

Peer Review Article

Relational Design

Victor Udoewa

CTO, CXO, and Service Design Lead, SBIR/STTR at NASA
victor.udoewa@nasa.gov

Savannah Keith Gress

Independent Dialogue, Evaluation, and Learning Consultant
savannahkeith@gmail.com

Abstract

Participatory design occurs when professional designers do design work with the community members who will use the design. Traditional (colonial) participatory design leaves the choice of methodology in the hands of the professional designer, the leader or facilitator, who often chooses extractivist methods and methodologies, contradicting the very relationality, equity, and participation intended through participatory design. Using such methods in participatory design creates situations in which participating community members conduct extractivist, transactional methods against their own communities. In contrast, Radical Participatory Design decolonizes participatory processes as communities not only equally participate, but also equitably lead the design process, naturally leading to asset-based methodologies. Though Radical Participatory Design is a type of relational design because the design process is done relationally elevating relational knowledge and expertise, we go further to describe an explicit Relational Design.

What would a design process look like if we not only conduct it participatorily, but also replace extractivist, transactional activities with relational ones? Because design involves the production and solicitation of knowledge, we rearticulate knowledge as the presence of healthy relationships. With that understanding we describe Relational Design. We discuss the connection between systems and relationships and why Relational Design is important for positive systems change and impact. We then describe one possible and specific relational methodology that we have used in the space of educational systems: the sustained dialogue framework. Using this framework, we discuss how each phase of a generic design process changes when using a relational methodology like sustained dialogue. As the health of relationships in a system increases, the need or usefulness of positivist methods based on third-person knowing decreases.

Keywords

decolonizing design, relational ontology, dialogue, relational epistemology, participatory design, power

Introduction

I, Victor Udoewa, occupy spaces of privilege and a lack of privilege. I am a partner and father of three. I am both a Nigerian and U.S. American. I am a cisgender Christian male and a Black person from an immigrant family. I am from the Ibibio Indigenous group and my name *Anietie* is a shortened version of the question “Who is like God?” I have lived in high-income countries like the UK and low-to-middle income countries like South Africa. I have both co-worked with a professional designer as a community member and worked as a professional designer.

I, Savannah Keith Gress, identify as a racially white and ethnically Northern European cisgender, straight woman. I am a partner and mother of two. I lived roughly the first half of my life in Mississippi, near where I and generations before me were born. I lived the second half of my life in cities in northeastern and mid-Atlantic regions of the U.S., as well as in France, Rwanda, and Ecuador. I am the first person in my family to complete a bachelor's degree. I have experienced the oppression of classism, sexism, and ableism, and receive unjust advantages due to racism, homophobia, transphobia, colonialism, ageism and other forms of oppression. My purpose is to collaborate with others to end the systems of oppression that harm us all. Design has been a tool I have used in those efforts as a layperson.

We live on Catawba, Waxhaw, Cheraw, and Sugeree land in North Carolina and Nacotchtank (Anocostan) land in the District of Columbia. We honor these Indigenous groups on whose lands we work, live, and have our being. We share our positionality and acknowledge the land we use as a simple, inadequate

embodiment of a sacred holding ritual, from our Indigenous cultures, without which there is no transfer of knowledge.

There is a cycle between our ways of being and knowing and our ways of designing. Our ontologies—our worlds or realities or ways of being—are our epistemologies, our ways of knowing. Our onto-epistemologies are our namologies—studies, types, or ways of designing (Ibibio, Generations). In other words, our ways of being and knowing create our ways of designing. Our designs and the designed world then turn around and design us and our ways of being, creating a type of reinforcing loop (Meadows, 2008). Thus, colonial ontologies can never produce liberatory namologies that can resolve the crises caused by those same colonial ontologies and epistemologies—the economic and poverty crisis, the ecological crisis, the crises of ongoing conflict, and the spiritual crisis, to name a few. We need new ontologies, and the namologies, or ways of designing, will follow.

Radical Participatory Design is a meta-methodology through which community members outnumber the professional researchers, designers, and consultants; always lead; and own the artifacts, data, and outcomes of the work as well as the narratives around those artifacts, data, and outcomes. Radical Participatory Design does not use the model of designer-as-facilitator. Instead, Radical Participatory Design uses the models of designer-as-community-member, community-member-as-designer, and community-member-as-facilitator.

Radical Participatory Design starts with an ontology of relationality which then opens up relational ways of knowing—relational knowledge, cultural knowledge, etc. (Udoewa, 2022b). Radical Participatory Design then consistently produces, builds upon, and brings relational knowledge into the design process through the full, equal participation and full, equitable co-leadership of community members through the entire process and the storytelling of that process.

In contrast, colonial participatory design, what some call participatory design, still maintains a hierarchy (Udoewa, 2022a). Using the language of democratization, colonial participatory design does not only colonize the knowledge, but also the methodologies, of people groups. Professional designers and consultants use a participatory process with communities but choose an extractivist, non-relational methodology that the participatory group follows. The communities participate, but they do not lead, so the methods and methodologies remain unchanged—creating situations where communities use extractivist, transactional methods (e.g, surveys, observations, interviews, etc.) against their own community to make knowledge accessible for designers outside of their relationships! When community members lead, relational knowledge flows into the design process.

What happens if the epistemology changes the design method so that it is no longer positivist, extractivist, or transactionalist? What if every activity in every component of a design journey were relational. When this occurs in Radical

Participatory Design, the design approach moves from being a type of relational design to being explicitly RD.

The impact of deficit-based colonial participatory design methods on a social system is minimal, upholding subsystems of oppression. From our experience, it seems to have little effect on the system purpose or function (Meadows, 2008). Instead, RD shows greater possibility for healing systems toward the recreation of a beloved community of belonging. At the heart of all socio-human systems in which we desire social change, are relationships. Changing, growing, healing, and deepening relationships affect the system. We seek to bring greater awareness to this relational work.

The connection between Radical Participatory Design and RD is strong. When RD uses the designer-as-community-member, community-member-as-facilitator, and community-member-as-designer models, RD is a subset of Radical Participatory Design (Figure 1). However, when RD uses the designer-as-facilitator model, it does not fall under Radical Participatory Design. Both RD and Radical Participatory Design are meta-methodologies, approaches or orientations, not methodologies. There are many different methodologies that fall into each category.

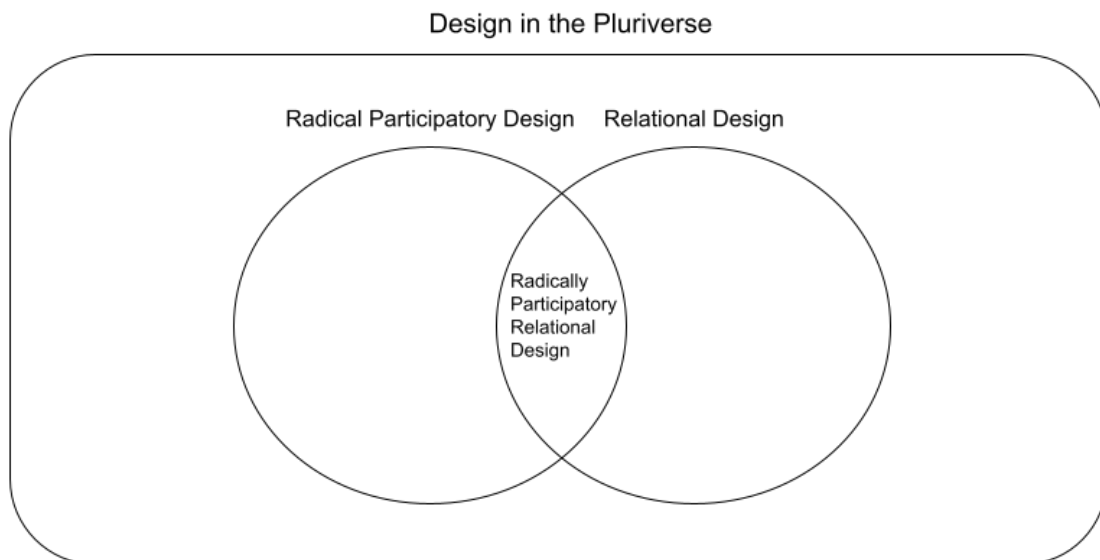


Figure 1. The relationship between Radical Participatory Design and Relational Design.

In this paper, we briefly review movements of critical self-reflexivity and increasing relationality in design. Next, we introduce RD, not as a new argument, but simply a reality we have witnessed, experienced, a reality that is ancient. We do not use any Western, colonial methodological approaches but simply community-based and Indigenous practical synthesis through which communities discard approaches that do not serve the community well and traditionalize approaches that are helpful for the health of the community, like storytelling, oral histories, ceremony, learning circles, etc. (Smith, 2021; Ellison, 2014; Suaalii-Sauni & Fulu-Aiolupotea, 2014). We also introduce dialogue as a

practical example of one relationship methodology we have used in RD work. Dialogue is not the only way RD can occur. We use it here because it creates a clarifying and introductory picture of one way RD might appear. Then, we show how any component of a design process might embody relationality through sustained dialogue and ultimately transform the component and the onto-epistemology upon which it is built. Lastly, we discuss the impact of RD and then share concluding thoughts.

Movements of Critical Self-Reflexivity in Design

Work in relationality in design, of which RD is a part, contributes to an entire field of critical self-reflexivity for designers aimed at advancing design justice. Inclusive design highlights the traditionally excluded while values-sensitive design makes transparent the designer's relationship to values (Coleman & Lebbon, 1999; Clarkson et al., 2013; Friedman & Hendry, 2019; Friedman, 1996). The relationship to our environment is explored through ecological and circular design (Madge, 1997; Van der Ryn & Cowan, 2013; Medkova & Fifield, 2016; Moreno et al., 2016; Williams, 2007; Chapman, 2012). Speculative design, including discursive and critical design, opens space for reflection about our society and possible futures (Bardzell & Bardzell, 2013; Bardzell et al., 2012; Barab et al., 2004; Tharp & Tharp, 2022, 2013).

Equity-centered, emancipatory, and liberatory design, including frameworks like equityXdesign, help designers critically reflect on positionality, power, and equity (Anaissie et al., 2021; Guzman, 2017; Noel, 2016; Hill et al., 2016). Design justice uses an intersectional feminist lens; design for belonging focuses on inclusion, belonging, and collaboration; while trauma-responsive design focuses on trauma and safety (Wise, 2022; Costanza-Chock, 2018; Harris & Fallot, 2001a, 2001b).

Inter-human and post-human design has grown through community-centered design, society-centered design, humanity-centered design, life-centered, or planet-centered design (Clasen, 2023; HmntyCntrd, 2023; Norman, 2023; Rizo, 2023; Life-Centered Design School, 2022; Vignoli et al., 2021; Xu, 2021; Ishida, 2004; Lee et al., 2020; Manzini & Meroni, 2017; Cantu et al., 2013; Jawaharlal et al., 2016). Postcolonial, decolonial, ontological, and pluriversal design focus on colonization and its effects, liberation, pluralism in design, and the various worlds people inhabit (Wizinsky, 2022; Gupta, 2021; Leitão, 2020; Abdulla et al., 2019; Escobar, 2018; Garzon, 2017; López-Garay & Molano, 2017; Tlostanova, 2017; Mainsah & Morrison, 2014; Irani et al., 2010; Willis, 2006).

These movements over the past 30 are not new. As long as there has been colonization, there has been decolonial work. Before decolonization, various local and Indigenous groups have always practiced design like values-sensitive design, future envisioning, emancipatory work, and ecological design.

Movements of Relationality in Design

Relationality through and from design processes, has been explored in at least three ways. Relational design can mean designing in, with, or for relationships.

Designing in relationship signifies design that happens with people with whom you have a relationship. This may include designing with friends, co-workers, or partners, and others you know. A good example is community design when a community engages in a project to design something for their own benefit (Comerio, 1984).

Designing with relationship signifies design that happens with people you may not know, but with whom you form a relationship while or before designing or in order to co-design. This is often a requirement when designing with Indigenous populations who embody the principle of respect as part of the 4 Rs—respect, relevance, reciprocity, and responsibility (Kirkness & Barnhardt, 1991; Smith, 2021). One academic researcher had to build relationships with Indigenous peoples before starting a decolonizing participatory research engagement with them (Stanton, 2014).

Designing for relationship signifies design that occurs for the benefit of relationships or with the goal of improved relationships (Akama, 2012; Light & Akama, 2014). For instance, you can design public services to improve the relationship between civil servants and the public (Ulloa & Paulsen, 2017; Cipolla & Manzini, 2009).

Relational Design (RD) is different from relational design and not focused on designing in, with, and for relationship, though that does occur in RD. In RD, we practice the explicitly different model of design-as-relationship-building.

Relational Design

In social work with people experiencing poverty, I, Victor Udoewa, other social workers, and various communities have experienced a common understanding of the nature of poverty. This truth is exemplified by a thought experiment I have conducted with various middle-to-upper income people (Udoewa, 1995-Present; Common Change, 2002). I ask them to create a scenario. *Imagine if you lost your housing, your job, all your money. How long would it take you to find some food?* Most say a few hours. *How long would it take you to find a place to sleep and stay?* Most say by the end of the same day, at most. *How long would it take you to find a new job?* Most say in a few months.

I ask them why they would be able to find food, housing, and a job in those time periods. They all say because they have friends, family, or connections who will help them. In other words, poverty is not the absence of money; poverty is the absence of healthy relationships (Communities, Generations; Udoewa, 1995-Present; Oliver, 2010). In economic terms, poverty is the absence of healthy relationships through which resources, like money, flow.

Money is only one type of resource. What if the resource is knowledge? This allows us to rearticulate what ignorance and knowledge are. Ignorance is not the absence of knowledge; ignorance is the absence of healthy relationships through which knowledge flows. In other words, knowledge is healthy relationship, or being in healthy relationship within a community. This articulation is not anthropocentric; community includes not only all life but all creation, as we learn from healthy ecological relationships with the Earth and its various components and dynamics.

Radical Participatory Design is a type of relational design because it creates, uses, and builds upon knowledge while in equitable relationship with community members. Through community leadership, a Radical Participatory Design team often chooses asset-based methodologies like positive deviance, for instance. In positive deviance, the research and design team observes positive deviants in a community acknowledging that the community already holds and has the inherent wisdom needed to resolve a situation; the community does not need to be saved by mainstream, institutional knowledge brought in by the external designers (Marsh et al., 2004). The problem, though, is somehow the positive deviant knowledge or behavior of community members is not flowing to all parts of a community. In other words, there is a relational problem, based on a relational definition of knowledge and ignorance. The positive deviance research and design team uncovers the particularly helpful knowledge or behavior of positive deviants, propagates that knowledge to the entire community, and helps with community adoption of the helpful practices. The positive deviance team conducts its research through methods like observations and interviews.

In contrast to interviews and observations, relationship methods are methods focused on building healthy relationships. What happens when a Radical Participatory Design team not only works through equitable relationship but also uses relationship methodologies or methods throughout a design journey? RD is a type of relational design in which each activity or phase of activities explicitly uses relationship methods, or where relational design is done through a relationship methodology.

Design can be deconstructed into common components across some parts of the pluriverse of design understandings and practices in the world. One decomposition breaks into three components that can occur in any order, loop back, recur, and may last multiple years or a short moment (Udoewa, 2022b, 1995-Present). Any local practice or definition of design may have other and/or more components.

- Receiving or gathering information
- Receiving or thinking of one idea or more
- Making or trying those ideas

Each component of design involves the production, use, or flow of knowledge. What if each component were done through a relationship methodology? We will explore at least one way RD transforms the components of a design journey,

though there are many. Before sharing the transformation, it is important to understand three contextual notes.

First, RD is ancient. It has always occurred when communities have gathered, are in relationship, and encounter situations in which they must make design choices (Udoewa, 2022a). We are not introducing RD, but rather describing a reality we have experienced. We hope to avoid the colonial understandings of time, history, and discovery by assuming that because we write it down first, we have discovered something (Smith, 2021). Instead, we are describing an ancient reality that has always been with us, of which design communities have lost sight, partly due to the rise of the professional designer. Examples include oral history, griots, ancient birth control, folk medicine, experimental tool design of early humans, etc. (Udoewa, 2022a).

Second, RD is different from social design. Social design is an application area of design but does not specify any particular methodology. RD is a meta-methodology, usable with relationship-building methodologies, that can be applied outside of social design, like product or service design.

Third, RD is a meta-methodology. In other words, a Radical Participatory Design team explicitly doing RD might use any number of relationship or dialogic methodologies such as intentional communal living; regular, focused, intentional gatherings; grins; arenas; agoras; and dialogic methodologies, generally (Claiborne, 2016; Parker, 2020; Tsolakakis, 2018, Dahlberg, 2005). The RD process can appear very differently depending on what methodology a design team uses.

Introduction to Dialogue

Dialogue, like RD, is an ancient practice (Isaacs, 1993; Nichol, 1996; Saunders, 2009). It has been defined and practiced differently by many cultures: Setswana-speakers in Botswana practice *a re bue* meaning an inclusive, bi-directional conversation; Australian Indigenous cultures practice yarning to connect and make meaning together (Bessarab & Ng'andu, 2010); Indigenous peoples of the Americas have practiced talking circles; and the *agora* of ancient Greece included dialogue-like practices (Isaacs, 1999). We explore dialogue, specifically sustained dialogue as articulated and practiced primarily by David Bohm, Harold Saunders, and William Isaacs, because it is one starting point for relational design that we have experienced.

Dialogue has been called a way of talking or listening, a process, an art, a lifestyle, a mindset and more. We define it as a sustained experience of inquiry into individual and group-based assumptions out of which individual changes and new collective meaning emerges (Isaacs, 1993; Bohm, 2004). Below, we discuss how dialogue can foster healthy relationships by exploring four central characteristics of dialogue: sustainment, excavation underneath assumptions, change in participants, and collective meaning-making (Isaacs, 1993; Bohm, 2004; Saunders, 2009).

The first distinguishing characteristic of this form of dialogue is that it is structured and sustained. Groups are typically constructed of eight to fifteen (or more) participants with two facilitators who support participants in understanding dialogue and encourage the use of dialogic practices (Bohm, 2004; Sustained Dialogue Institute, 2022). Groups meet consistently across a few days, weeks, months, or indefinitely. This structure, in addition to dialogic practices, creates the container for deep encounters. Over time, participants move from engaging with one another superficially to connecting with one another's full humanity. The power of dialogue lies in what happens *in between* participants, in their relationships, as they become more than the sum of their individual parts (Buber, 1970). The healthy relationships forged through sustained dialogue form a strong foundation for RD.

Secondly, dialogue is not primarily concerned with one's viewpoints or rationales—as in debate or discussion. Instead, dialogue explores the thoughts that precede one's expressed views. Bohm likens it to moving beyond remediating pollution in a stream to seeking the source of pollution—the thought (Bohm, 2004). Importantly, dialogue does not ask participants to change their thoughts (Bohm, 2004; Saunders, 1999). Instead, the focus is on suspending, rather than defending, as the first step—observing the thought mindfully without suppressing, accepting, rejecting, or judging it (Bohm, 2004; Isaacs, 1993, 1999). The focus shifts from the rightness or wrongness of an idea to understanding it. Participants can then practice “inclusion” whereby they seek to imagine another's reality while equally holding onto their own perspective (Buber, 2002). The practice of unearthing and evaluating one's own thoughts suspended alongside others' leads to new flows of information and understanding that fosters the development of deeper relationships (Bohm, 2004; Nichol, 1996) and fuels RD.

A third characteristic of effective dialogue is that participants change (Freire, 2000; Hahn, 1995). Understanding and contemplating others' experiences expands one's understanding of the world and their place in it, leaving the individual in a different place than where they began (Freire, 2000; Goethe, as cited in Cottrell, 1998). A hallmark of effective dialogue is that one emerges changed, more fully themselves, after sustained inquiry in relationship with others (Scharmer, 2020; Sustained Dialogue Institute, n.d.).

Finally, dialogue fosters collective meaning-making that can shift tacit understanding (Bohm, 2004; Isaacs, 1993). By suspending the thoughts that undergird one's assumptions, what participants once considered to be certain may have shifted, expanded, or otherwise been challenged (Bohm, 2004). As groups explore what these shifts mean for themselves and society, they engage in what Scharmer calls “generative dialogue”. That is the highest of his four fields of conversation, in which participants have a greater sense of their collective whole and ability to create meaning together (Bohm, 2004; Isaacs, 1993; Scharmer, 2020). The result can be changes in the group's collective tacit understanding. Far beyond the change that can result from expanding

individuals' understanding alone, shifting collective understanding holds the potential for deep, lasting change because the knowledge we hold in our relationships determines our patterns of interaction in society (Bohm, 2004).

Out of dialogue, a group may decide to take specific action. However, whether a distinct action beyond dialogue emerges, change has already occurred. From their individual internal changes and collective shifts in tacit understanding, external changes manifest. RD is one possible expression of change.

Conversational Approach

In the following sections, we seek to embody the relationality that is central to both dialogue and RD through a conversational approach. While we cannot reflect the richness of dialogue in a written conversation between two people, we do see an opportunity to embrace two aspects that resonate with our experiences of dialogue.

1. We transparently reflect the reality that we are individuals participating in a collective process of inquiry and exploration as we describe our experiences with RD. As in dialogue, we do not homogenize our perspectives into one but offer our views and experiences as part of a conversation.
2. We expose the thought processes and experiences beneath our assumptions, as in dialogue, to expose the roots of our understanding of RD, providing concrete examples for readers.

Relational Design: Receiving Information

Victor Udoewa: In design processes, there is an information gathering component that can last a moment or years and can recur throughout a journey. In certain design processes, a research component comes after project framing in which designers decide the main purpose or aim, and determine or choose the research objectives, questions, methodology, methods, and recruitment strategies, if needed. What has been your RD experience?

Savannah Keith Gress: In my work with a non-profit using dialogue to strengthen relationships among caregivers, staff, and school leaders in public schools, I have observed RD starting with participants receiving information in dialogue. Dialogue groups typically span 10 weeks and include 10-12 community members who are diverse along lines of race, ethnicity, class, languages spoken, etc. Sessions support participants in exploring their own and others' experiences related to race and schooling. Topics often include the history of schooling in America, racism and antiracism, intersecting forms of oppression, white supremacy culture, the purpose of schooling, and liberation movements.

Dialogue facilitates information gathering by increasing and strengthening connections among community members. Families in diverse school communities

typically have asymmetric access to information which not only inhibits equitable access to student opportunities but also undermines effective RD (Murray et al., 2020). Even when relationships do exist, they are often not sufficiently deep or healthy to allow for the free flow of information. For example, co-facilitators and I often ask caregivers to share their hopes and fears for their children. Their hopes are often similar—that their children find purpose, are courageous, are compassionate, find a sense of belonging, and achieve their goals. Their fears, however, often differ based on identity. Caregivers raising white children often share fears that they will not self-actualize or be accepted. Caregivers raising children of color often share those fears and fears that their students will be emotionally or physically harmed by racism. Hearing those starkly different fears, participants often reflect on how they had not previously discussed those differences in racially diverse groups. They consider what it means that these different concerns have gone largely unspoken and unaddressed in the school community. This example highlights how relationships fostered through dialogue can open information flows about the full array of experiences in communities without any type of project or design framing that often precedes traditional research.

Victor Udoewa: I remember one community that met weekly for a meal and time of sharing experiences. We had no design intention or project frame. We all belonged to a larger church community that had an office of social work. Through that office, the church had programs for orphans, single mothers, students, older adults, and returning women citizens, as well as a tutoring service, legal clinic, health clinic, counseling center, an urban farm for the food insecure, a home for those experiencing homelessness, and women’s empowerment enterprises. Before our community began, most members did not feel they could bring concerns to the elders of the church. Through our weekly relationship building, we made connections across lines of visibility and position at the church. Because of those relationships, someone in our group, who regularly met with the elders, introduced and negotiated the idea and design of an office of social justice. All the social programs helped people after they already encountered hardship, but the church was doing nothing to address root causes preventing people from experiencing those hardships. The shift in purpose to this justice-based direction came from our relationship building and learning from each other what was important.

What happens when there is no relationship? Continuing the economic analogy of poverty, donors give money to the poor, and both walk away feeling good, without true relationship (Common Change, 2002). Donors walk away feeling good they gave to needy people, and the beneficiaries walk away feeling good they received money. Because there was no structurally systemic shift, no relationship formed, the need will continue to resurface; a donor will have to give again; the person in need will, again, be in need.

Similarly, with extractive research methods like interviews or observations, the researchers complete research, happy they acquired information while research

subjects leave the research study, happy to receive compensation, gift cards or money, if anything at all. The research becomes a transaction, often one-sided. Similar to the economic example, no relationship is formed, and thus no structural change happens to the system. Even though the researchers and designers will go on to design something, the capability of that design to do any substantially healthy systems change is negligible. Have you ever heard of any extractivist or transactionalist design methodology fulfilling its promise of solving a social problem in society (Thomas et al., 2017; Vinsel, 2018; Kolko, 2018)? Even the problem-solving framing of such methodologies shows a possible misunderstanding of how open, social systems work in which we focus on system healing, not solutions. Extractive methods produce interventions that leave the system purpose unchanged in the long run.

Is a method like an interview always extractive? Even inside a relationship, an interview can be extractive. Extraction does not require intent to do harm. It simply means one person is mining a resource from another person, a type of transaction. A granddaughter asking to interview her grandmother for a school project may cause no harm, but is still extractive. The interview is being done for the granddaughter's purpose or need. One way for an interview not to be extractive is for the interview to be requested by the interviewee. In that case, it is not extraction, but offering.

All systems are made up of relationships. Therefore, any fundamental change to the system purpose requires relational work. Changing the quantity of deep relationships or the quality or health of relationships in a system, can change the system.

Savannah Keith Gress: Yes, working with schools, I have observed that as relationships are formed or strengthened, community members' sense of who is a part of their community expands, and then behaviors change to support that expanded understanding. One public elementary school in Washington D.C. had long hosted what some felt was a beloved school event and others felt was exclusionary and hurtful. Dialogue created space for knowledge about the impact of the event on different community members to be shared. From that sharing, the group chose to make changes to the event. However, the system shift was not due to the event changes themselves, which could have been identified through traditional design methodologies. Rather, the community examined their system of decision making. They reflected on the original idea for the event (the thought) to identify how it failed to incorporate the experiences and perspectives of all community members. They also reflected on the absence or poor health of relationships that prevented the flow of information about the harm of the event for years prior. The community learned and changed the systems (thought and relationships) that generated this issue rather than simply tweaking event details. This community was practicing what Bohm urges—looking at the *thought* as the source of the problem rather than just the problem (2004). The result was a system that more fully receives and values the insights of all community members.

Victor Udoewa: Working with community members, designers might start with the intention of designing and involve community members in participatory design. Or designers still begin with the intention to address a problem or realize a vision with design, but first build relationships with the community in order to design using participatory design (Rogers, 2015; Stanton, 2014). RD functions at a different level of relationality where the relationship building precedes any intention of design. Instead of design leading to relational work or relationship building, relationship building or relationship methodologies lead to shared understanding of community problems or a shared vision for the community.

I was part of a group in London that designed an alternative community for people of all faiths and no faith. The group never had the intention of designing an alternative community. We were just a group of people who met weekly for a time of sharing, a unique experience, or a discussion. Through those times, we built relationships with each other, sharing our frustrations, fears, hopes, and dreams. Out of that relational work came the idea for an alternative community, the design of which was a natural outcome. The power to create resulted from our relational work.

Relationship building leads to design. This has been my experience and observation in all my communities. The RD period of receiving information is very much like the academic, western-centered, research category of exploratory research. Unlike exploratory research, though, RD does not have a research question. Relationship is the aim, community is a product, and design is a natural outcome.

Relational Design: Receiving Ideas

Victor Udoewa: In certain design processes, there are times when designers generate ideas. The ideas of what to create are often based on uncovered themes, insights, and patterns, and reasoned design principles from research. RD also contains information receiving (“research”), but as a by-product of the relationship. In a study of “expert” designers, Dorst notes that “expert” designers rarely brainstorm or hold ideation sessions; instead ideas flow from reframing the problem (Dorst, 2015). Similarly in RD, ideas emanate from the relationship.

Savannah Keith Gress: As relationships strengthen and knowledge is more fully shared, communities better generate new ideas and evaluate previous ideas because their thoughts about the problem are more fully informed. Frequently, families in school communities who participate in dialogue reprioritize more superficial collaborative efforts (e.g., playground improvements, fall festivals, etc.) as their understanding of their community’s full experiences deepens. In one Washington D.C. elementary school that was beginning dialogue, a caregiver shared her idea to establish a school food pantry or free clothing closet. Near the end of dialogue, she shared that by suspending her assumption that families lacked resources and learning from others’ experiences, she learned that racial

discrimination was a greater issue than economic hardship. She withdrew her prior suggestion and supported new ideas the group generated. This change can extend more broadly when whole school communities engaging in RD have reprioritized, re-envisioned, or re-purposed fundraising-related activities based on a stronger, collective understanding of the marginalizing impact of certain approaches (i.e., those that value financial resources over other resources) or as they better understand the problem they are attempting to address. This represents a shift in the purpose of caregiver engagement.

Victor Udoewa: There is something special when community members in an RD process do not suggest a particular idea because they know it would harm other community members. They suggest ideas based on their relationships and relational knowledge, without the use of personas, journey maps, or research-derived design principles. This phenomenon is the sustained, embodied, and embedded auto-empathy we experience in Radical Participatory Design meta-methodologies of which RD is a subset (Udoewa, 2022b). Because each RD team member either has direct experience related to the reason for designing or they are connected to another community member who has direct experience, the ideas transform from human-centered to community-centered or relationally centered. There is an embodied, unwritten design principle: What ideas are good for the whole community?

In one 50-member church community in which we built relationships through regular weekly, monthly, and seasonal rituals and gatherings, we began holding sacred conversations, similar to dialogue, in which we had sustained focused conversations with partners for months to learn about their world. Through the process of relationship-building, many of the native English speakers learned that the native Spanish speakers felt isolated or siloed in the church community; most events were separated by language group. The idea to combine the services and do everything in both languages naturally flowed from our relationships and led to the community redesigning the all-community gathering as one integrated service with interpretation in both languages. The relational knowledge flowing from the sacred conversations also exposed a deep need for theology centered in the experience of the native Spanish speakers from various Latin American countries. Again, featuring Latin American Liberation theology more prominently in our praxis and theology, as well as having people in the community from the background share and preach, flowed from the relationship. The situation happened again when through relationship and dialogue, white members knew that Black community members felt they were not represented in the musical genres. The service was immediately redesigned to include songs not just in the African-American tradition but with deep Black liberationist messages. This has happened time and again. It is important to underscore that there are many predominantly white communities that have not attended to expressed needs of minority groups in their midst; the redesign of our community happened due to relationship building, that both exposed problems to people who would otherwise be unaware and generated the idea of what to do. The greatest

example of this phenomenon was learning about the desire of some members to better understand the multi-hundred year history of the church. Based on that desire, uncovered in relationship, the community designed a participatory research project that discovered that the church was not founded by an abolitionist, but by a slave owner. This ruptured the mythology about the church's abolitionist founding. The idea to remove the name of the founder from various halls or rooms, create an archival history project to present to the community and city on the alternative history, and design a committee to advance our reparations work all flowed from intimate conversations and relationships which unearthed deep shock and hurt over false narratives. The work was recognized nationally such that our Associate Pastor was asked to be the Deputy Director of the Alliances of Baptist Churches in the U.S. to shepherd the decolonial, anti-racist work nationally.

Savannah Keith Gress: When ideas emanate from the relationship, they are enriched by existing knowledge about the communities' assets, challenges, histories, values, hopes, traumas, and priorities. Consequently, those ideas are more likely to be valued by, invested in, and sustained by the community. One Washington D.C. elementary school I worked with had recently experienced a racist incident among students. Dialogue participants felt that the incident itself, the school's delayed, limited response, and the divided reactions in the community were all fueled, in part, by the lack of deep relationships and shared understanding across difference. The group hoped that more members of their community would form authentic relationships as they had through discussing, sometimes with difficulty, the very topics related to identity and racism that had divided their broader community. The group decided to host a school-wide event to support conversations about racial equity and build relationships. Their shared history and understanding of their community's specific challenges deeply informed their design.

Victor Udoewa: RD not only leads to community-centered thinking and relational *ideation*, it also leads to relational *ideas*, themselves. This reinforces the authors' experience that relational ontologies lead to relational namologies. In one RD project in South Africa, I was a part of a 15-person community of multi-racial university students who met weekly to build relationships. Often members spent even more time doing relationship building in smaller groups or in duos throughout the week. We had no intention of creating or designing any community projects or addressing community problems. Through our relationship building, which involved eating, dialogue, art, and storytelling, we built a shared desire to spend at least as much time on other people outside our group through service than on ourselves through conversation. The needs that certain people felt or experienced in our community were sensed by all community members through our healthy relationships. We discussed, and everyone wanted to do relational service projects (where one builds relationships through recurring service interactions rather than one-off projects) in either homelessness work or children's work.

We identified several relevant projects. Instead of voting and satisfying some community members and not others, our relational care led us to look for and choose a project that encompassed both. We chose to spend time with children and youth at a home for orphans who had been experiencing homelessness. We built relationships with them, and then with those children and youth with whom we were relating, we co-designed and co-created a series of events and programs. Interestingly, instead of brainstorming and designing one-off events and programs, the youth and our community group designed relational service projects like mentoring younger children. Relationship building in our community group led to the RD of relational service programming with orphan youth experiencing homelessness. The relational work with the youth led to the relational co-design of relational service projects like mentoring and arts co-creation programming with children. This was not planned, just a natural outcome of authentic relationships.

Relational Design: Making Ideas

Victor Udoewa: In many design processes, after conceiving of an idea, design teams build the idea or a component of the idea. They focus on shipping a prototype, service, or product to the world to learn as the world uses it, and then to iterate. In RD, prototyping, testing, and implementation of an idea is transformed into both an external process, doing and making things outside of our bodies, and an internal process, dealing with the interiority of individuals and the community. In RD, there is an implicit order: the interior process takes priority affecting the outer making-and-doing process. What have you experienced?

Savannah Keith Gress: At the previously mentioned Washington D.C. elementary school that gained a fuller understanding of the impact of its annual event on the whole community, the change process was both internal and external. The community could have chosen to view the feedback that the event was exclusionary and hurtful as simply highlighting a miscommunication. Their response might have been to more vociferously communicate the *intentions* behind their choices without adjusting the event. Instead, there was an internal change. The community acknowledged that the perspectives that were considered when creating the event did not fully reflect the community and that their relationships were not sufficiently broad or deep to receive the feedback. They collectively changed their understanding of the problem. After the internal change, the group made external changes to the event including renaming it—a shift in power—and more ways for community members to engage beyond financial contributions.

Victor Udoewa: In one RD project, we used weekly community dinners to build relationships among 20 people. From that work we designed and built a community choir. Due to the knowledge of our experiences and the racial power imbalances in South African institutions including many churches, we ensured

the choir sang in multiple languages, included music from African Indigenous groups, included majority non-white soloists, and was conducted by a non-white person for greater inclusion, accessibility, and equity. Seeing non-white leadership of a choir in the church and hearing their language sung was a source of empowerment for the community.

The choir design we tested is a pattern across RD projects in which the internal relational process affects the external product, service, or outcome through the creation of a prototype. Design teams generally try to create minimum viable prototypes that are somewhat functional, reliable, usable, and delightful (Marchand, 2022; Ritter & Winterbottom, 2017). In RD, when the bonds of healthy relationships are present, facilitating the flow of resources, team members tend to create services, campaigns, products, etc. that are inclusive, equitable, just, and accessible. In other words, the minimum viable prototype becomes a minimally exclusive, viably equitable prototype (MeVeP).

Savannah Keith Gress: One dual-language public school community confronted different needs and values when creating a MeVeP for their parent-teacher association (PTA). Dialogue fostered stronger relationships between bilingual and English-dominant caregivers who regularly participated in the PTA and those who had chosen not to engage in that way, including Spanish-dominant caregivers. Through those relationships, information flowed about how Spanish-dominant caregivers often felt marginalized by the PTA's approach to interpretation. Spanish interpretation was only provided if attendees responded "yes" to the question, "Does anyone need interpretation?", which put undue pressure and attention on those caregivers. So, the group considered alternatives. Their MeVeP was providing interpretation during all PTA meetings, regardless of who attended, acknowledging that all families in their dual-language community deserved equal access to such spaces.

Some caregivers raised a concern that this approach could be in tension with the value of efficiency. However, knowledge also flowed through these relationships about the experience of Spanish-dominant families and the value of ensuring fair access for all families. Ultimately, they chose to expand interpretation and maximize accessibility even if meetings lasted longer or covered less content. Implementing their idea through RD allowed this community to confront differing needs and values. In doing so, the community removed a barrier to healthy relationships across languages that could improve the flow of information and contribute to future cycles of RD.

Victor Udoewa: Without the design process being led by a professional designer, I have experienced and observed multiple instances of communities trying to address problems with a project, its design, or implementation, by building relationships. This seems counterintuitive from a Western, academic lens which tends to focus on the problem directly. Focusing on relationships, however, demonstrates a relational systems thinking view, even if subconsciously (Goodchild, 2021, 2022). In a project to design a racially just PTA

at my child's school, we started with dialogue groups of caregivers. In the design phase, a few parents, frustrated with the progress on creating the equitable PTA community, suggested we needed a stronger sense of belonging and inclusion through more interactions and relationships.

Through autonomous design, they started a new initiative of our emerging PTA focused on inclusion and creating events to bring people together. Events may not have been the best way to profoundly deepen individual relationships, yet, the choice to focus on building relationships and community in order to resolve PTA problems demonstrates a relationality that has entered into the thinking and ways of being of our emerging community that began with group dialogues.

The story also highlights the circularity of any RD process. The fundamental relationship methodologies are not just research methodologies at the beginning of a project. Relationship building and relationship methodologies can improve any component of an RD process. Deeper, healthy relationships help us better implement or create what we imagine and receive more ideas or more information. All work done through and on the foundation of relationships, in any phase, helps to deepen those relationships.

RD not only precedes the initiation of a project, but also succeeds the end of a project after implementation. Because the design project is not the goal but an outcome of the relationships, the relationships persist. Because the relationships continue, they lead to other design projects based on other shared visions, assets, needs, or problems. The cyclical and parallel nature of RD means that the phase of implementing a community idea benefits from the chemistry and relational history of community members who have worked with each other before on projects.

I have a current unfunded, voluntary RD community that decided to meet weekly to share a meal, tell stories, and learn about each other. These convenings led to a shared sense of the issues in our city and a decision to do relational service work in the area of children's education and hunger. That relational service experience gave us more opportunities to learn about each other, affirming the gifts and talents we saw in each other in the midst of our weekly, relational work in children's art education and food services. Later when the teachers and kids in our group voiced what they saw in their schools and the parents in the group shared similar understandings, which others who lived in communities with schools affirmed, we decided to work on education inequality and school integration. We knew who was excellent at researching with which city officials we should talk, who was good at facilitating workshop sessions, who had more time to attend education meetings across the city, etc. We were better able to offer tasks to people in alignment with availability, interests, and skills. We made decisions more quickly. Group members raised concerns that other members would have, such as the fact that public charter schools contribute to gentrification which everyone in our group did not know originally. In short, we knew each other better, and it affected our operations. We did our RD work

better. Of course, communities can change over time through deaths, births, schedule changes, arrivals, departures, etc. Still, in as much as a person has worked with another community member in the past, that person is able to build upon the previous and current relationship and growth while working together.

Challenges

Victor Udoewa: What challenges have you encountered conducting RD?

Savannah Keith Gress: Power asymmetries can challenge RD by stifling the expression of information, undermining the valuing or understanding of information. This includes differences in formal power or in informal ways power manifests in relationships. In dialogue, forming a group with participants who hold different levels of formal power within a company, for example, is difficult to do well because the assumptions of those with higher rank tend to be imposed upon the group (Bohm, 2004). Hierarchies are not *necessarily* problematic, but special attention must be paid to their potential impact on the flow of information.

Dialogue participants from a diversity of backgrounds have a robust set of perspectives that enriches the design process. However, they must pay special attention to informal power dynamics. Intersecting forms of oppression can make communicating or understanding knowledge transmitted across different lived experiences difficult. If the dominant group fails to acknowledge how their assumptions may be based on their dominance (e.g., men failing to see how some assumptions are not informed by experiences of misogyny), it blocks the group from meaningfully considering one another's thoughts. Oppressive ways of engaging (i.e., men interrupting women, white people receiving credit for an idea previously shared by a person of color, etc.) impede trust formation, prevent free flows of information, and perpetuate harm. Other political norms, though desirable by other measures, may limit free flows of information such as respect for one's elders. Transactional relationships also create barriers to the free flow of information as motivation to share difficult, sensitive, or personal knowledge can be low.

Awareness of power dynamics is key to addressing them. Once aware of power dynamics, community members may then choose to explicitly name the dynamic (e.g., junior employees being reserved around their bosses, concerns about oppression being dismissed by less-affected groups, etc.) and invite collaborative problem solving. Alternatively, communities may deepen their understanding of the issue in affinity groups before working to resolve it as a community. Or community facilitators may identify and interrupt limiting or harmful behaviors in which power undermines the community's capacity for relational design.

Relational design requires thinking not only about the relationships within the community but the relationships with proximate communities. This is particularly important for homogenous groups. Homogenous groups can design what is both beneficial to their group and—intentionally or unintentionally—

harmful for other groups (e.g., adults with limited or no childcare responsibilities establishing events logistics that present barriers for caregivers, racially segregated communities creating policies that harm other racial or ethnic groups, etc.). When a homogenous group has more power, formal or informal, its members must carefully consider the thoughts and assumptions behind their understanding of the problem or opportunity and their response. They must diligently evaluate potential negative impacts of designing without information flowing freely from the wider community. Communities will benefit from understanding outside perspectives even if the community's values, needs, and desires are ultimately elevated over external groups'.

Victor Udoewa: How a professional designer starts practicing RD is another challenge. A familiar option is to serve as the facilitator for a community group that is practicing RD.

To practice the Radical Participatory Design version of RD, there are three options. The most familiar option may be to consider a Community-Driven Design version of RD in which the RD community team calls in a professional designer for specific, focused help at a specific point in time. A possibly more difficult option is a Radical Participatory Design team that is equitably co-leading an RD process with a professional designer. In that case, the ultimate control or decision-making still belongs to the community.

The easiest entry point to experience the designer-as-community-member model of Radical Participatory Design version of RD is in a non-work community in which you are already a member. The designer's professional identity and colonial design expertise are less inclined to take over the process in the regular non-work setting. When joining a new community to practice RD, beware of RD immediately converting into an extractivist design framework. If professional designers only join a community to practice RD in order to gather information and then leave that community, they are practicing transactional design. Only join communities in which you have a genuine interest and intent to be an on-going community member.

Evaluating Relational Design

Savannah Keith Gress: If a community team passes through all those challenges, how do they know the process was truly, deeply, and healthily relational?

Victor Udoewa: As a subset of Radical Participatory Design, RD can use the same type of principles-based evaluation criterion question (Patton, 2017): Have a majority of the design or research team members experienced a sustained or sustainable shift in power?

Savannah Keith Gress: Additionally, or in place of that question, teams can ask a different question.

Have a majority of the design and research team members experienced a sustained and sustainable increase in the quality and depth of relationships across differences of experience or in the number of deep relationships across differences of experience? In certain groups, differences of experience will emerge from differences in aspects of identity. In seemingly homogeneous groups, the differences in experience may emerge from unique perspectives or individual experiences. In either case, the quality and depth of relationships are improving or the number of deep relationships are improving as knowledge flows.

Victor Udoewa: We have also asked another.

Have a majority of the design and research team members experienced a sustained and sustainable shift in resource-based power? Often the problem with many socio-economic integration programs is that the goal is diversity across socio-economic classes. However, if groups of people build truly deep relationships across class, resources should flow and those differences should slowly diminish. One sign that RD is being truly radically relational, is that resource landscapes are changing (knowledge in a knowledge economy, finances in a financial economy, etc.). Even if one is a design team member who is giving up power and money to people she now calls true friends, she is also gaining knowledge, connections, and help through relationships. This is an exchange of mutuality even if the same resource is not being shared in all directions.

Savannah Keith Gress: An example of an RD project that did not meet these conditions and was not radically relational, is one where a community of caregivers was working to create a racially just PTA. The project began with community members participating in two dialogue groups. However, over the course of the 10 weeks in dialogue, all Spanish-dominant caregivers withdrew from the groups due to changes in schedules, jobs, and interest. Additionally, the onset of the pandemic necessitated a sudden shift to conducting dialogue virtually which made establishing the same level of connection as in-person dialogue challenging. In the end, the dialogue groups failed to include a vital subcommunity within the school; most relationships did not reach the depth necessary for continued vulnerable exchange.

Did the number of relationships change for people on the design and research team as a result of dialogue? Temporarily, yes. Did the number of *deep* relationships across differences change? No, for the majority of participants. Did a majority of the design and research team members experience a sustained shift in resource-based power? Ultimately, no. There were medium shifts as evidenced by some participants accepting the need to provide Spanish interpretation in PTA meetings. But that change turned out to be a one-time resource movement and not a continuous flow. A community member later shared that decision-making practices continue to favor the loudest voices and marginalize others despite concrete proposals for more equitable decision-making protocols. Though the community may have formed more relationships, they are not yet leading to effective RD.

Victor Udoewa: An example of a successful RD project is a 12-member community that used a mix of intentional communal living (a few members) and weekly community meals, sharing, and discussion (all members). Through our relationship building, we learned about passions for working with children and a burden for homelessness. We organically grew a shared desire for relational service in those areas. We designed community projects that we did alongside young boys at a home for orphans. We also designed relationship building time and space with the young boys. Through those relationships, knowledge of the boys' situation, countries, and families flowed to us, and our resources (time, bicycles, funds, etc.) flowed to them. Over time, the relationship transformed from one of a group of benefactors and orphans, to contributing members of our city. One boy, now a man, was able to attend university and find a professional job. Another started a business. Another became a physical trainer. There are many similar stories.

Conclusion

Systems practitioners Winhall and Leadbeater (2020) mention four keys that unlock system innovation: power, purpose, resource flows, and relationships. However, an awareness and focus on relationships actually affects all the other keys. Instead of seeking system health by trying to change power, resource flows, or purpose, one can focus on system relationships. As relationships deepen and the number of deep, healthy relationships grow, resources will flow. Power then shifts due to changing resource accumulation and flows, and shifting relationships between those with more power and those with less power. Ultimately, new deep relationships along with resources and power can change the purpose of the system as well.

Whether or not community members engaged in RD make onto-epistemological shifts internally, depends on their initial onto-epistemic framework. Certain communities already embody relationality in their realities and worlds, and this is an extension of their daily worlding processes and rituals. Others may experience an internal shift that may occur at different paces for different members engaged in the RD experience. The dynamics of those shifts and the location on the shifting journey affects what each RD team can create as the relationality leads the team to attend to the various locations of each team member. That attending does not mean catering but can even involve challenging, listening, pausing, returning, space-giving, etc.

RD shifts systems by building relationships, creating resource flows, changing power, and altering the purpose of small (sub)systems. RD transforms traditional information gathering, ideation, and building components of design by utilizing relationship-building methods and the design-as-relationship-building model. True RD requires awareness of power dynamics that can undermine healthy relationships and caution when engaging as a professional designer. To evaluate RD's effectiveness, we ask whether more healthy, deep relationships were established, and whether they led to sustained shifts in

resource-based power. More work is needed to see if a purely relational practice like RD can heal large systems, such as the education system for an entire region. In future work, we will explore the infusion of relationality into the decision-making process in a design journey.

References

- Abdulla, D., Ansari, A., Canli, E., Keshavarz, M., Kiem, M., Oliveira, P., Prado, L., & Schultz, T. (2019). A manifesto for decolonising design. *Journal of Future Studies*, 23(3), 129–132. [https://doi.org/10.6531/JFS.201903_23\(3\).0012](https://doi.org/10.6531/JFS.201903_23(3).0012)
- Akama, Y. (2012). A 'way of being' in design: Zen and the art of being a human-centred practitioner. *Design Philosophy Papers*, 10(1), 63–80. <https://doi.org/10.2752/089279312X13968781797634>
- Anaissie, T., Cary, V., Clifford, D., Malarkey, T., & Wise, S. (2021). *Liberatory design: Mindsets and modes to design for equity*. Liberatory Design. <https://www.liberatorydesign.com>
- Barab, S. A., Thomas, M. K., Dodge, T., Squire, K., & Newell, M. (2004). Critical design ethnography: Designing for change. *Anthropology & Education Quarterly*, 35(2), 254–268. <https://doi.org/10.1525/aeq.2004.35.2.254>
- Bardzell, J., & Bardzell, S. (2013, April). What is "critical" about critical design?. In *Proceedings of the SIGCHI conference on human factors in computing systems* (pp. 3297–3306). <https://doi.org/10.1145/2470654.2466451>
- Bardzell, S., Bardzell, J., Forlizzi, J., Zimmerman, J., & Antanitis, J. (2012, June). Critical design and critical theory: the challenge of designing for provocation. In *Proceedings of the designing interactive systems conference* (pp. 288–297). <https://doi.org/10.1145/2317956.2318001>
- Bessarab, D., & Ng'andu, B. (2010). Yarning about yarning as a legitimate method in Indigenous research. *International Journal of Critical Indigenous Studies*, 3(1), 37–50. <https://doi.org/10.5204/ijcis.v3i1.57>
- Buber, M. (2002). *Between man and man* (2nd ed.) (R. Gregor-Smith, Trans.). Taylor and Francis. (Original work published 1947)
- Buber, M. (1970). *I and thou* (W. Kaufmann, Trans.). Charles Scribner's Sons. (Original work published 1923)
- Bohm, D. (2004). *On dialogue* (L. Nicol, Ed.). Routledge.
- Cantu, D., Corubolo, M., & Simeone, G. (2013, October). A Community Centered Design approach to developing service prototypes. In *ServDes. 2012 Conference Proceedings Co-Creating Services; The 3rd Service Design and Service Innovation Conference; 8-10 February; Espoo; Finland* (No. 067, pp. 65–70). Linköping University Electronic Press.
- Chapman, J. (2012). *Designers Visionaries and Other Stories: A Collection of Sustainable Design Essays*. Routledge.
- Cipolla, C., & Manzini, E. (2009). Relational services. *Knowledge, Technology & Policy*, 22, 45–50. <https://doi.org/10.1007/s12130-009-9066-z>
- Claiborne, S. (2016). *The irresistible revolution, updated and expanded: Living as an ordinary radical*. Zondervan.

- Clarkson, P. J., Coleman, R., Keates, S., & Lebbon, C. (2013). *Inclusive design: Design for the whole population*. Springer.
- Coleman, R., & Lebbon, C. (1999). Inclusive design. *Helen Hamlyn Research Centre, Royal College of Art*.
- Comerio, M. C. (1984). Community design: Idealism and entrepreneurship. *Journal of Architectural and Planning Research*, 227–243. <https://www.jstor.org/stable/43028704>
- Common Change. (2002). *What is poverty?* Relational tithe. Retrieved October 9, 2022, from <https://relationaltithe.com/>
- Communities. (Generations). Relational, cultural knowledge of communities around the world for generations.
- Costanza-Chock, S. (2018). Design justice: Towards an intersectional feminist framework for design theory and practice. *Proceedings of the Design Research Society*. <https://ssrn.com/abstract=3189696>
- Cottrell, A.P. (1998) The resurrection of thinking and the redemption of Faust: Goethe's new scientific attitude. In D. Seamon and A. Zajonc (Eds.), *Goethe's way of science: A phenomenology of nature* (pp. 255–276). State University of New York.
- Dahlberg, L. (2005). The Habermasian public sphere: Taking difference seriously?. *Theory and Society*, 34(2), 111–136. <https://doi.org/10.1007/s11186-005-0155-z>
- Dorst, K. (2015). *Frame innovation: Create new thinking by design*. MIT press.
- Ellison, C. (2014). *Indigenous knowledge and knowledge synthesis, translation and exchange (KSTE)*. National Collaborating Center for Aboriginal Health.
- Escobar, A. (2018). *Designs for the pluriverse: Radical interdependence, autonomy, and the making of worlds*. Duke University Press.
- Freire, P. (2000). *Pedagogy of the oppressed* (30th anniversary ed.). Continuum.
- Friedman, B. (1996). Value-sensitive design. *interactions*, 3(6), 16–23. <https://doi.org/10.1145/242485.242493>
- Friedman, B., & Hendry, D. G. (2019). *Value sensitive design: Shaping technology with moral imagination*. MIT Press.
- Garzon, J. C. (2017). Designing spirits: Transitioning from attachments that kill to attachments that save. *Design Philosophy Papers*, 15(1), 69–75. <https://doi.org/10.1080/14487136.2017.1303226>
- Goodchild, M. (2021). Relational systems thinking: That's how change is going to come, from our earth mother. *Journal of Awareness-Based Systems Change*, 1(1), 75–103. <https://doi.org/10.47061/jabsc.v1i1.577>
- Goodchild, M. (2022). Relational systems thinking: The Dibaajimowin (story) of re-theorizing “systems thinking” and “complexity science”. *Journal of Awareness-Based Systems Change*, 2(1), 53–76. <https://doi.org/10.47061/jabsc.v2i1.2027>
- Gupta, M. (2021). Design for women, gender lens design research, strategy, and Innovation. Unconform. Retrieved April 25, 2023, from <https://www.unconformstudio.com/>
- Guzman, C. M. O. (2017). *equityXdesign: Leveraging identity development in the creation of an anti-racist equitable design thinking process*. Harvard University. <http://nrs.harvard.edu/urn-3:HUL.InstRepos:33774659>
- Hạnh, T. N. (1995). *Living Buddha, living Christ*. Riverhead Trade.

- Harris, M., & Fallot, R. D. (2001a). Designing trauma-informed addictions services. *New Directions for Mental Health Services*, 2001(89), 57–73. <https://doi.org/10.1002/yd.23320018907>
- Harris, M. E., & Fallot, R. D. (2001b). *Using trauma theory to design service systems*.
- Harris, L. D., & Wasilewski, J. (2004). Indigeneity, an alternative worldview: Four R's (relationship, responsibility, reciprocity, redistribution) vs. two P's (power and profit). Sharing the journey towards conscious evolution. *Systems Research and Behavioral Science: The Official Journal of the International Federation for Systems Research*, 21(5), 489–503. <https://doi.org/10.1002/sres.631>
- Hill, C., Molitor, M., & Ortiz, C. (2016, November 16). Racism and inequity are products of design. They can be redesigned. *Medium*. <https://medium.com/@equityXdesign/racism-and-inequity-are-products-of-design-they-can-be-redesigned-12188363cc6a>
- HmntyCntrd. (2023). *Mobilizing leaders through courses, community, and consulting*. HmntyCntrd. <https://www.hmntycntrd.com/>
- Ibibio. (Generations). Namology is a neologism. Nam means create or design in Ibibio culture.
- Irani, L., Vertesi, J., Dourish, P., Philip, K., & Grinter, R. E. (2010, April). Postcolonial computing: a lens on design and development. In *Proceedings of the SIGCHI conference on human factors in computing systems* (pp. 1311–1320). <https://doi.org/10.1145/1753326.1753522>
- Isaacs, W. N. (1993). Taking flight: Dialogue, collective thinking, and organizational learning. *Organizational Dynamics*, 22(2), 24–39. [https://doi.org/10.1016/0090-2616\(93\)90051-2](https://doi.org/10.1016/0090-2616(93)90051-2)
- Isaacs, W. (1999). *Dialogue and the art of thinking together: A pioneering approach to communicating in business and in life*. Doubleday.
- Ishida, T. (2004). Society-centered design for socially embedded multiagent systems. In *Cooperative Information Agents VIII* (pp. 16–29). Springer. https://doi.org/10.1007/978-3-540-30104-2_2
- Jawaharlal, M., Ellingwood, S. N., & Thokchom, K. (2016, November). Life centered design using morphological chart. In *ASME International Mechanical Engineering Congress and Exposition*, 50657, 11–17. <https://doi.org/10.1115/IMECE2016-65121>
- Kirkness, V. J., & Barnhardt, R. (1991). First Nations and higher education: The four R's—Respect, relevance, reciprocity, responsibility. *Journal of American Indian Education*, 1–15. <https://www.jstor.org/stable/24397980>
- Kolko, J. (2018). The divisiveness of design thinking. *Interactions*, 25(3), 28–34. <https://doi.org/10.1145/3194313>
- Leadbeater, C. & Winhall, J. (2020). *Building better systems: A green paper on system innovation*. System Innovation initiative. <https://www.systeminnovation.org/article-building-better-systems>

- Lee, S. H., Rudnikb, J., Linc, L., Tangc, L., & Zhouc, D. (2020). Apply humanity-centered design process to envision the future learning experience of public area–use “redesign Shanghai library innovation space project” as an example. In *Design Management Institute (DMI) – 2020 Academic Design Management Conference: Impact the Future by Design*.
- Leitão, R. M. (2020). Pluriversal design and desire-based design: Desire as the impulse for human flourishing. In R. Leitão, L. Noel & L. Murphy (Eds.), *Pivot 2020: Designing a World of Many Centers - DRS Pluriversal Design SIG Conference*. <https://doi.org/10.21606/pluriversal.2020.011>
- Life-Centered Design School. (2022). *Life-centered design school*. <https://lifecentereddesign.school/>
- Light, A., & Akama, Y. (2014, October). Structuring future social relations: the politics of care in participatory practice. In *Proceedings of the 13th Participatory Design Conference: Research Papers-Volume 1* (pp. 151–160). Association for Computing Machinery. <https://doi.org/10.1145/2661435.2661438>
- López-Garay, H., & Molano, D. L. (2017). Alter design: A clearing where design is revealed as coming full circle to its forgotten origins and dissolved into nondesign. *Design Philosophy Papers*, 15(1), 63–67. <https://doi.org/10.1080/14487136.2017.1303974>
- Madge, P. (1997). Ecological design: a new critique. *Design issues*, 13(2), 44–54. <https://doi.org/10.2307/1511730>
- Mainsah, H., & Morrison, A. (2014, October). Participatory design through a cultural lens: insights from postcolonial theory. In *Proceedings of the 13th Participatory Design Conference: Short Papers, Industry Cases, Workshop Descriptions, Doctoral Consortium papers, and Keynote abstracts-Volume 2* (pp. 83–86). <https://doi.org/10.1145/2662155.2662195>
- Manzini, E., & Meroni, A. (2017). Catalysing social resources for sustainable changes: Social innovation and community-centred design. In C. Vezzoli, C. Kohtala, A. Srinivasan, L. Xin, M. Fusakul, D. Sateesh & J.C. Diehl (Eds.), *Product-Service System design for sustainability* (pp. 362–379). Routledge.
- Marchand, L. (2022). *The innovation mindset*. Columbia University Press. <https://doi.org/10.7312/marc20308-006>
- Marsh, D. R., Schroeder, D. G., Dearden, K. A., Sternin, J., & Sternin, M. (2004). The power of positive deviance. *Bmj*, 329(7475), 1177–1179. <https://doi.org/10.1136/bmj.329.7475.1177>
- Meadows, D. H. (2008). *Thinking in systems: A primer*. Chelsea Green Publishing.
- Medkova, K., & Fifield, B. (2016). Circular design-design for circular economy. In C. Kura (Ed.), *Lahti Cleantech Annual Review 2016* (pp. 48–54). Lahti University of Applied Sciences. https://www.theseus.fi/bitstream/handle/10024/121322/LAMK_2016_24.pdf
- Moreno, M., De los Rios, C., Rowe, Z., & Charnley, F. (2016). A conceptual framework for circular design. *Sustainability*, 8(9), 937. <https://doi.org/10.3390/su8090937>
- Murray, B., Domina, T., Petts, A., Renzulli, L., & Boylan, R. (2020). “We’re in this together”: Bridging and bonding social capital in elementary school PTOs. *American Educational Research Journal*, 57(5), 2210–2244. <https://doi.org/10.3102/0002831220908848>
- Nichol, L. (1996). Forward. In D. Bohm, *On dialogue* (pp. vii–xvii). Routledge.

- Noel, L. A. (2016). Promoting an emancipatory research paradigm in Design Education and Practice. In P. Lloyd & E. Bohemia (Eds.), *Future Focused Thinking - DRS International Conference 2016* (pp. 27–30). <https://doi.org/10.21606/drs.2016.355>
- Norman, D. A. (2023). *Design for a better world: Meaningful, sustainable, humanity centered*. MIT Press.
- Oliver, C. (2010). *Economic conspiracy*. Relational Tithe. <https://relationaltithe.com/featured-resources/economic-conspiracy-relationality/>
- Parker, P. (2020). *The art of gathering: How we meet and why it matters*. Penguin.
- Patton, M. Q. (2017). *Principles-focused evaluation*. Guilford.
- Ritter, M., & Winterbottom, C. (2017). *UX for the web: Build websites for user experience and usability*. Packt Publishing Ltd.
- Rizo, E. (2023). *Más que diseño de experiencia (UX): Life-centered design para productos y servicios*. Alpha Editorial.
- Rogers, M. (2015, December 22). *Embedded participatory design: 5 principles for designing with and in communities* [web log]. Retrieved October 29, 2022, from <https://designthinkingformuseums.net/2015/12/22/embedded-participatory-design/>
- Saunders, H. H. (1999). *A public peace process: Sustained dialogue to transform racial and ethnic conflicts*. Palgrave Macmillan. <https://doi.org/10.1057/9780312299392>
- Saunders, H. (2009). *Dialogue as a process for transforming relationships*. SAGE Publications Ltd. <https://dx.doi.org/10.4135/9780857024701>
- Scharmer, C. O. (2020, May). *Presencing: Learning from the future as it emerges*. [Paper presentation]. Conference On Knowledge and Innovation, Helsinki, Finland. <https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=ecf9269e2f2ad77783c7d2d7045da4673a22fc39>
- Smith, L. T. (2021). *Decolonizing methodologies: Research and Indigenous peoples*. Bloomsbury Publishing.
- Stanton, C. R. (2014). Crossing methodological borders: Decolonizing community-based participatory research. *Qualitative Inquiry*, 20(5), 573–583. <https://doi.org/10.1177/1077800413505541>
- Suaalii-Sauni, T., & Fulu-Aiolupotea, S. M. (2014). Decolonising Pacific research, building Pacific research communities and developing Pacific research tools: The case of the Talanoa and the Faafaletui in Samoa. *Asia Pacific Viewpoint*, 55(3), 331–344. <https://doi.org/10.1111/apv.12061>
- Sustained Dialogue Institute (2022). *Checklist for Applying the Sustained Dialogue (SD) Process*. <https://sustaineddialogue.org/wp-content/uploads/2022/11/When-to-use-Sustained-Dialogue.pdf>
- Sustained Dialogue Institute (n.d.). *Workplace*. Retrieved April 26, 2023, from <https://sustaineddialogue.org/our-work/workplace>.
- Tharp, B. M., & Tharp, S. M. (2013). Discursive design basics: Mode and audience. *Nordes*, 1(5), 406–409. <https://archive.nordes.org/index.php/n13/article/view/326>
- Tharp, B. M., & Tharp, S. M. (2022). *Discursive design: critical, speculative, and alternative things*. MIT press.
- The National Coalition for Dialogue & Deliberation (n.d.). *What is Dialogue? Definitions from Leaders in the Field*. Retrieved November 6, 2022, from <https://www.ncdd.org/what-is-dialogue.html>

- Thomas, V., Remy, C., & Bates, O. (2017, June). The limits of HCD: Reimagining the anthropocentricity of ISO 9241-210. In *Proceedings of the 2017 Workshop on Computing Within Limits* (pp. 85–92). <https://dx.doi.org/10.1145/3080556.3080561>
- Tlostanova, M. (2017). On decolonizing design. *Design Philosophy Papers*, 15(1), 51–61. <http://dx.doi.org/10.1080/14487136.2017.1301017>
- Tsolakis, M. (2018). Street Discussion Spaces in Post-conflict Côte d'Ivoire: non-formal learning, dialogue and daily life. *Educação & Realidade*, 43, 817–836. <https://doi.org/10.1590/2175-623674797>
- Udoewa, V. (2022a). An introduction to radical participatory design: decolonising participatory design processes. *Design Science*, 8, e31. <https://doi:10.1017/dsj.2022.24>
- Udoewa, V. (2022b). Radical participatory design: Awareness of participation. *Journal of Awareness-Based Systems Change*, 2(2), 59–84. <https://doi:10.47061/jasc.v2i2.3816>
- Udoewa, V. (1995 - Present). Lived experience.
- Ulloa, M. A., & Paulsen, A. (2017). Co-designing with relationships in mind Introducing relational material mapping. *FORMakademisk*, 10(1). <https://doi.org/10.7577/formakademisk.1608>
- Van der Ryn, S., & Cowan, S. (2013). *Ecological design*. Island press.
- Vignoli, M., Roversi, S., Jatwani, C., & Tiriduzzi, M. (2021). Human and planet centered approach: Prosperity thinking in action. *Proceedings of the Design Society*, 1, 1797–1806. <https://doi.org/10.1017/pds.2021.441>
- Vinsel, L. (2018, May 21). Design thinking is a boondoggle. *The Chronicle of Higher Education*. <https://www.chronicle.com/article/design-thinking-is-a-boondoggle/>
- Williams, D. E. (2007). *Sustainable design: ecology, architecture, and planning*. John Wiley & Sons.
- Willis, A. M. (2006). Ontological designing. *Design philosophy papers*, 4(2), 69–92. <https://doi.org/10.2752/144871306X13966268131514>
- Wise, S. (2022). *Design for Belonging: How to Build Inclusion and Collaboration in Your Communities*. Ten Speed Press.
- Wizinsky, M. (2022). *Design after capitalism: Transforming design today for an equitable tomorrow*. MIT Press.
- Xu, X. (2021). Integrating people-centered and planet-centered design: in conversation with Elizabeth Murnane. *XRDS: Crossroads, The ACM Magazine for Students*, 28(1), 42–47. <https://doi.org/10.1145/3481839>