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Mapping How Worlds Come to Be

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Abstract

The notion of 'worlds' has gained much traction in recent discourses. Across the sciences, humanities and arts, including architecture, studies centring on 'worlds' aim to establish a new condition for theorising systems and their wider entanglements. Especially in architecture, there is a plethora of studies that often use a cartographic approach to chart various material (trans)formations of planetary spaces, and/or the wider discourses on spatial practices that may serve as the basis for theorising and practicing towards other possible worlds and futures. In this review I attempt to further these inquiries into spatial production by such 'other' means, by calling for a complementary posthuman account in which, following Braidotti, environmental, social, and technological transformations can no longer be understood in isolation. Here, I argue, it is necessary to resume and extend Foucault's initial call to subsume the formation of built environments (and the

various practices that create them) under the general history of technē, here generalised in terms of (cultural) technologies and cosmotechnics. With this aim, the following discusses theoretically-grounded approaches through the spatialisation and coupling of (cosmotechnical) difference.

Keywords:

Worlding, built environments, posthumanism, cosmotechnics

The notion of 'worlds' has gained much traction in recent discourse. Against the universalising and ubiquitous idea that we all live in a single world instituted by western historiography and its 'one-world model' of development, studies across many fields now critically analyse and contest the ways in which a diverse planet has, through centuries of colonisation, imperialism and global capitalism, become increasingly impoverished and homogenised, by erasing difference. Through a more pluralistic notion of 'worlds', these studies employ the Zapatistas' slogan to safeguard and re-create a 'world of many worlds' in promoting what we could call with Arturo Escobar a more 'pluriversalising' stance.¹

Across the sciences, humanities and arts, including architecture, studies centring on 'worlds' aim to establish a new condition for theorising systems and their wider entanglements by way of constitutive differences, asymmetries and inequalities, and thus think about constitutive and transformative relations.² Especially in architecture, there is a plethora of studies that use a cartographic approach to chart various material (trans)formations of planetary spaces and the wider discourses on spatial practices that produce them. Thus often foregrounding verbs like 'making' or 'constructing' worlds, they analytically attend to alternative and emancipatory social and

spatial practices or other(ing) spaces. This aligns with their often feminist, queer and decolonial aim to reclaiming a number of minoritised or othered subject positions and perspectives, which may serve as the basis for theorising and practicing towards other possible worlds and futures.³

In this review I attempt to further these inquiries into spatial production by such 'other' means, by calling for a complementary posthuman account that re-examines the ways in which technics mediate – and always have – between social and environmental formations. As Rosi Braidotti argues, in the present condition, environmental, social and technological transformations can no longer be understood in isolation, and mapping the socio-techno-environmental entanglements that shape our world requires a more transversal approach.⁴ Based on a Félix Guattari's transversal understanding of the way architecture – as a technology recursively producing culture – intersects these three dynamics, scholars including Héléne Frichot and Peg Rawes started to re-consider architecture as an ecology of practices that engage in the purposive transformation of co-constitutive habitats, habits and modes of inhabiting worlds.⁵ Understood as both critical and creative, material and discursive, these practices can no longer be understood as taking place *in* space or the world. Rather they must be conceptualised immanently as taking form *through* spatialisations that are constitutive of worlding dynamics, and ought to be mapped as such.⁶ Here, I argue, it is necessary to resume and extend Foucault's initial call to subsume the formation of built environments (and the various practices that create them) under the general history of *technē*, here generalised in terms of (cultural) technologies and cosmotechnics that enact and constrain them.⁷ After introducing the notion of worlding (practices) in more detail, I discuss a few theoretically-grounded approaches and alternative ways of mapping how worlds world worlds through the spatialisation and coupling of (cosmotechnical) difference, and reconceptualise the role of architecture therein. As I conclude, reconceptualising architecture as a worlding practice presents a radically inclusive stance for engaging cosmotechnical difference in mapping how worlds come to be.

Worlding and worlding practices

Having emerged in the context of a particular critique of cartographic representation, the neologism 'worlding' was popularised by Gayatri Chakravorty Spivak's postcolonial call to critically study the worlding of the so-called Third World. To recuperate the subaltern subject position and modes of being in the world, Spivak adopted and adapted Heidegger's notion of worlding as an ontological concept

to describe the 'presencing' of an environment that exists in constant processes of transformation, and within which all beings are constructed from ongoing dynamics.⁸ Oppositional modes of thinking conceive of beings as merely existing *in* the world, akin to container conceptions of things in space. Worlding focuses instead on processes, events or dynamics through which certain things or beings are brought about, brought into existence, or render certain beings visible and thinkable, while also concealing and rendering others invisible and unthinkable.⁹

Pheng Cheah has further argued that a world is precisely that which cannot be represented in maps. Cheah here mainly critiques the way cartographic modes 'epistemologically construct the world by means of discursive representations' by 'reduc[ing] the world to a spatial object'.¹⁰ Building on this critique, Neil Campbell's book *What Worlding Does* investigates worlding in terms of constructive processes and calls for studying dynamics and modes of temporalisation without reducing this temporal dimension to an effect of things *in* space.¹¹ To evade the still-oppositional relation between the colonial logic of world-making against which Cheah proposes minor forms of 're-worlding' or 'counter-worlding', Aihwa Ong calls for approaching worlding non-ideologically. Through the term 'worlding practices', she approaches worlding in terms of situated practices that shape alternative social configurations. In this view, worlding becomes 'linked to the idea of emergence' insofar as it 'remap[s] relationships of power at different scales and localities'.¹²

Material-discursive worlding dynamics

Ong's situated understanding of worlding (practices) here converges with Braidotti's conception of cartography as a theoretically powered and politically informed reading of the present. By revealing the webs of power relations we are all entangled in, cartography can assist in bringing forth alternative figurations based on embodied, embedded, relational and affective perspectives and visions.¹³ Ong's closer focus on *configuration* processes adds a more spatio-temporal aspect in approaching worlding practices from different dynamics of spatialisation within various spaces of flows or milieus.¹⁴ Thinking through milieus foregrounds actual morpho-dynamic processes operating simultaneously at and across different levels of organisational complexity, and configures individuations and becomings. Karen Barad's reading of apparatuses (*dispositifs*) famously elaborates how physical phenomena come about through particular reconfigurings of the world which Barad calls 'boundary-drawing practices'. These 'cut together/apart' new matters and meaning in co-constitutive ways and, as such, present material-discursive practices.¹⁵

Understood in terms of the material-discursive apparatus, architecture and built environments can then be said to 'cut together/apart' socio-techno-environmental dynamisms in particular ways that generate particular social realities and subject formations. Yet, such a vision calls not only for a fundamental critique of how we conceive such systems in their irreducibility, but also for challenging the reductive terms of the discussion. As Braidotti's post-humanist reading of socio-techno-environmental relations warns, a greater problem concerns any reductive reading of technology as presumably doubly-opposed to 'nature' and 'culture', which may invite transhumanist perspectives. To further a transversal vision, decolonisation is needed to challenge Western ontological presuppositions and hierarchies. Aligning here with Braidotti and Barad, Walter Mignolo has most powerfully critiqued the ways in which Western cosmology enacts a representationalist system of knowing (epistemology) that privileges beings, objects or transcendent ideas to which relations become secondary, while many other cosmologies start from the primacy of relations.¹⁶ Furthering the aforementioned focus on minor positions, to map worlding practices thus generally requires adopting a stance that maintains the primacy of relations in the way worlds, things, objects and subjects come to be.

How worlds world worlds

Reconceptualising the ways in which relations shape becomings was the declared methodological aim of Deleuze and Guattari's concept of assemblages. In assemblages, architecture attains a particular configuring function. Mapping form-taking assemblages requires pinning down where and how 'an architecture' – chosen among many virtually-possible configurations – comes to organise productive relations.¹⁷ It highlights how architectures (meta)stabilise certain assemblages by spatialising difference in particular configurations, while temporalising the constitutive dynamics and rhythms that generate and maintain them. This spatio-temporal process engenders twofold processes of machinic heterogenesis, in which asymmetries give rise to further differentiation. Such dynamics, reciprocally determining what is related to what, thus constitute mutually-constitutive relata that 'machinically' give rise to path-dependent becomings. When mapping how worlds come (or came) to be through such machinic heterogeneses, is not enough to trace transformative processes back through their spatial results. What needs mapping is what was going on, meaning what differentiating couplings of differences (or 'differentiations') were being actualised in this formation. Aligning with all aforementioned critiques of representation, here the cartographer's task is to avoid phenomenological

reductivism, insofar as the process of how worlds world worlds does not directly resemble the worlds worlded.¹⁸

Foucault's genealogies still struggled with representationalism in trying to render visible how in the worlding of western early modernity, its institutions, spaces, knowledge, power and subjectivities were co-produced through material-discursive dispositifs of distribution and their organisation into grids, classes, taxonomies and so on. This gridding, Kimberlé Crenshaw and others have since illustrated, has mutated into a wider and multi-layered matrix of intersecting axes of exclusion, marginalisation and hierarchisation.¹⁹ Effectuating matrices of oppressive powers such 'hierarchising assemblages' present the very diagram (that is, a productive scheme outlined by lines) driving Western worlding.²⁰ Particularly in a colonial milieu, three of these axes – nature, sex and race – have intersected to form the main enunciating factors that drove the heterogenesis of 'the human' and naturalised, sexualised and racialised others co-produced and contra-distinguished by an associated milieu of discrimination. This constituted (and instituted) a problematic 'type of man' resulting from what Sylvia Wynter (after Fanon) primarily saw as a sociogenetic practices.²¹ But these practices cannot be isolated from the environmental and technical reconfigurings that accompanied them. Kathryn Yusoff's essay 'Anthropogenesis', discussing the reciprocal formation of *anthropos* and 'anthropogenic' environments, describes the latter not as a mere (by-)product of the former but as a means by which specific types of being are generated and sustained.²² As Anna Tsing further notes, the particular mode of production behind 'man-made' environments widely reduces complexity, diversity and liveability in favour of impoverishing landscapes that monotonously produce and reproduce the same.²³ In this sense, the very architecture of these 'anthropogenic' environments must be understood as a differentiating factor in a process of machinic heterogenesis, which gave rise to and configured a particular world through its reticulated socio-techno-environmental organisations and ecologies of material-discursive practices.

Positing that such differentiations are fundamentally inscribed into (or flattened out from) evolving systems, the philosopher of technology Bernard Stiegler subsumed the process of anthropogenesis into a wider evolutionary process he called epiphylogenesis. With this term, he theorised the way (not just human) life co-evolves largely 'by means other than life', recognising one of the decisive mediators in technics. For Stiegler, technics constitute a third kind of memory that is retained in the organisations of the inorganic. By coupling genetic and epigenetic memories, epiphylogenetic memory enables path-dependent evolutions in which species memory is

produced and passed on along specific becomings and worldings.²⁴ Tending to foreground the way life forms shape and design their worlds, studies attended less to how those worlds act back on the life forms, (re)shaping them in turn. Understanding this reciprocal process in which life forms don't simply adapt to their environments but to their own environment adaptations, lies at the heart of any critical transformative engagement with the planet's present and future.

Both Yusoff's and Stiegler's theorisations imply 'sympoietic' processes. Popularised by Donna Haraway, the notion stresses that nothing ever makes itself; things only ever emerge (and become) *with* co-constitutive (non-human and non-organic) others, including technics, which come to act as mutual scaffolds in processes of developmental sympoiesis.²⁵ Worlds are always worlded *with* and *by means of* all sorts of (non/organic) others, which they come to integrate or be entangled with. This process requires a careful examination insofar as it often includes some forms of life or life worlds evolving at the expense of others. For instance, it calls for problematising how (different) technics (and the hierarchising assemblages they form) make us human to different degrees, and disindividuate or even dehumanise in different ways.²⁶ It begs the question: if worlds co-emerge through processes of machinic heterogenesis, then *how* do couplings of differences, inequalities or asymmetries that drive them come to be instrumentalised, or 'technicised' within co-evolving socio-techno-environmental organisations? And what modes of subjectivation and becoming do these technicities, tooled for different ends, engender?²⁷

Worlding(-with) cosmotechnical difference

Creating other possible worlds or a pluralistic world of many worlds, we may conclude, thus seems to first necessitate a kind of 'worlding theory' concerning what architecture does (or can do) within epiphylogenetic/sympoietic processes. To outline this theory, environmental design needs further reconceptualisation as a cultural technology intersecting with socio-techno-environmental ecologies, to view it as an ecology of worlding practices that – as I would argue – technicises coupled differences.²⁸ From an assemblage-theoretic perspective, this technicity resides in the (re-)configuring function in how – across differently-scaled and trans-scalar assemblages from tools, to buildings, to cities – spatialised and spatially-inscribed differences come to act as differentiating developmental scaffoldings for their recursive and path-dependent (co-) evolutions.²⁹ Design here taps into a 'space of possibility' associated with any given system, so that 'other/different' possibilities may be realised.³⁰ Feminist, queer or decolonial calls for other modes of constructing and collectively

structuring the world – starting from a radically inclusive vision of otherness that (re-)situates life in a field of multiple co-constitutive differences – instead hope to open up entirely different spaces of possibilities to transform disindividuating socio-techno-environmental entanglements into emancipatory worlds yet-to-come.³¹

A further cue for such a transformative theory may lie in Yuk Hui's proposition that worlding is possible only through *technē* and akin 'cosmotechnics'.³² Hui's latter notion calls for a fundamental transformation of 'mono-technological' thought (limited to the Western-Greek conception of *technē*) into a technodiverse multi-logics that – as Luciana Parisi and Ezekiel Dixon-Román comment – accounts for the ways in which cultures elaborated various metaphysical spaces by means of other cultural technologies enabled and constrained by differing cosmologies.³³ This account mirrors pluriversalising calls for an 'ontological reorientation of design' (understood both as *technē*, but as just one cosmotechnics) to move from dualistic-hierarchical models to relational-heterarchical ontologies of difference.³⁴ Such a reorientation may itself depend on an epistemological shift, discarding all forms of representationalism in favour of diagrammatics and perspectivism, and ultimately depends on an ethical reorientation of theory-practice. We may thus be advised to adopt a generalised ethico-onto-epistemological stance to revisit built environments, their organisation and genesis in terms an ecology of material-discursive practices enabled and constrained by cultural techniques, technicised environments and the machinic phyla they form. From this epiphylogenetic angle, any cartographic exercise of comparatively mapping how worlds come (or came) to be, recursively studies these processes 'otherwise' and the other way around; namely, by means of the constitutive spatial (trans)formations and differentiating spatialisations that establish different socio-techno-environmental assemblages, and in terms of worlds worlded-with and worlding-with cosmotechnical difference.

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Biography

Robert A. Gorny is a scholar and lecturer in architecture theory at TU Delft. His transdisciplinary research combines historically grounded scholarship with an assemblage-theoretic extension of genealogical accounts, as developed in his doctoral dissertation, 'A Flat Theory: Toward a Genealogy of Apartments, 1540–1752' (TU Delft, 2021). Currently he is extending this approach towards a general organology of built environments, their organisation and genesis. As a member of the board of *Footprint*, he recently co-edited an issue on Bernard Stiegler's related concept of epiphylogenesis (2022).