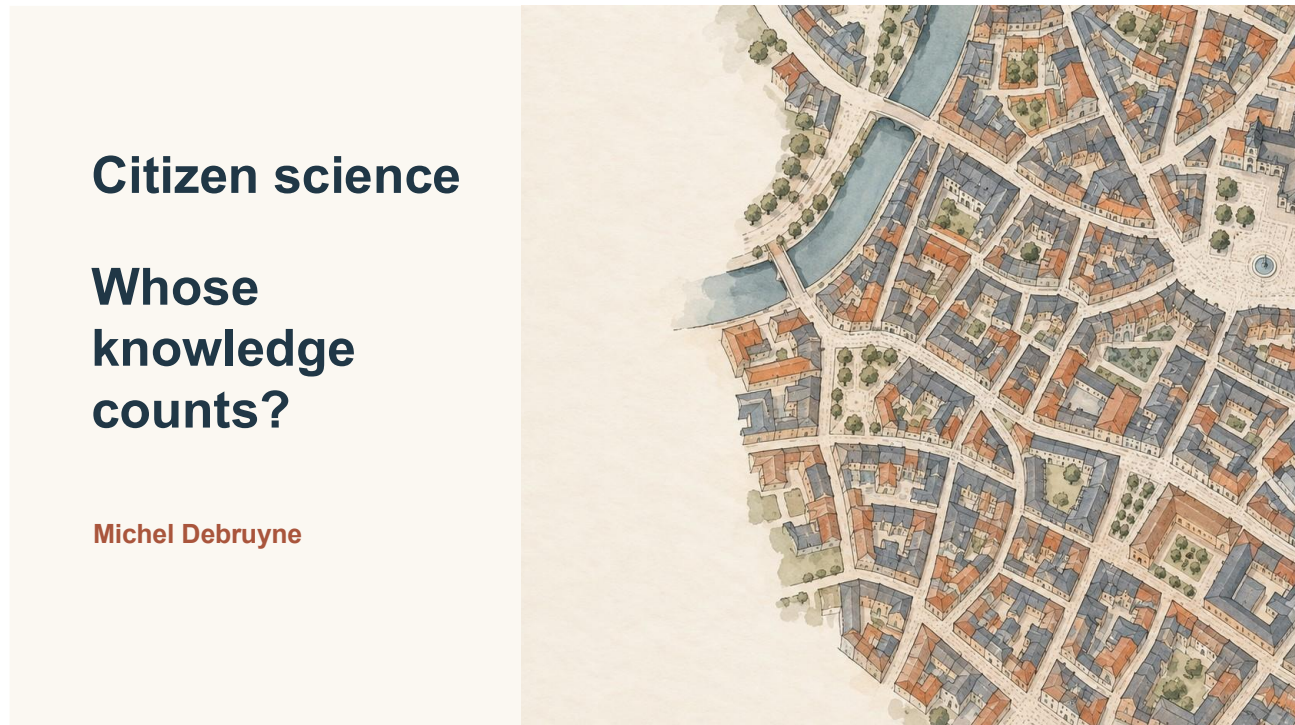


Citizen science and the question of whose knowledge counts

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A map as a starting point

Imagine a map of a neighbourhood in Ghent. It marks housing blocks where the condition of the homes is a concern. It shows dangerous traffic points, places where children have almost no room to play, and buildings or open sites that might offer new possibilities. The map was not produced by a researcher working alone at a desk. Residents observed their streets, discussed what they found, and corrected the first version. They then took the map to the city authorities. What appeared on paper could help shape what happened to their neighbourhood.

That map is where I want to begin today. I am Michel Debruyne. I have worked, among other places, at Beweging vzw, and I now support projects that bring scientific knowledge together with knowledge from organisations and people's lived experience. My question today is straightforward: when does citizens' knowledge genuinely count in research? I want to answer it in practical as well as principled terms. What changes in our research question, in our analysis, and in the decisions that follow from our work?

First, I will explain how the map was made. I will then draw an uncomfortable lesson from the history of social science. Next, I will consider what epistemic injustice means for our work, and how an Alliance of Knowledge and a Level Telling Field can bring different forms of knowledge into conversation. I will end with questions you can put to your own research projects. They are also questions I want to put to my own work.

Before I begin, a brief word about terminology. The topic is described as science for and with “vulnerable groups”. That phrase can reduce people to a single characteristic. In an INVOLVE consortium meeting, I asked what it meant. Answers ranged from people living in poverty to older people who felt isolated. Some participants pointed out that vulnerability is shaped by social conditions and institutions, rather than being a fixed trait of a group. What we all had in common was that we defined these individuals based on their so-called vulnerability. In fact, we reduce them to that vulnerability. By using such a term, we define them as a problem; we’re talking about negative potentials. We did not settle on a replacement term. Throughout this lecture I will usually say “people” or “citizens”, and I will pay attention to their capacities (positive potentials) as well as the constraints they face.

Citizen science is a broad term. In some projects, volunteers collect observations using a scientific protocol. Elsewhere, citizens help formulate the question, interpret the data, or use the results. These can all be valuable forms of participation. Today I am concerned mainly with social research in which citizens may do more than supply data. I am describing the approach I try to develop, not setting a definition that every citizen science project must satisfy. That distinction matters to scientists. A project can produce excellent research with a limited role for participants, provided that role is clear. A project can also hold many meetings without allowing a single contribution to change the knowledge it produces. I want to examine how participation can be meaningful and the findings remain open to scrutiny.

What residents did with the map

Soon after completing my studies, I became the coordinator of BIRO, an organisation concerned with residents' role in spatial planning. We worked in nineteenth century working class districts, including several in Ghent. Many homes were in poor condition. Green space was scarce, traffic pressed through residential streets, and buildings stood close together. Residents knew these problems from daily life, but their knowledge did not automatically enter a plan for the neighbourhood.

There was a scheme through which an area could be recognised as a regeneration district. Recognition could unlock investment. It gave us a concrete possibility, although we could not promise an outcome. We wanted to work with residents on a proposal that local government would find difficult to ignore.

We began by talking with people and organisations who knew the district: community health practices, associations, local traders, and residents. Then we held an open neighbourhood meeting. Residents explained what they saw as the main problems. A neighbourhood committee grew from that meeting. Its members went out to observe, record, and compare. Where were the poor quality homes? How did traffic move? Where were the empty sites? What might be done with a particular site or building? We helped develop a way of working and offered examples, but the residents made the observations and discussed what should follow from them.

We used those observations to make a map. The first map was not the final answer. The committee asked whether it was accurate, what was missing, and which problems mattered most. We then took it to other organisations and back to the neighbourhood. Turkish associations, for example, had not been present in the initial committee. Their absence was a reason to return and listen, not a reason to claim that the committee already spoke for everyone. Only after those

conversations did we take the revised map to the alderman responsible for spatial planning. In some Ghent districts, the work helped secure recognition as a regeneration district. In others, it did not.

What role did residents play? They supplied observations, but they also judged what those observations meant. They chose priorities and used the map in a political negotiation. A resident chaired the meetings. BIRO provided facilitation, training, and examples of possible interventions. We showed ideas for streets with less traffic and for social housing from other places. That was not a neutral act. Whoever selects the examples influences what people can imagine. The examples therefore had to remain open to discussion. Residents could reject them, adapt them, or combine them with their own ideas.

I regard this as an early experience of participatory research that shaped my understanding of citizen science. Today I would describe its scientific status more carefully. We observed and compared in a systematic way, but we did not have the detailed research protocol that some present day projects use. The case matters because a contribution travelled a complete route: from observation, through collective interpretation, to a proposal and a possible decision. I want to follow that route throughout this lecture.

Who frames the research question

Before we invite citizens to participate, we have often decided what the problem is. Researchers draft a proposal. A funder sets conditions. An institution asks for an explanation of the behaviour of a particular group. Participants enter the process later. We may then conduct excellent interviews while still asking a restrictive question.

W.E.B. Du Bois shows why this matters. At the end of the nineteenth century, the University of Pennsylvania appointed him to study social conditions in Philadelphia's Seventh Ward. Many Black residents lived there, and public debate spoke as though they themselves were the problem. Du Bois systematically collected information about housing, work, education, and everyday life. His study made visible what explanations based on supposed group characteristics left out, including exclusion from employment and discrimination. His work also invites us to ask how a research assignment describes people before the first interview has even taken place.

Saidiya Hartman returns to this history in *Wayward Lives, Beautiful Experiments*. She shows what surveys often failed to see: mutual care, relationships, and the possibilities that people created for themselves. Those capacities are part of what I asked us to notice at the beginning. In her words, "The sociological surveys documented only ugliness." Hartman also writes a scene in which residents resist the researcher's gaze. I treat that scene as Hartman's literary reconstruction, not as a verbatim transcript of Du Bois's interviews. Its question remains current: do we see people only when they illustrate a problem, or can they challenge our account of what the problem is?

I have felt the same tension in more recent projects. People who have lived with poverty may be interviewed for the tenth time and ask why the same question is being put to them again. Why not study the institutions and decisions that restrict their options? This is not a refusal to contribute knowledge. It is a proposal to define the object of research differently.

That challenge can be difficult when the proposal, budget, and work plan are already fixed. Even so, new subquestions may emerge. We may investigate a perspective that the original design

missed, or compare an unexpected finding with our initial hypothesis. We can then show where participants changed the research. If the funding conditions leave no room even for that, we should say so plainly.

Consider research on discrimination. We can document the experiences of those who face it with great care. But if we study only them, the actions of employers, services, or bystanders can easily remain outside the frame. Nor should we place the whole burden of finding solutions on those who are harmed. The research question already distributes responsibility. It determines who must explain themselves and who can remain unexamined.

That is why I would ask, before finalising a questionnaire: who appears in our first account of the problem, and who is absent? If those concerned find the question one sided, is there still room to change it? A funding call may allow little flexibility. We should then be honest about the limits and look for scope to change subquestions or interpretations. We should never exaggerate the influence participants have.

Experience is knowledge but it does not speak for itself

Researchers sometimes say they want to give people a voice. People already have a voice. The question is whether we recognise what they say as knowledge. Miranda Fricker uses the term epistemic injustice when prejudice leads us to find someone less credible, or when shared concepts are inadequate to name an experience. Think of the period before sexual harassment became a recognised term. People who experienced it often had fewer words with which to explain what had happened and ask for recognition. The gap also lay in the concepts that society made available.

That leads to a practical question for our research. Which experience does not fit the categories in our questionnaire or policy framework? In BIRO, residents could mark a place on the map that we had not considered a problem. They were doing more than adding a dot. Sometimes our description had to change. A planner might see an open site as a place for development, while residents knew it as the only place where children could play. The same site meant something different depending on who was looking.

In *Building and Dwelling*, Richard Sennett warns against looking for a single typical voice to represent a group. Someone who speaks exactly as we expect may easily become its representative, while differing experiences disappear. That is distinct from the statistical question of whether a sample represents a population. We need to ask both: which claims can we generalise, and which voices do our expectations make us miss? Lived experience is not exempt from scrutiny. It may, however, reveal where our measurement or explanation falls short.

In *INVOLVE*, a participant said of his school years: “The school never helped me make my dreams come true. They could have done better anyway. But financially, going to another school wasn’t an option for me.” In a few sentences, we hear two possible explanations: what the school did or failed to do, and the family’s financial room to choose. Had we asked only about individual ambition, we might have missed that connection. The quotation does not tell us how common this experience is. It points to a mechanism worth investigating.

Analysis still requires discipline. A single story may reveal a mechanism without telling us how often it occurs. If we write that financial constraints shape school choices, we need to show what

supports that conclusion and what remains unknown. Other interviews, administrative data, and existing research may help. We should also look for cases that do not fit our first interpretation. Another participant may have faced similar constraints but made a different choice. What was different in that case? The strength of a narrative interview is that it opens such questions. It cannot replace further scrutiny.

An open interview, however, does not in itself make research collaborative. Researchers decide what to transcribe, which sentences to quote, and how to name a pattern. Preliminary interpretations should therefore go back to those involved, with room for a different reading. Participants do not have to agree with our transcription or our analysis. Their disagreement may show where we have generalised too quickly. And if someone does not want to tell their story, we must respect that choice. Our presence in a neighbourhood gives us no right to everyone's experience.

From individual stories to shared questions

In another scene, Hartman has a woman ask Du Bois: "Do you propose to do anything after you get the facts?" The scene ends with her refusal to continue. I recognised that question in RE-INVEST. At an introductory meeting, participants living in poverty asked: "What will we get out of this?" In the BIRO work I could point to the possibility that the district would gain official recognition. A European research project offered a much less certain route to a direct result. We could provide support, compensation, and feedback, but we could not promise a change in policy. We had to name that difference honestly.

In several projects we also asked people about their aspirations: where would they like to be in ten years? They spoke about their children, education, employment, or starting a small business. In OPPORTUNITIES, participants also described what they wanted for their communities: "to contribute to society as a community" and "a society of equality". In INVOLVE, affordable, decent housing for people like them came to the fore. These shared aspirations can change the research question. A story about one household may open an inquiry into access to housing for many households.

This shared work does not happen automatically. Someone who has experienced poverty, a professional, and a researcher bring different words, examples, and expectations to the table. The professional knows how services and rules work. The researcher knows methods and literature. The participant knows what a measure means in daily life. None has the whole picture. ATD Fourth World developed a method for bringing these kinds of knowledge together. People in different positions first have space to think among themselves and then enter a shared discussion. That approach inspires my work. Separate preparation helps prevent the quickest speaker, or the most familiar vocabulary, from defining the whole conversation.

I call our approach a Level Telling Field: an attempt to create a more equal space in which people can tell what they know. In OPPORTUNITIES we used stories and a Cross Talk method so that participants could first encounter another perspective and then look for conclusions together. The aim is not to make different interests disappear. It is to prevent a person's job title, education, or access to policymakers from giving them authority over the story before anyone else has spoken.

What does Cross Talk look like in a meeting? Participants first decide within their own group what they want to bring forward. They write short stories. Other stakeholders then read those stories

aloud. We ask which passage struck them and what they felt as they spoke another person's words. We take those emotions seriously. They show where the conversation is difficult and which questions deserve further inquiry. We then bring concepts and evidence into the discussion. A quick round in which every party gets two minutes can simply reproduce existing inequalities. Someone who regularly presents reports uses those minutes differently from someone who first needs to explain why an experience does not fit an established policy category.

Consider the recruitment of nurses from Ghana by Germany. We discussed this during the OPPORTUNITIES project. The public account can readily call it a win-win arrangement: Germany fills vacancies and the nurses gain opportunities. But the nurses have plans of their own, while patients, colleagues, and health institutions in Ghana may experience the consequences of their departure. Trade unions, training institutions, and policymakers also bring knowledge and interests. These accounts do not automatically carry equal weight. For a Level Telling Field, the question is not only whom to invite, but how each perspective is prepared, heard, and examined. A nurse should appear neither solely as a loss to Ghana nor solely as a solution for Germany. A policymaker's story, backed by figures and a press office, often carries more authority than an experience that is difficult to express in policy language. A method of discussion can expose that difference. The final decision remains a political responsibility.

We do not need to manufacture agreement at the end. Sometimes the most useful outcome is a clear account of a disagreement. Residents may consider a traffic measure necessary while a local authority points to a limited budget. Researchers may need more evidence before claiming an effect. We should record what each party knows, what remains uncertain, and who decides the next step. A more equal space for telling makes a disagreement visible and discussable. It does not require the facilitator to smooth it away.

A fairer discussion sometimes requires separate preparation. In consortium meetings I noticed that NGOs spoke less when the conversation turned to theory or statistical analysis. They contributed more when we discussed practical work. We therefore held sessions in which NGO representatives could discuss the scientific work among themselves and identify their questions. Sennett describes a designer and his team leaving a room, after which residents began to see the designs they had left behind differently. One participant noticed things on a flip chart that she had missed while the experts were present. Sennett writes that the materials became “a presence, a reality, an actor on its own rather than a medium for exchanges between us and our clients.” I recognise that dynamic: an expert can steer a conversation without intending to. We need to explain our concepts, but sometimes we also need to make room for others to form their own analysis first.

An alliance that lasts beyond one meeting

A good discussion is fragile if it remains the only encounter. That is why we work with the idea of an Alliance of Knowledge. I mean a structure in which people with different knowledge and responsibilities meet again during the life of a project. They can refine questions, assess findings, develop proposals, and return to what happened to earlier proposals. The Level Telling Field describes how a discussion within that structure may become fairer. The Alliance provides preparation and follow-up.

An alliance does not statistically represent a neighbourhood. Even when half its members are residents, important experiences may be absent. An association does not automatically speak for

all its members, let alone everyone with a similar background. An alliance must therefore actively look for those who are missing from the table. It can do so through targeted conversations, a wider survey, or another meeting. Some people do not want a commitment lasting several months but still have something important to say. They should be able to contribute without becoming permanent members.

An open neighbourhood meeting and a citizens' assembly have different strengths. The neighbourhood meeting offers an accessible way for someone to raise a concern spontaneously. An assembly can use selection by lot and careful composition to bring together a broader and more representative group for deliberation. An Alliance of Knowledge has a different task. People who know a problem from different positions return to the same question over time. They can see whether an earlier observation changed the analysis and whether a decision was carried out. These formats can complement one another. An alliance can use an open meeting or a wider survey to discover its own blind spots.

Mikael Stigendal and Andreas Novy describe knowledge alliances as a way to connect scientific and practical knowledge. The BIRO case shows why this involves more than collecting opinions. Residents identified places and explained how they used them. We helped put their observations on a map and discussed possible interventions. The local authority understood the regulations and the funds available. Connecting these kinds of knowledge produced a proposal that explained the problem and identified a possible course of action. None of the parties held that complete picture at the start.

I also want to be precise about the role of NGOs. An organisation can build trust and reach people whom researchers do not know. It can also influence who receives an invitation and who does not. Our research consortia bring scientists and NGOs together. The NGOs have relationships with the groups under study; they do not automatically speak for every member of those groups. Like researchers, they should be able to discuss their own position and blind spots.

Government is more than an audience, too. If a project might affect public services or public space, the institutions with authority need to explain which decisions they can make. An alliance cannot take over their legal responsibility. It can ask for a visible response: which proposals will you adopt, which will you reject, and why? Without that feedback, we ask more of participants while leaving the consequences of their work invisible.

One further condition deserves emphasis: trust. NGOs can help connect researchers with participants through existing relationships, but researchers must earn trust themselves. That takes time and a willingness to examine their own class position and institutional authority. Our assumptions and methods can make experiential knowledge easier to dismiss. We need to notice when that happens and change how we work.

Trust can also grow through sustained presence, working together and, where appropriate, sharing daily life. In INVOLVE, interviewers spent a day working alongside the teams before they were allowed to conduct interviews. Shared work helped them understand the setting and build relationships. Pascal Nicolas-Le Strat calls this openness to the unpredictability of ordinary life or 'recherche de plein vent'. For me, it means allowing encounters to change the research process, rather than treating fieldwork as the execution of a fixed script.

What makes the research strong

Let me return to the BIRO map. Suppose we were to set up a similar citizen science project today. How would we ensure that the map was more than a persuasive illustration? First, we would agree together on the question it should help answer. Is it about housing conditions, traffic danger, space for children, or the relationship among those issues? The question determines which evidence we collect.

Next, we would agree with residents on clear observation procedures. Residents would work as co-researchers, going into the streets to document their neighbourhood. That requires preparation. What counts as a problem point? Do two observers record the same situation in the same way? What do we do when they disagree? We would check which streets and users were absent from our observations and compare findings with other evidence where necessary. A difference between sources would prompt further inquiry, rather than the immediate rejection of one source.

Suppose residents identify a junction as dangerous although few accidents are recorded there. Both observations matter. Perhaps people already avoid the junction, so accidents are rare. Perhaps it feels dangerous only at a particular hour missing from our count. Or perhaps one striking incident has led us to overestimate the risk. We can observe the site, speak with different users at different times, and examine the existing records. Only then should we draw a conclusion. Residents' experience remains a serious clue, and the explanation remains open to testing.

Then comes analysis. Who draws the boundary around a problem area? Who decides that one concern carries more weight than another? A neatly printed map can appear objective even though it embodies many choices. We need to make those choices visible. If residents change a category or add a missing area, that change is part of the research finding. We should be able to reconstruct why the map changed.

Finally, what effect did the work have? In the BIRO case, recognition as a regeneration district was one possible concrete result. A scientific evaluation would also ask what the map represented reliably, whom the process missed, and which proposals were actually implemented. The number of participants or workshops tells us little about that. I would follow the path of a contribution: was an observation included, did it change the analysis, did it influence a proposal, and did a decision maker give a reasoned response?

I am describing how I would design such a project now. I do not claim that we documented every one of these steps at the time. The example does show that participation and scientific quality can strengthen each other if we make our methods open to scrutiny. The European Citizen Science Association stresses meaningful participation and a genuine scientific outcome, alongside data quality, feedback to participants, and evaluation. That is a useful standard for social research as well.

Agreements that make participation possible

People can contribute freely only when they understand how their contribution will be used. An interview about poverty, migration, or discrimination can identify and harm someone even when their name has been removed. We should therefore agree in advance what will be recorded, who may read it, how long it will be kept, and what may appear in a publication. Not all data can be

shared openly. The right to leave a question unanswered or withdraw from participation must work in practice.

Recognition requires more than a thank-you at the end of a report. Someone who works over time on the interpretation or a publication may deserve visible credit or authorship. Discuss that early, together with the future use of texts, maps, and stories. Pay for time and work where possible. In all our scientific projects we arranged volunteer payments, childcare, and links to services. Such support shapes who can actually participate. Without it, the right to take part remains theoretical for many people.

We also need to be honest about influence. Which decisions belong to researchers, participants, funders, and public authorities? Can participants challenge an analysis before it appears? Can they put a new question on the agenda? If a proposal is rejected, will they receive an explanation? The answers differ by project. A promise we cannot keep damages trust more than a clear boundary does.

I therefore prefer to judge co-creation by what people could do, rather than by the label. Who could change the project's direction? Who was paid for their work? Whose interpretation appears in the final text? What remained available after the project ended? Sometimes these questions reveal a project that offered valuable consultation but no shared decision making. We do not need to hide that work. We need to describe it accurately and design the next project better.

What I ask of researchers

The map with which I began mattered because residents could do more with it than supply information. They could discuss it, correct it, and use it to make a request to the city. Their contribution had a visible route to a decision. The work also showed how incomplete the first group could be, how much influence facilitators held, and how strongly an outcome depended on political choices.

I am not asking every project to let everyone decide everything. That would obscure expertise and responsibility. I am asking us to specify where influence lies and to examine what happens when someone outside the research challenges our question or explanation. A resident may notice something our map misses. An organisation may show that a rule works differently in practice than we thought. A researcher can test competing explanations. The work becomes stronger when these contributions can genuinely change one another.

If you look at one of your own projects after this lecture, start with four questions. Who framed the research question? Which contribution from citizens demonstrably changed an analysis or proposal? How did we test that contribution and our own interpretation? Can participants follow the decision that resulted? Honest answers will tell us much more clearly whose knowledge counts in our research.

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