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Design capabilities for community resilience: Towards dialogic practices and policies

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Abstract: This paper draws on a pilot study insight into Brazilian informal-settlement communities' problems, adaptative strategies and needs during the COVID-19 pandemic. Although communities play a noteworthy role in resilience, emergency and recovery plans often lack sufficient community engagement. This contributes to leaving particularly disadvantaged communities behind. Inequalities were further exacerbated during the pandemic, urging the deployment of plural and sustainable measures, which can promote equity in a global health crisis. Design can play a meaningful role in tackling inequalities in emergency and recovery. However, this role of design is still under-researched in resilience. We expand on related work analyses to draw on key design capabilities for the development of dialogic practices and policies aiming to contribute to designing effective participation of communities in decision-making processes. These key design capabilities support the development of dialogic design practices and policies by enhancing and supporting collaboration and communication throughout policy co-design.

Keywords: design capabilities, community resilience, dialogic practices and policies

1. Introduction

This paper explores the potential of design capabilities for community resilience. It builds upon the insights into the challenges for, problems, adaptative strategies and needs of Brazilian informal-settlement communities, as identified through a pilot study conducted in 2020. Informal settlements are also known as “subnormal agglomerates (SBAGs)”¹ (Instituto Brasileiro de Geografia e Estatística [IBGE], 2010), and within those there are also territories known as *favelas*.

Growing populations in informal settlements is a global trend (Samper, Shelby, & Behary, 2020), due to socioeconomic inequalities all over the world (Organisation for Economic Co-operation and Development [OECD], 2020). Disadvantaged communities living in informal

¹ The subnormal agglomerate is a cluster composed of at least 51 households. Most subnormal agglomerates lack elementary public services, occupying or having recently occupied (public or private) land owned by others. They are high-density areas and their buildings are usually disorderly arranged. In some Brazilian cities, small SBAGs predominate fragmented in the urban setting. In others, there are rather large ones, with over 10,000 houses (IBGE, 2010).



settlements share similar conditions such as overcrowding, inadequate housing, and a lack of regular employment (United Nations [UN], 2020). In Brazil, 8 per cent of households are in informal settlements. Over 19 per cent of households in Rio de Janeiro city and over 11 per cent in Belo Horizonte are in informal settlements (IBGE, 2019), these focus areas of the pilot study.

This study focuses on the deployment of design capabilities for the building of a better world. From our perspective, a 'better world' means that the place where people live, their culture, origin, race and gender do not define their chances to shape their lives and access a diverse range of opportunities, including human rights and equal health opportunities. By equal health opportunities, we mean that people living in different circumstances need different policies and solutions that consider those differences and disadvantages. Policies are critical tools for enabling people's participatory capabilities (Sen, 1999). However, these relations between policy and participation are still poorly explored in the context of underserved communities from the Global South. This paper presents a case study that was undertaken with Brazilian informal-settlement communities and aims to help the design community in unfolding the potential of designers' capabilities for community resilience in the context of public policy, administration, services and politics that were observed during and beyond the COVID-19 pandemic.

The theoretical background of this paper was based on a literature review on the participatory approaches to disaster in risk management. This was utilised to identify complementary design and economics research, aiming to shed light on the potential role of design to nurture community resilience considering this gap in design research.

From the pilot study's insights and the aforementioned literature review analysis, we draw on key design capabilities for the co-design of plural (Escobar, 2018) and sustainable dialogic practices and policies through design. By 'dialogic' we mean 'learning and knowing through dialogues' (Freire, 1970, 2005).

1.1 Community resilience and public policy in emergency contexts

Prior studies in emergency and recovery define resilience as the capacity to quickly recover from disasters' impacts, reducing future vulnerabilities by employing adaptative strategies, making choices that seek (1) to balance quick recovery and the optimisation of "opportunities for a safer, better and equitable community", and (2) to consider how those choices impact on the vulnerability of the built and natural environments, as well as on the "local capacity to organize, adapt and respond to disaster impacts" (Berke, Cooper, Salvesen, Spurlock, & Rausch, 2011, p. 2).

In this context, the resilience of disadvantaged communities is related to capability building linked (1) to inter-personal skills in community organising, relationship building and access to external resources and expertise, as well as (2) to enabling communities to undertake their own ends and achieve wider community-based goals by holding local planning efforts accountable (Berke et al., 2011, p. 14).

Although communities and their organisations have played a noteworthy role in dealing with disasters throughout history (Patterson, Weil, & Patel, 2010), and public and stakeholders' engagement is essential to successful disaster recovery, contributing to communities' resilience and stability (Amaratunga, 2014; Berke, Cooper, Salvesen, Spurlock, & Rausch, 2011; Meyer, Hendricks, Newman, Masterson, Cooper, Sansom, Gharaibeh, Horney, Berke, van Zandt, & Cousins, 2018; Crawford, Langston, & Bajracharya, 2013; Vahanvati & Beza, 2017; Vahanvati & Rafliana, 2019), risk assessment and urban planning processes are usually operated by experts without sufficient community engagement (Meyer et al., 2018).

In contemporary European policymaking, the idea that citizens, public servants, and organisations can form networks or communities and the state can manage those networks reinforcing the interdependence of actors towards shared goals, is known as networked governance or new public governance, and has taken place since the 2000s (Julier, 2017). The plummet in public budget spending during the austerity period has attracted attention to design capabilities, experimental and collaborative approaches and methods for facilitating policy co-development and implementation, in order to develop creative and innovative solutions that complex contemporary challenges require (see for instance Bason, 2014; Julier, 2017; Junginger, 2014; Mortati et al., 2016). In this context, design capabilities are seen as elementary skills for citizens in the future (Manzini, 2015, 2018, 2019).

Besides, democratic theory is underpinned by the elementary principle of citizens' participation in the decisions that affect their lives (Sanoff, 2007; Sen, 1999). Ideally citizens' capabilities "to lead the lives they value – and have reason to value" should be nurtured (Sen, 1999, p. 18). Community participation goes beyond voting and public consultation in Participatory Design, involving the engagement of citizens in the creation and management of their environment and enabling them to make informed decisions (Sanoff, 2007).

However, effective participation requires "knowledge and basic educational skills" (Sen, 1999, p. 32). Hence, denied access to education hampers citizens' effective participation (Sen, 1999). Capability building processes happen in a two-way relationship. On the one hand, "the direction of public policy can be influenced by the effective use of participatory capabilities by the public" (Sen, p.18). On the other hand, capabilities can be improved by public policy that should provide people with enabling conditions to effectively participate in public decisions, assuring civil rights, economic facilities, social opportunities (e.g., access to education and health care), transparency guarantees and protective security (social safety to prevent misery) (Sen, 1999).

Minamoto (2010) notices that decisive leadership is better to achieve desired results regarding social services provision than reaching a consensus through a participatory approach to recovery under certain conditions. Julier (2017) also warns that contemporary European policymaking can be seen as "the relinquishment" (p. 155) of the state's responsibility for welfare and other public services. In addition, if these developments result in public money savings is "hotly debated" (p. 153).

Nevertheless, a top-down approach to recovery often disregards livelihood diversity and misses opportunities to utilise local knowledge that can create grounds for sustainable living conditions (Vahanvati & Rafliana, 2019). And participatory (bottom-up) approaches positively contribute to the resilience knowledge of communities (Meyer et al., 2018).

However, the use of citizens' engagement to solve public problems has limitations in 'normal' (see Julier, 2017) and recovery circumstances (see Minamoto, 2010; Patterson, Weil, & Patel, 2010; Vahanvati & Beza, 2017), including factors related to existing social and political power structures such as:

- conflict of interests;
- privileges of certain networks over others;
- inclusion or exclusion of individuals' criteria, or, if selected participant citizens can be considered representative of all citizens and public interest.

Other constraints are related to implementation aspects, possible and politically desirable outcomes and impacts.

Dong (2008) also highlights concerns about citizens' participation in public work during recovery, particularly regarding their design capabilities. The author explains that citizens in developing and developed countries share the problem of a design policy that "reflects the values of the people" (p. 77), emphasising the importance of the design capabilities of citizens to enable effective contribution to and participation in design. Therefore, Dong argues that there is a need for design policies dedicated to building the design capabilities of the lay public.

However, participation goes beyond public work issues and contributes to the sense of community empowerment, ownership, commitment to implementation and trust in government (Sanoff, 2007). And the co-development of information for disaster emergency and recovery is key to inputting communities' needs and circumstances into planning projects.

Furthermore, there are key factors underpinning the sustainability of community resilience such as autonomy, inclusive accountability, and communities' capabilities. Autonomy enables "opportunities for the local people to define and act on their own ends" (Berke et al., 2011, p. 4; see also Bott & Braun, 2019; Choudhury, Uddin, & Haque, 2019). Inclusive accountability is essential to achieving communities' goals and building sustainable change (Amaratunga, 2014; Berke et al., 2011; Smith & Iversen, 2018; Vahanvati & Beza, 2017). The sustainability of solutions relies on the capabilities of communities built throughout co-development processes of self-organising, accessing needed resources, and reinforcing networks rather than on outcomes themselves (see Berke et al., 2011; Bott & Braun, 2019; Schilderman & Lyons, 2011; Vahanvati & Beza, 2017).

1.2 Emergency, recovery and resilience policies

The pandemic has further exacerbated the difficulties governments, international and non-governmental organizations face in tackling global challenges and coordinating effective responses to those at both levels (local and global). This is also recognised in recovery contexts (Hardoy, Gencer, & Winograd, 2019; Wanie & Ndi, 2018; Vahanvati & Rafliana, 2019). Good governance is critical to community resilience and the success of participatory approaches (Choudhury, Uddin, & Haque, 2019).

The coordinator of the United Nations' aid relief operation, Mark Lowcock, recently highlighted that even humanitarian organisations have been failing to give “people what they themselves say they most need” (Wintour, 2021). This issue is more complex than giving people what they say they need because we cannot rely only on what people say but capturing and fulfilling their needs requires more than actively listening to them.

Research and globally recognised guidelines on disaster prevention, preparedness, hazards mitigation, recovery and resilience (i.e., UNDRR, 2017; UNISDR, 2016) are often approached from a risk management perspective, failing to address socio-cultural aspects and livelihoods diversity that influence the sustainability of proposed policies and solutions to these (Vahanvati & Rafliana, 2019).

Although risk management for disaster policies emphasises the need to “leave no one behind” (UNDRR, 2019), inequalities are an issue in disaster planning (Berke et al., 2011). For instance, older adults, disabled, poor, and ethnic minority groups are usually not able to leave a disaster area. They are left behind when they are neither included nor addressed in emergency planning. The COVID-19 pandemic confirmed this disparity (see UN, 2020).

The need for community and city resilience was stated even prior to the COVID-19 pandemic, as it relates to the ability “to withstand and bounce back” from both natural and manmade disasters or socio-economic issues (United Nations Office for Disaster Risk Reduction [UNDRR], 2017, p. 3). Connections between recovery and disaster resilience are globally acknowledged (Vahanvati & Beza, 2017). Approaches to recovery, changes and ‘advancements’ that emerge from these under pressure contexts influence people’s future behaviour and ways of living that can contribute to “Build Back Better” (BBB) (see The United Nations Office for Disaster Risk Reduction [UNISDR], 2015 for BBB).

Vahanvati and Rafliana (2019) emphasise that BBB impacts are usually limited to housing and construction systems’ structural changes rather than systemic changes that have a transformative role amongst communities. Moreover, aspects beyond engineering resilience are key to success, including political backdrop, governance, trust, cultural and social determinants as well as the voice of communities, the freedom to make informed decisions with support from multi-disciplinary teams, facilitators, and government (Choudhury, Uddin, & Haque, 2019; Minamoto, 2010; Vahanvati & Beza, 2017; Vahanvati & Rafliana, 2019).

1.3 Inequalities in crisis

The COVID-19 pandemic has disproportionately affected vulnerable communities and aggravated inequalities worldwide (United Nations [UN], 2020). Inequalities form a reality across and within countries regardless of their income status (least-, low-, middle-, upper-) (OECD, 2020). This still strongly influences the likelihood of achieving satisfactory education, health and wellbeing.

In Brazil, the political divide impacts health decisions, adopted practices and recommendations (Ajzenman, Cavalcanti, & Da Mata, 2020) and offers further opportunities for corruption. Policies that provide access to basic and key services (i.e. health, education, etc), which are harder for disadvantaged communities to attain have not addressed the digital divide (Fonseca Braga et al., 2020, 2021). Moreover, tackling the pandemic requires a global effort in science and technology development, economic and social cooperation as well as coordination. A situation that global and local organisations were not prepared and able to handle.

The potential of design is still under-researched in this context, even though the COVID-19 pandemic has been shifting design practice and research attention to emergency, recovery and resilience challenges. Especially by work that focuses on rethinking the use of spaces, innovating in services, protective gear and medical equipment, creating communication materials on the 'invisible threats' and working on visual preventative guidelines. Special issues in design journals and dedicated design conference tracks, further support this (see for instance Fonseca Braga et al., 2021; Design Emergency, 2020, 2021; Rodgers et al., 2020). However, how design can be an asset to tackle inequalities that are further exacerbated during the COVID-19 pandemic recovery remains still an under-researched area.

2. Methodology

This paper was built upon a qualitative and exploratory pilot study conducted with three informal-settlements communities, one in Rio de Janeiro and two in Belo Horizonte. It expands prior related work (Fonseca Braga et al., 2020; Fonseca Braga et al., 2021) undertaken through a collaboration between Lancaster University (UK), University of Minas Gerais (Universidade Federal de Minas Gerais [UFMG], Brazil), Minas Gerais State University (Universidade do Estado de Minas Gerais [UEMG], Brazil).

The pilot project utilised multiple data sources and triangulation of methods to capture communities' perspectives and experiences during the beginning of the pandemic in Brazil. Primary data was collected through three online roundtables with community members from five informal-settlement communities, two in Belo Horizonte and three in Rio de Janeiro, and NGOs' representatives who have been actively involved in tackling the COVID-19 pandemic in these communities. Conversations encompassed: sources of information, communication means and impacts on routine; prevention; diagnosis and treatment; support, and change.

Table 1. Belo Horizonte online roundtable.

Roundtable role	Gender	Related Community / Role
Participant 1	Male	Community A / NGO representative and community member
Participant 2	Male	Community A / NGO representative
Participant 3	Female	Community B / Kindergarten teacher, community member and volunteer
Participant 4	Male	Community B / NGO representative and community member
Mediator	Female	Lancaster University / Research Associate
Time moderator	Male	UFMG / Master student
Observer 1	Male	UFMG / Professor
Observer 2	Female	UEMG / Professor
Observer 3	Female	UEMG / PhD candidate

Table 2. Rio de Janeiro online roundtable.

Roundtable role	Gender	Related Community / Role
Participant 5	Female	Community C / Nurse, doula and community member
Participant 6	Female	Community D / Journalist and community member
Participant 7	Male	Community D / NGO representative and community member
Participant 8	Female	Community D / Educational project founder and community member
Participant 9	Female	Community E / Social movement representative and community member
Mediator	Female	Lancaster University / Research Associate
Time moderator	Male	UFMG / Master student
Observer 2	Female	UEMG / Professor
Observer 3	Female	UEMG / PhD candidate

The analysis of these conversations was conducted through design methods such as affinity and mind mapping (for details about these please see Fonseca Braga et al., 2020; Fonseca Braga et al., 2021) that identified and synthesised communities' problems, adaptive strategies, needs and the related areas of challenges regarding each topic through cross-reference. Finally, maps showing communities' problems, challenges, adaptive strategies and needs and their interrelations during and beyond the pandemic were made and validated with participants through a third roundtable that enabled reflection, further discussion, and sense-making in a participatory process (please see Fonseca Braga et al., 2020 for further information on these specific maps). Secondary data included public data from community members and NGOs' social media, websites and press releases. Most challenges existed before the COVID-19 spread and were exacerbated by it.

3. The design by communities in emergencies: a case study

3.1 Context

“1 billion people live in informal settlements and slums” worldwide (United Nations [UN], 2020). Growing populations in informal settlements is a global trend (Samper, Shelby, & Behary, 2020) and in Brazil (IBGE, 2010, 2019). Communities living in informal settlements share similar conditions such as overcrowding, inadequate housing, and a lack of regular employment (UN, 2020). The COVID-19 pandemic disproportionately affects vulnerable communities and reveals racial disparities. Around eight per cent of Brazilian households are in informal settlements in Brazil (IBGE, 2019). Rio de Janeiro city has over 19 per cent of its households in informal settlements and Belo Horizonte’s households account for over 11 per cent (IBGE, 2019).

Brazilian informal settlements vary across the country. However, they share some characteristics, such as their emergence is often related to the historical migration from the countryside to cities that shaped especially favelas in the 1940s. Their infrastructure is limited, often lacking water and sanitation grids, and elementary services (e.g., waste collection, sewage treatment, water, energy supply as well as Internet). Informal-settlement communities are mostly composed of Black and brown people, informal and low-income workers (e.g. cleaning, construction work, and waste picking and collection) and female-headed families (Musumeci, 2016).

3.2 The pandemic policies, their drawbacks, and community-led design in response to unsuitable policies and politics

Community-led strategies in response to barriers and challenges regarding infrastructural, political, behavioural factors, public policy and service as well as socio-economic determinants were identified and mapped in prior work (Author et al., 2021) as follows (Figure 1).

	Barriers	Challenges	Community-led strategies		
Infrastructural	Lack of access to internet.	How to access reliable information, interpret and understand it.	WhatsApp and Facebook groups.*	Communication	
	Distrusted politicians.		Local community leadership. Personal network. Educational videos on prevention. Rap lyrics creation. Car with sound system circulates in the community.		
	Lack of information technology resources.	How to assure (1) access to education and (2) the safety of children and teenagers during the pandemic.	Home-schooling project. Reformulation of the school planning.	Education	
	Public schools are closed.				
	Absence of (infrastructure, service and staff) support from schools.				
	Lack of access to Internet.				
	Political	No possibility of remote work.	How to ensure community members' subsistence and wellbeing.	Local NGOs' support to access government benefits. Local NGOs and private sector partnerships (food parcels' and hygiene products' donations). Local NGOs and wider society partnerships (e.g. solidarity of citizens beyond the community).	Employment and income
		Social Service (CRAS) closure.			
		Overpriced food and hygiene products.			
	Public policy and/or service	Unemployment.	How to bring awareness about the 'invisible' threat.	Hand sanitizers and masks distribution to workers at dawn. Grated soap and water mixture stored in reused oil cans.*	Culture, leisure and behaviour
Informal work.					
Children's street culture and games.					
Youth keep partying.					
Behavioural and/or cultural	Adults keep going to bars.	How to create support and coordinate strategies and actions with communities for mitigating COVID-19 effects and impacts.	Community-led communication strategies. Handwashing and hand sanitizer check points.	Public administration and politics	
	Older adults have resistance to change/adapt their habits.				
	Lack of water and sanitation grids				
Socio-economic determinants	Political instability, 'bad' behaviour and practices.	How to assure community access to health services.	Community self-organisation and volunteering. Mutual help amongst households. Design and manufacturing of masks. Establishment of a community leadership unity.	National Health System	
	Lack of public officials support.				
	Lack of protective gear for health professionals in the public sector.	How to provide communities with assertive diagnosis and treatment.	Donations of food parcels and hygiene products by citizens and socially responsible organisations. Water purchase from a water tank truck.		
	Lack of free COVID-19 tests.				
	Need of health workers for access to reliable information and knowledge to provide diagnosis and treatment.	How to provide communities with feasible preventative measures.	Community members raised money for diagnosis and protective gear for health workers. Traditional knowledge: ginger and saffron teas and sunbathing to strengthen vitamin D. Self-medication based on media speculation.* Prescriptions' sharing.*		
	Standard preventative measures are unsuitable for the community conditions.				
	Lack of trust in the public health system's diagnosis.				
	Distrust in medical appointments by phone.				
Overcrowded and intergenerational households.					
High-density areas.					

Figure 1. Barriers, challenges and community-led strategies for tackling the COVID-19 pandemic (Fonseca Braga et al., 2021, p. 2175).

Although there are interconnections between these factors, in this paper, we focus on political, public policy and service aspects that impacted the way of coping with the pandemic in the informal settlements studied.

Political barriers included distrusted politicians, political instability, their bad behaviour and practices related to the pandemic risks and public administration. Politicians are mostly seen in these communities due to poll interests and they are often associated with corruption. These led to challenges for communities that questioned the existence of the COVID-19 virus at the beginning even when working in the public health sector as it is an invisible threat.

Failures in public policy and service impacted the access to education and social services. In addition, community members faced issues, such as lack of access to tests for free, reliable information on prevention and treatment, assertive diagnosis as well as the unsuitability of global preventative measures for living conditions in informal settlements. The absence of public officials' support in tackling the pandemic challenges with communities was felt and the global health policies in place which aimed to mitigate the pandemic impacts failed to address livelihood diversity and the technological divide that prevails in these territories that usually (1) do not have access to the Internet, (2) need to cope with water scarcity and insecurity, (3) are made up of overcrowding and intergenerational households with informal and low-income earnings.

In response to these challenges community leaders and community-led NGOs were critical to promoting social organisation and cohesion as well as collaboration and partnerships with the public (e.g., health workers) and private sectors. Especially partnerships with the private sector and community crowdfunding were key to financing community strategies.

However, the scale and sustainability of community-led strategies are still challenging the communities' abilities to beat the COVID-19 disease in informal settlements and some strategies are risky, involving prescription sharing and self-medication influenced by media speculation. Despite the unfavourable political environment and the distrust in public officials, communities expressed willingness and openness to build dialogues and collaboration, demonstrating their need for proper support from public organisations.

4. Towards dialogic practices and policies through design

This paper expands into key design capabilities that were not addressed in prior related work (Fonseca Braga et al., 2020; Fonseca Braga et al., 2021) and that we consider crucial to supporting the 'making' of dialogic practices and policies necessary to build or enhance community resilience. We understand that informal-settlement communities have been playing a critical role in mitigating the pandemic impacts in their territories. However, the way expert designers' capabilities could be better deployed in these circumstances, helping to address political, public policy and service drawbacks strategically with communities and different stakeholder groups is underexplored.

Designers should build upon dialogic practices that can enable them, different stakeholder groups and communities to set up also dialogic policies. This is what we call building bridges instead of reinforcing the walls of current policy systems that disavow the most disadvantaged and underserved communities.

Successful participatory approaches to recovery favour community empowerment, ownership, commitment to implementation, and trust-building between communities, public officials, and key stakeholder groups; thus contributing to more resilient communities and to sustainable and inclusive initiatives and solutions.

Participation is an elementary principle of democracy (see for instance Sanoff, 2007; Sen, 1999). Rather than the expert design 'making' of public work (i.e. Dong, 2008) that is one part of public problems and can be seen as an 'end of the pipe' approach that looks at the output; we posit that design capabilities are necessary to conceive, plan and make (Buchanan, 2001) a better world by underpinning dialogic practices and policies for building resilient communities. Designers can support communities' goals at the decision-making level by bringing together different stakeholder groups and communities, contributing to building meaningful conversations in a holistic and situated way. They can do so by considering livelihood diversity, facilitating collaboration, communication and (short- to long-term) strategy development, structuring change and creative processes to deploy collaborative, creative and innovative solutions that complex challenges require in a multistakeholder, multisectoral and experimental approach.

Therefore, also (co-)design capabilities can play a key role in these two-fold complex glocal (Swyngedouw, 2004) issues, working with organisations and communities to (1) bring people's voices to solution development and decision-making, providing communities with ownership and empowerment; and (2) promote informed participation and collaboration, 'translating' information and facilitating meaning sharing and understanding. We expanded on the pilot study analyses, prior related work (Fonseca Braga et al., 2020; Fonseca Braga et al., 2021) and the theoretical background of this paper to propose key design capabilities that can contribute to 'learning and knowing through dialogues' (Freire, 1970, 2005) and should be nurtured to better tackle complex inequality challenges and to build dialogic practices and policies towards resilient communities. We explain these design capabilities below.

- **Building bridges.** Beyond promoting access to different stakeholder groups, designers need to foster connections between those groups and communities towards the collaborative craft of situated policies that are effective for communities to tackle the pandemic barriers and challenges.
- **Holistic view.** To zoom out / zoom in. To be able to work on the parts of a complex problem without overlooking the system's interconnectedness. Barriers to coping with the COVID-19 pandemic were structural, complex and interconnected. Most community problems were exacerbated by the pandemic and involved varied factors that influence one another.

Understanding these relations between factors at various levels is necessary to identify the most urgent and important intervention points considering the context and factors determining people's behaviours, practices as well as feasibilities of plans and actions. A policy should be always something viable and translated into possible and potential actions on the ground.

- Sense making. To contribute to making sense of learnings and information, making those shareable and meaningful (locally and culturally appropriate) and enabling understanding of reasons behind behaviours. The COVID-19 messages and information meant different things to different people. Finding reliable sources was confusing even for public health workers. Designers can support better knowledge exchange, communication, and collaboration between diverse groups of people by translating, integrating, and synthesising knowledge as well as accessing stakeholder groups that are hardly accessible to communities.
- Synthesis. To synthesize ideas, knowledge and information, directing attention to relevant points.
- Visualisation and 'making'. To make ideas tangible so that others can share, communicate, reflect and build upon one another's insights to collaboratively solve problems, envision and plan better futures.
- Active listening. To actively listen to diverse voices. Understanding different perspectives and lived experiences is essential for the craft of effective policies that are really concerned with intersectionality and inequity issues. Active listening is about being open to not knowing and also recognising the inability of designers to deploy empathy in certain circumstances, being honest and true to themselves. There are situations in which designers cannot empathise with communities and this would be cynical when they have never been in that place throughout their lives. As bell hooks highlights, empathy can also mean eating the other. So, instead, it is important to actively listen and understand what is going on and why as well as how designers can contribute to harnessing community plans and strategies. The next capabilities we emphasise build upon the latter.

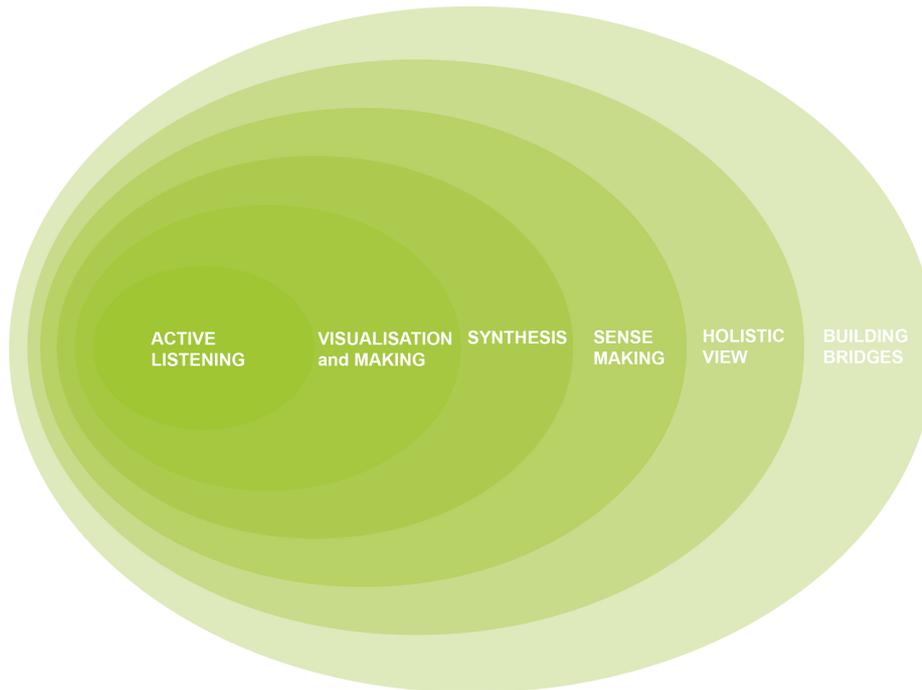


Figure 2. Design capabilities for community resilience: towards dialogic practices and policies.

These design capabilities can support the practice of ethics, especially equity and diversity values, that are critical to creating an enabling environment in which everyone can thrive together indeed. This goes beyond inclusion when changing the way people, especially from disadvantaged communities, are seen, valued and enabled to access the resources they deserve.

Fostering of these design capabilities can support community ownership and empowerment. This does not mean a lack of government and public sector accountability towards citizens, which is much needed. Institutional mechanisms, such as laws, policies and 'silent' colonial and patriarchal norms, that keep people marginalised can change through dialogic practices and policies. Beyond these, the sense of justice is essential and should underpin these dialogic instruments. There is no room for privilege if we want to (although we clearly must) tackle inequalities and build a better world. However, there are still challenges for these design capabilities to thrive, including dysfunctional democracies and reckless leadership (e.g., public officials and politicians who are not committed to the public good) that require design activism and further design research.

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