# DESIGNING FROM SOME–WHERE: GENERATIVE AI AND FORECLOSED FUTURES IN DESIGN

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**THE INTEGRATION OF GENERATIVE ARTIFICIAL INTELLIGENCE INTO DESIGN IS WIDELY CELEBRATED FOR ACCELERATING WORKFLOWS AND EXPANDING IDEATION. THIS PAPER ARGUES, HOWEVER, THAT THIS INSTRUMENTAL PERSPECTIVE OBSCURES A CRITICAL EPISTEMIC SHIFT: GENERATIVE AI DOES NOT JUST ACCELERATE DESIGN PROCESSES BUT STRUCTURALLY ENTRENCHES ALREADY EXCLUSIONARY PRACTICES. BY EXTERNALIZING EXPLORATORY, AMBIGUOUS, AND MATERIAL FORM–FINDING PROCESSES INTO PROBABILISTIC OPERATIONS, AI UNDERMINES DESIGN AS A SITUATED CULTURE OF KNOWLEDGE. DRAWING ON THEORIES OF EPISTEMIC INFRASTRUCTURE, HAUNTOLOGY, AND DECOLONIAL CRITIQUE, WE ANALYZE HOW AI SYSTEMS FUNCTION AS ENGINES OF CONVERGENCE, PROJECTING A DOMINANT VIEW FROM A SPECIFIC SOME–WHERE WHILE PRESENTING IT AS A NEUTRAL STANDARD FOR EVERYWHERE AND EVERYONE. THROUGH A DOUBLE FORECLOSURE, HAUNTOLOGICAL AND PROBABILISTIC, THESE SYSTEMS FAVOR FORMS OF KNOWING ALREADY PRESENT IN THE DOMINANT DIGITAL ARCHIVE WHILE RENDERING ALTERNATIVE DESIGN FUTURES STRUCTURALLY INACCESSIBLE. TO COUNTER THIS HOMOGENIZATION, THE PAPER PROPOSES A CONCEPTUAL SHIFT. REIMAGINING AI MODELS NOT AS UNIVERSALIZING INFRASTRUCTURES BUT AS LOCALIZED CARRIER BAGS CONTAINING SITUATED EPISTEMOLOGIES, WE CRITICALLY EXAMINE HOW SUCH ALTERNATIVES MAY REPRODUCE THE ASYMMETRIES THEY SEEK TO ADDRESS. BY CENTERING CARE AS A NECESSARY CONDITION FOR KEEPING EPISTEMIC PROCESSES OPEN, DESIGNERS AND EDUCATORS MAY PROTECT THE PROCESSUAL CONDITIONS UNDER WHICH DIVERSE KNOWLEDGES EMERGE.**

**KEYWORDS:** GENERATIVE AI, DESIGN EPISTEMOLOGY, SITUATED KNOWLEDGES, FORECLOSURE, AI LITERACY

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## ALLURE OF THE SHORTCUT: AI AND DESIGN KNOWLEDGES

Generative AI is reshaping design practice at remarkable speed—expanding ideation, accelerating workflows, and producing images that seem to emerge from nothing in seconds. Yet the fascination with these capabilities risks obscuring a question that is not technological but political: advantageous for whom, and according to whose understanding of design?

If AI is understood primarily as a tool for optimizing outcomes, its benefits appear self-evident. But this instrumental framing overlooks a dimension of design that only becomes visible when attention shifts from results to processes (Neuburg et al., 2020).

If we view design primarily as a result, we encounter detrimental issues ranging from aesthetic averaging to biased training data. However, if design is understood as a process, the focus shifts towards the conditions under which design knowledge emerges: What happens to design as a knowledge practice when explorative inquiries are externalized into generative systems? To what extent does artificial intelligence entrench design processes—and what are the epistemic consequences of this curtailment?

This paper offers a critical-theoretical contribution that examines the epistemic consequences of integrating generative AI into design practice. The following text hypothesizes that artificial intelligence does not merely accelerate design processes but structurally entrenches them, intensifying and automating exclusions that design's hegemonic, Western knowledge culture has long carried. Explorative investigations are outsourced, while the epistemic capacity of ambiguities and material engagement loses significance. This entrenchment is not culturally neutral: it disproportionately affects situated forms of design knowledges that depend on slow, embodied, contextually embedded processes of inquiry—forms of knowing that are already underrepresented in dominant discourse. Consequently, the dimension of designing in which design is not only a reactive activity but a process of knowledge generation comes under pressure.

Methodologically, this critical inquiry is structured around three analytical lenses: First, it draws on design theories that describe designing as a knowledge practice and negotiate questions of tacit knowledge and practice-based knowledge production. Second, generative AI systems are analyzed as epistemic infrastructures, particularly regarding how prompt-based interaction, probabilistic image synthesis, and predictive modeling reorganize explorative processes. Third, it uses speculative reflection to outline possible consequences of these transformations for design practice and education. The illustration that follows acts as a conceptual anchor to make the argument's concepts legible and render their implications for design practice more tangible.

## NO VIEW FROM NOWHERE: LOCATING DESIGN KNOWLEDGES IN PLURAL WORLDS

To approach the epistemic consequences of AI intervention in design, it is first necessary to suspend the problem-solving paradigm through which design is so often understood. In complex systems, problems become visible only after the feedback loops that reveal them have long been in operation (Meadows, 2009). By the time something emerges as an identifiable problem, its causes are already deeply embedded in the conditions that produced it. Therefore, arriving at a problem doesn't necessarily mean arriving at its origin. Understanding design as a problem-solving activity faces its structural limits here and requires a perspective on design that attunes to the instability of its own questions. Over the past decades, design has increasingly been described as a distinct knowledge culture—a field in which insight is generated not only through analysis or abstraction, but through situated, material, and processual engagement with the world. Mareis (2011) traces how design sought to establish itself as an autonomous academic discipline precisely by articulating this specificity: design, she argues, is not merely a form of craft or commercial activity, but an epistemic practice—a mode of producing knowledges about and through the world. Crucially, Mareis also notes that this framing is not innocent: the claim to epistemological autonomy has been driven not only by intellectual curiosity, but by strategic interests in disciplinary self-legitimation (Mareis, 2011, pp. 9–10).

Designing does not simply produce artifacts but produces ways of knowing through sociomaterial engagement. The materials created along this process—whatever form they may take between prototypes, mappings, participatory encounters, or sketches—function not merely as preparatory steps toward an outcome, but as epistemic instruments. They allow ideas to become negotiable, revisable, and transformable. Much of what designers know in this process resists explicit articulation—residing in gestures, material judgments, and tacit decisions, in what Polanyi (1966) called tacit knowledge, Schön (1995) described as knowing-in-action, and Cross (1982) theorized as designerly ways of knowing. These knowledges are inseparable from the processual, non-linear conditions under which they emerge.

Design processes rarely unfold as linear trajectories but rather as search movements, proceeding through detours, interruptions, and reformulations. Knowledges emerge precisely in those moments where resistance interrupts intention and form hesitates before stabilizing. If design generates ways of knowing through such processual engagements, any technological restructuring of these processes must also be understood as an epistemic intervention. Yet the conceptual frameworks that describe these knowledges are themselves historically, geographically, and institutionally situated and biased.

The concept of design as a culture of knowledge emerged primarily in the institutional context of Europe and North America—from the Bauhaus to the HfG Ulm, from the British design methods movement of the 1960s to American design schools—and encodes the epistemological assumptions, aesthetic preferences, and disciplinary ambitions of these specific milieus—for example, according to Mareis, technocratic and androcentric influences can be identified in design research in the tradition of the Design Methods Movement (Mareis, 2011, p. 393). What presents itself as designerly ways of knowing is, in other words, always already a view from somewhere specific.

Haraway's concept of situated knowledges argues against the pretense of a view from nowhere—what she calls the "God trick" of claiming universal vision from a position that is actually nowhere accountable (Haraway, 1988, p. 581). All knowledges are produced from somewhere; the claim to universality is not the absence of perspective but the concealment of a dominant one. Escobar (2018) argues that mainstream design—including research and education—serves capitalist and Eurocentric ends, while design knowledges are always relational, shaped by the conditions of their production. The universalizing logic of mainstream design is inherited and amplified by generative AI, which encodes the epistemological assumptions of one particular some-where as if they were the neutral standard for everywhere.

What's at stake is that there are multiple worlds with irreducibly different ways of knowing and making, not one universal designerly epistemology waiting to be uncovered.

The active exclusion and destruction of non-Western knowledge systems through the imposition of hegemonic epistemological standards is what Santos (2015) terms epistemicide. Applied to AI, Ofosu-Asare (2025) traces how this dynamic operates through the architecture of systems trained on datasets that reflect existing power asymmetries. Cognitive imperialism in AI does not even require deliberate exclusion: it functions by encoding Eurocentric and Anglophone frameworks as default standards against which all other epistemologies are measured.

Generative AI systems, as Pragya (2025) argues, produce a systematic flattening of epistemic tones and ideas, marginalizing the voices and perspectives of scholars and practitioners from the diverse communities of the Global South. This underrepresentation is not due to a lack of participation in the digital ecosystem. On the contrary, the global majority produces a substantial share of the data circulating online. Yet data that is most represented in the curated datasets remains disproportionately skewed towards Western and English-language sources (Arora, 2025). The ability to determine what counts as knowledge, and whose ways of knowing are recognized, is a political one. When generative AI systems become infrastructures for design practice, they reconfigure the temporal and cognitive conditions under which design knowledges emerge, and they do so in ways that systematically favor those forms of knowing already most visible in the dominant digital archive.

Ultimately, the output of generative AI is not a view from nowhere, but a dominant and frequently discriminatory view from a very specific some-where—one that is rooted in hegemonic histories, bodies, and ecologies of knowledge. To take design seriously as an epistemic practice, we must critically challenge AI in its current configuration. This demands, as the following sections will argue, that we begin to cultivate new concepts and practices of care and doubt within AI-assisted design.

## ENGINES OF CONVERGENCE: GENERATIVE AI AS EPISTEMIC INFRASTRUCTURE

To understand what happens when generative AI enters design practice, we must go beyond what these systems do and ask what they become when embedded in practice. The prevailing discourse on AI in design tends to view these systems as tools that augment human capabilities, accelerate certain tasks, or add new options to designers' repertoires—a simplification that overlooks their role as infrastructure.

The concept of infrastructure, in the theoretical tradition that Star and Ruhleder developed in the 1990s, refers to systems that become the invisible constitution of practice. It is not what one works with, but what one works through. Infrastructure is characterized by a set of properties that distinguish it from tools in the ordinary sense: it is embedded in other structures and practices; it becomes invisible through use; it has a temporal reach beyond single events; it is learned as part of membership in a community of practice; and crucially, it shapes what it is possible to do, think, and know within the contexts it structures (Star & Ruhleder, 1996). What makes infrastructure politically significant is precisely its invisibility: once embedded, it tends to disappear from view, taking its assumptions, standards, and exclusions with it. Star and Ruhleder are unambiguous on this point: there are no genuinely neutral or universal infrastructure standards (Star & Ruhleder, 1996). The infrastructural embeddedness of generative AI rests on material foundations—mineral extraction, the energy of training and inference, and the precarious labor of data annotators and content moderators, largely in the Global South—whose costs fall along the same lines of global inequality that structure the epistemic landscape described above (Crawford, 2021). The convergence this paper traces at the level of knowledge is thus continuous with, and dependent on, a convergence of material and economic power: the same platform infrastructures that foreclose pluriversal futures also concentrate the computational capacity to produce these very systems. As these models become embedded in everyday design tools as an invisible backbone, they begin to structure practice in ways that are no longer deliberate choices.

This infrastructural takeover, however, cannot be laid out as the corruption of an otherwise neutral design practice. Design methodologies have long operated through their own extractive and gatekeeping logics: translating the complexities of communities and lifeworlds into solvable problems, extracting situated knowledges for use elsewhere, and consolidating methodological authority within institutional standards of legitimacy that remained Eurocentric by default (Escobar, 2018; Tunstall, 2023). Escobar argues that mainstream design currently serves capitalist and Eurocentric ends not as an aberration but as a constitutive condition, insisting that "there is no modernity *anywhere* without this coloniality" (Escobar, 2018, p. 94). Generative AI, in this light, does not introduce a colonial logic into a previously innocent practice; it automates, accelerates, and infrastructurally entrenches a set of extractive tendencies that design has carried since its disciplinary formation.

This infrastructural embedding, as described above, has a concrete epistemic consequence: it abbreviates the design process at its most generative stage. Nowhere is this more legible than in what these systems require from designers: textual description. To prompt a generative system, one must articulate expectations in advance. This is epistemically significant, because it inverts the temporal relationship between knowing and making. Ingold's (2013) concept of the textility of making captures this inversion: making, on his account, is not the imposition of a pre-formed idea onto passive material, but a responsive correspondence with materials that have their own tendencies and resistances. In prompt-based generation, this textility is replaced by a textuality of description: the open, responsive weaving of designers and materials gives way to specification of an expected output. While iterative prompting practices exist, the structural tendency of prompt-based interaction nonetheless privileges specification over exploration—even vague prompts require a textual articulation that differs fundamentally from the non-verbal negotiations of embodied design processes. Where embodied inquiry arrives at form through material resistance and unexpected discovery, a prompt-based process requires the articulation of expectations before such encounters can occur.

It is precisely the fragmented, resistance-driven search movement described above that generative systems abbreviate—and this is true not only where image generation is concerned. The restructuring extends across the full breadth of AI-assisted design: to language models that synthesize user research or draft conceptual frameworks; to systems that propose information architectures or interface patterns from behavioral data; to tools that translate vague briefs into structured scenarios before designers had to interrogate the brief itself. In each case, the same structural inversion occurs: rather than allowing knowledges to

emerge from open-ended material inquiry, AI systems produce a synthesized output that manifests decisions before exploratory processes have unfolded. What appears as acceleration is a delegation of exploratory labor: hesitation, debate, reformulation. This reorganizes the epistemic temporality of design itself: the finished replaces the searching, and the plausible replaces the speculative. With this shift, design risks losing one of its central capacities: the ability to think through making.

The technical architecture of generative AI systems imposes these restructurings through their own construction. In particular, the large language models and latent diffusion models that currently dominate creative AI applications involve specific epistemic operations that differ fundamentally from the processual logic of design described in the previous section. The output of a generative AI system is, in a structural sense, a probabilistic average: it reflects what, across the enormous span of its training data, tends to follow from what constitutes the dominant cultural consensus, reducing creative variation to a mathematical interpolation of existing artifacts (Bender et al., 2021; cf. Manovich, 2019). AI systems are, by design, engines of convergence oriented toward what already exists in recognizable and reproducible forms. This convergence is a cultural dilemma that exceeds the technical realm. Fisher (2014), applying Derrida's (1994) concept of hauntology, diagnosed contemporary culture with an inability to produce the genuinely new—a condition in which cultural forms can only recycle, sample, and recombine what has already existed, haunted by lost futures that never arrived. What Fisher described as a pathology of cultural production becomes, in generative AI systems, an architectural principle. By being trained on an existing archive, a model is constituted by the past, and its outputs are, therefore, hauntological: they present themselves as new while being assembled entirely from the already-said, the already-made, the already-seen. Generative AI infrastructuralizes this tendency, and embeds the retrospective logic of the archive into the conditions under which seemingly new design work is conceived. The stakes of this become acute when set against the earlier pluriversal argument. Fisher's hauntology is a diagnosis of cultural foreclosure under capitalist realism: the structural impossibility of imagining futures genuinely different from the present. This convergence of hauntological logic within a decolonial critique has recently been developed by Patil, Cila, Redström, and Giaccardi, who argue that AI systems in design contexts haunt the present with the unfinished structures of colonial knowledge hierarchies, making certain design futures structurally inaccessible while presenting this inaccessibility as a neutral feature of the medium (Patil et al., 2024). Their concept of designing with ghosts—attending to what has been excluded from the archive, to the traces of what was never allowed to fully form—offers a methodological perspective: if generative AI is constituted by an archive that already encodes epistemic violence, then designing critically with AI requires learning to read its absences, not only its outputs. The probabilistic logic of AI's latent space enacts a compounding inversion of imaginable futures. Where futuring models such as the Futures Cone already foreclose pluriversal possibilities through their embedded Western temporality (Patil et al., 2024), the latent space again flattens this flattened opening back into a single attractor: the statistically most central output averaged across the training archive (Manovich, 2019).

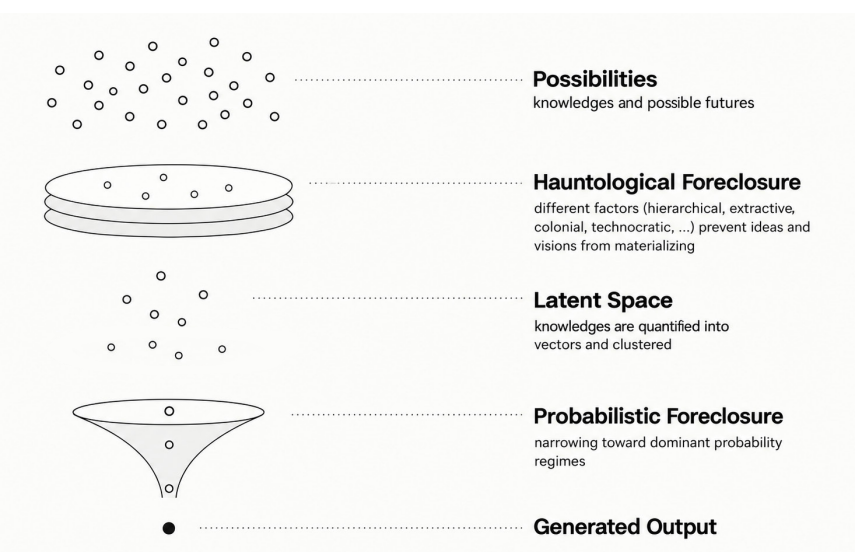





FIGURE 1. *Double foreclosure. The diverse, irreducibly different futures of the possible space (top) pass through a hauntological foreclosure at the archive's threshold; within the latent space they are rendered uniform, and a second, probabilistic foreclosure compresses them toward a single AI output. The futures excluded at the threshold remain as ghosts at the threshold. The schematic representation is intentionally somewhat vague—it is a conceptual visualization, not a technical diagram.*

Futuring models are therefore not merely haunted by colonial structures, as Patil et al. argue, but the emerging thoughts and prototypes are actively compressed by the averaging operation of generative AI models, reducing an already limited field of possible futures to its most probable, and therefore most hegemonic, form. Applied to design, and read through Escobar and Santos, this double foreclosure (hauntological and probabilistic) takes on a structurally exclusionary dimension: it does not merely underrepresent non-dominant design cultures in its outputs, but forecloses the futures they might produce, because those futures have not yet left the traces from which a statistical model could reconstruct them. What cannot be averaged cannot be generated. And what cannot be generated gradually ceases to be imaginable. This is what Tony Fry (2020) calls defuturing: the process by which dominant design practices do not merely fail to imagine other futures, but eliminate the conditions under which those futures could have emerged.

A hypothetical design scenario illustrates how the double foreclosure described above (Figure 1) could operate in design practice. Imagine a designer engaging with a regionally specific woodworking tradition, transmitted primarily through embodied craft knowledges and only fragmentarily inscribed in digital archives. Seeking to understand and reconstruct a relevant wood joinery technique, the designer turns to a generative AI system for instructions. Since AI systems are strongly focused on completion and solution continuation and tend to understand every prompt as part of a solvable problem structure requiring a constructive, actionable response, this produces a kind of silent imperative: when something is asked, something must be answered—and when something is to be built, a set of instructions must be produced. The responses therefore tend to stabilize around globally standardized and well-documented forms of joinery, as codified in canonical carpentry manuals and widely circulated online tutorials. The resulting epistemic compression can be understood as a manifestation of the double foreclosure outlined above: Hauntologically, the system reproduces sedimented, industrialized craft epistemologies that have already achieved archival legitimacy, thereby reactivating hegemonic regimes of thinking-making. Probabilistically, whatever fragments of the situated tradition did enter the archive occupy too marginal a region of the latent space to survive averaging; they are smoothed toward the statistical center before they can become thinkable. The ghosts of these underrepresented knowledges might materialize as flattened or hallucinated instructions in the generated output. The practical implication is then that AI literacy must include the capacity to read absences as epistemically significant and to treat generated output not as a neutral point of departure but as a partial, already-filtered proposal, to be held against situated, embodied engagement with the world it claims, or fails, to represent.

This bypassing is rarely perceived as loss, because an output is immediately produced. And it is here that the consequences for situated and culturally specific design knowledges become most acute. Ultimately, to design with generative AI is never to design with a blank slate; it is to design with some-thing—and the ghostly traces of some-bodies (and not every-bodies). It means designing with the materialized remnants of the past that have become deeply entrenched in our infrastructure and that are surreptitiously foreclosing the pluriverse of possible futures.

#### GATHERING, CARRYING, AND RECLAIMING SITUATED INTELLIGENCES

If the preceding analysis reveals generative AI as a homogenizing infrastructure that structurally truncates design processes, the question arises: how can design practice and education respond?

We have traced the transition of AI from a mere tool to an epistemic infrastructure (an invisible, foundational system that dictates the boundaries of what can be imagined and created). To resist the epistemically homogenizing and foreclosing pressures of this global infrastructure, another technological imaginary is possible: reimagining AI models as containers. Le Guin's "Carrier Bag Theory of Fiction" (1988) offers a counternarrative to the dominant technological imaginary: against the story of the tool as weapon—linear, extractive, aimed at a singular target—she proposes the container as the foundational cultural technology: a vessel for gathering and holding diverse, heterogeneous elements without reducing them to one. Current AI models operate according to the spear logic: they extract patterns from a vast archive and project them forward as singular, convergent outputs. A container logic would instead preserve epistemic heterogeneity within the model itself—holding situated knowledges in their difference rather than averaging them into a probabilistic collapse. This is where the emerging discourse around local, community-driven models becomes politically and epistemically urgent. Their significance lies not in their smaller scale alone or ethical superiority, but in their potential to redistribute how knowledges are gathered, delimited, and governed. Design education could treat models less as universal tools and more as epistemic containers whose contents must be deliberately curated.

Smaller or specialized models may function as bounded containers of particular epistemologies, e.g., embedding regional aesthetics, Indigenous practices, or specific material traditions within their training corpora. In contrast to large-scale models trained on a predominantly Western digital archive, such systems foreground the fact that every model is situated within a specific epistemic horizon.

Yet this containment is not inherently emancipatory since it surfaces and redistributes, rather than resolves, epistemic power. Who defines the boundaries of the container and who again curates the archive from which it learns? Which omissions are actively chosen? While large models flatten pluriversality through probabilistic convergence, smaller models may risk essentialization or reification. A community-controlled corpus can preserve situated knowledges but can also stabilize them into a fixed representation. Moreover, the technical, financial, and infrastructural resources required to train and maintain localized models are themselves unevenly distributed. The communities most affected by epistemic marginalization are often those least able to access the computational capacity, data sovereignty, or institutional support necessary to build and govern such systems. In this sense, "local models" may remain accessible primarily to already resourced actors, potentially reproducing the asymmetries they seek to counter.

Transitioning from designers as passive consumers of global infrastructure to active curators of localized epistemic containers fundamentally changes the educational and practical mandate of design. What does it mean to resist the infrastructural trajectory at the level of daily practice and pedagogy? What new forms of labor and care are necessary for these systems, which must now be seen and cared for? And who has the institutional,

economic, and technical capacities for maintaining them, and who, in their absence, becomes excluded once again?

A shift towards situated models entails an epistemological reorientation of the values according to which design processes are organized and assessed. Central to such a perspective is the notion of care as a constitutive condition of knowledge production. Attending carefully to the conditions under which knowledges are produced, maintained, and sustained is itself a rigorous epistemic act (Puig de la Bellacasa, 2017). Just and democratic design cannot be achieved through procedural or technical adjustments alone, but requires attending to the relational, embodied, and care-oriented dimensions of knowledge production that current AI paradigms structurally exclude (Hardt et al., 2024). Applied to design education, this suggests that what needs to be cultivated is not resistance to AI per se, but a renewed commitment to the forms of knowing that require slowness, vulnerability, material engagement, and attention to the particular. Such practices unfold at temporal scales that resist the linear acceleration logics embedded in computational systems. Slowness is, as Stengers (2010) argues, a political resistance: it prevents dominant knowledge regimes from prematurely closing questions and allows other practices of knowing to become articulate and to problematize those questions. The demand for speed is therefore never neutral; it advantages forms of knowledge that travel quickly while marginalizing those that require time, care, and relational embedding to become legible.

A second perspective is political, and it operates at the level of the data itself. Caroline Sinders' Feminist Data Set (2020), an ongoing multi-year project that interrogates every stage of the machine learning pipeline through an intersectional feminist lens, demonstrates that the training data of AI systems is not a given but a design decision, and therefore a site of designerly, political intervention. Sinders' project proceeds through collaborative workshops in which participants collectively define the parameters of feminist knowledges, building a corpus of artworks, essays, and interviews that can be used to train AI systems to recognize feminist and intersectional ways of thinking (Sinders, 2020). The project enacts data collection as feminist practice, making visible the political labor that underlies every training corpus, including those whose politics are rendered invisible by their dominance.

Payal Arora's framework of creative data justice offers another illustration of what a counter-infrastructure to mainstream AI might look like. Arora proposes a decolonial and Indigenous framework for assessing creativity and AI that begins from a different set of questions entirely: not how to make existing systems less biased, but how to evaluate whether the very criteria by which AI creativity is assessed are themselves the product of colonial epistemologies (Arora, 2025). Her framework intersects three dimensions: creative labor (including the invisible work of data labelers and content moderators in the Global South), creative rights (drawing on Indigenous models of communal ownership over Western patent frameworks), and creative learning (centering informal, community-based knowledges). Against the Western, Educated, Industrialized, Rich, and Democratic (WEIRD) (cf. Henrich et al., 2010; Linxen et al., 2021) bias structuring most AI training data, Arora proposes Indigenous systems of care: reciprocity, communal ownership, and equitable distribution as the basis for fair creative value. Applied to design education, AI literacy must therefore extend beyond technical or even critical competence to actively contesting whose aesthetic judgments are encoded as universal.

Locally curated, community-controlled, epistemologically situated corpora represent a form of counter-infrastructure that demands that the conditions under which those systems operate be made visible, contestable, and transformable. For design education, this opens a set of questions that are as much pedagogical as technical: What kinds of knowledges should design education want its students to (re)produce? Whose aesthetic judgments, material practices, and cultural sensibilities should inform the systems with which those students work? And what would it mean to train designers not just in the use of AI tools, but in the critical and constructive practice of shaping the epistemic conditions those tools embody?

Consequently, for design education, it is imperative to render generative AI's truncating effects perceptible, which may entail valuing the process over the resulting artifact. It is essential to attend to the search movement—the detours, reformulations, and productive failures—as well as to understand the absences of a model; and regarding a generated result, one must interrogate not only what it shows, but also what it will never be able to show. Critical AI literacy can be regarded as a constitutive component of design education—and if data are conceived as design material, then learning to critically interrogate, curate, care for, and govern this corpus of data belongs to a new core of design competence. Projects such as Sinders' Feminist Data Set and frameworks like Arora's creative data justice are highly instructive here precisely because they are inherently pedagogical: they enact corpus-building as collaborative, explicitly value-based work and can be translated into curricular formats in which students themselves assemble, delimit, and reflect upon the situated archives from which AI infrastructures learn. From this, implications for design education follow: that we should explore unrealized futures, learning to read a model for what is absent from its archive; that we must hold open a space for the knowledges foreclosed by the dominant archive, rather than presuming we could simply recover them; and that we must engage data as a design material—not only curating what a corpus contains, but attending to the extractive labor, the energy, and the material entanglements from which any model is built, and for whose exclusions design bears responsibility. Design education needs critical reflection, but above all the active search for more hopeful and more generative ways of working with these systems: an orientation that stands, in this sense, within the tradition of a broader post-colonial and (eco-)feminist commitment that ought to shape design education as a whole.

These propositions invite empirical investigation: How exactly does AI reshape the exploratory phase in practice and education? Under what institutional conditions can localized, community-governed models be built and sustained without reproducing the very asymmetries they are intended to counter? And how might the situatedness of this very critique—which is predominantly Western in its theoretical vocabulary—be decentered through research conducted from other epistemic perspectives and locations? Treating these aspects as open questions rather than settled conclusions is, in turn, consistent with the ethics of care and slowness defended in this argument.

If design is understood as a culture of knowledge, then AI's intervention into it is not only technological but epistemological. Frameworks of care may offer one way to recalibrate what that culture values and how it knows.

## DISCUSSION: DESIGNING FROM SOME–WHERE

The preceding analysis has traced a double movement of generative AI as infrastructure that structurally truncates design processes, and the foreclosing pressure this exerts on pluriversal ways of knowing. What remains to be asked is what reorientations of design practice and education may follow from this.

Care, in this context, is a necessary condition for keeping epistemic processes open. We established earlier that design knowledges emerge through processes. Caring for design, therefore, means fiercely protecting the temporal and spatial conditions under which these knowledges can form. This means teaching and learning to value detours over shortcuts, to interrogate the political labor behind a dataset, and to treat the productive failure as more epistemically valuable than an instantaneous, synthesized result. This is not, however, a call to restore a (non-existing) prior designerly innocence that generative AI has corrupted. The extractive and gatekeeping tendencies that AI infrastructures now automate were already operative in design's methodological traditions, long before any model was trained. What generative AI changes is the speed, scale, and apparent neutrality and invisibility with which these tendencies operate. In design education, this means treating the epistemic containers of generative systems—what they were trained on, what they exclude, whose judgments they encode—not as a technical given but as a design material in its own right, one that designers must learn to shape, contest, and take responsibility for. If generative infrastructure structurally truncates the design process, care becomes the methodological counterweight that keeps designerly processes open.

Designing from some-where means acknowledging that generative systems only ever contain some things—a historically frozen, hegemonically filtered subset of knowledges from which countless ways of knowing have been excluded. If alternative futures are to be imagined, they cannot rely on the probabilistic averaging of this archive. They must be consciously constructed from carefully situated, responsibly curated, and deliberately chosen epistemic resources. The shift from passive consumption of global AI infrastructures toward the active shaping of the conditions under which these systems operate is, ultimately, what algorithmic literacy in design must come to mean.

Such a discourse is, of course, inherently academic—which is precisely our intention within an educational context. However, this critique itself is situated: it draws predominantly on Western theoretical traditions and employs the very epistemological vocabulary it seeks to problematize. Acknowledging this situatedness does not dissolve the contradictions it exposes. Rather, it foregrounds the responsibility of design practice and education to cultivate the forms of attention, care, and epistemic accountability required to resist the quiet foreclosure of plural ways of knowing within increasingly dominant generative infrastructures.

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