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Dealing with the Pitfalls of Inclusion and Diversity: How to Involve Citizens Experiencing Distance from and Distrust of Science and Governance

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and Willemine Willems*

12.1 INTRODUCTION

Complex and global emergencies such as the COVID-19 pandemic and the climate crisis have made scientific knowledge more relevant and at the same time more contested. Such contestation is amplified by widespread

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misinformation and a growing scepticism among certain groups in society towards science and policies that seem to be based solely on scientific research (Davies, 2022).

Many have argued that the complexity of such emergencies and the contestation regarding scientifically developed solutions and policies require transdisciplinary research (TDR). With such an approach diverse perspectives and forms of knowledge from a range of different stakeholders are taken into account and integrated, including those of citizens and communities (Kok et al., 2021). The rationale for such participation often includes a substantive, instrumental and normative component, meaning that such engagement is thought to improve the quality and desirability of science and technology, increase the likelihood of the public acceptance of future technologies, and to meet citizens' democratic right to be involved in matters of public concern. Furthermore, (co)researching is thought to have broader methodological benefits—such as greater validity and more generalizable findings (Evans et al., 2014; Fung, 2015; Hueske et al., 2023; Turbe et al., 2019).

In this chapter we present three major pitfalls and potential remedies to help TDR involve citizens (and other stakeholders) in a successful and meaningful way. The examples are based on three studies that investigated the ways in which citizens' involvement, and the concepts of inclusivity and diversity, were approached in science, technology and policy development. We aim to provide insights for transdisciplinary researchers who seek to make their research, and the transitions being investigated and supported, more inclusive by developing spaces and approaches that allow for a wide variety of views and lived experiences to be heard, shared, understood and ultimately acted upon.

Whom to include and how to do so in an inclusive manner in processes of knowledge co-creation is a pressing question in TDR. The search for such answers has a long history in the fields of science communication and citizens' engagement in science, technology and policy, where practitioners and researchers have reflected on and published about successful and meaningful ways to involve a wide range of citizens as a means to

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improve research and policymaking. When communication and engagement are not sufficiently inclusive or diverse or cannot make good on their substantive, instrumental and normative promises, it damages the very trust or acceptance it seeks to build (de Weger et al., 2023; Lewis, 2014; Luluquisen & Pettis, 2014). Many studies over the years have pointed out that in practice it remains difficult to fulfil these promises. For example, some of the literature has consistently observed that there is an overrepresentation of white, middle-class and better-educated citizens in research and policymaking while people from less advantaged backgrounds are often underrepresented (Cyril et al., 2015; de Weger, 2022; Fraaije, 2023). Some authors have sought to explain this, in part, through the focus of (western) governments on improving efficiency and effectiveness. This literature suggests that this has made it difficult for organizations to alleviate social exclusion, which results in over-including and overproviding to those who are easiest to reach and assist and underproviding to more disenfranchised, underrepresented citizens who may be costlier to assist (Beresford, 2019; Cortis, 2012; Fletcher et al., 2016) (see Table 12.1 for a summary of the key theoretical concepts).

Notwithstanding the increasing insight into the benefits of inclusivity and diversity, and greater awareness of the enablers and barriers to achieving them, it remains difficult to attain them. Despite many public engagement initiatives and projects, scholars in the field are critical of what has been achieved to date (Irwin et al., 2013). Earlier studies have shown that inequitable social involvement stems from the fact that research is largely based on the interests, needs and norms of those who design and commission it (Beresford, 2019). Moreover, in research and policymaking there tends to be a focus on efficiency in terms of time and budgets, rather than investment in outreach and empowerment. Placing the emphasis on efficiency rather than on empowerment is detrimental to the influence of citizens, especially those from disadvantaged backgrounds. As a result, when disadvantaged groups are involved, they often report feeling shut out and unable to share their experiences and perceptions, their skills and insights (see, for instance, Cook & Kothari, 2001; de Weger, 2022). Although there is a growing literature about the pitfalls of engagement, it remains a pressing issue to understand how to overcome and remedy these, and to build a reflexive engagement environment that is inclusive to a wide range of citizens' experiences, perspectives and norms and values. First, the case studies provide examples of well-known pitfalls that can arise when trying to involve a wide range of citizens in an

Table 12.1 Key theoretical concepts

<i>Term</i>	<i>Definition</i>
Citizen engagement	This refers to the various ways in which citizens are involved in the planning, designing, governance and/or delivery of research, policymaking and technological developments. Such engagement takes many different forms and occurs at different levels—for example, at the consultation level, where citizens share information with organizations; the communication level, where citizens and organizations enter into dialogue; and participation, where citizens have an active role in the planning, design, decision-making and implementation (de Weger, 2022; O'Mara-Eves et al., 2013; Rowe & Frewer, 2005)
Inclusivity	While inclusivity has many different definitions it is broadly centred on the importance of involving a range of different citizens with different backgrounds, perspectives, experiences and needs. Processes underpinning 'inclusivity' can be broadly categorized according to (a) the openness of the process to participation; (b) the representativeness of those involved of the wider communities; (c) the transparency of the processes to everyone involved (Landemore, 2014)
Diversity	This term has been defined and conceptualized in many different ways and is dynamic and influenced by the context. Broadly, it refers to differences between (groups of) people. These distinctions are often based on different criteria or characteristics and usually refer to a 'meaningful characteristic', namely one that influences the person's identity and way of life (Van Ewijk, 2011)
Science communication	Science Communication (SciCom) encompasses a wide range of activities that aim to connect science and society and has various meanings. SciCom is not merely scientists talking about their work (to improve public lack of understanding), nor is it simply an offshoot of the field of 'communications'. Many define SciCom as being synonymous with public awareness of science (PAS), public understanding of science (PUS), or scientific literacy (SL). As such SciCom does not only pertain to the communication of scientific facts, but rather denotes ways to a more informed and open dialogue of the role of science in society at all levels and relating to all actors; and also includes the participation of a wider variety of actors (Bucchi & Trench, 2021; Burns et al., 2003)
Risk communication	Risk communication centres on the real-time exchange of information and community involvement between 'experts' and 'people facing the risk, hazard or threat' to their survival, health or economic or social wellbeing. The purpose is to enable citizens to make informed decisions and to involve them in decision-making processes in emergencies or emergency preparedness. Risk communication concerns the relationship between risk, science, and science communication and therefore informs difficult matters of dialogue, governance and decision-making processes (Irwin, 2021; World Health Organization, 2017)

effort to achieve inclusivity and diversity for research and policymaking. Secondly, they highlight relevant lessons and solutions to overcome these.

12.2 ASSUMPTION I: DEMOGRAPHICS ARE AN INDICATOR OF WHETHER DIVERSITY AND INCLUSIVITY HAVE BEEN ACHIEVED

12.2.1 *Background*

Aiming to involve a diverse range of citizens, many organizations rely on demographics to inform their research and policymaking processes. Such organizations frame the lack of diversity or inclusivity according to standards they can easily set and measure. The idea is that inclusivity can be achieved if X share of each demographic is achieved—enough low-income households, enough LGBTQI+ citizens or enough citizens with a migrant background, for instance (de Weger et al., forthcoming; 2023).

12.2.2 *Pitfall*

Such thinking about inclusivity and diversity lacks reflexivity and cultural sensitivity both for TDR and for policymaking. It wrongly assumes that demographics are clear-cut indicators of who is included. By taking demographics as the main indicator for people's experiences of distrust of and distance from science and government, this spuriously generalizes about such demographic groups, and misses the more relevant features of diversity: different conceptions about (trust in) science and government (see Box 12.1). After all, these initiatives follow general statistics on 'trust in science' or stereotyped understandings of certain social groups, to argue that these—be they migrants, less-educated or conservative-voting people—need to be included precisely because they have less understanding of and trust in science and government. While this may be statistically true, it also obscures the diversity *within* demographic groups and deems it irrelevant. Is it even possible to regard these groups as uniform or are there significant differences between people from a similar demographic? Is diversity reached when demographic categories are taken as benchmarks, or are we including only the already trusting segments of such demographic groups?

Indeed, as Butter and Knight (2023) showed in studying citizens' responses to the COVID-19 pandemic, opposition towards science and

government is by no means the monopoly of any single demographic category, but is present in *all* demographic groups. The anti-vaxx demonstrations across Europe and North America included various social groups, from highly educated urban hipsters influenced by alternative health and New Age spiritualities to less-educated people in rural areas inspired by nationalist ideologies, and many others besides (Harambam & Voss, 2023). Although opposition to the governing authorities may seem to unite rather different groups, their (distrustful) understanding of science and government differ markedly: the former challenge ‘unnatural’ biomedical interventions such as vaccinations, while the latter are opposed because ‘elites’ disregard ‘common sense’ and ‘ordinary people’. Context matters too: although voters for populist political parties generally tend to have less trust in science, this increased sharply during the pandemic while other groups rallied around the flag (Bromme et al., 2022). Political scientists and psychologists have shown in various quantitative studies that political and religious beliefs rather than demographic categories determine trust in science (Rutjens et al., 2018), while the ethnographic studies undertaken by sociologists and anthropologists show that cultural world-views are important predictors of whether a person aligns with science (Harambam, 2020; Sobo & Drazkiewicz, 2021).

In the Netherlands, studies undertaken during the COVID-19 pandemic found increasing distrust as communication and policymaking were focused on technical or scientific knowledge (e.g. Harambam, 2023; Prettner et al., 2023). Studies such as the one described in Box 12.1, and more recent studies about the Dutch vaccination campaign, found that by portraying anyone who poses critical questions as a ‘conspiracy theorist’ arguably creates a greater gap between citizens, science and government bodies. The point is that demographic categories may sometimes be good proxies for groups distrustful of science and government, but in principle they are not the best way to include the right people. What is relevant, after all, is people’s social, cultural and political distance from science—their concrete ideas about and experiences of science, and not their supposed group affiliation. Moreover, using such general demographic categories as proxies and lumping all kinds of people together in supposedly uniform groups create various adverse and unintended consequences.

Box 12.1 Understanding ‘Conspiracy Theories’

Conspiracy theories—explanations of social phenomena involving the covert actions of certain (powerful) people—are now found everywhere. Narratives about the real truth behind terrorist attacks (like the September 2001 attacks in the United States [9/11] and the November 2015 Paris attacks) or behind collective vaccination campaigns (e.g. COVID-19, Human Papillomavirus [HPV]) feature widely in western societies. For many, conspiracy theories have become a normalized idiom to account for what actually happens and have been popularized in films such as *The Matrix*, *the Da Vinci Code*, *The X-Files*. Although conspiracy theories have moved from the cultural margins to the centre, they remain little understood. Both among academics and beyond, the prevalent assumption is that conspiracy theories are paranoid, delusional, and irrational interpretations of reality—so those who believe in them must, therefore, be similarly delusional. Academics tend to view conspiracy theories as paranoid politics: they are systemized, delusional fears of conspiracy and deceit, and they cast the world rather unproductively in an apocalyptic battle between absolute good and evil. Scholars warn of the social dangers were conspiracy theories and the related paranoia to proliferate: demonization, scapegoating, cultural conflicts, political extremism, radicalization, violence, terrorism. From this perspective, conspiracy theories threaten the health and functioning of democratic societies.

This pathological framing which dominates academic work on conspiracy theories is problematic for a number of reasons. First, it may be questioned deluded and paranoid conspiracy theories really are when there are so many cases of state-sponsored conspiracies that have taken place, such as Watergate, the CIA mind-control programme, the Iran–Contra Affair, the LIBOR scandal, and WikiLeaks. More importantly, the pathological framing does not help to understand why so many people are drawn to conspiracy theories. It would be better to explore such conspiratorial understandings without disqualifying or comparing them to specific moral or epistemological standards.

The ethnographic study of the Dutch conspiracy milieu aimed to see the world from their perspective. It shows what conspiracy culture empirically looks like—the ideas, motivations, practices, biographies, and products of people who inhabit this subculture—and how these are related to the mainstream. For this study, the author was immersed in the Dutch conspiracy environment for two years and became acquainted with a range of people, attended their social gatherings, built rapport and was recognized by insiders as a trustworthy person. The author read their posts,

articles and books, held in-depth interviews with them in safe settings, visited their performances and political activities, watched their documentaries and stayed in contact through social media. The study highlights that conspiracy theories are not merely ideas formulated in the abstract, but that they spur real-life action and incite both cooperation and conflict among their adherents. An important lesson this study conveys concerns the issue of diversity. In contrast to the dominant stereotype of conspiracy theorists as a petty-minded paranoia-espousing hatred and bigotry, the conspiracy (sub)culture harbours many kinds of people. Through the field-work, the author came into contact with young urban do-it-yourselfers, people in their 60s and 70s drawn to Eastern philosophies, technical pundits, libertarian vagabonds, etc. The popularity of conspiracy theories cuts across demographics and ideological conviction. There is no typical conspiracy theorist.

Source Harambam (2017)

12.2.3 *Lessons and Solutions*

From this understanding of the different social positions towards science and governments follows an important lesson when thinking about inclusion. Rather than using demographic categories as diversity benchmarks, it makes more sense to create substantive categories that are adapted to each case. Ideally, these categories are based on, or informed by, empirical research. So, when talking about distrust of science, it becomes possible to create better quantitative categories such as ‘socio-cultural distance from science’ or more qualitative categories such as ‘different types of scientific distrust’ than merely relying on demographic generalizations that may not even yield the intended diversity of viewpoints.

For example, for a current science communication research project on using citizen assemblies to discuss climate research issues (Climate Research in Dialogue—Vrije Universiteit Amsterdam (vu.nl)), we used a simple four-item questionnaire in the selection procedure to yield a diverse group of people based on their socio-cultural distance from science. This was designed to ensure that we included enough different people based on our most relevant criterion. Similarly, when probing anti-vaccination positions, it is possible to invite different demographic groups and hope for diversity, but it is also feasible to invite different groups based on their specific opposition to these biomedical interventions. The

important question is: *what is the most relevant diversity criterion for our project?* This way of ensuring diversity and inclusion better aligns with the self-understandings and identifications of these social groups. Rather than regarding them as a uniform (and often inaccurate) group, people are acknowledged for their specific opinions, beliefs, worldviews and value systems. This not only mitigates the risk of reifying demographic categories, but also creates more trust as people (and their ideas) are taken seriously. Diversity and inclusion should be just as much about worldviews as demographics.

12.3 ASSUMPTION 2: PEOPLE CAN BE INCLUDED EQUALLY IF THE CONTEXTS, CONDITIONS AND OPPORTUNITIES FOR THEIR INVOLVEMENT ARE THE SAME

12.3.1 *Background*

In an effort to ensure inclusivity and diversity many knowledge institutes, public-sector organizations and tech companies will try to create conditions and opportunities that are equal for all citizens. Their thinking is that if all conditions are the same for all citizens and everyone has the same opportunity to be involved, inclusivity must therefore follow. This allows organizations to base engagement approaches on their own views and priorities rather than on citizens' varying lived experiences, perceptions, norms and values.

12.3.2 *Pitfall*

While the aim to create equal contexts, conditions and opportunities for all citizens may seem centred on a desire for inclusivity, this approach in fact enables organizations to avoid reflecting on how different people have different interests, priorities and support needs. By developing and implementing 'one-size-fits-all' engagement approaches, organizations do not have to invest more time and resources to create contexts, conditions and opportunities that would enable a wide variety of citizens' lived experiences, interests and support needs to be taken into account. Scholars have shown that engagement approaches are often based on the systematic processes, structures and goals rather than on citizens' lived experiences. Creating equal contexts, conditions and opportunities for all

citizens may thus inadvertently limit access to involvement and potentially widen inequalities between different groups of people (de Weger, 2022; Holley, 2016). When the contexts, conditions and opportunities, are still mostly based on organizational structures and goals rather than citizens' experiences, it often means that only a select group of citizens feel interested and empowered to engage, thus inadvertently excluding a wide range of citizens (de Weger, 2022; Holley, 2016).

This effect is clearly visible in one of the case studies described in Box 12.2. The study shows that equal contexts and conditions led to more vulnerable citizens to feel excluded, increasing their sense of not being heard. This case study examined whether, how, why and when low-income citizens wished to be involved with municipalities and health(care) organizations to contribute to improving the organizations' services and policies—in other words under which contexts, conditions and opportunities. It showed that citizens' personal situations and their perceptions and experiences of the services they used influenced their engagement preferences (i.e. the engagement opportunities and support they would have liked).

Low-income citizens wanted to contribute to the improvement of health and care services and all interviewees had shared solid ideas on how to improve services and policies. However, most did not want to participate because of systemic issues, such as bureaucratic and inaccessible processes and structures. Others indicated they would have liked to contribute but could not do so because of a lack of support for their own physical and/or mental health conditions. These negative experiences—such as organizational apathy, bureaucracy, fragmentation and never being asked about their experiences or whether they would like to be involved—show the importance of creating different types of engagement contexts, conditions and opportunities by tackling constraining systemic factors. Furthermore, organizations' lack of involvement and outreach towards low-income citizens mirrors how these same citizens had experienced the services they had used as impersonal and apathetic, bureaucratic and fragmented. Clearly, then, such 'equal contexts, conditions and opportunities' were not enough for low-income citizens to become involved, although they are often sufficient for the 'usual suspects' (often white, middle-class, retired citizens) (de Weger, 2022; Jansen & Denters, 2018).

For those who had expressed a wish to be involved there were, broadly speaking, three different categories: (a) in a practical or voluntary way;

(b) as a buddy; (c) as a lay expert. However, none of the interviewees had been enabled or asked by organizations to get involved in any way, thus underscoring the systemic issues that negatively affected their ability to be involved. This highlights that creating ‘equal’ engagement contexts, conditions and opportunities are more geared to the ‘usual suspects’, namely citizens who are already engaged because they can operate within this system-focused form of engagement. In doing so organizations exclude low-income citizens and prevent them from discussing their experiences, needs and the ways in which they want to be involved and the support they need to enable them to do so successfully and sustainably. Furthermore, it means that organizations are missing out on important ideas to improve their services, policies and organization (de Weger et al., 2022). By applying the same conditions and opportunities to all citizens equally, organizations forgo significant untapped potential of citizens who are more vulnerable and/or are more distrustful of knowledge institutes, government bodies and the tech industry.

Previous literature has suggested that the reason for this standardized approach to engagement stems from the fact that (western) governments’ health and care policies have been focused on improving efficiency and effectiveness. This has made it more difficult for organizations to deploy resources to address social exclusion (Beresford, 2019; Cortis, 2012; Fletcher et al., 2016). This could be an important reason why they focus on inclusivity rather than diversity—and create ‘equal’ contexts, conditions and opportunities. It remains easier for them to include those easiest to reach and thus fail to involve more disenfranchised, underrepresented citizens who may be more costly to assist. This policy environment makes it more difficult for organizations to promote more diverse contexts, conditions and opportunities for citizens’ engagement.

Box 12.2 Achieving Engagement

Citizens’ involvement is seen as pivotal to the improvement of people’s health and wellbeing and to the development of citizen-centred and sustainable health and care systems. The expectation is that by involving citizens, the effectiveness of services and policies are improved and that these can be more tailored more closely to citizens’ own needs and experiences. The study was conducted over four years, drawing on qualitative and realist methods and integrated multiple perspectives, including those of citizens, citizen representatives, local health and care providers, and

municipalities in six regions in the Netherlands. The overarching question was: *how can community engagement be realized in health and care settings taking into account different contexts, aims, experiences and needs.*

By addressing how involvement can be successfully realized in the health and care domains, and examining which (aspects of) involvement approaches work, for whom, and under which circumstances, this study examined several important facets of involvement in the Netherlands. The study firstly showed 10 guiding principles for the successful engagement of citizens: (1) ensure staff provide supportive and facilitative leadership to citizens, based on transparency; (2) foster a safe and trusting environment enabling citizens to provide input; (3) ensure citizens' early involvement; (4) share decision-making and governance control with citizens; (5) acknowledge and address citizens' experiences of power imbalances between them and professionals; (6) invest in citizens who feel they lack the confidence to engage; (7) create quick and tangible 'wins'; (8) take into account both citizens' and organisations' motivations; (9) Develop a shared CE vision with clear roles for professionals and citizens ensuring communities' diversity, interests and needs are reflected within the vision; (10) invest in the engagement environment to create a cultural change and enhance reflexivity. Secondly, the study highlighted that citizens and professionals perceive and experience involvement differently and that they have distinct perspectives and priorities for involvement and health and wellbeing in communities. It suggested that citizens' involvement has the potential to better align services and policies to their lived experiences and to improve the democratic legitimacy of policymaking. However, it also showed that organizations and already engaged citizens are seeking new visions and roles to better fit in with a decentralized system and a 'participation society'. Furthermore, the empirical findings also show that the engagement environment needs to be improved and invested in, in order to change organizational cultures, structures and processes to ensure these: (a) address power imbalances between citizens and professionals; (b) are better suited and more sensitive to different ways in which different citizens want to be involved; (c) are more accessible to a wider range of citizens and communities. Without such further investments, citizens' engagement will remain no more than 'positive additions' to health and care systems rather than being seen as crucial to restoring accountability and person-centredness to those systems.

Source de Weger (2022)

12.3.3 *Lessons and Solutions*

To avoid the ‘one-size-fits-all’ pitfall, the obvious answer is for organizations to improve their processes and structures by focusing on citizens’ own experiences and perceptions, and to align their outreach and engagement approaches more closely to citizens’ varied lived experiences, interests and needs. The four-year study presented in Box 12.2 highlights the importance of reaching citizens on their own terms, but also that organizations need to take the time and make the effort to contact more vulnerable and diverse groups. The study also highlights that doing this may not be as hard as is often assumed. For this study, the authors first prioritized contacting low-income citizens and other ‘harder-to-reach’ groups and decided to take the necessary time to recruit citizens through those who are in closest contact with them, such as their support workers, local foodbanks, non-profit emergency funds and local churches. The authors also took the time to build relationships with citizens to build trust and in order to understand and observe their needs, such as by holding interviews in their own comfortable and safe spaces, using English or French for refugees, or holding dual interviews for those who wanted their carers or loved ones to accompany them to feel more secure. Without such adjustments (to help make the participants feel more comfortable, appreciated and safe), it is unlikely that the authors could have been able to involve them in the study (de Weger, 2022; de Weger et al., 2022).

Of course, such an upfront investment in the outreach and in establishing relationships with a wide range of (more vulnerable) citizens is seldom built into organizations’ (or professionals’) capacity. This four-year study therefore highlights the importance of investing in a more inclusive and diverse engagement environment that stimulates the embedding of a wide range of engagement practices (and outreach and relationship-building) with a broad range of citizens and by ensuring that their engagement is a structural and routine part of research, projects and policymaking, as well as by providing citizens and professionals with the time, space and support to develop creative engagement approaches. This requires long-term financial support in citizens, community-led initiatives, and by helping professionals and organizations to develop engagement skills and know-how—for instance, by providing training and guidelines. There is also a need for additional resources to create the reflexive space

for organizations to build relationships with communities and to develop, innovate and expand engagement approaches.

Ultimately, for TDR to be more inclusive and diverse in its methodologies and engagement approaches, research commissioners and research institutes should not only make citizens' involvement a prerequisite in all of their research calls, but should also build more funding in these to help researchers to invest more time and resources to build relationships with a wide range of citizens, especially with those who are more vulnerable and distrustful. Commissioners should also consider engaging and/or employing citizens as advisors to help evaluate and improve research calls and to advise research teams to ensure that future studies are more inclusive and representative of citizens' interests, needs and questions. In this way, research commissioners could be role models in how to involve a wide variety of citizens in the various project stages and would help to foster an improvement in the engagement environments and researchers' underlying reflexivity.

12.4 ASSUMPTION 3: INCLUSIVITY IS A MATTER OF GETTING THE RIGHT PEOPLE AT THE EVENT

12.4.1 *Background*

So far, this chapter has focused on the importance of diversity for achieving inclusivity and the requirements for attaining such diversity within engagement activities. However, what we haven't discussed yet is what organizations should do to promote inclusivity beyond those engagement events. If an engagement event lacks support from an inclusive work culture, the engagement activity is likely to become less inclusive, and the outcomes of engagement will likely lack impact on the involved organizations. Therefore, in this section, we will explore how organizations can foster inclusivity throughout the entire organization, extending beyond individual engagement events.

12.4.2 *Pitfall*

The pitfall described in this section is organizing engagement events without supporting those events with the inclusive organizational regulations, tools, infrastructures, ways of doing and ways of thinking.

This is a common pitfall in all sectors, but a particularly illustrative example is offered by the world of smart cities. The term ‘smart cities’ refers to an innovation system of IT companies and governments that together develop new data technologies for the urban space. These technologies are typically developed based on the compelling vision that collecting vast amounts of citizen data will ultimately lead to cleaner, safer and more efficient cities (Sadowski & Bendor, 2019). There are, however, also ethical concerns regarding smart city technologies, such as the invasion of privacy and the increased influence of corporations in the public space.

Despite efforts from both the public and private sectors to promote citizen engagement in smart city development, these initiatives often fall short of expectations. In a case study that we performed in ‘smart city’ Amsterdam (Fraaije et al., forthcoming), we investigated what makes citizen engagement so difficult to achieve in practice (see the last case study in Box 12.3). In this case study, we looked at how citizen engagement connects to the institutional environment of the involved organizations; in other words, we looked at the ways in which citizen engagement is both enabled and restrained by the way organizations think and work. In this way, the case study clarifies what organizations can do to support inclusivity throughout their organization and beyond their engagement events.

The case study looked at four ‘institutional logics’ four different layers of the involved organizations that together determine how inclusivity in the organization may take shape:

- *Materialities*: the physical context of citizen engagement: the buildings and digital platforms for citizen engagement as well as the shape and form of the technologies in question
- *Formal rules and regulations*: the laws and regulations under which actors have to work, even if they don’t always adhere to these standards in practice
- *Practices*: the things actors do when they can be observed by others from the same organization; a way for them to demonstrate to each other ‘this is how we do things around here’
- *Narratives*: the way actors explain and justify their actions to each other, thereby normalizing what they do and what they find important in this

We found that despite the strong motivations and efforts of the involved organizations to organize citizen engagement, inclusivity was severely obstructed throughout all of these organizational layers. Sometimes this happened in very simple ways: The physical rooms in which the organization could meet citizens, for example, hardly allowed for two-way interaction (and was rather intended for one-way presentations). Furthermore, the formal rules and regulations around data ethics were so complex that they distracted the involved organizations from other concerns that citizens might have had. And finally, the practices and narratives of the involved organizations were ultimately targeted at getting citizens to conform to the organizations' smart city vision, rather than to challenge it. The organization for example preferred to highlight the intended benefits of the smart city technologies, and its compliance with existing regulations, rather than to explore any of the possible controversies with citizens. As a result, the involved organizations were unlikely to learn anything new from interacting with citizens, and therefore they did not become significantly more inclusive.

Unfortunately, these issues are not unique to the case study described. Despite growing efforts to involve citizens, they often feel uninformed about smart city developments, ill-equipped to voice their criticisms, and perceive smart city technologies as irrelevant to their lives (Engelbert et al., 2019; Jameson et al., 2019; Rijshouwer et al., 2022). This illustrates that if citizen engagement is not sufficiently supported by an inclusive institutional environment, then engagement risks becoming an 'empty signifier': a means for the organization to face adversity without having to change any of its critical work processes in response (Cardullo & Kitchin, 2019).

Box 12.3

In recent decades, many municipalities across the globe have sought more efficiency, sustainability, and inclusivity by leveraging data technologies. Although such a 'smart city' approach offers certain benefits, it also brings forth various challenges, particularly in terms of privacy, security, and social inequality. Our aim, therefore, was to help municipalities navigate these challenges by investigating how arts-based citizen engagement could foster more responsible innovation in the 'smart' city Amsterdam.

To this end, three case-studies were conducted. In this first case, 12 interviews were performed with innovators working in the smart mobility

sector in Amsterdam to investigate how they see the future of Amsterdam. This study revealed that these innovators had fairly uniform vision of the future: a clean, frictionless city in which designers have ironed out the undesirable side effects of smart technologies. The case-study highlighted the need for more inclusive conversations to develop a more diverse vision for the future of Amsterdam.

In the second case-study, a new citizen engagement approach was developed to support such a diverse vision for the future of Amsterdam. Street theatre, playful group conversations, and a theatrical dialogue were used to enable a diverse range of citizens to join the conversation about smart city developments in Amsterdam. Various challenges arose as well, especially with respect to making sure that those perspectives could impact ongoing innovation projects. Overall, the study underscored the importance and systemic challenges of involving vulnerable citizens in smart city developments.

In the third case-study, these systemic challenges were explored further. Another arts-based citizen engagement approach was developed but then specifically for the Digital Perimeter project (DP). The DP was a smart city innovation team that aimed to improve public safety by investigating controversial technologies like real-time bodycams and facial recognition. Our study revealed that despite the fact the municipality and industry partners were motivated to engage citizens, the institutional environment of the ‘smart city’ severely restrained real dialogue. Organizing citizen engagement did, however, initiate minimal changes to this institutional environment which paved the way for more inclusive citizen engagement in the future.

Source Fraaije A. Can (sm)art save the city? Lessons from action research on art-based citizen engagement towards responsible innovation in ‘smart city’ Amsterdam, 2023.

12.4.3 *Lessons*

The lesson we can learn from this analysis is that to achieve inclusivity, it is not sufficient to organize a series of engagement events. Rather, inclusivity should be performed throughout all layers of the involved organizations. The only way to ensure engagement activities is effective is by ensuring the rationale and belief in citizen engagement is felt at all organisational levels. This is because it is the only way the involved organizations will

take the outcomes seriously and be ready to make any necessary changes in response.

So, what does an organization that supports inclusivity throughout look like? In our smart city case study (Fraaije et al., forthcoming), we saw that the involved smart city organizations supported inclusivity in several ways. They primarily supported inclusivity through various practices. For example, the organizations tried to reach out to citizens in numerous ways, applied various ethical design approaches and regularly showed empathy when confronted with diverse participants at citizen engagement events. These practices were also partially supported by a few helpful narratives, like wanting their smart city project to be more ‘ethical’ than other smart city projects and considering citizen perspectives to be crucial to the project’s success. In addition, the organization could create spaces for employees to meet with citizens in informal, conversational settings, and they could try to put the existing data regulations into perspective.

As described above, any supportive institutional logics did have to compete with other institutional logics that ultimately restrained inclusivity. Yet, the same case study also showed that the logics may conflict with each other and change over time through sustained collaboration. We observed, for example, that by organizing citizen engagement events together with the involved smart city organizations, they became more appreciative and understanding of citizen engagement. In other words, by changing the practices together, also the narratives started to change. This offers potential for change, because it means that when one institutional logic starts to change, then others may change with it.

Even though organizing citizen engagement events may not be *sufficient* for achieving inclusivity, it can be a significant step *towards* inclusivity, as long as the organizers remain reflective regarding how the various organizational layers shape inclusivity.

12.5 CONCLUSION

This chapter has made the case that it is imperative to make trans-disciplinary research processes inclusive and diverse in order to achieve more equitable, high-quality and desirable technologies, policies and public services. We argued that to do so, inclusivity and diversity are not merely a matter of ‘getting the (demographically) right people at the right table, in the right room at the right moment’. We presented

three pitfalls in attempts to achieve inclusivity and diversity in transdisciplinary research for technology and policymaking. The first concerns the assumption that inclusivity and diversity are about demographic representation. We highlighted that it is just as relevant to involve a range of people in terms of their level of (dis)trust in science and governance as it is to involve a wide range of people in terms of their demographics (e.g. age, gender, sexuality, socioeconomic status). The second pitfall is the common idea that equality in participation can be achieved when everybody participates under the same conditions. This approach to inclusivity tends to exclude, for example, low-income citizens, while over-including those who are easiest to reach. The third pitfall is to focus merely on the engagement events without considering the institutional logics of the organization where the input is most needed. This applies to policymaking organizations, and also for transdisciplinary research that seeks to have social rather than simply an academic impact. For participation to be inclusive and diverse and to make a difference, the institutional logics of the organization with which participants are asked to engage are critical. Relevant questions concern how people collaborate within the organization, how they talk about citizens, what they expect from them and how the physical spaces are organized. The pitfalls and solutions in each case study provide an important overarching lesson that research and policymaking organizations should reflect on their ways of thinking and working in order to reach and include a wider range of citizens.

As with many other well-intended efforts to make society, science or policy more equal and just, efforts to make participation more inclusive and diverse may in fact increase distrust and distance if they fail to take into account the pitfalls we have presented. Without such reflexivity, inclusivity and diversity run the risk of becoming empty checkbox exercises that make the practices of science, technology and policy more complex and cumbersome, while not making any difference to how concerns and values are taken into account. This is equally true for transdisciplinary research. Achieving participation that is meaningfully inclusive and diverse calls for continuously asking critical and reflexive questions not only about the methods, but also about the underlying assumptions and logics of the research project or research organization.

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