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Thinging with the Past: Co-designing a slow road network by mediating between the historical landscape and the design space

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Abstract: In this article, we put forward the importance of engaging with the past in co-design projects. We argue that such an engagement is pertinent to better situate and contextualize design projects, tackling dominant pre-existing assumptions and design legacies. In particular, we reflect on our experience in setting up a participatory design research to explore and reactivate a neglected infrastructure of slow roads as a network of potential in sustainable mobility transition. We start from considering slow roads in relation to two design perspectives on thinging. First, by understanding thinging in the historical landscape as an agency of things 'designing over time', we explore how road infrastructures enact previous design models - for example, the design legacy of a car-city vision. Second, by looking at thinging as a design approach of gathering and confronting heterogeneous perspectives in a design project, we engage with slow roads as socio-material assemblies that evolve in the design space over time. By revisiting our design engagement with the past in the case study, we connect these two perspectives to propose thinging as a design approach that mediates between the historical landscape and the design space. In the discussion, we reflect on methods we used in the case study to operationalise this theoretical perspective in outlining co-design strategies for sustainable mobility.

Keywords: participatory design, thinging, design space, slow roads

1. Introduction

In searching for ways towards a sustainable mobility transition, slow roads are becoming an increasing design interest in the context of spatial planning and development. Slow roads, in simple words, are roads and paths used for slow, non-motorised, movement. Internationally, they are also referred to as soft connections, shared-use paths, shared trails or greenways. In the Belgian context, they are mainly defined as roads and paths that serve slow traffic for public use (pedestrians, cyclists and/or horse riders, possibly combined with agricultural or service vehicles) (Geopunt, 2015). Previously protected as roads of public and municipal value, they present historically meaningful traces of old neighbourhood and

church roads that became increasingly neglected with the accelerated highway construction and suburbanisation since the 1960s in Belgium (Jacobs, 2021).

In this article, we reflect on a project of co-designing a slow road network that the authors collaborated on, in order to argue for the relevance of engaging with the past in participatory design (PD) approaches to sustainable mobility transition. The *WegenWerken* (or *RoadWorks*) project started in 2017 as a collaboration between Trage Wegen (Flemish slow roads association), and research groups Spatial Capacity Building (UHasselt) and Social Spaces (LUCA School of Arts) commissioned by the city authorities of Genk, Belgium. Initiated by these different actors with an intention to challenge its car-city legacy, *WegenWerken* started in Genk from the idea to explore and reactivate the neglected infrastructure of slow roads as a network of potential in sustainable mobility development. It responded to the growing shifts in the political context towards sustainable spatial development in Flanders, not only through transformation of mobility, but also restoration of open public space and landscape ecology. Having in mind that Belgium, and especially Flanders, is home to one of the most dense motorway networks in the world, and presents one of the most paved regions internationally, slow roads emerged as an interest in alignment with calls for reducing car use and depaving the ground[1]. Increasingly, the concerns for slow roads and depaving are becoming established in public discourse as paths towards greater biodiversity, cooler cities, better soil quality, reducing flooding risks, etc.

For eighteen months, the authors conducted the *WegenWerken* participatory design (PD) research together with residents, designers, civil servants, policymakers (at district, city and region level), as well as public and private organisations. We were part of the research group Spatial Capacity Building, which explores PD approaches in the contexts of spatial design, planning and development. The first author is a designer interested in the uses of the past at the intersections of design and heritage in spatial development contexts. She initiated this article as a reflection on how this particular perspective, of engaging with the past, configured the participatory approach in the *WegenWerken* project. The other two authors, with backgrounds in architecture and cultural studies contributed to the participatory mapping and design approach. Collaborating with our partner, the Trage Wegen association[2], we saw the historical relevance of slow roads as an important aspect in contextualising the co-design approach and envisioning the future network. This association was born out of the need of many local activists to preserve slow roads, which they perceived as a form of living heritage (Jacobs, 2021). We especially saw it necessary to engage with the historical context of Genk, having in mind the long-standing agendas of local heritage and environmental actors for acknowledging the public values of the city's post-mining landscape[3]. Based on our shared interests to challenge the subordination of open space to car use in participatory ways, while exploring how the future mobility transition could relate to historical infrastructures, together with Trage Wegen, we started developing a PD approach for *WegenWerken.*

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[1] The Department of Environment (of the Flemish government), initiated the Vlaanderen breekt uit! (Flanders breaks out!) program to explore potentials for depaving and set up pilot projects in Flanders. Depaving is defined as"the physical removal of pavement on the site: demolishing a building or removing asphalt, so that the soil is permeable again and allows various other natural functions." One of these case studies, the Evence Coppéelaan road in Genk, is discussed in this article. More information at: https://omgeving.vlaanderen.be/vlaanderen-breekt-uit-homepagina

[2] Trage Wegen vzw brings together more than 40 associations, action groups and even regional landscapes that all share the same concern: slow mobility. Since its founding in 2002 by Natuurpunt, Bond Beter Leefmilieu and a number of private individuals, this organisation works for the revaluation of neighborhood roads, field roads, church paths and towpaths in Flanders.

[3] E.g. through the nomination of the Hoge Kempen Rural-Industrial Transition Landscape for UNESCO World Heritage Site. More info: https://whc.unesco.org/en/tentativelists/5623/

2. Situating the PD approach in *WegenWerken* as "thinging with the past"

PD research mainly starts from an interest in creating settings, methods and tools for those affected by design to take part in the process of designing (Ehn, 2008), focusing on the use of technologies in the workplace and other socio-technical contexts, such as healthcare. As researchers in the context of spatial development, we align with the recent PD trajectories interested in more distributed participation (DiSalvo, Clement & Pipek, 2013) of heterogeneous stakeholders (Dalsgaard, 2012), particularly by engaging with practices through which people already take part in designing their environments. In grasping the complexity of participation in this context, we consider PD as a long-term process of embedding design research and practice within ongoing networks, and considering how it is prefigured in the previous and ongoing activities of diverse people and communities affected by the design project. This builds up on PD approaches that span beyond project frameworks by embedding in long-term networks through, for example, infrastructuring (Karasti & Syrjänen, 2004; Hillgren, Seravalli & Emilson, 2011) or institutioning (Huybrechts, Benesch & Geib, 2017). By aligning with these approaches, we strive towards PD as a situated engagement that emerges in the agency of all interested publics (DiSalvo et al. 2013) and in the ongoing alignment of disparate actors (Suchman, 1999; cited in DiSalvo et al. 2013).

In the work we do in Genk, our research group has also put many efforts into embedding participatory approaches and projects strongly in the local networks, through long-term collaborations with different institutions, organisations and community actors. Across different projects, as well as in *WegenWerken*, we collaborate in setting up design pre-trajectories that have the goal of prefiguring future spatial transformation through participation of diverse actors - rather than engaging participants in co-designing an already approved or ongoing project. In that sense, participation processes start at the moment when there is still no consensus, not only between different actors and communities, but also between the more powerful actors and decision-makers. As a research group mandated by these more powerful actors to configure the participatory processes they initiate, we make efforts to position ourselves in a critical and reflexive way towards this mandate. To do so, we search for a strongly situated approach that can challenge pre-existing assumptions of public participation, as well as any consensus that may be implied in the project assignment. In that sense, we consider our approach as related to discussions on 'thinging' in PD, where the design project unfolds "as actors engage in alignments of their conflicting objects of design" (Bjorgvinsson, Ehn & Hillgren, 2012). Thinging is a matter of understanding design projects as design Things - that span beyond the limits of an 'object' - by grasping them as 'socio-material assemblies that evolve over time' (Binder et al., 2015). In such 'thinging', heterogeneous and disparate perspectives of the design project are gathered and confronted, allowing it to become more situated in relation to diverse actors in space and time.

In taking up the concept of thinging, we are especially interested in how this situatedness, and the attention to heterogeneous perspectives, can be supported by engaging with temporal aspects that reveal how the design concern was configured through time in the specific context. As in the case of the slow roads project, this requires an engagement with the historical landscape of the project, which we understand (by following Dolores Hayden, 1995, p. 43) as the context for greater responsibility of designers. We argue that the past contained in this historical landscape can help configure participatory design approaches in different ways - not only through participation of different historical perspectives, but also by attending to how "the legacy of our previous designing is always a part of what is acting upon us" (Stewart, 2015; p. 286). Designed things to 'go on designing' (Fry, 2017, p. 38) has been discussed in design philosophy as the agency of thinging. For example, highway infrastructures in Flanders enact previous development visions and projects, where car use was prioritised in development, thus, they continue 'thinging' unsustainable mobility. The engagement with the past is

crucial here, to elucidate how this thinging configures the design space of mobility transitions, and how this can be challenged through participatory approaches.

In positioning within the context of heterogeneous participation, we consider how participatory processes are configured by previous and ongoing alignments, tensions and confrontations between different actors and perspectives. Attending to such confrontations allows us a more situated position from which to challenge the framework of the mandated project, as well as the pre-existing assumptions it might imply, that often perpetuate unsustainable design legacies of previous development projects. In this article, we especially focus on how our engagement with the past, across different steps of the project, affected the PD process and helped situate the PD approach. In that sense, the article aims to contribute to other discussions on the relevance of historical analysis in PD (e.g. Le Dantec, 2015; Asad, 2017, Huybrechts, Hendriks and Martens, 2017; Rizvi, 2018; Harrington et al. 2019) which underline the importance of engaging with the past to contextualise PD approaches. As the particular contribution of this article, we propose that the engagement with the past helps in situating through thinging - not only by considering the past as a context for the future, but also by grasping its agency as an active participant in the contemporary design space, that continuously acts through things in the historical landscape. By doing so, we reflect on the experience of *WegenWerken* to propose how situated PD approaches could start from mediating between things in the historical landscape and socio-material assemblies in the design space. In grounding this reflection, we discuss the methodological approach and findings of the project and how they helped reveal insights on thinging, as well as operationalise it. In particular, by elucidating how the methodological approach of the project engaged in 'thinging with the past', we propose an outline for design strategies that can help reveal, challenge or interrupt the agency of unsustainable design legacies.

3. Mobility infrastructures (in the city of Genk) as things mediating between the historical landscape and the design space

In this section, we will introduce the initial grounding of *WegenWerken* in its context, and clarify how the approach of thinging by engaging with the past helped in challenging the mandated framework and redefining it through the participatory process. We will first discuss the mobility infrastructures in Genk as things in the historical landscape, and how their thinging through time shaped the historical design concern and the project framework. Second, we will address how the thinging of slow mobility infrastructures, as projects and socio-material assemblies in the design space, revealed pre-existing assumptions on slow roads, that we aimed to challenge in setting up the PD approach.

3.1 Thinging as the agency of infrastructures in the historical landscape to 'keep on designing'

Genk is a city of contradictions. Even though it is proclaimed as the greenest city in Flanders, its residents are highly concerned with the excess and safety of car traffic. Recent statistical data (Statistiek Vlaanderen, 2018) also points out how a high percentage of the population (over 70%) are satisfied with public transport options, own a bicycle and find it safe to use. Nevertheless, the dominant mode of transportation is still by car (74%), higher than the average in Flanders. Historically, this city was developed with the exploitation of coal, when three large mining sites opened at the beginning of the 20th century with garden cities built in their proximity as workers' housing. As the coal industry started declining towards the 1960s, the city leaders decided to invest in large-scale road infrastructure to support economic reconversion and boost development. These roads were planned to connect the garden cities with new industrial areas on the outskirts of Genk - such as the Ford factory as a new large employer replacing the mines.

Different scholars describe how mobility infrastructures in Belgium have played not just a key role in the country's industrial development, but have also designed the development of its dispersed and fragmented landscape (De Block, 2014; Nolf, 2013; Peleman & Notteboom, 2012; Van Acker, 2014). Infrastructure planning 'facilitated a spatial organisation that attributed centrality to the transport network rather than the metropolis' (De Block, 2014). In line with this legacy of infrastructure as a carrier of spatial development, the political leaders in Genk opted for a car-city model, as a solution to it's inefficient railway connectivity, inspired by the mid-century US model of car-based modernization of cities (Nolf, 2013; Tieleman, 2013). In the past decade, the city of Genk is increasingly acknowledging how the large road infrastructures have failed to connect the dispersed city and instead created new barriers between neighbourhoods. The car-city model has thus been recognised as a historical failure in the planning community. To overcome this negative heritage, and initiate a sustainable mobility transition, the city planners and officials turn towards designing green transversals, 'depaving' large roads, as well as creating safer bicycle and pedestrian connections.

According to Fry (2015, p. 165), 'the operative efficacy of the designing ("thinging") of all designed things is their ongoing consequences'. For example, designing the cities for car use has the consequence of increasing future car dependency. The car-city vision in Genk is a clear example of how the designed world 'acts back on us' (Willis, 2006) andcontinues to configure the urban landscape and its use, as well as pervade the ways of visioning future development. In our first discussions on *WegenWerken* with the city officials, they mainly framed the problem as related to the need to raise awareness about the need for slow mobility, while tackling its lack mainly as an issue of residents' mobility culture. However, this expert perspective did not reflect on how the current car-city culture also represents a failure of previous development and planning agendas. For this reason, it was important to set up a participatory process that engages not only with perceptions and understandings of sustainable mobility, but that also gathers diverse actors around telling the history of the roads and discussing how different types of mobility developed through time transformed the historical landscape of Genk. This meant broadening our focus to not only map and explore slow roads, but also their relations to the history of large motorways (e.g. Evence Coppéelaan road detailed in section 4.3). By bringing forward the broader historical context, we wanted to acknowledge how new designs for slow roads cannot tackle unsustainable mobility if they are not understood as inextricably tied to the history of motorways, as reflective of previous development agendas. In that sense, we aligned with the interest of the planning community in Genk and Flanders towards overcoming the car-city as a historical issue, but also challenged the expert framing of this interest in a participatory way, through an engagement with the past.

3.2 Thinging as engaging with assemblies in the design space of sustainable mobility

We especially wanted to articulate the potentials for slow roads to become shared spaces, by starting from the bottom-up perspectives and existing ways of using and appropriating them in the landscape. In that sense, while taking up the city's assignment to map and co-design a slow road network, we moved one step back to ask: *What are slow roads, and what could they mean for different actors?* This was triggered by the first encounters with the city officials, where we learnt about their own expectations and understandings of what slow roads should be. Our initial proposal was to map these roads and search for common language in defining their different types in the specific context of Genk, through participatory encounters in the field. The expectations of the city officials, on the other hand, were already tied to specific definitions of slow roads which they mainly perceived as infrastructures for cycling and expected the project to produce concrete results that could support this specific function. These first tensions encouraged us to persist in the intention to co-define the slow roads in conversation with different actors and challenge any pre-defined expectations.

For example, one of the case studies in *WegenWerken* was related to an old mining infrastructure - a coal track that we proposed reimagining as a long-distance slow road. Around this track, we mapped different expectations for the future, as well as their tensions and confrontations. While local entrepreneurs in innovative technologies saw the slow road as a possible testing site for their electric vehicles, the environmental organisations were strongly opposed to these ideas as they would have negative effects for biodiversity. By articulating the tensions between such different expectations, we saw *WegenWerken* as an assignment of thinging by gathering and confronting different perspectives in order to co-define slow roads as complex and controversial things. This perspective understands thinging as a process by which design can become public and open to controversies among participants (Ehn, 2011). For Binder et al. (2011), 'design things are always plural public spaces where different projects confront each other and the world' (Ibid, 2011, p. 188). In spatial transformation contexts, these things take shape through assemblies and confrontations between different actors related to a specific development project, who bring their different interests into the design space, as the conceptual space where actors take part in envisioning the future design (Binder et al., 2011).

In our understanding, the design space is historical: shaped by previous designs, as well as by how actors use the past as a resource to articulate their visions of the future (Zuljevic & Huybrechts, 2021). In mobility contexts, this space is distributed across different development visions and local projects, while also shaped by existing things and practices. Considering the design space as historical adds another layer to this complexity. By taking up a situated approach and positioning the project within long-term networks in this city, we wanted to know more about how the design space of the slow roads could be co-defined together with a variety of actors in the historical landscape. More importantly, we wanted to reflect on how the current tensions, alignments and confrontations in this design space were shaped through history. For example, the tension between the old coal track as a site prioritising innovative technologies or biodiversity is shaped by the legacy of mining in Genk. On the one hand, the stimulation of electric transport research was integral to the redevelopment of former mining sites into technology incubators, and described as a continuation of the city's energy-related heritage. On the other hand, nature organisations work towards protecting the specific biodiversity which was created and nourished in the process of (de)industrialising the landscape, thus also a legacy of extensive mining. Thinging is related to how the design space emerges around a thing - in this case, mobility infrastructures that gather different actors together - and, as we argue, it should entail attending to how different engagements with the post-mining landscape were historically configured.

4. *WegenWerken* Methodology

During the project duration of eighteen months, *WegenWerken* entailed a PD approach that engaged with a longer time-scale (past, present and future), and on both city-wide scale (focusing on the network of roads), and micro-scale (focusing on specific road typologies through case studies). Across these different scales, we engaged with methods of site observation, participatory mapping, historical research, design interventions and participatory design workshops (figure 1).

Design strategies	Methods	Participants
City-wide scale research		
Slow roads map-inventory &	Spatiotemporal mapping	Trage Wegen/volunteers (6)

typologies	• GIS mapping • Site observations • Historical research Participatory design workshops	Local experts (5) Arck researchers (5) LUCA researchers (3) Local actors (≈50)
Micro-scale research		
Case studies of slow road typologies	Spatiotemporal mapping • Participatory mapping sessions Live Projects Interventions Participatory design workshops	TW team (3) Local experts (20) Arck researchers (5) UHasselt students (≈50) LUCA researchers (3) LUCA students (≈30) Local actors (≈100)
City-wide / Micro-scale: Final Outputs		
Spatiotemporal map of slow Genk	Spatiotemporal mapping • GIS mapping • Historical research • Participatory mapping sessions	TW team (3) Local experts (20) Arck researchers (5) LUCA researchers (3) Local actors (≈100)
Toolbox	Collection of tools and methods used or proposed across the different activities to activate slow road networks	TW team (3) Arck researchers (5) LUCA researchers (3)

Figure 1: Overview of research activities (those discussed in this article are highlighted in yellow)

To bring a situated PD approach of thinging into practice, we used participatory mapping as our key method, where we explored its potentials as a "critical method of confronting maps, perspectives and knowledge" (Roosen et al., 2020), mainly between and involving both professionals and residents. We particularly experimented with spatiotemporal mapping, as a combination of participatory mapping with historical research. The historical material was gathered through examination of archives and documents of infrastructural development in Genk, and by mapping historical locations that the network connects or could do so in the future. This material was visualised in maps that were then used to collect oral history related to specific roads during participatory mapping sessions. The purpose of spatiotemporal mapping was, hence, to articulate the historical context of the mobility infrastructures, but also to complement or challenge the archival accounts of history with stories, memories, oral history and other engagements with the past, gathered together with the participants. More importantly, the goal was to contextualise the representation of current relations between actors and spaces with a temporal layer that articulates their history. To do so, we drew the future slow road network in the same map as the information related to the past and the present. In that way, we explored how participants imagine this future in relation to ongoing and past practices, as well as the confrontations that this produced. In the following paragraphs, we will reflect on how 'thinging with the past' was operationalised through the approach of spatiotemporal mapping in different research activities and design strategies.

4.1 Slow road map-inventory and typologies

The inventory of slow roads assembled by the Trage Wegen association in 2016 offered the first important dataset on the state of the slow road network in Genk in a GIS map, created in a participatory

way by many volunteers linked to the association. Together with the initial group of stakeholders (Tragen Wegen members, local experts and city officials) we expanded this inventory through several participatory observation and mapping sessions organised as collective walks or cycling tours. During these sessions, the participants were invited to observe different types of roads, after which we collectively searched for a vocabulary that could designate these types. We also started employing spatiotemporal mapping by visualising both the existing roads and those that have disappeared over time, as well as by substantiating the definition of types with historical research (to understand the origin of the roads and their context).

In this way, we proposed six slow road typologies (figure 2) in Genk: *service-roads* (entrance roads to facilities such as hospitals or schools, later redefined as *domain-roads*), *square-roads* (paths within open public spaces such as squares or parks), *green roads* (informal paths within the natural environment), *switches* (infrastructural nodes connecting other types of slow roads, e.g. tunnels or bridges), *long-distance roads* (city-scale roads for faster-slow movement, e.g. cycling highways) and *passages* (paths and alleys in residential areas). In order to challenge this initial definition of typologies andto engage more deeply with particular roads that the participants proposed as relevant, we engaged in spatio-temporal mapping of one case study per typology.

Figure 2: Slow road typologies (from left to right: *domain-road* at the hospital, *square-road* at the railway station, *green road* in Waterschei, *switch* tunnel in Winterslag, *long-distance road* - former coal track and a *passage* in Waterschei)

4.2 Spatiotemporal map of a case study typology

On a micro-scale, for each of these typologies, we selected a particular road to explore in-depth and design through interventions, mapping sessions and participatory design workshops. In these activities, we worked on identifying issues, challenges, existing initiatives and proposals for each of the case studies together with the steering group (Trage Wegen and local experts), as well as residents, students and other local actors (figure 3 and 4). We also challenged, enhanced or redefined our initial assumptions about specific typologies. For example, domain-roads (*domein-wegen*) were initially defined as service-roads (*dienst-wegen*). This redefinition came about through the participatory process at the hospital in Genk, where we observed, together with the hospital architect and other local actors, how the access road to the hospital was mainly servicing car use. This was identified as particularly challenging by the hospital architect, who expressed interest in redefining this road as a public space

that could increase accessibility to people arriving by bus, foot or bicycle. This was an important goal as it also aimed to tackle the lack of accessibility to residents of lower income who used public transport, as the service road was mostly occupied for private car use. In that sense, we decided to redefine the *service-road* typology into a *domain-road*. Domain is a term used in the Flemish context to designate the public value of a site and, in this way, we wanted to underline the ambition for these slow roads to work as public spaces.

Figure 3 & 4: Participatory mapping session & intervention.

In another case study, of Kolenspoor - an old coal track that has been a long-term object of redevelopment studies we first defined it as a *long-distance slow road* and a potential fast cycling connection. In doing participatory spatiotemporal mapping, we engaged with its historical uses, by bringing them into a connection with different old and new practices that emerged around the track. The spatiotemporal map (figure 5) was co-produced with around twenty local actors. Via this approach, we sought to upgrade the track's historical function as a connector in the city. We articulated relationships between community gardens and two former mining sites: one was recently converted into a technology research park and another was reestablished as an art centre working on biocultural diversity. A local councillor proposed to transform the Kolenspoor into a fast cycling track as the city was planning to make its centre car-free in the future, while the energy research companies saw it as a great infrastructure for testing sustainable mobility solutions that they were working on. We drew proposals on how the track could be a place to test electric vehicles by using them as mobile food trucks between the gardens and distribution points. However, the drawing indicated not only possible assemblies, but also confrontations between the people involved. Participants representing a regional nature conservation organisation pointed out how this "fast cycling" vision falls short in creating a connector for non-human participants - such as animal ecopassages, or in preserving silence and darkness to protect biodiversity.

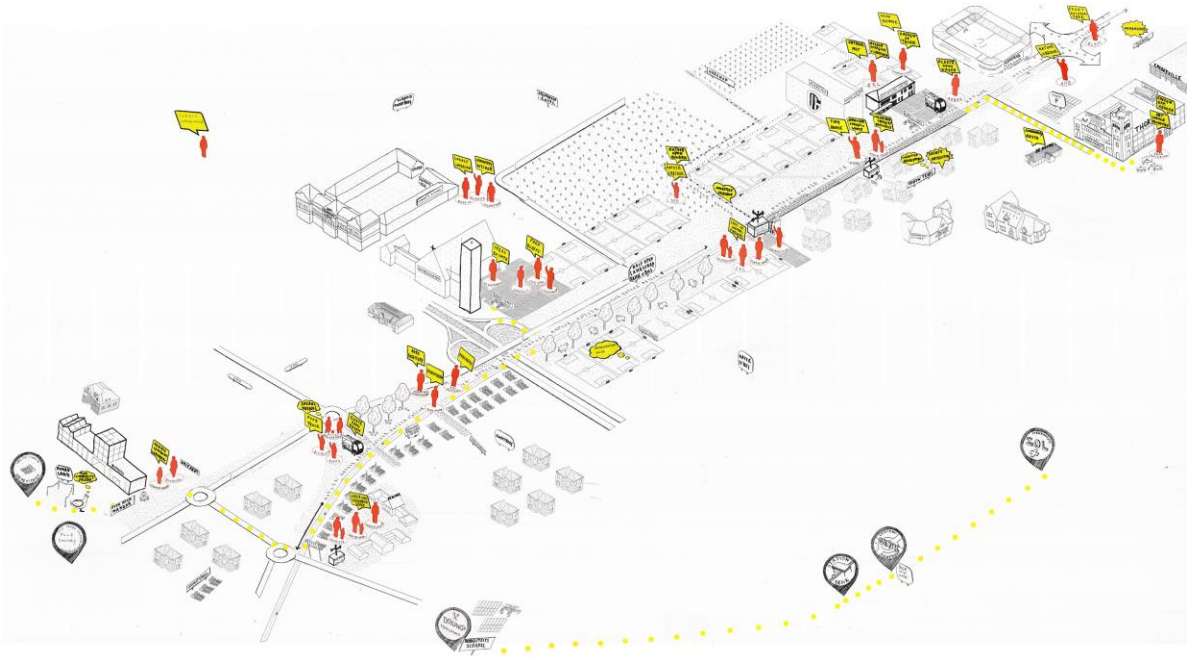

Figure 5: Kolenspoor map.

4.3 Spatiotemporal maps of slow Genk

Case study interactions on a micro-scale fed back into the city-wide network research, by drawing the slow road network in yet another large spatiotemporal map (Figure 6b), which assembled the different typologies and their potential roles in the city. Together with Trage Wegen, we produced this map by analysing the different participatory encounters, observations and findings gathered through the sessions. This map was envisioned as an object that could serve as a counterpoint to the 'car-city' image (figure 6a) that was the dominant representation of Genk in public discourse. Hence, we proposed the slow network map as a new mental image of Genk and a vision of the future that sustainable mobility could contribute to.

However, we also wanted this map to articulate confrontations between different perspectives on how the slow road network could be situated in the historical landscape. Therefore we added a historical layer (figure 6c), assembled through both archival research, and oral history-telling during participatory sessions. As such, it confronted perspectives on what is found valuable in this landscape, by juxtaposing locations represented in the official heritage discourse (e.g. Flemish heritage inventory) with those more community-based (e.g. a café that was a gathering spot for the local community with Italian background)..

Figure 6(a): Car-city map of Genk; (b) Mental map of slow Genk; (c) Historical layer of the map.

Figure 7: Part of the atlas of historical elements. Figures 8 & 9: Mapping at the Evence Coppéelaan.

We continued articulating these tensions in the mental map of the slow road network, by using an atlas of historical elements (figure 7) in participatory mapping sessions with different actors on location. One example of such a participatory interaction was organised in collaboration with the urban planning department of Genk at the Evence Coppéelaan, a four-lane avenue in the centre of the city. The opportunity was a car-free day event, where the future of this street as a long-distance slow road was presented to the residents by the planning department. Being recently selected for the depaving program of the Flemish government, the street was scheduled for partial removal of the asphalt layer in the next few years. The planners presented the design proposal for the depaving project, while our role was to start a conversation on the past and collect oral histories that could inspire and influence the design program. In the participatory mapping session, we used a textile map of the city (figure 8 & 9) which placed together the historical locations and stories about this road with its future vision, situated within the imagined slow road network. On this spatiotemporal map, we assembled drawings and texts presenting different elements of the historical landscape, while inviting the participants (mainly residents living in the street or nearby) to add other locations and elements that they found valuable. In speaking about the past, the participants also discussed the depaving vision, either by expressing

positive remarks or specific doubts. In this way, the historical map layer offered context for the future vision, that the participants were invited to address in reflecting on the meanings and potentials of the depaving project.

What we found peculiar in their statements about the Evence Coppéelaan - as a historically significant road, connecting between a mine and the city centre across almost two kilometres in length - was that the majority of participants perceived and accepted it as 'just a road'. One of the participants, a resident living nearby the street, told us:

> The Evence Coppéelaan has always been known for 'Theunissen tires', which is literally as old as the street. Everyone came to get their tires there.

Besides this tire shop, the street also houses a car dealer shop, two car repair shops, and another tire shop. Most of the participants referred to one of these places in their statements or evoked the car culture by complaining about the dangers of crossing the street, excessive traffic or noise. It didn't surprise us that, in such a car-dominated landscape, the residents had trouble imagining how this road might look like a slower and greener street. One of them expressed concerns with how the slow street could become more dangerous for children who will become less aware of the presence of cars in what they saw as unpredictable dynamics of slow roads. Another participant, a resident who has been living in this street since childhood, said:

> I heard they were going to make it the way it used to be. That's ridiculous. My grandfather had lived here too. He used to say: 'a change is not always an improvement.' (...) The Evence Coppéelaan is a busy street. Are they still going to let the trucks pass here? You can't make it all green. A lot of traffic still has to pass... I think they have to provide a lot of parking space.

These different comments point out how the historical dominance of car culture created a barrier in imagining the road as a green space. Another resident spoke about how she tried to prevent the cutting of trees when this road was initially built - and how now, after so many years, the politicians 'would like to put the trees back, going back to old Genk'. This notion of 'going back to the past' was shared by several more participants, who expressed distrust and confusion with what appeared as a reversal of progress in spatial development. Roads were presented as the epitomes of progress for decades and slowing them down was perceived by some participants as dissonant to the expectations of future development.

5. Discussion: Situating *WegenWerken* by thinging with the past

We will now discuss how our engagement with the past through different methods in this project - particularly the spatiotemporal mapping of typologies, cases and the slow road network - helped inform and situate the thinging approach to co-designing sustainable mobility. We particularly focus on how these methods supported the thinging process (and thus the bringing together of heterogeneous voices over time) by facilitating mediation between the historical landscape and the design space.

4.1. Thinging by co-defining and counter-naming typologies

By mapping the different types of slow roads in a spatiotemporal way, we gained more insights into how these infrastructures emerged in relation to the historical development of the city. For example, the *passages*, the smallest parts of the mesh, presented the legacy of the garden city housing model, connecting common spaces and courtyards, while supporting everyday interactions between neighbours. *Square-roads* emerged in the design of public spaces such as parks and squares, in the efforts to strengthen the centre of the city from the 1960s onwards, as a point of connection between the garden cities. *Domain-roads* are currently merged into large parking lots affording the priority of

arrival by car to public institutions such as hospitals, reflecting the car-city history and reducing access to public transport and slow movement. Co-defining these typologies helped make these different stories and past visions more tangible in the design space of the slow road network. It was envisioned as a strategy that could help us open up assumptions and expectations of what slow roads represent for different people, with the help of historical contextualisation. In this sense, thinging is about engaging with the complex context and a variety of actors, by detecting and articulating confrontations and tensions, while questioning the top-down assumptions from the different perspectives that we encounter in the field.

Further, in searching for place-based typologies, the naming of the typologies was a tool to imagine and enact their potential future role in the slow-mobility network. We observed how such an approach of thinging by naming also occurred in the implementation of the car-city model. Two large roads, cutting across the landscape of Genk to materialise this model, were named Westerring and Oosterring. The designation of these linear roads as 'rings' was used to suggest that they would take up the role of typical ring-road infrastructures in other Flemish cities (Nolf, 2013) and help establish an image of Genk as one of these *normal* cities. Thus, these motorways were superimposed on the landscape not just as material things, but also through naming. The naming of typologies in *WegenWerken* aimed to challenge these previous legacies of configuring the landscape. A 'thinging with the past' approach, in this case, started from using typologies as an instrument of counter-naming that could articulate less powerful design legacies and practices, while bringing more awareness into how development projects become materialised through names. We propose this strategy as *thinging by co-defining and counter-naming typologies* as tools of articulating and historicising socio-material assemblies in the design space.

4.2. Thinging by spatiotemporal mapping of socio-material assemblies

By using spatiotemporal mapping, we also engaged in thinging the slow road network by means of articulating the socio-material assemblies, and the confrontations they entail in the design space. For example, visualising the coal track as an assembly of places, projects and actors that it gathered over time, helped us articulate its evolving political context and its plural publics. In mapping the historical role of this track, as a connector between different mining sites, we initially neglected how the history of mining also shaped the growth of particular biodiversity in the post-industrial landscape. Partakers confronted the need for a fast-cycling track with the need for traversal ecological connections. The enclosure of this slow road's function into a fast-movement typology revealed how the necessary next step in thinging is to include the possibility of continuous rearticulation of slow roads as assemblies of human and non-human actors that evolve in space and time. We see this strategy as one of *mapping socio-material assemblies in a spatiotemporal way*, to help articulate connections and confrontations that emerge over time in an evolving political context. Thinging with the past, as such, could support the potential of slow roads to *go on designing* by continuously pointing to emerging or neglected confrontations.

4.3. Thinging with the past to contextualise and activate vision-making

The vision-making for the Evence Coppéelaan street, by using the textile map, was an exploration of how this road could work within the future slow road network. By placing the history of Evence Coppéelaan side by side with its present and potential future role, the slow-city mental image helped us contextualise and articulate the relevance of the road within the larger vision of the network. In this way, *thinging with the past to contextualise vision-making* helps envision how particular case studies can contribute to visions on the longer timeline of sustainable mobility transition, as well as how new assemblies could emerge beyond the local or short-term scale. While this approach of vision-making

helped situate the road within a longer temporal context, it also triggered discussions on how its future is connected or confronted to its past. For example, the strategy of assembling historical data and oral histories with design visions, on the same map, encouraged the participants to make links between the past and the future - which brought forward how some of them perceived the future vision of a green road as a step back into the past. In this way, contextualising vision-making in a spatiotemporal way can help observe confrontations between different expectations of the future and pay attention to how we can position design visions more clearly in relation to the historical landscape. Hence, thinging with the past could support strategies of vision-making by revealing how expectations of different actors are shaped by the past contained in the historical landscape.

6. Conclusion

In this article, we reflected on the experience of the *WegenWerken* project in co-designing a slow road network, to outline an approach of thinging by engaging with the past in PD. We proposed this approach based on mediating between the historical landscape and the design space, to take into account thinging both in terms of how things design over time and how they work as socio-material assemblies, gathering and confronting different publics and visions. We outlined possible design strategies which entail situated thinging by:

(4.1) *co-defining and counter-naming typologies* as tools of articulating and historicising the assemblies in the design space,

(4.2) *spatiotemporal mapping of socio-material assemblies* to articulate the evolving political context, while allowing their continuous rearticulation to address the past and emerging confrontations, and

(4.3) *contextualised vision-making*, by articulating long-term contributions and new assemblies in the design space, and by historicising expectations of future development.

By theorising the two-fold agency of thinging, we argued that PD should engage more critically and explicitly with the past through experimentation with mapping, naming and defining typologies. In this way, by designing as thinging sustainable mobility in a more situated way, we will be in a better position to tackle the agency of previous design legacies and challenge the continuity of unsustainability they produce.

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