



Delft University of Technology

Challenging the North-South Divide in Decolonizing Design

Baha, Ehsan; Singh, Abhigyan

DOI

[10.7764/disen.25.Article.5](https://doi.org/10.7764/disen.25.Article.5)

Publication date

2024

Document Version

Final published version

Published in

Diseña

Citation (APA)

Baha, E., & Singh, A. (2024). Challenging the North-South Divide in Decolonizing Design. *Diseña*, 25, Article 5. <https://doi.org/10.7764/disen.25.Article.5>

Important note

To cite this publication, please use the final published version (if applicable).
Please check the document version above.

Copyright

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

Please contact us and provide details if you believe this document breaches copyrights.
We will remove access to the work immediately and investigate your claim.

Challenging *the* North-South Divide *in* Decolonizing Design

How to cite this article: Baha, E., & Singh, A. (2024). Challenging the North-South Divide in Decolonizing Design. *Diseña*, (25), Article.5. <https://doi.org/10.7764/disena.25.Article.5>

DISEÑA	25
August	2024
ISSN0718-8447 (print)	
2452-4298 (electronic)	
COPYRIGHT: CC BY-SA 4.0 CL	
Original Research Article	
Reception	<input checked="" type="checkbox"/>
January 08 2024	
Acceptance	<input checked="" type="checkbox"/>
August 23 2024	
¿ Traducción al español aquí	

Ehsan Baha

University of Montreal
Delft University of Technology

Abhigyan Singh

Delft University of Technology

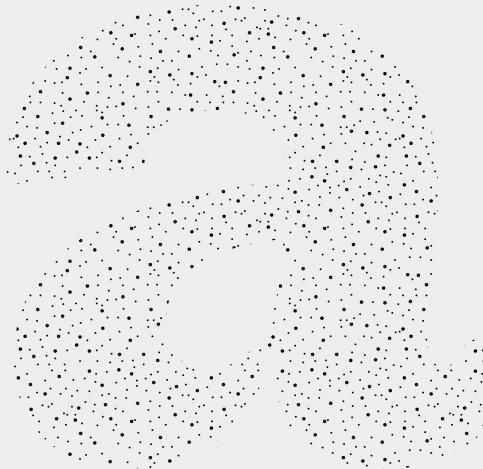
This article critiques the prevailing North-South divide within the discourse on decolonizing design, recognizing its historical significance while exposing its limitations in advancing decolonial agendas. The uncritical adoption of this dichotomy often leads to oversimplification, exclusion, and isolation, limiting the practical impact of decolonizing efforts. Drawing on insights from a global design anthropological study on energy exchange, we advocate for a post-development perspective that transcends the North-South divide. Our study presents three key insights: colonization is rooted in ideology and requires global reform for decolonization; mutual learning between the Global North and South is essential; and infrastructure plays a crucial role in envisioning and implementing decolonial alternatives. This work aims to stimulate further discourse toward a dialogic, contextual, infrastructural, and comparative post-development paradigm in decolonizing design.

Keywords

- pluriversal design
- design anthropology
- ideology
- post-development theory
- energy transition

Ehsan Baha —Assistant Professor in the School of Design at the University of Montreal. He holds a MSc and BSc degree in Industrial Design from Eindhoven University of Technology. He is a member of the design research laboratory, Hybridlab (University of Montreal). His scholarly pursuits center on exploring an authentic approach to designer identity development, cultivating a strong foundation for pluralism within the field, and elevating the academic standing of design. He is currently awaiting a defense date for his doctoral thesis titled 'Authentic Designer Identity' (Faculty of Industrial Design Engineering, Delft University of Technology). Some of his publications include 'Expertise Profiling in Design Schools: A Theoretical Framework' (co-authored with T. Dorta and P. Gauthier; *DRS* 2024); and 'Why Am I Studying Design?' (with M. Koch, N. Sturkenboom, R. Price, and D. Snelders; *DRS* 2020).

Abhigyan Singh —Assistant Professor at the Department of Human-Centered Design of Delft University of Technology. He holds a doctoral degree from the Faculty of Industrial Design Engineering at Delft University of Technology, a MA in New Media Design from Aalto University, and a BTech in Information and Communication Technology from DAIICT. His research examines social, cultural, and economic aspects of emergent energy systems, and makes conceptual and methodological contributions to the emerging domain of design anthropology. He received the 2021 wwna Apply Award from the European Association of Social Anthropologists' Applied Anthropology Network (EASA-AAN). Some of his latest publications include 'Design Anthropology for Ethics of Care and Emergence' (co-authored with G. van Leeuwen; *DRS* 2024); and 'Envisioning 'Anthropology through Design' (with N. Romero Herrera, H. W. van Dijk, D. Keyson, and A. T. Strating; *Design Studies*, Vol. 76).



Challenging the North-South Divide in Decolonizing Design

Ehsan Baha

University of Montreal
Montreal, Canada
Delft University of Technology
Delft, the Netherlands

ehsan.baha@umontreal.ca

 <https://orcid.org/0000-0002-0322-1103>

Abhigyan Singh

Delft University of Technology
Delft, the Netherlands

a.singh@tudelft.nl

 <https://orcid.org/0000-0003-4984-9067>

TOWARDS A NEW PARADIGM

Many anthropologists and historians identify *neoliberal capitalism* as a pervasive global ideology that has significantly influenced societal norms and cultural landscapes (Harvey, 2005; Kipnis, 2010). In recent decades, however, academic discourse, including within the field of design, has witnessed the rise of diverse movements actively challenging this dominance and advocating for alternative worldviews (Escobar, 2021; Julier, 2013; Kaszynska, 2023). Central to these efforts is the global *North-South divide* (Davis, 2012), which serves as a conceptual framework for transformative movements such as decolonizing design (Escobar, 2018; Onafuwa, 2018). While this dichotomy has effectively raised awareness about the unjust status quo and recognized alternative worldviews for design (Gutiérrez Borrero, 2021), it faces significant barriers that must be overcome to advance toward a more just, pluralistic, dialogic, and sustainable understanding and practice of design (Tseklevs et al., 2020).

This article argues that decolonizing design scholars should engage in self-critique and openness informed by an ununified post-development theory (Escobar, 1995), which challenges three main development movements corresponding to three contrasting theoretical orientations: *modernization theory* (1950s/1960s), *Marxist-inspired dependency theory* (1960s/1970s), and *critiques of development as a cultural discourse* (1990s/2000s) (Demaria et al., 2023). We share insights from an exploratory approach aimed at overcoming the inherent barriers in the decolonizing design movement, drawing inspiration from design anthropology discourse (Otto & Smith, 2013). Rather than perpetuating the dichotomy between the so-called developed Global North (GN) and developing Global South (GS) regions, which often emphasize awareness-raising and alternative worldviews through an oppressor-oppressed lens, we advocate for a shift in focus. Our proposal focuses on identifying and transforming colonizing ideologies embedded across global designs, aiming to decolonize them through a post-development perspective.

As design scholars from the GS (I. R. of Iran and India) working in the GN (Canada and the Netherlands), we aim to bridge the North-South divide by sharing insights from a global energy transition project. This project involved a design anthropological study focused on energy exchange in Gaya, India, and Amsterdam, the Netherlands. Through our expertise in identity and design anthropology, we contribute a post-development perspective that challenges the prevailing North-South divide in decolonizing design discourse. The project explores various possibilities of human relationships with energy and emphasizes the integration of social and cultural values into human interactions with energy infrastructures.

THE NORTH-SOUTH DIVIDE IN DECOLONIZING DESIGN

The North-South Divide

Since the 1960s, the terms 'North' and 'South' have been pivotal in discussions on international political economy (Davis, 2012). These labels differentiate economically developed countries—typically industrialized with high per capita income—primarily located in the northern hemisphere, from economically disadvantaged countries—characterized by high poverty rates and lower levels of industrialization—predominantly in the southern hemisphere, with notable exceptions such as Australia and New Zealand.

This divide underscores a significant international political and economic cleavage rather than mapping global poverty accurately. The South is often portrayed as a bloc of low-income nations united by poverty, colonial oppression, and exclusion from global political and economic systems. This exclusion stemmed from the dominance of former colonial powers in the North, which established international structures and institutions and disproportionately benefited from them, showing little inclination to address this inequality or alleviate poverty in the South (Davis, 2012). The North-South divide has undergone three paradigm shifts: beginning with the *development* or *modernization* paradigm, challenged by the *dependency/liberation* paradigm, and culminating in the *post-development* paradigm (Litonjua, 2012).

Decolonizing Design through the North-South Lens

Discussions from a decolonial lens point to the manifestation of this divide in design through monological etymology, language, ontology, and epistemology (Gutiérrez Borrero, 2021; Sloane, 2019). Modern design tends to monopolize the future via the concept of the 'project', viewing the present as defective and the past as irrelevant, leaning toward discriminatory biases (Papanek, 1971; Tunstall, 2023; Van Amstel, 2021), and marginalizing GS design practices by dismissing them as underdeveloped (Gutiérrez Borrero, 2021). In recent years, design literature has

increasingly addressed the harmful legacy of colonial design in both the GN and GS (Escobar, 2021). The decolonizing design movement, which emerged in 2016 and gained momentum through diverse voices (Schultz et al., 2018)—especially Black, Indigenous, South American, Asian, and other non-Christian voices (Tunstall, 2023)—aims to expose and rectify the colonial legacy of Northern hegemony in design (Schultz et al., 2018; Shvartzberg Carrió, 2022), advocating for the incorporation of GS worldviews (Ansari, 2019, 2021; Escobar, 2021; Taboada et al., 2020; Vatsyayan, 1996).

Within the North-South divide framework, one strand highlights the white supremacist underpinnings of design (Tunstall, 2023) and its brutal history, including the lingering trauma (Menakem, 2017); while another emphasizes valuing the past as a guide for understanding the present and future, challenging the modern notion of the past as fixed and gone (Vazquez, 2017). While some scholars emphasize inclusivity, equity, empowerment, culture, and pluralism in design practices (Smith et al., 2021), others advocate abandoning design as a GN-centric concept, calling for alternative etymologies and linguistic frameworks from the GS (e.g., Escobar, 2018; Gutiérrez Borrero, 2021). Additionally, some seek to reform design by embracing a post-development paradigm, considering cosmological ontologies (e.g., Ansari, 2019) or interrogating the conflation of design with scientific thinking, which prioritizes universality over individual and cultural identity (e.g., Baha et al., 2018; Diethelm, 2016).

Barriers to Decolonizing Design

Although the global North-South framework on which post-development discourse rests has increasingly influenced the design discourse, decolonizing design still faces major challenges (Abdulla, 2021). Under the North-South framework, the decolonizing design discussion often risks oversimplification by monolithically categorizing the GN as the colonizer and equating white or Western people and designers as colonizers. Simultaneously, it positions the GS as the sole space of colonization. This reductive framing tends to overgeneralize and impose a universal perspective, disregarding nonconforming insights and alternative viewpoints that challenge the North-South divide. Consequently, such framings fail as they inadequately examine and address the fundamental presuppositions within design practices, leading to tokenistic rather than transformative design efforts.

A simplistic critique of Western scholarship, design practices, and institutions—often privileged and powerful—risks alienating potential allies, including scholars from the GS. This exclusion impedes decolonization efforts. Although the GS can be envisioned as a space for materializing certain experiences and autonomous thoughts, it is essential to recognize that design practices in both the GN and GS may share similarities, alongside their differences. Moreover, these

practices do not always reflect a totalizing view of their respective regions (Gutiérrez Borrero, 2021; Patil, 2024). Besides, effective resistance against oppression requires engaging all parties in critical dialogue (Freire, 1970). Conversely, design interventions are only effective when they respect and recognize identity (Diethelm, 2016).

By labeling designers as colonizers (Diethelm, 2016; Gutiérrez Borrero, 2021), current decolonizing design approaches often focus on isolated roles and contexts, without addressing how indigeneity manifests in broader settings, such as urban environments or interactions with colonizers, where indigenous recognition or autonomy is not championed. This gap limits nuanced comparative studies and systemic solutions for global challenges like climate change, which require systemic and nuanced post-development approaches that transcend geographical and ideological divides—something impossible to achieve without understanding and recognizing the coloniality still practiced through monological Western-Anglo-Eurocentric design (Vazquez, 2017).

As a result, the decolonizing design movement struggles to extend its influence from academia to professional practice (Tunstall, 2023). Theoretical academic literature is often inaccessible to practitioners (Zielhuis, 2023), a first step required for real-world application, especially by those unfamiliar with decoloniality (Fry et al., 2015; Geib, 2023). This inaccessibility perpetuates colonial infrastructures in both the GN and GS contexts (Diethelm, 2016). After all, decolonial design practitioners must combat colonial design tendencies to effectively engage the broader design community pivotal to decolonization (Torretta et al., 2024). The barriers presented by the North-South divide are summarized in Table 1.

Table 1: Barriers of the North-South divide to decolonizing design and their consequences

<i>Barrier</i>	<i>Consequences</i>
Oversimplification	Results in superficial solutions due to a simplistic understanding of colonial issues. Fails to address foundational ideologies in design practices, leading to tokenistic efforts.
Exclusion	Creates a divisive atmosphere that prevents potential global alliances from forming. Emphasizes individuals over systemic issues.
Isolation	Focuses excessively on Indigenous communities without a comprehensive view of how indigeneity manifests in broader contexts. Lacks comparative studies that bridge Global North and Global South experiences, hindering global achievements.
Limited influence	Renders academic knowledge inaccessible and impractical for practitioners, restricting broader engagement and real-world application. Results in insufficient decolonial practice, perpetuating entrenched colonial infrastructures.

THE INTER-HOUSEHOLD ENERGY EXCHANGE PROJECT

This section introduces the ‘Inter-Household Energy Exchange Project’, which serves as a case study for exploring a post-developmental perspective on decolonizing design. This project contributes to global energy transition efforts aimed at shifting from *centralized* to *decentralized* energy systems. This transition is facilitating a global shift away from traditional large-scale, fossil fuel-based, passive energy models toward localized renewable energy production, storage, and management (Adams et al., 2021; Singh, 2019; Singh et al., 2017). By emphasizing active community participation, this transition promotes the integration of socio-cultural elements into energy exchanges between households and neighborhoods, moving beyond purely technological systems. Such transformative changes are particularly pertinent to a post-development perspective, as they represent a global phenomenon intertwining the GN and GS through shared infrastructural and climate challenges, emerging energy technologies, and international policy actions driven by various global organizations.

Initiated in 2014 by author Abhigyan Singh as part of his doctoral research on energy exchanges in India, this ongoing global project—that represents a crucial step toward decolonizing the design of energy exchange systems—critically examines the meanings, theoretical foundations, and values underlying energy exchanges. In this paper, we focus on insights from a longitudinal design anthropology study conducted by Singh at two specific locations: the Gaya district in India and the Amsterdam Southeast area in the Netherlands. For further details on the research approach and methods, interested readers are encouraged to consult previous publications by Singh (2019), Singh et al. (2021), and Van Leeuwen and Singh (2023, 2024).

As part of the design anthropology approach in India, Singh conceptualized, designed, and installed energy kiosks—an off-grid energy infrastructure—in the villages of Rampur and Manpur (Figure 1). These villages were not connected to any electrical grid. The energy kiosks, equipped with solar panels, power banks, and solar lamps, were provided as infrastructure to facilitate diverse forms of energy exchange within the villages (as detailed in Singh, 2019; Singh et al., 2021).

Since 2021, Singh, in the role of a *designer-anthropologist* (Singh et al., 2021), has continued to explore opportunities for energy exchange in the Netherlands by participating in a multidisciplinary energy innovation project in Amsterdam Southeast. This region is characterized by significant ethnic and cultural diversity, with residents from 170 nationalities. The area includes a dynamic mix of large businesses such as a football stadium equipped with over 4,000 solar panels, a 3 MW battery bank, commercial zones, and neighborhoods facing socio-economic challenges, with residents living in social housing

(Figure 2). The design anthropological research in the Netherlands is ongoing at the time of writing this article. For further details, readers may refer to recent publications stemming from it (Van Leeuwen & Singh, 2023, 2024).

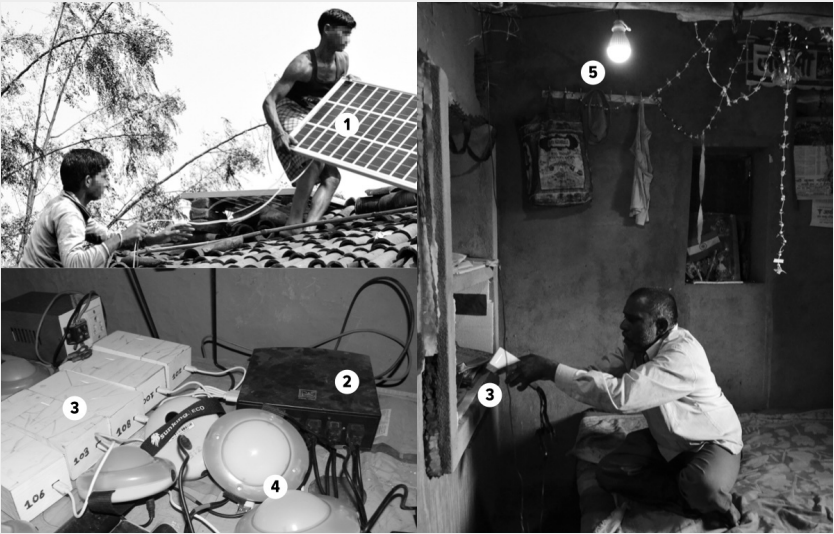


Figure 1: Energy exchange infrastructure and its components: solar panel (1), energy router (2), power banks (3), solar lamps (4), and a LED bulb connected to a power bank at a villager's home (5). Photographs: Abhigyan Singh.



Figure 2: Scenes from Amsterdam Southeast. Amsterdam Bijlmer ArenA train station (1), Johan Cruyff Arena (JCA) football stadium (2), and a street view of a social housing neighborhood (3). Photographs: Abhigyan Singh.

EXPLORING COLONIZATION AND DECOLONIZATION IN ENERGY EXCHANGE

Colonization as Driven by Ideology and Decolonization by its Global Reform

Employing a post-development perspective through field research in both rural India and the Netherlands has illuminated several intriguing insights into how an ideological frame influences the design of energy exchanges, and how the same

ideological notion is colonizing energy exchange in both the GN and the GS. In this context, we understand *ideology* through the lens of social sciences as having two primary dimensions. Firstly, ideology encompasses a multifaceted process involving the production, reproduction, and transformation of meaning that manifests power and domination (Silbey, 2006). Secondly, ideology represents a system of social and moral ideas and values that constrain, confine, and dominate (Bloch, 2010).

A key realization is that *neoliberalism* (Harvey, 2005; Kipnis, 2010) influences and constrains efforts to design energy exchanges in both the GN and the GS. As a dominant ideology, it produces, controls, and limits the meaning of energy exchange to *market-based energy trading*, where market mechanisms drive transactions and energy is commodified (Adams et al., 2021; Singh et al., 2017, 2018). Such an approach not only endorses and moralizes market structures as the normative framework for orchestrating energy exchanges, but also casts participants—individuals, households, or communities—as actors driven solely by economic self-interest. This ideological frame prioritizes values of efficiency, resource optimization, and financial gains, often at the expense of social and cultural dimensions, which are relegated to the periphery.

Neoliberalism, though originating in the GN, assumes diverse forms that shape various human experiences worldwide, including in the GS (Centeno & Cohen, 2012; Connell & Dados, 2014; Ganti, 2014). Neoliberal ideology has deeply permeated the mindsets of designers, engineers, businesses, and governments involved in developing energy exchange systems, leading them to avoid questioning and exploring alternatives to energy trading. As a result, design solutions—such as infrastructures, technologies, services, and business models—across both the GN and the GS are predominantly oriented toward facilitating energy trading while simultaneously limiting the exploration of alternative energy exchange possibilities.

In India, energy exchange designs notably exhibit minimal engagement with indigenous theories and concepts. We contend that energy exchange design is not colonized by any single institution, region, or even the GN, but rather by the pervasive ideology of neoliberalism. Intriguingly, this ideological colonization affects design in both the GS and GN. Therefore, a decolonizing design approach necessitates a global reassessment and reform of the dominant ideology's influence.

Mutual Learning between the Global North and the Global South

The design anthropology fieldwork in India identified three practices that exemplify alternative energy exchange modes, challenging the dominant neoliberal *energy trading* model. The first practice is *bartering energy*, where households ex-

change energy resources, such as charged batteries and solar lamps, for goods and services, bypassing traditional currency (Singh et al., 2018). Ethnographic instances of this practice include bartering energy for agricultural products—like rice, milk, grains, and vegetables—and labor and handmade tools such as spades and ladders (Figure 3).

The second practice is *donating energy*, representing a form of energy exchange rooted in gift-giving and charity. This practice was particularly evident during cultural and familial gatherings, such as the socio-religious festival of Saraswati Pooja, where community members—especially children and youth—collected energy donations, including charged batteries, LED bulbs, and solar lamps, to illuminate celebration spaces (Figure 4).



Figure 3: Handmade tools used in energy barter: two spades crafted by a household in exchange of energy (1), and a ladder made by a local carpenter in return for energy (2). Photographs: Abhigyan Singh.



Figure 4: Village youth and children preparing for Saraswati Pooja. The unveiled idol of Goddess Saraswati is illuminated by an LED bulb powered by a donated power bank for the festivities. Photograph: Abhigyan Singh.

The third practice is *renting energy*, an economically rational yet deeply socio-culturally embedded form of exchange. Ethnographic observations reveal that rented solar energy systems—comprising solar panels, batteries, loudspeakers, and microphones—facilitate significant community events. A notable example was a wedding procession where a bicycle equipped with a loudspeaker and amplifier served as a mobile music unit, demonstrating the adaptability of energy systems to enhance social rituals and meet local needs (Figure 5).

Figure 5: Renting energy example. Villagers mount a rented loudspeaker, battery, and audio amplifier onto a bicycle for a wedding procession. Photograph: Abhigyan Singh.



The insights gained from the study in India led to Singh being invited to participate in discussions and collaborations with various stakeholders in the Netherlands, including energy companies and think tanks. The energy exchange practices observed in rural India served as valuable boundary objects (Star & Griesemer, 1989), facilitating collaboration, communication, and cooperation among diverse stakeholders. These practices not only provided inspiration but also a practical framework for exploring alternative energy exchange possibilities in the Amsterdam Southeast area of the Netherlands.

Although the design anthropology explorations in Amsterdam Southeast are ongoing at the time of writing, these have already revealed the potential for diverse forms of energy exchanges. Many residents informally engage in various exchanges in their daily lives, such as sharing goods within close relationships and bartering locally produced items and services within their ethnic and religious communities and networks (Toellner, 2023). These seemingly mundane and informal practices are crucial for residents to cope with economic challenges and maintain social relationships. Despite being overlooked by designers and engineers in Dutch energy industry and governmental agencies, these practices

highlight the potential for designing decolonial energy exchanges that go beyond neoliberal energy trading models.

Counterintuitively, this comparison demonstrates that the G S, as exemplified by insights from these Indian villages, can inspire and inform alternative decolonial design practices in the G N. This case illustrates the potential for mutual learning between the Netherlands and India—and, by extension, between the G N and the G S—for decolonizing design. Such mutual learning is particularly crucial for addressing emerging global challenges, such as the energy transition, which have far-reaching and interconnected impacts for both the G N and the G S.

Furthermore, the alternative energy exchange practices in the villages were made possible through the energy kiosk infrastructure, which relied on globally sourced components—power banks from a Dutch company, solar panels from a Chinese manufacturer, and solar lamps from an Indian firm. This scenario reflects many other locations in the G S, where the infrastructure necessary to support decolonial designs cannot be produced locally and requires global sourcing.

Role of Infrastructure in Imagining and Practicing Decolonial Alternatives

Although both rural India and the Netherlands possess the potential for alternative forms of energy exchange, our comparative fieldwork revealed that infrastructure plays a critical and contrasting role in either supporting or hindering the imagination and development of decolonial alternatives.

In the Netherlands, the energy grid infrastructure is highly developed, incorporating the latest ‘smart’ technologies and offering convenient energy access. This infrastructure is institutionalized and heavily dominated by the state and market forces through strict regulations and integration into various energy markets. Traditionally, people and households have been passive consumers of energy, typically considering the state and businesses responsible for shaping their energy. The complexity and invisibility of this energy infrastructure to the general public significantly diminish opportunities for active engagement in imagining, experimenting with, and generating decolonial energy alternatives.

The notable absence of practices engaging with energy infrastructure led to various challenges during field research in Amsterdam Southeast, particularly in engaging residents and local communities in discussions about alternatives to neoliberal modes of energy exchange (Van Leeuwen & Singh, 2023, 2024). Despite experiencing energy poverty, many residents considered *energy trading* the norm and were skeptical of alternative possibilities. This skepticism reinforces our earlier point (discussed in Section ‘Colonization as driven by ideology...’), highlighting how global neoliberal ideology has colonized societal norms and cultural landscapes, shaping people’s relationships with energy even in the G N.

In contrast, the villages in India were off-grid, disconnected from any large-scale energy infrastructure or centralized grid. Even basic electrical appliances, such as fans and televisions, are absent, making life with such limited energy setup challenging. This situation compels people to think, imagine, and take action regarding their energy needs, well-being, and futures. Villagers acquire and install small-scale energy equipment, such as solar panels and LED lights. The energy infrastructure in these villages remains visible, simple, and understandable. Consequently, the energy setup is not controlled by the state and remains outside the bounds of any energy market. Interestingly, the absence of large-scale, hidden, and complex energy infrastructure, coupled with the absence of state and market control, fosters active engagement and provides creative space for people to think, imagine, and develop alternative energy exchange practices, as demonstrated in the previous section.

DISCUSSION AND CONCLUSION


By critically examining the historical significance of the prevailing North-South divide, we highlighted how the uncritical adoption of this framework leads to oversimplification, exclusion, and isolation, ultimately limiting its practical impact on advancing decolonial agendas. Drawing from our global design anthropological study on energy exchange, we identified three key implications for decolonizing design, while advocating for a post-development perspective.

First, while the North-South divide was initially intended as a framework to highlight global economic inequities, our insights suggest that decolonization must transcend this binary to be global. Our study uncovered that energy exchange is globally driven by neoliberal ideology, challenging the conventional GN-GS framework. We emphasize the necessity to critically examine the role of ideologies in both the colonization and decolonization of design, advocating for a perspective that requires a non-hierarchical, global approach that integrates both the GN and GS within an international post-development context. Reforming the ideologies underpinning colonization is essential for advancing the decolonizing design discourse, highlighting the potential of a post-development approach to enable a dynamic interplay between the global and local.

Second, as the North-South divide increasingly fails to capture the dynamics of international political and economic cleavages, it becomes an inadequate framework for understanding colonization and decolonizing design. While regions possess different capabilities and face distinct challenges, decolonizing within the context of emerging global issues, such as the energy transition, requires dialogue and mutual learning between the GN and GS. Insights from Indian villages in our study, for example, demonstrate that alternatives to ideological dominance are both imaginable and possible. The GN can benefit significantly

by engaging with and closely examining these innovative alternatives emerging from the G S, promoting a reciprocal learning process that enriches design practices across contexts. Design practitioners and researchers rooted in both the G S and G N can strategically foster this mutual learning to address global challenges effectively and advance a post-development paradigm for decolonizing design.

Third, adopting a post-development perspective deepened our understanding of colonization within the context of decolonizing the energy exchange practice. A comparison of insights from India and the Netherlands highlighted the profound influence of infrastructure on imagining and implementing decolonial alternatives. This comparison underscores how the material conditions of infrastructure can either constrain or enable practices and visions that challenge dominant neoliberal designs. Understanding this dynamic is essential for advancing decolonizing efforts. Our research suggests that flexibility, visibility, and simplicity of the infrastructure are pivotal in developing decolonial alternatives in both the G N and the G S. Therefore, mutual engagement between the G N and the G S is imperative: the G N can enhance its understanding of infrastructural constraints and create spaces for creative exploration, whereas the G S can draw valuable insights from the G N's infrastructure provisioning. This reciprocal engagement holds the potential to confer benefits upon both regions. Consequently, the role of the market and state in decolonizing design warrants greater attention in future research and practice.

It is essential to clarify that our research neither diminishes the historical ramifications of colonization nor the significance of distinct practices and outcomes within the G S. Future research should focus on comparing global and local insights, addressing infrastructural influences, and enhancing the dialogue between the G N and G S to promote effective, contextually relevant decolonizing design practices. 

Funding

The field research in India is a part of Abhigyan Singh's completed doctoral research, funded by the province of Fryslân, the Netherlands. The research in the Netherlands is a part of the Local Inclusive Future Energy (LIFE) City Platform project, supported through the Missiegedreven Onderzoek, Ontwikkeling en Innovatie (MOOI) subsidy program from the Rijksdienst voor Ondernemend Nederland.

Acknowledgments

We extend our deepest gratitude to Ahmed Ansari for his unwavering support and invaluable contributions to this article. His critical insights and constructive feedback were instrumental in refining our work. We also thank the anonymous reviewers for their thoughtful feedback, which greatly enhanced the quality and clarity of this manuscript.

Note on Authorship

Both authors contributed equally to this article and share co-first authorship.

REFERENCES

- ABDULLA, D. (2021). Disciplinary Disobedience: A Border-Thinking Approach to Design. In C. Mareis & N. Paim (Eds.), *Design Struggles: Intersecting Histories, Pedagogies, and Perspectives* (pp. 227–241). Valiz.
- ADAMS, S., BROWN, D., CÁRDENAS ÁLVAREZ, J. P., CHITCHYAN, R., FELL, M. J., HAHNEL, U. J. J., HOJCKOVA, K., JOHNSON, C., KLEIN, L., MONTAKHABI, M., SAY, K., SINGH, A., & WATSON, N. (2021). Social and Economic Value in Emerging Decentralized Energy Business Models: A Critical Review. *Energies*, 14(23), Article 23. <https://doi.org/10.3390/en14237864>
- ANSARI, A. (2019). Decolonizing Design through the Perspectives of Cosmological Others: Arguing for an Ontological Turn in Design Research and Practice. *XRDS: Crossroads, The ACM Magazine for Students*, 26(2), 16–19. <https://doi.org/10.1145/3368048>
- ANSARI, A. (2021). Design's Missing Others and Their Incommensurate Worlds. In T. Fry & A. Nocek (Eds.), *Design in Crisis: New Worlds, Philosophies and Practices* (pp. 137–157). Routledge.
- BAHA, S. E., DAWDY, G., STURKENBOOM, N., PRICE, R., & SNELDERS, D. (2018). Good Design-Driven Innovation. *DRS2018 Research Papers*, 1, 98–111. <https://doi.org/10.21606/drs.2018.648>
- BLOCH, M. (2010). Ideology. In A. Barnard & J. Spencer (Eds.), *The Routledge Encyclopedia of Social and Cultural Anthropology* (pp. 369–370).
- CENTENO, M. A., & COHEN, J. N. (2012). The Arc of Neoliberalism. *Annual Review of Sociology*, 38, 317–340. <https://doi.org/10.1146/annurev-soc-081309-150235>
- CONNELL, R., & DADOS, N. (2014). Where in the World Does Neoliberalism Come From?: The Market Agenda in Southern Perspective. *Theory and Society*, 43(2), 117–138.
- DAVIS, T. W. D. (2012). Globalisation and the North/South Divide: An Overview. In R. Pettman (Ed.), *Handbook on International Political Economy* (pp. 231–247). World Scientific. https://doi.org/10.1142/9789814366984_0015
- DEMARIA, F., KOTHARI, A., SALLEH, A., ESCOBAR, A., & ACOSTA, A. (2023). Post-development: From the Critique of Development to a Pluriverse of Alternatives. In S. Villamayor-Tomas & R. Muradian (Eds.), *The Barcelona School of Ecological Economics and Political Ecology: A Companion in Honour of Joan Martinez-Alier* (pp. 59–69). Springer International Publishing. https://doi.org/10.1007/978-3-031-22566-6_6
- DIETHELM, J. (2016). De-colonizing Design Thinking. *She Ji: The Journal of Design, Economics, and Innovation*, 2(2), 166–172. <https://doi.org/10.1016/j.sheji.2016.08.001>
- ESCOBAR, A. (1995). *Encountering Development: The Making and Unmaking of the Third World*. Princeton University Press.
- ESCOBAR, A. (2018). *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. Duke University Press.
- ESCOBAR, A. (2021). Autonomous Design and the Emergent Transitional Critical Design Studies Field. In C. Mareis & N. Paim (Eds.), *Design Struggles: Intersecting Histories, Pedagogies, and Perspectives* (pp. 25–38). Valiz.
- FREIRE, P. (1970). *Pedagogy of the Oppressed*. Continuum.
- FRY, T., DILNOT, C., & STEWART, S. (2015). *Design and the Question of History*. Bloomsbury.
- GANTI, T. (2014). Neoliberalism. *Annual Review of Anthropology*, 43, 89–104. <https://doi.org/10.1146/annurev-anthro-092412-155528>

- GEIB, S. (2023). Decolonizing the Design Process: A Case Study in Authorship, Power, and Control. *Diid —Disegno Industriale Industrial Design, DSI 1*. <https://doi.org/10.30682/diiddsi23t5k>
- GUTIÉRREZ BORRERO, A. (2021). When Design Goes South: From Decoloniality, through Declassification to Dessobons. In T. Fry & A. Nocek (Eds.), *Design in Crisis: New Worlds, Philosophies and Practices* (pp. 56–73). Routledge.
- HARVEY, D. (2005). *A Brief History of Neoliberalism*. Oxford University Press.
- JULIER, G. (2013). From Design Culture to Design Activism. *Design and Culture*, 5(2), 215–236. <https://doi.org/10.2752/175470813X13638640370814>
- KASZYŃSKA, P. (2023). Value in Design: Neoliberalism versus Pragmatism. *She Ji: The Journal of Design, Economics, and Innovation*, 9(1), 21–32. <https://doi.org/10.1016/j.sheji.2023.05.001>
- KIPNIS, A. (2010). Neoliberalism. In A. Barnard & J. Spencer (Eds.), *The Routledge Encyclopedia of Social and Cultural Anthropology* (pp. 503–504).
- LITONJUA, M. D. (2012). Third World/Global South: From Modernization, to Dependency/Liberation, to Postdevelopment. *Journal of Third World Studies*, 29(1), 25–56.
- MENAKEM, R. (2017). *My Grandmother's Hands: Racialized Trauma and the Pathway to Mending Our Hearts and Bodies*. Central Recovery Press.
- ONAFUWA, D. (2018). Allies and Decoloniality: A Review of the Intersectional Perspectives on Design, Politics, and Power Symposium. *Design and Culture*, 10(1), 7–15. <https://doi.org/10.1080/17547075.2018.1430995>
- OTTO, T., & SMITH, R. C. (2013). Design Anthropology: A Distinct Style of Knowing. In W. Gunn, T. Otto, & R. C. Smith (Eds.), *Design Anthropology* (pp. 1–29). Bloomsbury.
- PAPANEK, V. J. (1971). *Design for the Real World: Human Ecology and Social Change*. Pantheon Books.
- PATIL, K. (2024). Shape of the Design Worldview: Does Language Inform the Design Sense? *Design Issues*, 40(3), 88–104. https://doi.org/10.1162/desi_a_00769
- SCHULTZ, T., ABDULLA, D., ANSARI, A., CANLI, E., KESHAVARZ, M., KIEM, M., MARTINS, L. P. DE O., & J.S. VIEIRA DE OLIVEIRA, P. (2018). What Is at Stake with Decolonizing Design? A Roundtable. *Design and Culture*, 10(1), 81–101. <https://doi.org/10.1080/17547075.2018.1434368>
- SHVARTZBERG CARRIÓ, M. (2022). Designing Decolonization? Architecture and Indigenous Development. In K. Ruckstuhl, I. A. Velásquez Nimatuj, J.-A. McNeish, & N. Postero (Eds.), *The Routledge Handbook of Indigenous Development* (pp. 402–413). Routledge.
- SILBEY, S. (2006). Ideology. In B. S. Turner (Ed.), *The Cambridge Dictionary of Sociology* (pp. 278–279). Cambridge University Press.
- SINGH, A. (2019). *Conceptualizing Inter-household Energy Exchanges: An Anthropology-through-design Approach* [Doctoral Dissertation, Delft University of Technology]. <https://doi.org/10.4233/uuid:57be7165-2726-4a1a-b076-c5ed3988e00b>
- SINGH, A., ROMERO HERRERA, N., VAN DIJK, H. W., KEYSON, D. V., & STRATING, A. T. (2021). Envisioning ‘Anthropology Through Design’: A Design Interventionist Approach to Generate Anthropological Knowledge. *Design Studies*, 76(Sep), 101014. <https://doi.org/10.1016/j.destud.2021.101014>
- SINGH, A., STRATING, A. T., ROMERO HERRERA, N. A., MAHATO, D., KEYSON, D. V., & VAN DIJK, H. W. (2018). Exploring Peer-to-peer Returns in Off-Grid Renewable Energy Systems in Rural India: An Anthropological Perspective on Local Energy Sharing and Trading. *Energy Research & Social Science*, 46(Dec), 194–213. <https://doi.org/10.1016/j.erss.2018.07.021>

- SINGH, A., STRATING, A. T., ROMERO HERRERA, N. A., VAN DIJK, H. W., & KEYSON, D. V. (2017). Towards an Ethnography of Electrification in Rural India: Social Relations and Values in Household Energy Exchanges. *Energy Research & Social Science*, 30(Aug), 103–115. <https://doi.org/10.1016/j.erss.2017.06.031>
- SLOANE, M. (2019). On the Need for Mapping Design Inequalities. *Design Issues*, 35(4), 3–11. https://doi.org/10.1162/desi_a_00559
- SMITH, R. C., WINSCHIERS-THEOPHILUS, H., LOI, D., DE PAULA, R. A., KAMBUNGA, A. P., SAMUEL, M. M., & ZAMAN, T. (2021). Decolonizing Design Practices: Towards Pluriversality. *Extended Abstracts of the 2021 CHI Conference on Human Factors in Computing Systems*, Article 83. <https://doi.org/10.1145/3411763.3441334>
- STAR, S. L., & GRIESEMER, J. R. (1989). Institutional Ecology, “Translations” and Boundary Objects: Amateurs and Professionals in Berkeley’s Museum of Vertebrate Zoology, 1907–39. *Social Studies of Science*, 19(3), 387–420. <https://doi.org/10.1177/030631289019003001>
- TABOADA, M. B., ROJAS-LIZANA, S., DUTRA, L. X. C., & LEVU, A. V. M. (2020). Decolonial Design in Practice: Designing Meaningful and Transformative Science Communications for Navakavu, Fiji. *Design and Culture*, 12(2), 141–164. <https://doi.org/10.1080/17547075.2020.1724479>
- TOELLNER, V. N. E. (2023). *Unlocking Social Energy Through Relational Giving* [Master’s Thesis, Delft University of Technology]. <https://repository.tudelft.nl/record/uuid:51f0b20d-da6c-4ae7-b467-ae3fc3af490>
- TORRETTA, N. B., CLARK, B., & REDSTRÖM, J. (2024). Reorienting Design Towards a Decolonial Ethos: Exploring Directions for Decolonial Design. *Design and Culture*, Advance online publication. <https://doi.org/10.1080/17547075.2024.2356764>
- TSEKLEVES, E., DARBY, A., AHORLU, C., PICKUP, R., SOUZA, D. DE, & BOAKYE, D. (2020). Challenges and Opportunities in Conducting and Applying Design Research Beyond Global North to the Global South. *DRS2020 Research Papers*. <https://doi.org/10.21606/drs.2020.145>
- TUNSTALL, E. (2023). *Decolonizing Design: A Cultural Justice Guidebook*. MIT Press.
- VAN AMSTEL, F. (2021, May 6). Pluriversal Design Methods and Critical Ontological Design. *Frederick van Amstel*. <https://fredvanamstel.com/talks/pluriversal-design-methods-and-critical-ontological-design>
- VAN LEEUWEN, G., & SINGH, A. (2023). Local Frictions in the Energy Transition: Design Anthropology for the Emergence of Energy Communities. *The Ethnographic Praxis in Industry Conference 2023*, 277–294. <https://www.epicpeople.org/local-frictions-in-energy-transition-design-anthropology-for-energy-communities/>
- VAN LEEUWEN, G., & SINGH, A. (2024). Design Anthropology for Ethics of Care and Emergence: Reflections from an Energy Transition Project. *DRS2024 Research Papers*. <https://dl.designresearchsociety.org/drs-conference-papers/drs2024/researchpapers/235>
- VATSAYAN, K. (1996). *Bharata, the Nāṭyaśāstra*. Sahitya Akademi.
- VAZQUEZ, R. (2017). Precedence, Earth and the Anthropocene: Decolonizing Design. *Design Philosophy Papers*, 15(1), 77–91. <https://doi.org/10.1080/14487136.2017.1303130>
- ZIELHUIS, M. R. P. (2023). *Considering Design Practice: The Underutilized Opportunities in Collaborative Design Research Projects for Learning by Design Professionals* [Doctoral Dissertation, Delft University of Technology]. <https://doi.org/10.4233/uuid:7ee30b24-cb6d-4ab7-a0b9-6ea2e7be5aa3>