier's Modulor or in Ernst Neufert's still routinely used handbook.² It is a whole and closed body surrounded by and enclosed in spatial spheres that are firmly placed in a pre-existing Cartesian universe.

Recent theoretical discussions have questioned this implicit understanding of the body as a closed and impenetrable unity, along with the wider rejection of anthropocentrism, and the role and limits of design.³ Beyond these academic debates, artistic and architectural practices have offered potent images of bodies in space. The latter tentative explorations through design open up a broad field of possible interpretations; too broad perhaps, as they usually lack a coherent theoretical underpinning. Meanwhile the notion of the body as an almost sacred and intact locus of agency and the self persists.⁴ What would it mean for bodily space and corporeality, if we were to replace the whole and closed, Cartesian body with a more fluid and dynamic one? Which terms have been introduced to describe alternative body spaces, and can they be inserted in other disciplinary discourses? What are the consequences for design and what new

bodily formations, entanglements and alliances are we confronted with? As our powers of shaping and transforming all spatial scales – from the scale of the body to that of the planet – become clear in what has been called the Anthropocene, these questions become all the more urgent even if they far exceed the scope of this essay.⁵

Confronted with emerging spatio-corporeal paradigms, architects can no longer solely rely on a theoretical canon that has historically 'been deficient in the very tools of self-criticism'.⁶ They must therefore seek inspiration in related discourses in the humanities and social sciences. The main purpose of this essay is, thus, to suggest possible starting points, and speculatively explore a range of conceptual paradigms and their implications for design. Drawing on an eclectic mix of feminist, posthuman and nonhuman debates I will advance four theses for this bodyspace, as an intricate and entangled construct in constant flux. Starting from the thesis that the bodyspace is not a container (as proposed by Martina Löw), I will then explore the notion of the grotesque (traced back to Timothy Morton and Mikhail Bakhtin), reflect on the concept of stickiness (as defined by Sara Ahmed) and speculate on the transformative possibilities of alliances (as developed by Judith Butler). My aim is to show that reading these theses against each other could urge architectural discourse to move forward, while enriching it with potent images, philosophically informed arguments and the potential of transformative action.

Bodyspace is not a container

Martina Löw's widely read and commented upon *Sociology of Space* introduced the German term *Körperraum* (literally 'bodyspace') to deliberately include the body in her wider call for a relational understanding of space.⁷ It is important to understand this composite word (which I adopt here, despite its own limitations) within the scope of this perspective. First, she addresses space as a core concept of sociology, contrary to longstanding disciplinary tradition, in which the German-speaking world especially tended to ignore or marginalise space. Seeking to offer a counter-model to the absolute or static conception of Cartesian space, she develops an approach that expands and consolidates notions of a relational space. In this ambitious undertaking she combines theoretical insights with empirical research and takes into account the micro- and macro-sociological scales by identifying the body as the smallest sociologically relevant spatial dimension.⁸ It is on this scale that her relational theory of space must be put to test to confirm its applicability across different scales.

In looking for a relational notion of space Martina Löw is not alone among social scientists. Her contribution can be summed up in the often repeated and elegantly stated thesis that space is as a relational ordering of living beings and social goods.⁹ Actions such as the placement of things or the positioning of bodies bring about new spatial formations; stable ones that are iteratively reinforced, but also fluid ones that are prone to constant change. Consequently, she argues, space is not a category that precedes the social, no pre-existing setting in which action takes place, but is actively and constantly being reshaped.

Yet how does this understanding of space (which builds upon action-theoretical sociologists such as Anthony Giddens and echoes Henri Lefebvre's work) reflect on the body?¹⁰ In order to approach this

question Martina Löw draws on a variety of sources to weave a narrative of increasingly dissolving bodily barriers, a movement away from a closed, passive, container body to one increasingly open and unrestrained from its skin barrier. In this narrative the body is understood as a specific dimension of space. As such the thesis of a relational ordering of different parts that constitute an unstable and negotiable spatial formation should also apply to it.

Thus, after mentioning some historical examples of bodies in constant exchange with their natural environment, she identifies surgery as one of the developments that resulted in a narrow definition of the bodily boundaries that separate its interior from its exterior.¹¹ To bring internal organs and bodily functions to light through this surgical opening paradoxically reinforces the very boundary of the skin and with it the notion of a closed bodyspace.¹² While this is true for both male and female bodies the latter become (through the fetishisation of the womb) the container par excellence. The process of dissolving this boundary thus requires an exposure and questioning of the cultural practices and power mechanisms through which the closed body has become naturalised. Powerful counter-images with explicit spatial dimensions include the fragmentation and rearrangement of bodily organs, medical practices that prioritise the understanding of the body as an immune system, and discussions on prosthetics and cyborg paradigms.¹³ These corporealities present alternatives to the dominant, closed, container-body.

A parallel reading of Löw's narrative against Georges Teyssot's essay 'The Mutant Body of Architecture' reveals some striking parallels as well as some crucial differences.¹⁴ In Teyssot's explicitly spatial-architectural text, many of the above paradigms such as prosthetics, fragmentation, digitalisation, or cyborg bodies, appear as argumentative steps to create a narrative of the

dissolution of the body. This dissolution is at once a result of incorporation (of instruments, implants, grafts, organs, parasites and imprints) into the body as well as of disembodiment, the transposing of the body into expanding spatial spheres such as cyberspace. While Löw questions the intactness of the human body from the perspective of social theory, Teyssot is more concerned with the fragmentation of the body as an aesthetic and organising principle in architectural discourse and practice. Both authors deal with paradigms that share common genealogies and coexist without fully erasing earlier ones.

Some important underlying assumptions should be highlighted in this argument. To begin with, the composite word *Körperraum* (bodyspace) is a linguistic device and a neologism; in the German text this fact remains unacknowledged.¹⁵ Löw does not further contemplate whether the body is a certain kind of space per definition or if it merely possesses and occupies space. From this point the author moves on to seek further modifiers for this space (container, closed, open etc.). The coinage of the term in the German language is significant, not just because it allows for such composite words to easily form. As Peter Gould has pointed out, the Latin and francophone *space* carries far more connotations of openness and infinity than the more constrained and delimited Germanic *raum* or the old English and old Norse *rum*.¹⁶ Yet Löw's *Raum* is invariably translated as 'space' while the German text retains both meanings; a nuanced distinction that is easy to overlook. Furthermore, the compound word *Körperraum* connotes a spatial but finite entity. While the act of 'opening up' becomes more poignant and tangible, the deliberate merging of body and space – of two ontologically distinct categories in one – and its far-reaching theoretical consequences are obscured.

Additionally, there are two interrelated hypotheses that remain unexplored. The first hypothesis

is based on the theoretical device that Löw calls relational ordering. She reads bodies as a relational ordering of parts,

a concrete, material, animate organization of flesh, organs, nerves, muscles, and skeletal structure which are given a unity, cohesiveness, and organization only through their psychical and social inscription as the surface and raw materials of an integrated and cohesive totality.¹⁷

At the same time she theorises space as a relational ordering of living beings and social goods, which is given a unity through individual and collective explanation and integration processes. The choice of words is significant; by drawing a parallel between bodies and spaces as relational orderings, she reinforces the argument that the bodyspace is fundamentally similar to spaces of larger scales. Bodies just like spaces in general are to be understood as 'processual, relationally ordered systems'.¹⁸

The second, more ambitious hypothesis is based on and expands upon the first. The shifts in the understanding of the body not only mirror, but are indeed closely related to the shifts in the understanding of space.¹⁹ Elizabeth Grosz similarly speculates that historically specific theorisations of corporeality and spatiality (together with subjectivity and temporality) are linked. Concepts of spatiality are experienced through the body, while at the same time the body itself is conceptualised based on a spatial framework.²⁰ Shifts, it follows, are not coincidental; notions of corporeality and spatiality mutually inform each other. While this hypothesis is enticing Löw is careful to point out that different conceptualisations of the body have historically coexisted and overlap.²¹ An unwaveringly linear development would present an oversimplification since especially the concept of open bodies interconnected with their environment, is not new in itself.

Broadly speaking the 'dissolution of the bodily barriers' presents a historical development that can be problematic for body politics, while also opening up new possibilities. This broadly defined openness calls into question hitherto fixed identities, and the gendered hierarchies and power structures that generate them.²² Martina Löw's vocabulary and its twofold emphasis on closedness and openness, container and fluidity, the inside and the outside is specifically chosen so as to weave together perspectives and arguments across a range of disciplines and time scales, while still acknowledging their differences and nuances. At the same time they invoke potent spatial images that feed into the author's main argument for a shift in the understanding of space: from an absolute, static, container space to a dynamic, fluid, relational one.

Bodyspace is grotesque

In the middle of the seventeenth century 'the exposed buttocks of an old woman could invoke a storm, a "bleeding vulva" could influence the weather'.²³ Here agency – or rather instrumentality – emanates from a body and bodily flows intermingled with environmental ones. Rather than a clear separation there is a smooth, unmediated interaction between the body and its surrounding space. Transgressions of social order such as nudity or menstruation threaten to unwittingly summon natural forces, which in turn may destroy physical, built, spatial order. Hence flows between bodies and spaces were seen as constant and unpredictable.

In the beginning of the twenty-first century (well into the era that has been called the Anthropocene) we are confronted with phenomena that are 'massively distributed across time and space'.²⁴ These phenomena vastly exceed the spatial and temporal scales that are most readily associated with the human body but still surround, permeate and become inextricable from it. Timothy Morton has coined the term 'hyperobjects' to describe

phenomena such as climate change or plutonium that are hard to grasp, yet so immediately, urgently and terrifyingly present that they must be granted the ontological status of an object. In his writings a new constant and uncontrollable nexus of interdependences between the body and its surrounding space emerges. As a result I will argue that the bodyspace becomes increasingly grotesque.

Morton offers a compelling, yet nebulous vision of interconnectedness between distinct ontological entities. Ontological boundaries, he argues, are human-made; they are sustained through everyday practice that perpetuates mechanisms of separation. Knowledge is thus critical in questioning them:

For some time we may have thought that the U-bend in the toilet was a convenient curvature of ontological space that took whatever we flush down it into a totally different dimension called Away, leaving things clean over here. Now we know better: instead of the mythical land Away, we know the waste goes to the Pacific Ocean or the wastewater treatment facility.²⁵

Tracing the flow of bodily waste (or rather a blend of bodily waste and other objects forming one mass) through a series of spaces starting with the bodyspace and ending in the Pacific Ocean, Morton argues for a proximity that defies measurable distance in a Cartesian sense. As it cannot be directly experienced this proximity is mediated through socially constructed systems of knowledge. Hence an understanding of these systems is necessary to counteract the still dominant cognitive narrative of closed, intact bodies in well-ordered Cartesian spatial spheres. In this argument Morton performs a series of displacements, which in turn destabilise ostensibly distinct ontological entities. To point out this inextricable interconnectedness between bodies and spaces he repeatedly swaps ontological categories: space becomes an object,²⁶ hyperobjects become surrounding mediums,²⁷

human bodies become indistinguishable from nonhuman ones²⁸ and Nature disappears.²⁹

These ideas resonate strongly with related posthuman and nonhuman discourses.³⁰ Morton focuses, however, not on the theoretical and political imperative of the interdependence and intimacy between bodies and their environment alone.³¹ He moves on to explore its aesthetic dimension. He thereby argues for a new aesthetics, one where the distance between the viewer and the viewed disappears and where 'there can be no background; therefore there can be no foreground'.³² A world consisting of hyperobjects that defy common understanding of spatial and temporal scales cannot be partitioned and framed for aesthetic consumption; at the same time the body cannot be separated from this world and reduced to the consuming gaze. This 'aesthetics of zero distance' reinserts the body with its own materiality in space. This would require a radically different process of design. Morton's contribution in spelling out this argument is crucial. Unfortunately, he offers only a few vague observations on what spatial design in the time of hyperobjects could do.³³

Romanticism and the sublime are used as counterexamples for the aesthetics of interdependence and intimacy that Morton advocates, and which closely echoes the aesthetics of the grotesque as described by Mikhail Bakhtin: an aesthetics of exaggeration and excessiveness eventually culminating in the transgression of the boundary that encloses and delimits the human body.³⁴ By focusing on bodily functions such as 'copulation, birth, growth, eating, drinking, defecation' and bodily protrusions,³⁵ cavities and orifices such as 'the open mouth, the genital organs, the breasts, the phallus, the potbelly, the nose' Bakhtin argues that the grotesque is more than an artistic canon or device for satire and parody.³⁶ Indeed, it is widespread and common in folk culture and it is especially pronounced in the

case of people's assemblies that take place in the margins, or even in defiance of the regulated social order such as ritual spectacles, fairs, carnivals and the like.

Following Bakhtin there are three main attributes of what we may call the grotesque bodyspace: its penetrability and openness,³⁷ its inextricability from the material world, the surrounding space, the earth and finally its processuality.³⁸ The grotesque body 'is a body in the act of becoming. It is never finished, never completed; it is continually built, created, and builds and creates another body. Moreover, the body swallows the world and is itself swallowed by the world.'³⁹

If hyperobjects contain and penetrate human bodies, in the grotesque imagination the world swallows and digests them; in both cases the aesthetic distance between a human subject and its surrounding spatial environment is negated. Here again a series of ontological displacements can be observed at the moment when comic exaggeration turns to transgression, leading to a complete 'swallowing up'. Not only male, senile bodies become pregnant, but bodily protrusions and orifices turn to animals or inanimate things; objects in turn not only symbolise bodily organs but are granted their agency.⁴⁰

Reading Morton (who as a literary scholar has written extensively on grotesque themes in English literature) through Bakhtin, and vice versa, needs some clarification beyond these striking parallels. While for Morton knowledge plays a crucial role in the process of opening up the bodyspace, for Bakhtin this process takes place within the realm of the lived experience in the moments that make an alternative social order possible, such as the carnival. During those distinct situations, the grotesque emerges as an aesthetic principle with subversive potential. If we accept that hyperobjects

are both parts of the lived experience as well as facts that cannot be un-known, rethinking bodyspace in the time of hyperobjects is first and foremost a theoretical and political inevitability. Hyperobjects 'never leave us alone'.⁴¹ They stick to bodies in the process of becoming one, inextricable mass, which in turn means that bodyspace is always and necessarily grotesque.

Bodyspace is sticky

The renewed interest in interconnectedness in feminist and posthuman theory can be seen as part of an endeavour to re-conceptualise and dismantle bodily boundaries. To open up the Cartesian body while at the same time destabilising binary oppositions associated with it. Inevitably, our attention is called to the fleeting yet persistent surface of the skin as the product of interrelations. These efforts may be summed up as a process of thickening. Even as it loses its ontological clarity as an infinitesimal but absolute barrier separating the human subject from its surrounding space the skin does not disappear. It rather becomes multi-layered, saturated and heterogeneous. As it expands to include other things or becomes penetrated by them it acquires depth and materiality.

The figure of 'stickiness' has been employed by Sara Ahmed in an attempt to theorise this newly acquired three-dimensionality of the hitherto two-dimensionally conceptualised surface of the skin. Stickiness describes a consistency that 'neither has the firmness of something solid, nor the flow of something liquid'.⁴² Accordingly it provides a convenient starting point for theorising bodyspace as it lies between fixity and rigidity on the one hand and the openness of an unrestrained fluidity on the other. Ahmed does not see stickiness, however, as an inherent property of a surface but rather a condition of binding, of attaching meaning, of sustaining and accumulating connections. As such stickiness can be attributed to material (bodies, objects, surfaces) but also immaterial (affects, signs)

entities, which complicates any distinction between a metaphorical and literal use bridging the material with the discursive.⁴³

If stickiness is not an inherent property but rather a condition dependent on an act of bringing together, then the obvious question is how it comes to be. Ahmed proposes to 'think of stickiness as an effect of surfacing, as an effect of the histories of contact between bodies, objects, and signs'.⁴⁴ The two main propositions that are offered as an answer to the question above are transference – the proximity or contact with something sticky – and repetition; a process of signification and at the same time of attaching of signs to bodies or objects. It follows that stickiness is not a necessary condition of all and any bodies. Some bodies are stickier than others. Calling a queer, non-white or otherwise deviant body a derisive name can be understood as an act of transferring the stickiness of a sticky sign (the name) to a body which in turn becomes sticky. The name itself has become sticky through association with other derisive terms as well as through knowledge and power structures that precede it. The act of transferring stickiness, of associating bodies with derisive names evokes and reinforces this underlying history. This broadly defined historicity or processuality is an integral part of understanding stickiness as an effect that marks bodies unevenly and thickens bodily surfaces in different ways.

This concept offers a compelling explanation that brings together individual emotions with collective materialities, discursive and bodily acts so as to include whole populations in what Ahmed calls economies of affect.⁴⁵ Jasbir Puar, however, correctly points out the problematic underlying hypothesis that 'a form of narrativised discursive knowing ... functions as a prediscursive necessity for "stickiness" to have any force at all'.⁴⁶ Not sitting firmly within the material or the discursive realm but oscillating between both, stickiness is still a useful notion if applied to the spatiality of the bodily

surface. Here, it describes the process of merging together ontologically different entities: bodies, things such as appendages or attachments as well as discourses, words or signs and the power structures in which these are embedded.⁴⁷

Although both Ahmed and Puar evoke spatial images and refer to concrete spatial settings, it is with Arun Saldanha's figure of viscosity through which the concept of stickiness becomes spatial.⁴⁸ For Ahmed, a series of ontologically different entities are linked through a chain of transferred stickiness in a history of becoming sticky. For Saldanha it is space itself that should be pictured as a viscous mass – rather than an empty container – where bodies aggregate, clinging to each other and to places:

Neither perfectly fluid nor solid, the viscous invokes surface tension and resistance to perturbation and mixing. Viscosity means that the physical characteristics of a substance explain its unique movements. There are local and temporary thickenings of interacting bodies, which then collectively become sticky, capable of capturing more bodies like them: an emergent slime mold. Under certain circumstances, the collectivity dissolves, the constituent bodies flowing freely again. The world is an immense mass of viscosities, becoming thicker here, and thinner there.⁴⁹

Becoming a gendered, queer, non-white or otherwise marked body involves a thickening of the skin that is not only imprinted with histories of discourses, but also incorporates such heterogeneous elements as 'strands of DNA, phenotypical variation, discursive practices (law, media, science), artefacts such as clothes and food, and the distribution of wealth.'⁵⁰ Additionally these bodies '[forge] connections ... with things and places, ... get into certain habits, into certain collectivities, like city, social stratum, or racial formation.'⁵¹ As a result, the concrete configuration of the elements that merge to form a sticky body as listed above depends on the connection

between each element with another, but also on the spatial patterns of moving, clinging and pulling away through a viscous space of uneven densities.

Bodyspace is saturated with the possibilities of alliance

Aggregates of bodies including linkages of bodies and material, environmental and infrastructural conditions are discussed in Judith Butler's *Notes on a Performative Theory of Assembly*, one of her more space-related works to date.⁵² Butler introduces the term 'alliance' in order to discuss fragile yet vital links and interdependencies, as well as to discern their political potential. Rather than deliberate bonds or political ties based on articulated common interests or identities, the alliances that she examines are 'uneasy and unpredictable', difficult to acknowledge, and resistant to an identity politics.⁵³ Rather than relying solely on kinship, bodies 'sometimes find themselves unexpectedly allied with one another in a bid to persist and exercise forms of freedom that overcome narrow versions of individualism without being collapsed into compulsory forms of collectivism.'⁵⁴ Indeed, it is the social and economic condition of precarity coupled with a struggle for political agency and not a shared identity that supports the kind of alliances examined here.

An alliance cannot be reduced to a collection of bodies and the empty, neutral space between them.⁵⁵ First, while alliances do occur when bodies congregate, as in the example of mass demonstrations, they are not necessarily dependent on a concurrent presence of bodies within a designated space. Indeed, in some cases, entering a space (i.e. walking into the street) means possibly exposing oneself to violence or harassment. This individual bodily act only becomes possible because of an alliance that exceeds both the single body and the space in question.⁵⁶ At this point the body in alliance 'is less an entity than a living set of relations'.⁵⁷ Similarly, a single subject can indeed advance

an understanding of the self as an assembly, a complex formation allied with various 'cultural vicissitudes' within the space of a single body. Neither are alliances transposable, as Hannah Arendt suggests, a collection of bodies that can occupy any given space.⁵⁸ Alliances form within already existing spatial and material conditions that support them and which at the same time they promptly work to engender as such.

Starting from the body's performativity and productivity Butler reaches conclusions that sound strikingly familiar to the Lefebvre reader. Henri Lefebvre understands space as a product and a producer of social relations.⁵⁹ Social relations take place in space, are inscribed upon it and – in the process – produce it; at the same time space is always already inscribed upon, invested with the power to guide, restrict and enable social practice. Within this iterative process of production lies the potential to seize and appropriate space; to induce differentiation; to make contradictions visible.⁶⁰ This process can only take place within an existing material reality, which, at the same time, it actively (re)produces. Derek Gregory also notes the parallels between Butler's argument and Lefebvre's theory of production of space.⁶¹ While the notion of performativity has yet to be fully integrated in space-related disciplines, Gregory calls attention to the performance of space itself.⁶² In this view, 'action (and its precarious performativity, the effects it brings into being) cannot be severed from the space through which it is achieved.'⁶³ Due to its explicit spatial references the concept of alliance can thus offer a basis to better understand the implication of bodies in processes of production of space.

The notion of the 'space of appearance' is a further crucial element in Judith Butler's understanding of alliances. This notion is based on Hannah Arendt's thought and is critically re-interpreted and further developed in Butler's argument.⁶⁴ For an alliance to occur, it is necessary that bodies appear; that they

are perceived, seen and heard, penetrate and move through a space of appearance, which is often opaque and inaccessible. According to Arendt, spaces of appearance are already established and thus set certain conditions of appearance. The space of appearance becomes a prerequisite of political action and at the same time a field that can be transformed 'through avowing and showing certain forms of interdependency'.⁶⁵ These interdependencies that constitute an alliance are not solely between bodies but they extend to and include nonhuman beings, material and environmental conditions, media, infrastructures and things that are indispensable to human life, yet cannot be conflated with it.

Much attention has been paid to the proliferation of digital media as enablers of the kind of alliances that stretch over larger territories and far exceed the concrete spatiality and temporality of a certain act of appearing (or construing a space of appearance). While their importance should not be overstated (as both Butler⁶⁶ and Gregory⁶⁷ insist) digital media are indeed not only means of communication, coordination and organising between the allied bodies, but also an additional infrastructure that helps sustain the bodies in question. Digital media are thus part of the mix of local and supra-local, material and discursive, human and nonhuman elements that become part of the alliance and which include the pavement and the street, food and water, the hand holding the camera and social media, power structures and so on.

With Karen Barad we may think of this heterogeneous mix of entangled matter as a matrix of techno-scientific, material-discursive apparatuses where bodies in alliance materialise.⁶⁸ Drawing and expanding on Butler, Barad makes the case of a space saturated with apparatuses. These 'are not external forces that operate on bodies from the outside; rather, apparatuses are material-discursive practices that are inextricable from the bodies that



Fig. 1: Bodyguards by Jürgen Meyer H. In Wilko Hoffmann (ed.), *Could Should Would* (Ostfildern: Hatje Cantz, 2015).

are produced and through which power works its productive effects.⁶⁹ The high level of abstraction in Barad's elaborate thesis makes her argument broad, almost universal. Here, we find again a sense of inevitability, of the omnipresence of apparatuses that permeate and exceed the individual body, which however is bound to them in as much as it must necessarily come to matter through them. Butler's vision of alliances emphasises a space saturated with possibility and intentionality rather than a philosophical inevitability bordering on the universal. It is precisely this possibility of forming and actively pursuing alliances that enables precarious bodies to enter and transform space. Alliances displace the focus from the single, closed and whole body (and on a larger scale from well-defined, distinct and homogeneous groups). They instead draw attention to unforeseen and surprising constellations of ontologically different beings while at the same time reaffirming the agency of bodies in the social and political arena.

Insights and implications

With the notion of *Körperraum* Martina Löw has provided not only a convincing thesis in rejecting the Cartesian, closed body, but also notably, a tool for navigating recent theoretical developments in posthuman and feminist discourses to look for specific propositions on the bodyspace. The common themes of interconnectedness, permeability, merging, entangling and inextricability – which I have summed up as a process of opening – have to be critically examined, in order to acknowledge vital differences between them and crucially, to address their implications. If the bodyspace is not a container, the figure of the grotesque helps us question its ontological status while exploring an alternative aesthetic principle at the same time. With stickiness, a queering of the bodyspace ensues as we become aware of processes that affect bodies differently. The notion of alliance adds a further dimension beyond the ontological, aesthetic and epistemological; namely, the political.

Informed by these debates, the rethinking and consequent decentering of the Cartesian body in the process of design, which I advocate, must take into account these multiple dimensions. While not matching perfectly any one of the aforementioned theses, architectural design has indeed provided compelling images that counteract the still persisting Cartesian body to a certain degree. These could even be construed as grotesque, sticky or entangled with material-discursive apparatuses.

Ben van Berkel and Caroline Bos have, for example, tried to instrumentalise artistic representations of bodies in order to reflect on the conditions of architectural production but also to derive principles of spatial organisation.⁷⁰ In their 1999 essay on hybridisation they call for an architecture that seamlessly merges ontologically different entities in a fluid and variable whole. This represents a radically new relational ordering of heterogeneous parts.

Some of the emerging alternatives to the Cartesian body build upon architectural research on spaces that directly enclose the human body such as capsules and cocoons⁷¹ or on the topologies of skins and folds.⁷² Here we could name the speculative project 'Bodyguards' by Jürgen Mayer H. The architects imagine a space saturated with nano-devices called 'smart dust', which mediate between the human body and material conditions in its environment.⁷³ The graphics depict a barely visible, free flowing protective armature that sticks to the body as it expands, shrinks or even dissolves on demand creating an endless variations of densities or thickenings around bodies. [Fig. 1] This also raises the possibility of connecting more than one individual in this viscous mass of smart dust.

The work of Elisabeth Diller and Ricardo Scofidio takes an even more nuanced stance as it focuses less on the appearance of the bodyspace and more on its performance.⁷⁴ Design is here the tangible outcome of critically dissecting performances of

gendered bodies in domestic or public spaces. It reveals their inextricability on the one hand while also showing the problematic effect of persisting dichotomies on the bodyspace. Yet other works have questioned the very notion of an average or ideal human body inhabiting the various spatial scales as a foundation for architectural design, while at the same time addressing some of the ontological, aesthetical and political issues that are raised.⁷⁵

On the whole, there is considerable evidence pointing to an impending shift, or at least a growing pluralism in understandings and representations of corporealities. At the same time, architectural design actively questions the politics of bodily performances in space. Broadly speaking the opening up of the Cartesian body in space-related discourse and the practice of design is already taking place. Our posthuman, ontologically diverse selves will have to actively take part in the emerging debate. This should at the same time be informed by feminist and posthuman theory as well as bold, imaginative and unpredictable.

Notes

- To reflect on a changing, and in certain cultures increasingly fragmented field I employ an extended understanding of architecture that encompasses the design of buildings and open spaces, but also of processes that unfold in and transform space.
- For a critique see Dörte Kuhlmann, *Gender Studies in Architecture: Space, Power and Difference* (London and New York: Routledge, 2013) and Susanne Frank, *Stadtplanung im Geschlechterkampf: Stadt und Geschlecht in der Großstadtentwicklung des 19. und 20. Jahrhunderts* (Wiesbaden: Springer, 2003).
- For a discussion in broad strokes by leading architectural theorists see Beatriz Colomina and Mark Wigley, *Are we Human? Notes on an Archeology of Design* (Zurich: Lars Müller Publishers, 2016).
- For a recent example see Catherine Dereix Carrillo, 'The Body as Dust', *Journal of Landscape Architecture* 11, no. 3 (2016): 32–45.
- See Jürgen Renn and Bernd Scherer, 'Einführung', in Jürgen Renn and Bernd Scherer, *Das Anthropozän: Zum Stand der Dinge* (Berlin: Matthes & Seitz, 2015), 7–24.
- Neil Leach, *Rethinking Architecture: A Reader in Cultural Theory* (London: Routledge, 1997), xiv.
- Martina Löw, *The Sociology of Space: Materiality, Social Structures, and Action*, trans. Donald Goodwin (New York: Palgrave Macmillan, 2017 [2001]). For this paper I have consulted the German text in its 7th edition of 2012. Unless indicated otherwise I will refer to the German 2012 edition.
- Martina Löw, *Raumsoziologie* (Frankfurt am Main: Suhrkamp, 2012), 115.
- Ibid., 158–159; see also Martina Löw, 'The Constitution of Space: The Structuration of Spaces through the Simultaneity of Effect and Perception', *European Journal of Social Theory* 11, no. 1 (2008): 25–49. doi:10.1177/1368431007085286.
- Martina Löw, *Raumsoziologie*, 36–43.
- Ibid., 117.
- For a more detailed account of the effect of surgery on the corporeal space see Katharina D. Martin, 'Ecologies of Corporeal Space', in *Critical and Clinical Cartographies: International Conference Proceedings*, ed. Andrej Radman and Stavros Kousoulas (Delft: Japsam Books and TU Delft, 2015). <http://www.tudelft-architecture.nl>.
- Martina Löw, 'Der Körperraum Als Soziale Konstruktion', in *Geschlechter-Räume: Konstruktionen von 'gender' in Geschichte, Literatur und Alltag*, ed. Margarete Hubrath (Cologne: Böhlau, 2001) and Löw, *Raumsoziologie*, 122–129.
- Georges Teyssot, 'The Mutant Body of Architecture', in *Flesh: Architectural Probes*, ed. Elizabeth Diller and Ricardo Miller Scofidio (New York: Princeton Architectural Press, 1994), 8–35.
- For a similar argument and use of the composite Körperraum see Markus Schroer, *Räume, Orte, Grenzen: auf dem Weg zu einer Soziologie des Raums* (Frankfurt am Main: Suhrkamp, 2006), 284.

16. Peter Gould, 'Space and Rum: An English Note in Espacien and Rumian Meaning', *Geografiska Annaler* 63, no. 1 (1981): 1–3.
17. Elizabeth Grosz, 'Bodies-Cities', in *Sexuality & Space* (proceedings of a symposium held at Princeton University School of Architecture, 10–11 March 1990), ed. Beatriz Colomina and Jennifer Bloomer (New York: Princeton Architectural Press, 1996), 243.
18. Martina Löw, 'The Social Construction of Space and Gender', *European Journal of Women's Studies* 13, no. 2 (2006): 119–33. doi:10.1177/1350506806062751.
19. Löw, *Raumsoziologie*, 119.
20. Elizabeth Grosz, *Architecture from the Outside: Essays on Virtual and Real Space* (Cambridge, MA: MIT Press, 2001), 32.
21. Löw, *Raumsoziologie*, 117.
22. Ibid.
23. Löw, *Sociology of Space*, 93.
24. Timothy Morton, 'Zero Landscapes in the Time of Hyperobjects', *GAM Graz Architecture Magazine* 07 (2011): 79–87.
25. Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013), 32 (my emphasis).
26. 'Space is just a general word for large objects that contain us', in Morton, 'Zero Landscapes', 84.
27. 'You are surrounded by a hyperobject. You exist in a hyperobject. You are inside an object!' in Morton, 'Zero Landscapes', 82.
28. Timothy Morton, 'Queer Ecology', *Publications of the Modern Language Association of America* 125, no. 2 (March 2010): 277.
29. 'The more you think about the body, the more the category of nature starts to dissolve' in Timothy Morton, *Ecology Without Nature: Rethinking Environmental Aesthetics* (Cambridge, MA: Harvard University Press, 2007), 107.
30. Richard Grusin (ed.), *The Nonhuman Turn* (Minneapolis: University of Minnesota Press, 2015).
31. Morton, 'Queer Ecology', 274.
32. Morton, 'Zero Landscapes', 82.
33. Ibid., 87.
34. See Mikhail Bakhtin, *Rabelais and His World* (Bloomington: Indiana University Press, 1984), 303–306. As an example of exaggeration that culminates in transgression Bakhtin mentions (following Schneegans) caricatures of Napoleon III that enlarge the emperor's nose up to the point of becoming a pig's snout or a crow's beak, thus transcending species boundaries (ibid., 315–16).
35. Ibid., 88.
36. Ibid., 26.
37. 'Thus the artistic logic of the grotesque image ignores the closed, smooth, and impenetrable surface of the body and retains only its excrescences (sprouts, buds) and orifices, only that which leads beyond the body's limited space or into the body's depths.' Ibid., 317–318.
38. 'The object transgresses its own confines, ceases to be itself. The limits between the body and the world are erased, leading to the fusion of the one with the other and with surrounding objects.' Ibid., 310.
39. Ibid., 317.
40. For example a tower is not only a phallic symbol but can actually impregnate women, ibid., 312.
41. Morton, 'Zero Landscapes', 82.
42. Sara Ahmed, *The Cultural Politics of Emotion* (New York: Routledge, 2004), 90.
43. Ibid., 91.
44. Ibid., 90.
45. See also Sara Ahmed, 'Affective Economies', *Social Text*, 79, vol. 22, no. 2 (2004): 117–39.
46. Jasbir Puar, *Terrorist Assemblages: Homonationalism in Queer Times* (Durham, NC: Duke University Press, 2007), 188.
47. Puar uses the notion to convincingly explain how the turban of the Sikh people becomes a sticky sign; ibid., 187.
48. Arun Saldanha, 'Reontologising Race: The Machinic Geography of Phenotype', *Environment and Planning D: Society and Space* 24 (2006): 9–24.
49. Ibid., 18.
50. Ibid., 19.
51. Ibid., 19. For Saldanha the figure of viscous space resonates with relational understandings of space as

- being dynamic and in flux, yet acknowledging its inevitable hard materialisations.
52. Tucker J. Landesman, 'Review: Judith Butler, Notes Toward a Performative Theory of Assembly' in *Antipode: A Radical Journal of Geography* (2015), <https://radicalantipode.files.wordpress.com>.
 53. Judith Butler, *Notes Toward a Performative Theory of Assembly* (Cambridge, MA: Harvard University Press, 2015), 70.
 54. *Ibid.*, 42.
 55. *Ibid.*, 84.
 56. *Ibid.*, 51.
 57. *Ibid.*, 72.
 58. Hannah Arendt, *The Human Condition* (Chicago: The University of Chicago Press, 1958), 198. Also cited in Butler, *Notes Toward a Performative Theory of Assembly*.
 59. Henri Lefebvre, *The Production of Space* (Malden, MA: Blackwell, 2011).
 60. Undocumented immigrants taking to the streets to demand rights – seizing a public space from which they are excluded – is an example of a contradiction becoming visible (those who have no right to appear in public and take part in public discourse defy this condition by actively enacting this very right). See Butler, *Notes Toward a Performative Theory of Assembly*, 41.
 61. Derek Gregory, 'Tahrir: Politics, Publics and Performances of Space', *Middle East Critique* 22, no. 3 (2013): 235–46. Both Gregory and Butler take the arab spring uprisings and especially Cairo's Tahrir square as an example. Gregory additionally points out that Lefebvre's arguments are informed by the uprisings and the politics of space of his time, i.e. the May 1968 movement.
 62. See also Kirsten Simonsen, 'Bodies, Sensations, Space and Time: The Contribution from Henri Lefebvre', *Geografiska Annaler* 87, no. B (2005): 1–14.
 63. Gregory, 'Tahrir: Politics, Publics and Performances of Space', 242.
 64. Arendt, *The Human Condition*, 199.
 65. Butler, *Notes Toward a Performative Theory of Assembly*, 43.
 66. *Ibid.*, 92.
 67. Gregory, 'Tahrir: Politics, Publics and Performances of Space', 237.
 68. Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham, NC: Duke University Press, 2007).
 69. *Ibid.*, 230. On the example of fetal sonography the entangled bodies of the mother, the fetus and the obstetrician who are all materialised as bodies within the context of the technoscientific apparatus of sonography, both within the space of the obstetrician's lab, and in the much larger spatial scales where the bodies exist.
 70. Ben van Berkel and Caroline Bos, *Move 2: Techniques, Network Spin* (1999): 80–84.
 71. See Lieven De Caeter, 'The Capsule and the Network: Preliminary Notes for a General Theory', *OASE Journal for Architecture* 54 (2001): 122–34.
 72. Georges Teyssot, 'Soft Architecture and the Spaces of Topology', in *Could Should Would*, ed. Wilko Hoffman (Ostfildern: Hatje Cantz, 2015).
 73. Hoffman, *Could Should Would*, 244.
 74. For a discussion of the work of Elisabeth Diller and Ricardo Scofidio which has been pivotal in its engagement with the body see Diller and Scofidio, *Flesh: Architectural Probes*. See also Elisabeth Diller, 'Bad Press', in *Gender Space Architecture: An Interdisciplinary Introduction*, ed. Iain Borden (London: Routledge, 2000) and Lorie A. Brown, *Feminist Practices: Interdisciplinary Approaches to Women in Architecture* (New York and London: Routledge, 2011).
 75. For a discussion of the genealogy of non-Cartesian bodies in architecture see Ariane Lourie Harrison, 'Charting Posthuman Territory', in *Architectural Theories of the Environment: Posthuman Territory*, ed. Ariane Lourie Harrison (New York: Routledge, 2013), 3–33.

Biography

Xenia Kokoula is an architect (NTUA) and urban designer (ETH Zurich) with working experience in Greece, Switzerland and Germany. Since 2011 she has been teaching design studios and theory seminars at the Department of Landscape Architecture, TU Berlin. Her research focuses on the role of power, knowledge and affect in processes of production of space.