



How Researchers Changed the World Episode 8

Marco te Brömmelstroet: Transport choice and human connection: why cycling is good for society

MtB: I've always been fascinated with how cities evolve, as a young kid already and especially fascinated throughout my educational career in how cities evolve, regions evolve in relation to their mobility system. So, I studied urban planning and then I was very interested in how mobility played its part there. I blame Lego for that. When I was I think seven or eight, I was already building my own cities out of Lego and playing with them in terms of my own narratives, my own fantasies but I always built Lego cities that were realistic as far as you can call it realistic. So, they were always real cities.

KR: As well as being a Dutch Lego Master, Marco te Brömmelstroet is a keen cyclist and known in certain circles as the Cycling Professor. It's a title he wears with pride. His interest in urban planning and love of cycling led him to some interesting discoveries about how cycling can influence our behaviors while navigating transport infrastructure. In this episode of How Researchers, we're getting into the saddle, and travelling by bicycle, a vehicle of social, political and environmental change.

[How Researchers Changed the World introductory music]

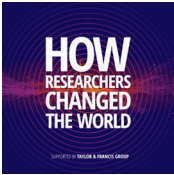
KR: Welcome to How Researchers Changed the World: a podcast series supported by Taylor & Francis, which will demonstrate the real-world relevance, value and impact of academic research; and highlight the people and stories behind the research. My name is Dr. Kaitlyn Regehr. I'm an academic researcher; an author and a scholar of digital and modern culture. And I'm interested in how new technologies can broaden the reach and real-world impact of academic research.

In this episode of How Researchers, we are speaking with Marco te Brömmelstroet, Assistant Professor in Urban Planning and member of the Centre of Urban Studies. He specializes in metropolitan transport planning, with a specific research focus on urban cycling and cycling behaviour.

We'll be focusing on Marco's 2017 paper: 'Travelling together alone and alone together: mobility and potential exposure to diversity'. He co-authored this paper with Anna Nikolaeva, Meredith Glaser, Morten Skou Nicolaisen & Carmen Chan.

MtB: My name is Marco te Brömmelstroet and I hold the chair in Urban Mobility Futures at the University of Amsterdam.

So I studied urban planning and then I was very interested in how mobility played its part there. After that I did a Masters in infrastructure planning where I was very much focused on how urban issues and spatial issues played a part there. Which in both cases this connection was relatively limited and made me decide to pursue a PhD research that was focused on how to bring these two topics together, especially in planning. So, how to bring planners that deal with cities together with planners that deal with transportation systems so they can have synergies in how they develop plans.



KR: And, how did Marco, an Urban Planning Academic become known as the Cycling Professor and amass nearly 30,000 Twitter followers?

MtB: After I finished my PhD on land use and transport I started working at the University of Amsterdam as an Assistant Professor in Urban Planning. And back then I was amazed by all the questions I received from around the world of people that wanted to understand cycling and especially cycling in Amsterdam and the Netherlands. And there was no academic go-to person to do that, so they went obviously, to the University of Amsterdam to the Department of Mobility.

That made me realise that in the Netherlands, cycling is very much a common thing that is very part and parcel of our cities and our society but at the same time we don't really seem to study it, making it sort of this non-conspicuous thing that's around everywhere, which is influencing who we are and who we are as a city and a society. This deserves academic attention. So, I started back then, by putting that on the academic agenda that we need to unpack this but also to use it as lens to study all kinds of urban and societal phenomena. I put that under the label – Cycling Professor.

KR: Urban Planning is the technical, societal and political process which looks at the design, development and land use of the built environment – cities in particular. It includes things like sanitation, infrastructure; public safety and welfare. Marco's area of primary focus is on transport and how this impacts people and the environment.

There is evidence of Urban Planning going back some 5,000 years to Mesopotamia, Minoan Civilisation, and ancient Egypt. The Romans mastered and documented it; their influence can still be seen and experienced today. Cities, for millenia were designed for people to live, work and play.

Although cycling is a relatively new form of transport, it is one of the most widely accessible and popular both in urban and rural areas around the world. We asked Marco why it was important for him to dedicate part of his career to studying cycling and why he wanted to open this conversation out on social media.

MtB: About seven years ago when I started all of this it was really an important lever to pull, in the sense that I could create...I could actually, I wouldn't say create but I could build on this wave of international attention that started to become bigger and bigger around cycling and I could connect to that wave. I could connect to that energy. And strangely enough, that's, I think, in hindsight, created the position that I now hold. It created attention from the academic domain because having a large following on Twitter actually became an asset, or an argument to show that there is indeed something special about cycling because, don't forget, within the Netherlands and within my colleagues here, they still consider studying cycling as something strange.

KR: Marco's passion on the subject of cycling, as a cyclist and also as someone who's interested in studying it academically, has come at the right time. The wave of international attention Marco discussed can be seen around the world with bike sharing schemes, dockless bikes and policy changes around urban planning and traffic management.

The Netherlands in particular is widely recognised as a 'cycling nation' and a pioneer in 'cycling culture' – but why is this?



MtB: How Amsterdam or the Netherlands became a cycling city is a question that is still structuring my academic career. It's not a question I think I will solve very easily but again, opening a more holistic understanding of that with this paper, leads us to ask very different questions. One of these things that came to the fore is that the Netherlands is a very egalitarian culture from an historical perspective already. What you can for instance see here is that it would work against you if are elite, so let's say if you were the king or a political elite. In the Netherlands it would work against you if you would use conspicuous consumption, like this idea of showing how rich you are with a very fancy car. So, that fits with an egalitarian ethos in which people... so it works in your favour in an egalitarian ethos if you show how normal you are. And in the Netherlands that's often done through the medium of the bicycle. So, our Prime Minister, when he wants to show to the general audience how normal he is, he would use his bike to go to work and he would make a point of being photographed of using a bike going to work.

And that all sort of, so it builds on this idea of an egalitarian society, so it's not frowned upon if you use a bicycle. And at the same time, it strengthens this egalitarian society because you are actually, if you look around, you see that cycling is used by all layers of society. So, this way of looking shows, I think, at least that's how I see it, it raises awareness of these complex loops, how for instance our cities develop, how they the co-evolve with a mobility system, but also how our societies develop and how they co-evolve with mobility systems.

KR: Marco's study proposes a framework that aims to understand if, and how, one's experience of being on the move influences a person's ability to develop a sense of connectedness. He also went on to link mobilities research and sociology in order to advance transport planning research and practice.

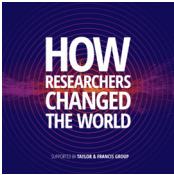
The published paper translates all of this into an analytical framework for understanding the relationships between connectedness and using different types of mobility.

The study focuses on one method of transport in particular.

MtB: The paper builds on this issue of cycling being something special. So, it starts with the observation that our current, the current way that we think about transport issues or mobility issues, is very much framed in terms of civil engineering. It's very much framed in quite a classical economic understanding of how people make choices. And that leads us to think that this is a realm that we have to give to experts, especially civil engineering experts. So what we did with the paper was to try and develop a different narrative, a different metaphor, a different language that would allow us to look at mobility from a different angle. And that angle in this case was basically seeing mobility as the agora of the public space in which you still, in this age of bubbles, you still meet and are exposed to the diversity of society.

KR: The agora was a central public space in ancient Greek city-states. The literal meaning of the word is "gathering place" or "assembly". The agora was the center of athletic, artistic, spiritual and political life in the city. The 'bubbles' that Marco refers to is a reference to our society's own self-interest – our individualism. In the age of Capitalism and Consumerism, much of Urban Planning is about economic growth and an efficient use of space, without factoring in the people who occupy that space.

MtB: There is sort of a misfit or a feeling of misfit of the paradigms that we are using. So, it mainly connects to questions or questioning the idea of economic growth as our main paradigm in which most of us have grown up and we start questioning them now. So, this paper resonates with the same movement in mobility, where there



is a feeling of discomfort with the limited ways that we understand mobility and exploring a more rich or a more holistic understanding. So in that sense the paper also is not so much a new empirical study, but I would call it a gateway paper that gives people that sense this, that gives them the entrance points to existing literature that is more academic in that sense. So, it's a gateway for people that are interested that feel this discomfort about the limited way of looking at mobility and gives them directions to further develop this more holistic understanding.

KR: Marco's quest has been to better understand how cities can function as more social environments.

Although cycling is a relatively new transport method, like other modes of transport, Marco believes it can be studied to better understand the relationship between society and the city. As a Dutch person, he was ideally placed to research and comment on this relationship.

MtB: I think if you cycle and then I refer specifically to the Dutch way of cycling, which is wearing normal clothes, sitting up straight, upright, so I'm not sitting in an inclined position. I'm not going too fast and cycling off, often with more than one person, there are two or three chatting. I think the direct relations that that has with society is that by definition, you're very open for interaction. So, interaction with your social environment, interaction with your spatial environment. You can easily look around and see what is happening. But also, it allows you to send offers and agreements as it's called by Thomas Schelling in his book 'Micromotives and Macrobehavior' which landed him the Nobel Prize for economics. He shows, actually he uses the example of how car drivers cannot negotiate at an intersection for a right of way, so the only way to solve that is basically to install machines, traffic lights, that help them to deal with that situation, otherwise you get a prisoner's dilemma.

KR: Thomas Crombie Schelling was an American economist and Professor of foreign policy, national security, as well as public policy. He was awarded the 2005 Nobel Memorial Prize in Economic Sciences

MtB: Cyclists have this peculiar openness with all their senses, so they are actually able to send offers and receive agreements on the right of way. So, as a cyclist you can engage in a dance with your fellow citizens. And that creates, well it creates a very specific, almost I would say a public space culture, where it's no longer the survival of the fittest. It's much more an equal dance with the dancers and sort of an emergent choreography. And it leads to, it might be related also with this idea that we are developing a sort of a muscle for finding consensus because that's basically what you're doing on a micro basis every day. Going to work, on the way you have to find consensus about the right of way several times. That would actually, might help you also to become more of a consensus seeker.

KR: After the break, we will hear more about Marco's research and its impacts. We will also learn about the Urban Cycling Institute; which Marco has been an integral part of establishing.

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Before the break, we were discussing the relationship between cycling, society and the city. What were the key points that came out of this study?

MtB: The key takeaway was that first of all, raising awareness that the current metaphors and language that we tend to use in mobility are limited and that's already I think, a huge step forward for many people to have become aware of that. That the way that we look at things is not a given, it's not a natural law, it's a matter of a choice of society. We can change that. What we did, is we developed a, well we call it a conceptual framework around the concept of potential exposure to diversity. We found in the sociological literature that if you put that central, this idea that you have the potential to meet other people and actually have to actively deal with these other people because you are using the same space, so you have a dilemma to solve, is correlated with many important characteristics of society. This is interesting because then you change the debate. For instance, if you now talk to a transport alderman about cycling policies, we tend to focus on cycling as being cheap, healthy or easy. While if you talk about it in the concept of the potential exposure to diversity, you can talk about how cycling can lead to a more egalitarian society or it is connected to a more egalitarian society. How cycling can help young children to develop a more holistic understanding of the place. They can develop a sense of place or a sense of society. And in the end even then it can relate to feelings of trust. If you meet strangers, you are less likely to have prejudices.

KR: This idea makes perfect sense. If you can experience a landscape where everyone is essentially on an equal footing, people sharing the space would be less likely to feel suspicious, envious and frightened of others.

MtB: It's very hard to have a convincing argument in a positive way, in the sense that you cannot say by definition that cycling and walking leads to these kinds of effects, however you could say the opposite. So, you could see how a society that is built around people in steel cocoons or in self-driving vehicles creates, or destroys the conditions for meeting people outside of your literal bubble and could lead potentially to societies where there's lower levels of trust. Where there's higher levels of inequality and where there's less sense of place and society. So it raises, I think, awareness of these threats that are currently not well articulated around mobility innovations.



KR: Marco's research talks about cars, and other encased motor vehicles as being 'solitary spaces'. This brings up an interesting question. Has the advent of the car, and our society's adaptation of the built environment made us, as individuals more individualistic or the other way around. Have we sought these innovations?

MtB: The mobility system, so it starts with the language that we use is not only a mirror of reality but profoundly shaped reality in the first place. It's a quote by Fischer and Forester. It shows what is called in academic language, argumentative policy making, it's called performativity of language. So, a very complicated answer to the question, how the car and how mobility is related to us becoming more individualistic.

I think it starts with this metaphor, the language we use to describe mobility. So, to put it very bluntly, this entire domain that basically designs our public space, is built on the premise of the homo-economicus and the homo-economicus is a rational, egoistic, utility maximizing individual. Right so, now if you design based on that premise, a mobility system design a mobility system that caters for this part of who the human is, but it's only a part of who the human is. The problem there is that if you then cater for that part of who the human is you will be performative so the system will strengthen this part of the human. So, in the long run developing a system based on the metaphor of the homo-economicus, will lead us to become more of a homo-economicus. And this is where I think that cycling can be so interesting, because cycling can allow us to see that we can actually design public spaces from a different logic which does not need to be in homo-economicus, but can be homo-ethicus or homo-ludens, the playful human. This would allow us to design a different mobility system and in turn, this would lead us to strengthen other parts of humanity that are now sort of marginalized.

KR: We seem to have accepted that this version of our built environment is here to stay. We asked Marco if he thought so too.

MtB: In the US when the car was introduced, there basically were two options for society. One was saying no to this innovation because the car didn't really fit with the way that we dealt with public space. So, children were playing there, there were markets, people were just out and about. Then the car came. So, one of the potential responses was, okay this doesn't fit. We need to not enter it. Or the other approach was we need re-make this entire public space that has been working like this for millennias, in the image of the car. The last was chosen and as a result, traffic engineering became about how to reclaim public space for the sake of fast driving vehicles. Countries that went along with this, for instance part of the Marshall Plan after the Second World War and the funding that was funnelled from the US to European countries, was earmarked with this logic. So, traffic engineering, the American traffic engineering model, was implemented in many other countries.

KR: The Netherlands didn't follow this same route, but that hasn't stopped the paradigm from seeping into the way people think about mobility in their city.

MtB: So in the Netherlands, every half hour on every radio station there's one problem big enough to be addressed. Every half hour. Every day. Even at Christmas, and that's traffic congestion. Why do we do that? Because we think traffic congestion is a problem. Because we think that people are optimizing their travel time which in part, they are doing but by keep focusing on that, we really think that we should spend most of our



public money on solving congestion, which is non-sensical. First of all, because you can't solve it as empirical evidence shows, but also because you can also use that same money to improve public spaces where humans are in a qualitative way. You could actually improve the qualitative experience of being under way instead of only seeing it as a quantity to reduce, travel time is a quantity to reduce, you can also conceptualize travel time as a quality to maximize. And that would lead to a completely different set of policy instruments that you will use, and I strongly believe that this in the end will also lead to a different way of how we engage with each other.

KR: This study was remarkably well received, and not just in the academic community, but is shaping lots of discussion in Urban Planning and political circles. We wanted to ask Marco about the impact of his paper, and what opportunities his online recognition has afforded him.

MtB: Well the fact that the paper was published under open access agreement led to also I think the popularity of the article. Because it could easily be read and sent around, especially in that domain. The domain of planning practitioners, that often already had this feeling of discomfort but couldn't really articulate and now they had a piece that helped them articulate this. Which for instance helped us to raise funding to make the Why We Cycle documentary. This documentary actually builds further on this logic. So it starts building the arguments that people can then use.

KR: The Why We Cycle documentary is an insightful, engaging and informative documentary which brings together people from all walks of life to discuss the Dutch cycling culture. It's well worth a watch.

MtB: So, did it lead to direct effect, I think not, not yet, but it makes people I think, hopefully a bit more aware of these underlying metaphors and the fact that they are not a given.

The ideal model that follows from this is not a replacement model of the current metaphors of transportation as such I think. But I think it's this art of using metaphors, the ideal models that leads to a solution in this is that we have to remake it political. So we have to come to terms with the fact that the transport system which happens in public space, is not something we can solve as an engineering question. It needs to be again reclaimed as a question of politics.

KR: As well as encouraging and facilitating open debate around this subject, Marco is spearheading the movement to educate urban planners, policy advisors and other academics. We asked him about the Urban Cycling Institute.

MtB: The Urban Cycling Institute was a response to this growing awareness of cycling as something worthwhile to study. So we started out with doing some small research projects around the role of cycling within the Netherlands. And more and more we raised awareness and because of cycling being such a normal thing in the Netherlands, it offered a very awesome lens into all kinds of other questions. For instance, we can look through media coverage on cargo bikes in the Netherlands and they're increasingly being used to transport children around. We noticed that by studying that, we could actually observe issues and trends around gentrification, so neighbourhoods becoming richer and replacing the existing inhabitants and issues about the role of gender and class.



So the Urban Cycling Institute was sort of an institutionalization of that. What we claim to do is study the role of reciprocal relations between cycling and the city and society. So how does cycling influence the city and society and vice versa. And a very strong part of that is to continue to bring knowledge about that from science to practice and back. So we really want to be as trans-disciplinary as possible. Everything that we do in terms of research but also in teaching, modules that we develop, we aim to build bridges between academia and practice, around this question of cycling as a lens to understand the city and society.

KR: And, we asked what role education plays in shaping our world and changing it.

MtB: Oh, education is absolutely key. I also came to that realization that, so working here already now for 12 years, I educated about 800-900 urban planners or at least partly. They had to listen to me talk. So, one way to change the world is to give these people, that are now planners, around the Netherlands mainly, give them tools to rethink and tools to be critical and constructive in their work around mobility. Especially the summer school that we developed, the summer school is called Planning the Cycling City, but the under title is Unravelling the Cycling City. So, it's also inviting people from around the world. So we have now done it for four years with around 120 alum from all walks of life. We had Masters students in Urban Planning but also the Mobility Mayor of Sydney and Emeritus Professors from the US to visit. So, a very diverse group every year. They come here, not to get a master class in how to build a cycling city, but they come here to be confused on a higher level. That's how we sell it. So, in three weeks you will reconsider all the things that you believed were true about cycling and about cycling in the Netherlands. And through that, you'll be able to ask better questions back home and to really get change going.

KR: To get change going, we must become confused on a higher level. Marco believes this will lead us to ask better questions and discover more insightful, holistic and inclusive answers.

Next time on How Researchers we'll be speaking to Dr Anja Kollmuss and discussing her paper on climate change and behaviour.

We'd also love to hear your feedback on today's episode. You can leave us a review on your podcast provider or send us your thoughts on social media. Tag us on @howresearchers and use the hashtag #howresearchers

This podcast was written and produced by Monchü and recorded at Under the Apple Tree Studios. Our producers were Ryan Howe and Tabitha Whiting with editing, mixing and mastering by Miles Myerscough-Harris at WBBC.

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