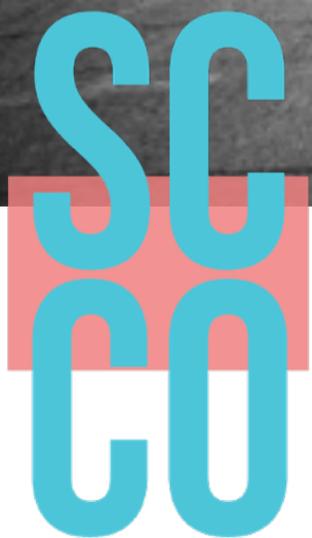


# SMART CITIES

for city officials

A SOCIAL SCIENCES APPROACH



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## MODULE 3

### Feminist Smart City

*Feminist scholars and activists have provided us with an immensely rich array of theories and methodologies for thinking about and challenging power structures in place. In this module we discuss feminist critiques and feminist urban planning practices in connection to Smart Cities. What would a feminist Smart City look and feel like?*

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# Module 3

## Feminist Smart City

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**CHIARA VALLI**- In the previous module we left with the idea that data definitely do not speak for themselves, and neither they should. To manage cities, we need to transform data into knowledge, and knowledge into wisdom, and to do that we need humans. And humans do not exist in a vacuum, they live in histories, places, multiple social relations, and intersectional power hierarchies. In order to provide real “smart” city projects that put citizens at the centre, we need multiple, pluralist perspectives for knowing the city and their citizens. Our experts agreed that the social sciences, and in particular feminist geographers and urban planners, but also the emerging “data feminism” field, can help us overcoming some of the limits of current smart cities data-based approaches. A sociological shortsightedness in looking at the smart city would entail overlooking place and power structures, and therefore risk reproducing existing patterns of inequalities and exclusion.

We need to start from what counts as data and knowledge to understand power and equality in cities, including smart cities. To help us with that, a pivotal understanding of feminist theories is that all knowledge is incomplete, and that better knowledge can only be gained by bringing together multiple partial perspectives. We take a quote from the book “Data Feminism” by Catherine D'Ignazio and Lauren Klein to open today's conversation about why feminist perspectives of smart cities are necessary:

“Today, data science is a form of power. It has been used to expose injustice, improve health outcomes, and topple governments. But it has also been used to discriminate, police, and surveil. This potential for good, on the one hand, and harm, on the other, makes it essential to ask: Data science by whom? Data science for whom? Data science with whose interests in mind? The narratives around big data and data science are overwhelmingly white, male, and techno-heroic.”

**GUY BAETEN**- Catherine D'Ignazio and Lauren Klein have not specifically worked on smart city technologies, but their principles have been brought up on several occasions by our smart city experts as helpful insights for thinking together about how to make more inclusive smart cities, and what a feminist smart city would look and feel like. Today's module also includes parts of our conversation with Linda Gustafsson, gender equality officer in the city of Umeå, in northern Sweden. Umeå is known for having over 30 years of experience with integrating gender equality and feminist perspectives into urban planning, so we thought that we could learn a lot by discussing the methods, challenges, and satisfactions of integrating feminist views so closely into planning and recently smart cities projects.

**CHIARA VALLI**- But let's take a step back now and hear what our smart cities experts have to say about the fruitful intersections of feminist theories and smart cities.

In her book “Smart Cities”, Germain Haleboua suggested a series of insights from feminist geography and urban planning and feminist data science that could be put into practice at the forefront of smart city development.

**GERMAINE HALEGOUA** -One of the things that I was thinking about when I mentioned in the book that we have much to learn from feminist geographers, is that feminist critiques of geography and urban planning have presented us with various vocabulary, models, theories, and ways of thinking about power and place. And the differential experiences of urban places, urban environments, urban social interactions, social capital, urban mobilities, that are different based on gender, sexuality, race, class, ethnicity, language, citizenship, status, education, income, and a variety of other sort of markers of difference. All of which we need to think more intentionally about when evaluating and critiquing the benefits and harms and desired outcomes of smart city initiatives.

I think we could also look to black feminist geographers as well. People like Katherine McKittrick, Brandi Thompson Summers, who talk about being black in place. These ways of thinking about cities and urban experience emphasise subaltern, or marginalised, or alternative patterns and lived experiences and ways of knowing cities that are absent in the smart city literature.

What I am referring to is that we have tools, and we have models and methods for thinking about marginalised communities within urban geographies. And we have to look towards that scholarship and those ways of thinking and put them at the forefront of smart city development. Replace efficiency and optimisation, to think about the culture of our cities, the social relationships that already exist within our cities, and to think about them through the lens of difference, through the lens of subaltern or historically oppressed. And questions of equity that haven't really been fore fronted in the ways that we think about epistemology, or ways of knowing the city.

We need to be more pluralistic in what we think about, what we take into account as data about urban experience, and the different sources that could be used as data about urban experiences. And not just those that are observable and translatable into code or numbers through technologies. There are other models out there for us in terms of how to think differently about inclusive cities or one's digital right to the city, especially around smart cities. Work by feminist critiques of data visualisation and data gathering. So I'm thinking particularly about a recent book about Data Feminism by Catherine D'Ignazio and Lauren F. Klein, where they propose seven important points, or models for interrogating and challenging traditional or canonic dominant ways of gathering data, visualising data and thinking about what counts as data.

Feminist geographers think about challenging unequal power structures and identifying these unequal social hierarchies. Questioning who has power within certain realms of urban government, regulation, and planning. And valuing multiple forms of knowledge and expertise, as important data to inform decisions and to respond to. And challenging systems of measurement and classification, which is something that we've been talking about a lot here. And that people who have critiques of big data analytics or predictive analytics often challenge these systems of measurement and classification as inadequate or biased.

**“Replace efficiency and optimisation, to think about the culture of our cities, the social relationships that already exist within our cities, and to think about them through the lens of difference, through the lens of subaltern or historically oppressed.”**

Catherine D'Ignazio and Lauren F. Klein, and many other scholars have brought up that data collection and data visualisation are never objective or neutral. And they're always embedded in administrative and institutional systems and ways of knowing the city that are biased. And I think one of the things that feminist geographers, black feminist geographers, feminist critiques of data visualisation do, is that they provide us with ways of critiquing and identifying these biases, which is something that not just citizens should be equipped to do, but public officials and urban planners should be thinking about as well.

**CHIARA VALLI**- As we mentioned in the introduction, we have talked to Linda Gustafsson, gender equality officer in the municipality of Umeå. We asked her: why do we need an intersectional take on smart cities? why is that necessary?

**LINDA GUSTAFSSON**- We need it because we need an understanding that the living conditions for people are different. And we need to make sure that that's part of the development of smart cities. Because otherwise, we think that everyone lives the lives that we live. If we're talking to someone who works in IT and is developing a new app, that person is going to think "everyone lives like me. Everyone has the same interest, the same amount of money, the same background, everyone faces the same challenges". So, we need it to make sure that we have a broad understanding of what it is to be a person in this space. And we need to do to have this active critical perspective on what we're doing and what that might lead to.

I think it's really, really important to, talking about smart cities, have a number of different competences or perspectives in the room discussing the solutions to make sure that we cover as many perspectives as we can to try to foresee the effects. But I also think, that if we don't have it [a feminist perspective], we won't get the positive effects that we want to have. If we don't understand why we behave in a certain way, or why we travel with certain modes of transportation or things like that, we won't get results. If we want to really get the effects out of the investments, we also need to have a feminist perspective, because we need to have that understanding of what behavioural changes we need to try to target at the same time as we present a new solution.

**“If we want to really get the effects out of the investments, we also need to have a feminist perspective, because we need to have that understanding of what behavioural changes we need to try to target at the same time as we present a new solution.”**

**GUY BAETEN**- What I understand from these first responses is that the first initial step for doing feminist work in smart cities is to understand differences among citizens and social groups, and the inequalities that are carried along with such differences. After we have started the work for that fundamental understanding - that will never be completed, as cities are not static but ongoing processes - what would an inclusive feminist smart city look and feel like?

**GERMAINE HALEGOUA** - I think one that privileges the deconstruction and questioning of power structures, through the technologies that are implemented. One that provides

technologies - and maybe these aren't digital technologies, maybe these are processes of co-creation, of deliberation, and knowledge sharing - that prioritise accountability. Holding people in power accountable to citizenry, but also, and I think this is the heart of everything I just mentioned, a city that really pluralises and expands what counts as knowledge about urbanism and the city, and that ways of knowing and understanding the city are not limited to numerical values and aren't limited to big data sets. A city that invites in people who experience the city in many different ways, and have various relationships, often contentious, with the public officials, and government structures and institutions that are part of the smart city stakeholders.

I think, a lot more questioning, a lot more inclusiveness of many different ways of knowing, seeing and living in a city. And something that appeals to this democratic process of co-creation that goes beyond the living lab model, but even works to forefront questions of equity and social justice, and questioning the institutions that are acting, presumably on behalf of the residents and citizens that they aim to serve.

**CHIARA VALLI**- Also, Linda Gustafsson highlighted the importance of participatory co-creation for setting the basis for inclusiveness.

**LINDA GUSTAFSSON** - I think that if it's done in a "smart way", then it can really address and help people in their everyday lives, (only) if we talk about what people's everyday life is and the different everyday lives of people. But, as I said, (the "smart way") is done with transparency and with co-creation with the people who live in the city. I think it's really important that the solutions are co-created, so that not only different competences from the city administration or from the university participate, but that it's done together with inhabitants. I think that is also really important if we want solutions that can address the issues we want to address.

**GUY BAETEN**- Gillian Rose's idea of a feminist smart city is about challenging gender classifications, but also about continuously reflecting on knowledge production, positionality, and reflexivity. Rose's feminist smart city is also one that, drawing on data feminism, openly reflects about "the partialities, the selectivity, the messiness, the unreliability of data itself". Keeping data open and transparent, and enabling citizens to generate different kinds of data would also be a way to a more egalitarian smart city.

**GILLIAN ROSE**- One way to approach them with this would be to think about gender difference. But that is coming under a lot of very interesting pressure at the moment from feminist scholarship. Especially in the past year, there's an immense focus on the diversity among women as a group. Intersectional femininities, and particularly the ways in which white women often occupy positions of privilege in relation to racialized women. But also, of course, a lot of data still asks that classic question "are you male or female?" and that is what is also coming under a lot of pressure from trans and non-binary people too.

That may well be an example of the ways in which some of these established data categories have been working for a century are no longer holding. People are figuring new ways to describe themselves and to do different things. And indeed, the visuals, social media, picturing people differently are absolutely part of that, in fact.

I like your proposal, I think I prefer your proposal that a feminist city will be something around, not necessarily describing what emancipatory city for women might be or look like. But actually, something about the knowledge and production processes that would help to move towards that. There is always with that sense that there will never be an endpoint, that it will always be an ongoing in terms of positionality, and reflexivity.

Those of us interested in smart cities, could be much more thoughtful about not only the city and the positionality of different groups, the social organisation within the city, but also the positionality of those people who are running the city. And, not to say that they are elites necessarily, but think a lot more about the assumptions that they're making, the kind of skills that they're bringing, the particular ways in which as policy rolls out, or as a new app is designed or a new Open Data hub, what kinds of things are being assumed there in relationship to accessibility and how other people can use things.

I've also been quite interested in work around notions of data feminism in terms of thinking about data itself. And, trying to think of ways of embedding in data, the partialities, the selectivity, the messiness, the unreliability of data itself. One of the things I learned in my very brief encounter with trying to learn how to code, was just how much time it takes to clean up the database in order to actually start to use it for these magical AI. I think if that was made visible, that process, that will be one way, at least, to beginning to displace this idea that somehow data reflects the world unproblematically.

Keeping data open and usable. Making it really clear where its sources are. Perhaps enabling lots of people to generate different kinds of data. And I think, trying to bring all these different things together, without trying to build them into a coherent whole. So, you've got that sense of data being, multiple, fragmented, needed to be worked on in order to become useful in a particular context, I think that might be quite helpful.

One of the projects I looked at in Milton Keynes in the UK, was a digital version of what had been a non-digital project. It was structured through GIS, some kind of primitive digital essay, where they basically put as many datasets as they could find about the city together. And they actually had a phone line where local people could call up and say, "I'm interested in this area, what's the information?", and they would then unpack this, as I say, often incoherence, different data about this single place. And I think that keeps that sense of places. Where the place and policies, opened to be made, rather than just simply managed or mimics by data.

**GUY BAETEN**- Finally, we come back to Linda Gustafsson. Smart city projects (or at least projects that explicitly adopt that label) have just started being implemented in Umeå. Yet, critically reflecting on technologies and the effects these have on the perceptions and uses of urban spaces is something that Umeå city has been thinking about for a long time.

**“I've also been quite interested in work around notions of data feminism in terms of thinking about data itself. And, trying to think of ways of embedding in data, the partialities, the selectivity, the messiness, the unreliability of data itself (...) I think if that was made visible, that process, that will be one way, at least, to beginning to displace this idea that somehow data reflects the world unproblematically.”**

LINDA GUSTAFSSON (00:21:18)- There has been a strategy in the city of Umeå for a long time to not use surveillance cameras, as a way of creating feelings of safety and security. Instead, there is more focus on how to build an environment that in itself can create feelings of safety and security.

In the tunnel by the railway, which was built a number of years ago working with gender mainstreaming, there are no cameras. The existence of cameras can also increase the feeling of insecurity. Of not feeling safe, of not feeling secure. That you are being surveyed, and that this is a dangerous space and that's why there is a camera there. So, there has been more focus on how to create spaces that create feelings of safety and security. For example, in that tunnel, the artwork is really important, which is a famous author from Västerbotten called Sara Lidman. And it's filled with quotes, and it's a really long glass artwork. And just creating the sense of a constant presence of a woman in that tunnel creates more feelings of safety and security than a camera. So, trying to make the built environment give you that sense.

In Umeå we also talk about those spaces in public space that you can't choose. Bus stations, bus stops and tunnels for example. Places where you need to move, where you



Sara Lidman-tunneln (Umeå Kommun, 2021)

need to be, but it's not where you would choose to be. But you have to stand there because you're waiting for the bus, or you have to go through because it's your way to work. So, parking garages and places like that. People need to make their lives work, so we try to infuse them (the spaces) with an understanding of gendered power structures and try to think about how we can build them in a way that people, but especially women, lose as little energy as possible when they move through them.

**CHIARA VALLI** - Smart cities and urban design can also pass through a withdrawal of technology, or from low-tech solutions, instead of an increased reliance and sophistication of technological systems. We were also curious about how Umeå municipality is making use of the 30 years of experience with gender mainstreaming in urban planning and applying these feminist principles to the new phase, which is the digitalisation of the city.

**LINDA GUSTAFSSON** - One of the things that we're building on is, as you say, the city has over 30 years of experience of working strategically with gender equality, and we know that it's a difficult thing to change gendered power structures, it's a difficult thing to challenge, or to change, or to break.

I think that the main lesson that the organisation has, is that coming up with a new technical way of, for example, lighting lamps in the street, that's not difficult, or finding a new way to heat houses, which was something we talked about connected to climate change, that's not difficult. A technical solution or a digital solution, that's not difficult. That is something that we can learn from other cities in Europe that have done it before us, and we can have that exchange. But understanding people's behaviour, understanding how power and privilege plays into our possibilities and living conditions as people, that's really, really difficult. To change that and to change norms, that's really difficult. And our experience tells us that we need to spend time doing that. I think that's the main thing, to understand that this is not something that you can add on at the end, this is something that needs to be present from the start when you work with things like urban planning or smart cities.

**CHIARA VALLI** - And in connection to our previous module on data-based decision-making and the limits of big data, we asked Linda about what alternative methods for knowing the city and citizens and social groups have been applied in Umeå to reinforce the gender perspective in decision making.

**LINDA GUSTAFSSON** - I think observation is one thing that we try to use. I'm very fond of the SCB National Report. Every 10 years there's this national report from a survey about how do we spend our time. It's a survey that people do, where you report every five minutes what you do with your day. On a weekday and on the weekends. And I think that's something that we use in Umeå, for example, even though it's not possible to see the results on a local level, but we use that survey.

**“A technical solution or a digital solution, that's not difficult. That is something that we can learn from other cities in Europe that have done it before us, and we can have that exchange. But understanding people's behaviour, understanding how power and privilege plays into our possibilities and living conditions as people, that's really, really**

I think that if someone would ask me in a survey, how often do you work out, then I would say three times a week, because I did that last week. But if I think about the year, then it's like once a month. And if I actually do the survey, the time survey, or if someone observes, then you can see that it differs. And it's the same talking about gender and power structure. You ask people, when do you do your grocery shopping? and everyone wants to do their grocery shopping once a week and do all of it. And no one wants to go to the grocery store at five o'clock in the afternoon with two kids coming from preschool. No one wants that, but everyone does it. That means that Okay, so we can't create solutions based on people going grocery shopping once a week, because that's not what they do, they go every day, because that's the life we live.

We do a lot of specific surveys interviews. And we do quite big surveys: we do a consumer habits survey, we do a travel habits survey, we've just run a survey on public health, we do a survey, which is targeted to young people within 14 and 19 every two years about their health and like their situation in school. So, we do a lot of our own surveys.

But then also, for example, in this this Free Zone (Frizon) project we did a lot of artistic workshops. They did photography, and they did prints, and they did dance, and they did theatre, all connected to what is it like to be a young woman in Umeå.

And when it comes to urban planning, we do a lot of go to schools and we do a lot of like, big maps, people putting small dots on spaces they like, spaces they don't like. I remember being at this one dialogue at a school and standing with a group of young girls, they were maybe 14 or 15. And we talked about safe and unsafe. And they looked at this map of their neighbourhood and we asked them, are there places where you don't feel safe? And all of them said "No, no, we feel safe". And then one of them pointed at a street, and she said to her friend "isn't that where you got hit by the car?" And that girl was like, "Yeah, that's right". And then they started talking about where they meet late at night because they feel unsafe when it's dark. They meet by this big tree, and they go together. So, the first answer might be, there's no problem. But then if you just give it some time, you ask in different ways, and maybe you have someone that highlights it, and then you get completely different answers.

We are trying to use a lot of visual methods, and maps, and using digital tools, of course, to collect input from citizens, and trying to use different methods, also based on the fact that people are not comfortable with the same sort of methods. So, if we do a dialogue, you need to be able to give your opinions to someone that is standing there, or that you can write them down, and you can do a survey, and that you can maybe email someone later, or you can do it on a map, and just having this variety of methods to work with, I think, is really important.

In Umeå we've completely stopped doing big town hall meetings, just because they don't work. It's not a good way of collecting opinions on a specific matter. We do smaller workshop methods instead.

When we worked with the Free Zone project, before that we worked with a skateboarding park, and then we worked with a skateboarding club, for example. But in the Free Zone, it was also about gathering people that weren't involved in a specific sport done in a in a specific way, like clubs. We find random young women that would like to be involved. And

I think that's also important. Because often, when we want to speak to inhabitants of a city, we turn to sports clubs or some theatre thing, but we wanted to gather all these random individuals as well.

**GUY BAETEN**- Wrapping up: what would a feminist smart city look like? According to our experts, a feminist city is aware that data science is a form of power, and it is profoundly social. Data and knowledge can be used to govern and maintain privilege structures, but also to expose, challenge and undermine such structures. A feminist smart city is a city that pluralises and expands what counts as knowledge and that puts co-creation at the forefront, striving for openness, accountability, and transparency of data. It is a city that spends time and effort in challenging norms, and does that from the start, not as an afterthought. Feminist critiques of geography and urban planning are constantly developing theories and methodologies for thinking about power in place, and according to our experts, these could be the necessary starting point for making our cities more inclusive and equal.

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