



The politics of velomobility: Analysis of the vote to include cycling in the Swiss Constitution

Patrick Rérat & Emmanuel Ravalet

To cite this article: Patrick Rérat & Emmanuel Ravalet (2022): The politics of velomobility: Analysis of the vote to include cycling in the Swiss Constitution, International Journal of Sustainable Transportation, DOI: [10.1080/15568318.2022.2068388](https://doi.org/10.1080/15568318.2022.2068388)

To link to this article: <https://doi.org/10.1080/15568318.2022.2068388>



© 2022 The Author(s). Published with license by Taylor & Francis Group, LLC



Published online: 05 May 2022.



Submit your article to this journal [↗](#)



Article views: 191



View related articles [↗](#)



View Crossmark data [↗](#)

The politics of velomobility: Analysis of the vote to include cycling in the Swiss Constitution

Patrick Rérat  and Emmanuel Ravalet

Observatory for Cycling and Active Mobilities and Institute of Geography and Sustainability, University of Lausanne, Geopolis, Mouline, Lausanne, Switzerland

ABSTRACT

In 2018, Swiss citizens voted for fostering cycling to be included in the Swiss Constitution. This national vote and a post-vote survey among a representative sample of citizens bring insight into the varying propensity to support cycling among the population. The main explanatory factor is participants' current cycling practices: cyclists were much more likely to vote positively, as they are more aware of the lack of infrastructure. Non-cyclists were more reluctant, perhaps because they do not wish to challenge the dominant system of automobility. The second most important factor is a right–left political gradient. People on the left were more likely to vote positively and to agree with the arguments for the inclusion of cycling in the Constitution (safety, reduction of congestion, environmental and health benefits), while people on the right were more likely to agree with counterarguments (cycling network already excellent, federalism, unfair to foster cycling). Support for the vote did not vary significantly between social classes, ages or residential contexts. Women, who cycle less than men, voted more in favor and were more concerned about safety, which may be interpreted as a latent demand to cycle. A desire to “catch up” was also observed on the regional level: cantons with a low modal share of cycling were characterized by a higher acceptance rate.

ARTICLE HISTORY

Received 7 April 2021
Revised 5 April 2022
Accepted 12 April 2022

KEYWORDS

Cycling; politics; public policy; transport policy; vote

1. Introduction

Cycling is receiving growing attention due to its contribution toward a sustainable mobility. This represents a rupture with the dominance of automobility, which is deeply embedded in mobility practices, social norms, the built environment, and urban and transport policies (Koglin & Rye, 2014). The “renaissance” of cycling is thus not unchallenged, and public support is essential, as policy makers take public opinion into consideration when implementing policies. It is therefore crucial to analyze why and by whom cycling is contested.



In 2018, almost three quarters of Swiss people—a much higher proportion than expected—enshrined the fostering of cycling in the Constitution. This was followed by a representative national post-vote survey, which provides an unprecedented opportunity to gain understanding of political support for cycling.

This paper addresses two questions: (1) What characteristics explain the propensity to vote ‘yes’/‘no’? (2) What are the main arguments taken into account? The paper starts with a literature review on voting behaviors related to transport, the contestation of cycling infrastructures and the

politics of velomobility.¹ It then presents the Swiss context, looks in detail at the vote itself and outlines the sources and methods of the paper. The large proportion of positive votes is explained by the renaissance of cycling, and also by the way the initiative was framed (non-binding; focus on safety issues, etc.). Logistic regressions show that attitudes toward cycling vary according to cycling practice (interpreted as an opposition between velomobility and automobility), political sensitivity (with a left–right gradient) and region (regions with a lower modal share of cycling had more ‘yes’ votes). Support for the vote did not vary significantly between social classes, ages or residential contexts, but women voted more in favor. The conclusion discusses the challenges inherent in the implementation of cycling policies on the basis of the results.

2. Literature review

No other vote on cycling with a follow-up survey exists to the best of our knowledge. To identify the factors and mechanisms that could explain the propensity to vote ‘yes’/‘no’ and to agree with the most frequent arguments heard during

CONTACT Patrick Rérat  Patrick.rerat@unil.ch  Observatory for Cycling and Active Mobilities and Institute of Geography and Sustainability, University of Lausanne, Geopolis, Mouline, Lausanne, Switzerland.

¹The work on automobility highlights the need to grasp the complexity and multidimensionality of the car, to look beyond the car as a simple artefact and to analyse its social, political and cultural aspects (e.g. Böhm et al., 2006; Urry, 2004; Walks 2015b). In line with that work, velomobility refers to the socio-technical elements which make up and influence the practice of cycling (infrastructures, policies, images, social norms, legal framework, industry, etc.) (Rérat, 2021b).

the campaign, we organize the literature review into three parts. First, we present the literature on some (rare) votes on transport to identify how political support may vary (2.1). Then, we turn to the literature on the contestation of cycling infrastructure, the opposition groups and their arguments (2.2). Finally, we discuss how political controversies on the way cars and bicycles should share the streets relate to three main ideologies (2.3).

2.1. Voting on transport and mobility

Literature is scarce on votes on mobility. Political battles on mobility (over motorways, airports, or other large-scale infrastructures) are in most countries settled before or at general elections along with other issues. Referendums are found in few countries and usually address either fundamental national issues or exist at the local level only. With regard to the latter case, studies have analyzed votes on congestion charges in European cities (Hansla et al., 2017; Sherriff, 2015) and on public transport in US counties (Manville & Cummins, 2015; Manville & Levine, 2018; Palm & Handy, 2018).

The influence of public values versus private interest has been long debated by political scientists, and there is mixed evidence with regard to transport (Palm & Handy, 2018). Self-interest explains why voters expecting benefits are more likely to vote ‘yes’ (Hansla et al., 2017). The lack of acceptance of measures for public transport, cycling and walking in Manchester was interpreted as the consequence of car domination both at the spatial and individual levels (Sherriff, 2015). It is worth noting that familiarity makes a measure more acceptable, such as in Gothenburg, where support for the congestion charge increased after its implementation (Hansla et al., 2017).

Public values are preponderant in US votes, where political support for public transport is much larger than its ridership and many voters are concerned about social and environmental problems regardless of their actual or desired use (Manville & Cummins, 2015; Manville & Levine, 2018; Palm & Handy, 2018). Support for measures restricting car use and/or promoting alternative modes differs according to personal values (Hansla et al., 2017; Manville & Cummins, 2015). Self-transcendent and biospheric values are positively related to the acceptability of environmental policies, while self-enhancement and egoistic values are negatively related to the same (Nilsson et al., 2004). While self-transcendent values emphasize acceptance of others as equals and concern for their welfare and for society at large, self-enhancement values emphasize the pursuit of one’s own relative success and dominance over others (ibid., 2014, 269).

Political ideology is an additional, but related, explanatory factor: the left and the center prioritize measures restricting car use (such as parking fees and emission standards) more than right-wing ideologies (Christiansen, 2020). Palm and Handy (2018) found a similar partisan line, and also noticed differences according to voters’ mobility practices; for example, a great majority of frequent cyclists voted in favor of public transportation. In Great Britain, opinions of cycling—measured through a survey—were generally

positive to a much higher degree than the actual use, and linked to voting intention with a decreasing positivity from left to right (Tapp et al., 2016, 14). This implies that surface opinions of cycling may be influenced by underlying deep-seated beliefs and values.

2.2. The contestation of cycling infrastructures

Some see opposition to cycling infrastructures as a positive sign of the evolution of cycling into the mainstream, as it can only be contested if it is present enough to be noticed (Goodyear, 2014). Some state that “what constitutes an effective transport system will always be contested and how one arrives at decisions and policies to bring such systems into being equally so” (Vigar, 2017, 39). For others, it is crucial to understand “bikelash” or the “angry community opposition” and to realize that cycle lanes, like any infrastructures, “are not apolitical or neutral technologies. New space carved out for cyclists inevitably represents the disruption of real or imagined order within the existing streetscape” (Wild et al., 2018, 507). Cycling infrastructures re-allocate public space, financial resources and political priority previously dedicated to automobility (Ferster et al., 2021). There is consequently a resistance on behalf of politicians to support the building of infrastructures for cycling, “particularly when this means taking resources away from the dominant automobile-based mode” (Siemiatycki et al., 2016, 225).

Wild et al. identify three main types of organized community opposition.² First, retailers, often supported by local business organizations, are concerned by the economic consequences of a change in car accessibility and parking spaces. A second opposition group, which is very frequent, gathers conservative voters (Castillo-Manzano & Sánchez-Braza, 2013; Henderson, 2013; Henderson & Gulsrud, 2019; Siemiatycki et al., 2016; Walks, 2015c; Wild et al., 2018). Wild et al. (2018, 510) point out that “conservative value commitments, in particular, the centrality of car travel to notions of family and economic responsibility; the commitments to suburbanism; a belief in market-led growth over state-led planning; and the associated commitment to privatized road space over the notion of streets as polis, all play out in conservative resistance.” In this context, removing road space for motor vehicles is highly contested and precipitate heated debates about the place for cycling and cyclists. A third group is anti-gentrification activists, mainly in North America, where the bike may symbolize the gentrification of formerly disinvested areas (Stehlin, 2015). The implementation of cycling infrastructures reveals the uneven geographical distribution of the possibility to replace car trips, as well as tensions over gender, race and class, raising the question of the inclusiveness of cycling (Hoffmann, 2016; Ibsen & Olesen, 2018; Stehlin, 2015).³

²A fourth, anecdotal, group includes cyclists themselves in contexts where infrastructures are poorly designed (the case of an infrastructure designed for leisure cyclists and criticized by utility cyclist in Brazil is mentioned).

³An additional suggestion is that infrastructures could be implemented in gentrifying neighbourhoods with existing demand and popular support, to minimise opposition (Krizek et al., 2009).

Some studies address the way to deal with opponents' arguments (Wild et al., 2018) and the planners' strategies to find support for cycling infrastructure (Wilson & Mitra, 2020). It has also been suggested that cycling be decoupled from underlying belief systems and presented simply as a form of everyday transportation (Tapp et al., 2016, 14). Other studies look at the different ideas, symbols and strategies of bicycle activism to improve conditions for cyclists and to get more people to cycle (Balkmar & Summerton, 2017).

2.3. Politics of velomobility

For Henderson and Gulsrud (2019), political controversies are associated with how cars and bicycles should share streets, relating to power struggles between three ideologies: left/progressive, neoliberal and right/conservative (Henderson, 2013).

The left/progressive ideology challenges the role of the car through government interventions that prioritize alternative modes. For Furness (2010), cycling is a resistant culture that represents a commitment to change in the way that people think and act with regard to mobility. Cycling has been endorsed by left-leaning movements such as anarchism, left-liberalism or eco-socialism (Castillo-Manzano & Sánchez-Braza, 2013; Walks, 2015a; Wilson & Mitra, 2020).⁴

From a neoliberal perspective, transport policy should enhance market-oriented economic growth. Cycling receives a varying reception: it is fiercely contested by neoliberals in Toronto (Walks, 2015a) and Vancouver (Siemiatycki et al., 2016), while in Copenhagen, neoliberals both celebrate the bike and want to accommodate more cars (Henderson & Gulsrud, 2019); meanwhile, in Portland, discourses promoting cycling rely in part on neoliberal rationales (competitiveness, cost-effectiveness, etc.) (Ibsen & Olesen, 2018).

The right/conservative ideology is the most reluctant with regard to cycling (Henderson, 2013; Henderson & Gulsrud, 2019) although it has to be noted that the boundary with the neoliberal perspective is not always clear-cut depending on countries. It fuses the automobile with political conservative notions of freedom and individualism, and with right-leaning populist discourses that essentialise the car as natural and inevitable (Walks, 2015c; Wild et al., 2018). Conservative policies are intended to sustain or expand the car system and regard with suspicion any potential threat to their pro-car vision, while they have a much lower interest in societal issues such as health or the environment (Tapp et al., 2016). Resentment is expressed toward the politicization of the bicycle as a left-wing icon, and the legitimacy of cyclists is repudiated through the depiction of them as "scofflaws" (Wild et al., 2018, 98). Geographical differences are also found between right-leaning suburban areas and left-leaning central cities (Walks, 2015c).

For Wilson and Mitra (2020), the politicization of cycling is mainly due to the dominance of automobility and to the seemingly apolitical context in which pro-car decisions are perceived as synonymous with economic growth, modernity and development (Mattioli et al., 2020). Cycling

infrastructure is often considered as an affront to automobil-ity, an annoyance to motorists who are not used to be challenged over road space (Wilson & Mitra, 2020).

The national vote to enshrine the fostering of cycling in the Swiss constitution and the post-vote survey provide a great opportunity to gain understanding of political support for cycling. The literature on some local referendums on public transport highlights the role of public values versus private interest (and expected benefits). Research on local contestation of cycling infrastructure but also more broadly on political ideologies identify differences between conservative and progressive voters or parties. Some other studies raise issues of gender, age and class in cycling. Our research has the originality to consider all these variables simultaneously for a specific vote, and to measure their respective influence on the propensity to vote 'yes'/'no' and on the reasons behind the vote.

3. Context and methodology

3.1. Popular initiatives in Switzerland

Switzerland is a consensus democracy where the members of an executive reflect the strength of the parties but not a coalition between them. Various referendum devices are often used on a wide range of issues. The number of national votes exceeds by a factor of six those in Liechtenstein and Italy, which rank second and third among Council of Europe member states (Kriesi & Trechsel, 2008, 49).

Popular initiatives take the form of proposals to change the Constitution. Changing the Constitution is a way to give the Confederation the right to intervene (in other countries, the Parliament could elaborate a national law without a constitutional basis). By gathering 100,000 signatures within 18 months, "societal actors can put issues on the political agenda that the government and parliament fail to politicize. Additionally—if put on the ballot—the initiative obliges the entire electorate to take a binding decision" (ibid., 59). Although few initiatives are accepted (9%), even the proposals that are rejected have indirect effects. For example, the Parliament may formulate a counterproposal which has a much higher success rate (60%) and constitutes "an effective instrument to take the wind out of the sails of a (usually) more radical initiative" (ibid., 60). They may also have a "flywheel effect" (leaving traces in later legislation) or a "canvassing role" (campaign tool) (Linder & Mueller, 2017).

A broad range of variables may explain a voter's choice: social, economic and political cleavages, campaign effects, media, government and party recommendations, degree of political consensus, linguistic region, etc. (Kriesi & Trechsel, 2008, 62).

3.2. The vote on cycling

In Switzerland, 7% of all journeys are made by bicycle, which is higher than in English-speaking and Latin countries but lower than in Northern European countries. Large differences are found between German-speaking cantons (8.6%) and

⁴An expression of this trend is the strong overrepresentation of left-wing voters in car-free housing developments (Baehler & Rérat, 2020).

Table 1. Presentation of the parties represented in the federal government.

Name (German/ French acronyms)	Political ideology	Vote % in the National Council (2019)	Position in relation to the initiative	Position in relation to the counterproposal
Swiss People's Party (SVP/UDC)	Right-wing (populist), national conservatism, economic liberalism	25.6%	No	No
Social Democratic Party (SPS/PSS)	Social democracy, center-left to left-wing	16.4%	Yes	Yes
FDP. The Liberals (FDP/PLR)	Right-wing to center-right, classical to conservative liberalism	15.1%	No	Yes
The Center (former known as Christian Democratic Party; CVP/PDC)	Christian democracy (center to Center-right)	11.4%	No	Yes

Table 2. Article 88 in the Constitution in its former version, the initiative and the counterproposal.

Former article in the Constitution	Drift article (initiative)	Accepted article (counterproposal)
Art. 88: Footpaths and hiking trails ¹ The Confederation shall lay down principles with regard to the network of footpaths and hiking trails.	Arc. 88: Footpaths, hiking trails and cycle paths ¹ The Confederation shall lay down principles with regard to the network of footpaths, hiking trails and cycle oaths devoted to everyday trips and leisure trips.	Arc. 88: Footpaths, hiking trails and cycle paths ¹ The Confederation shall lay down principles with regard to the network of footpaths, hiking trails and cycle paths.
² It may support and coordinate cantonal measures to construct and maintain such networks.	² It supports and coordinates, in the respect of the powers of the cantons measures by the cantons and third parties to construct and maintain safe and attractive networks and to provide information about them.	² It may support and coordinate measures by the cantons and third parties to construct and maintain such networks and to provide information about them. In doing so, it shall respect the powers of the cantons.
³ It shall take account of the network of footpaths and hiking trails in the fulfillment of its duties and shall replace paths and trails that it has to close.	³ It shall take account of these networks in the fulfillment of its duties. It shall replace footpaths and hiking trails and cycle paths it has to close.	³ It shall take account of these networks in the fulfillment of its duties. It shall replace footpaths and hiking trails and cycle paths it has to close.

the French-/Italian-speaking parts (2.9%/2.7%), indicating varying levels of cycling infrastructures (Rérat, 2021a).

In 2015, PRO VELO, the umbrella association representing cyclists' interests, launched the Bike Initiative, in order to foster cycling. It was joined by the Environment and Transport Association (VCS/ATE),⁵ an NGO promoting sustainable transport, as well as by left-wing political parties and by NGOs in the fields of mobility, environment, nature, energy and health. The aim of the initiative was to add cycling to Article 88 of the Constitution, devoted to the development of footpaths and hiking trails. This article results from the acceptance in 1979 of the counterproject to another initiative launched in reaction to the negative effects of road development on hiking paths.

Signatures were collected very quickly and handed in to the Chancellery in March 2016. The government decided to suggest a counterproposal because, while it defended the idea of fostering cycling, it rejected the wording that made it mandatory. In the consultation, center and right-wing parties were also opposed to binding measures.

Between October 2017 and March 2018, the two chambers of the Parliament discussed the initiative and the counterproposal (see the position of the main parties in Table 1). The initiative was rejected in both chambers, where its support came mainly from the left (Social Democratic Party and the Green Party). Two center and right-wing parties—FDP/PLR (classical liberalism) and CVP/PDC (Christian democracy)—

accepted the counterproposal, which therefore received strong support in both chambers (37 'yes', 1 'no', 2 abstentions; 115 'yes', 70 'no'). Opposition came from some representatives of FDP/PLR and almost all of the members of SVP/UDC, a (populist) right-wing party (national conservatism and economic liberalism). The main arguments related to financial costs, federalism, lack of respect from cyclists of traffic rules, the low potential of cycling to reduce traffic in bad weather, and the idea that enough had already been done for cycling.

While the initiative requires that the Confederation "supports and coordinates [...] measures [...] to construct and maintain safe and attractive networks and to provide information about them," the counterproposal only says that the Confederation "may" do so (Table 2). Moving from obligation to possibility makes the counterproposal acceptable by most and allows cycle paths to fall within the jurisdiction of cantons and municipalities.⁶ The Confederation has thus a role limited to gathering data, and to communicating and coordinating new standards of quality and safety. In March 2018, the initiative committee decided to withdraw the initiative, given the much higher support of the counterproposal.

⁵Switzerland, alongside Germany and Austria, is a member of the 'Germanic family' in planning (Newman & Thornley, 1996). It is characterized by a hierarchical planning system with a clear division of tasks and responsibilities between the national, regional and local levels (subsidiarity). The federal government gives guidelines, but has hardly any powers to force the regions to follow them, while the regional level is the most powerful.

⁵Acronyms are given in both German and French.

Given that it was non-binding, a large coalition campaigned for the counterproposal; this coalition included the organizations that launched the Bike Initiative as well as tourism actors and sport cyclists, center and right-wing parties and even the main car lobby (Touring Club Switzerland). The campaign framed cycling as a rather neutral object, making it compatible with a large spectrum of ideologies. While the initial concern was mainly utility cycling, the campaign also emphasized leisure and sport cycling. Yet enthusiastic slogans arising from the signature collection (“We love velo”) were replaced by dull, lifeless ones (“Safety and common sense”). The fact that cycling is the only mode of transport for which the number of people killed or injured is increasing (+27% since 2000; –34% for motorists) was at the core of the campaign. It was also argued that cycling is an asset for sport and tourism, that it completes the transport system, and that the project would lead to a better cohabitation between modes.

The campaign was very quiet, as is the case when a counterproposal is widely supported. The opponents were mainly the right-wing party SVP/UDC, major economic associations (Economiesuisse for big companies and SGV/USAM for small and medium-sized enterprises) and a car driver lobby (Automobile Club Switzerland). However, they neither organized nor invested in the campaign. Their actions were limited to press releases and interviews in the media. Their arguments referred to financial and federal issues that came up in the Parliamentary debates.

On September 23rd 2018, all cantons and 73.6% of Swiss citizens accepted the counterproposal—which was higher than expected. Article 88 has since been changed and a specific law discussed. This paper focuses on the analysis of the votes (who voted ‘yes’/‘no’ and why).

3.3. Source and methods

Six weeks after each vote, a phone survey funded by the Federal Chancellery (“VOTO” survey) is carried out by two research centers (FORS and Center for Democracy Aarau) among 1,500 Swiss people aged over 18 and selected randomly from a federal sampling register (FORS, 2020). The sample is weighted so that it represents Swiss citizens regarding socio-demographic characteristics and geographical distribution. Questions are asked about characteristics (sociodemographic, political leaning, etc.), participation in the vote and point of view regarding certain arguments. A short analysis of the vote was done as it is the case for all votes by FORS and Center for Democracy Aarau (Tresch et al., 2018). Our paper uses the “VOTO” survey but goes much deeper into the analysis with multivariate tools. It also refers to the literature on velomobility and to the debates before and during the campaign.

We consider the voting results to address attitudes to and support of cycling. Our analysis takes into account only the interviewees who participated in the vote ($n = 846$; the total is lower in some models due to non-responses). The variables to explain are the propensity to say ‘yes’ and to agree (completely or largely) with the main arguments found in the debates (or, in other words, with how the vote was

framed). Arguments in favor are safety (“It is necessary to do more for the safety of cyclists”), congestion (“It is necessary to increase the fostering of cycling in order to reduce peaks in road traffic and to relieve public transport”) and the environment and health (“Cycling is ecological and good for health. It is therefore necessary to develop cycle paths”). The arguments against relate to a lack of need (“The Swiss cycle path network is already excellent. There is no need for a constitutional article”), federalism (“Cycle paths fall within the remit of municipalities and cantons. The Confederation should not get involved”) and unfairness (“It is unfair to give more space to cycling to the detriment of other transport modes”). This argument partially encompasses a negative view of cycling as found in the literature (Aldred, 2010). The analysis is completed by an open question collecting self-expressed motives that were coded (FORS, 2020).

This post-vote survey enabled the provision of disaggregated data on preferences (‘yes’/‘no’) and motivations (arguments) and prevented ecological fallacy. As stated by Manville and Cummins (2105, 309), “knowing that people voted for a particular policy doesn’t tell us why they voted for it [...]. Voting data often compound the problem because they are available only by place, rather than by person. Place-based data create ecological inference problems: finding that people in high-income places support more transportation spending does not tell us that high-income *people* support such spending.” This approach also identifies the arguments that differ within the partisans’ and opponents’ camps. While the analysis of individual voting behavior is at the core of this paper, an ecological analysis on the scale of the 26 cantons is nonetheless presented as a complement to refine the interpretation of the differences between linguistic regions.

The explanatory variables refer to the socio-demographic characteristics of voters (age, gender, social class through education and income), the degree of urbanization of their place of residence based on geographical contiguity and population density (Eurostat, 2020), and the linguistic regions that represent a frequent political divide in Switzerland. Political opinion was measured on a scale from 0 (far left), through 5 (center) to 10 (far right), on which respondents positioned themselves. These variables can be found in all VOTO surveys. In addition, we suggested including two questions on the practice of cycling to the researchers in charge of the survey. These questions distinguish cyclists according to how often they cycle (frequently, defined as at least once a week, vs. rarely) and their predominant reason for doing so (utility versus leisure). No further information on mobility practices could be collected though.

Table 3 shows that all groups but the far right voted positively for the counterproposal. Seven models of voting behavior (propensity to say ‘yes’ and to agree with the six arguments) were built using logistic regressions. They measure the influence of each variable “all other things being equal” (e.g. provided all other variables remain the same) in terms of odds ratios. An odds ratio represents the ratio of the odds of an event occurring in one group compared to another. A value higher than one implies that the group is more likely to agree, and an odds ratio below one implies a lower propensity.

Table 3. Characteristics of the sample of interviewees who took part in the vote (n = 846; the total may vary due to non-responses).

Variables	Modalities	Number	“No” vote	“Yes” vote
Cycling practice (N = 844)	Frequent use/utility	295	14%	86%
	Rare use/utility	37	32%	67%
	Frequent use/leisure	122	21%	79%
	Rare use/leisure	117	26%	74%
	None	273	41%	59%
Gender (N = 846)	Men	458	30%	70%
	Women (ref.)	388	22%	78%
Age (N = 846)	18–29 (ref.)	76	22%	78%
	30–39	77	16%	84%
	40–49	114	13%	87%
	50–59	191	24%	76%
	60–69	148	29%	71%
	70+	240	38%	62%
Income (household) (N = 737)	First quartile (poorest; ref.)	146	35%	65%
	Second quartile	159	26%	74%
	Third quartile	234	28%	72%
	Fourth quartile (richest)	198	18%	82%
Education (N = 845)	Compulsory school (ref.)	53	24%	76%
	Vocational secondary	330	34%	66%
	General secondary/higher professional training	183	22%	78%
	Tertiary	279	21%	79%
Political values (0–10) (N = 822)	Far left (0–2)	86	18%	92%
	Left (3, 4)	196	13%	87%
	Center (5) (ref.)	257	71%	29%
	Right (6, 7)	197	70%	30%
	Far right (8–10)	86	43%	57%
Residential context (N = 843)	Cities	215	24%	76%
	Towns and suburbs (ref.)	453	27%	73%
	Rural areas	175	27%	73%
Linguistic region (N = 840)	German-speaking (ref.)	616	29%	71%
	French-speaking	185	17%	83%
	Italian-speaking	39	26%	74%

4. Models of voting behavior

4.1. Propensity to vote ‘yes’

The first model explains the propensity to vote ‘yes’ (Table 4). The most important variable is cycling practice: regular cyclists (both utility and leisure) were much more likely than average to vote ‘yes’ (odd ratios of 4.2 and 4.1). The same can be said, although to a lesser extent, of occasional leisure cyclists (3.1), while the relationship is positive but not significant for occasional utility cyclists. Cyclists were more likely to take part in the vote and to say ‘yes’, which can be seen as a way of practising *cycling citizenship* (Aldred, 2010). As cyclists, they have a personal interest in the counterproposal and are aware of the lack of infrastructures and the need to develop velomobility in a context dominated by automobility. It has to be noted, however, that most non-cyclists also voted ‘yes’ (59%) and that a small minority of frequent utility cyclists voted ‘no’ (14%).

The second most important variable refers to political values. People on the (far) left voted much more in favor than people in the center and on the right, while far-right voters said ‘no’ in majority, and a poll seven weeks before the vote showed that a small majority of people on the (center) right was against (Tamedia, 2018). A “priming effect,” i.e. a change in the criteria by which voters make their choice (Iyengar & Kinder, 2010), could have occurred due to the lack of debates and to the fact that it was supported by a wide variety of organizations and political parties.

Table 4. Logistic regressions on the propensity to vote ‘yes’ (all interviewees who took part in the vote; N = 711^a).

		“Yes” vote	
		Exp(B)	Sig.
Cycling practice	Frequent use/utility	4.176	***
	Rare use/utility	1.715	ns
	Frequent use/leisure	4.111	***
	Rare use/leisure	3.073	***
Gender	None (ref.)		
	Men	0.564	***
Age	Women (ref.)		
	18–29 (ref.)		
	30–39	1.936	ns
	40–49	3.262	**
	50–59	1.255	ns
	60–69	1.460	ns
Income (household)	70+	1.285	ns
	First quartile (poorest; ref.)		
	Second quartile	1.490	ns
	Third quartile	1.147	ns
	Fourth quartile (richest)	1.737	*
Education	Compulsory school (ref.)		
	Vocational secondary	0.746	ns
	General secondary/higher professional training	1.244	ns
Political values	Tertiary	0.987	ns
	Far left	3.017	**
	Left	2.561	***
	Center (ref.)		
	Right	0.831	ns
Residential context	Far right	0.331	***
	Cities	1.353	ns
	Towns and suburbs (ref.)		
Linguistic region	Rural areas	0.804	ns
	German-speaking (ref.)		
	French-speaking	2.633	***
Constant	Italian-speaking	1.502	ns
		0.731	ns

N = 711. Pseudo R2: Cox & Snell = 0.188; Nagelkerke = 0.277; model sig. < 0.01.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

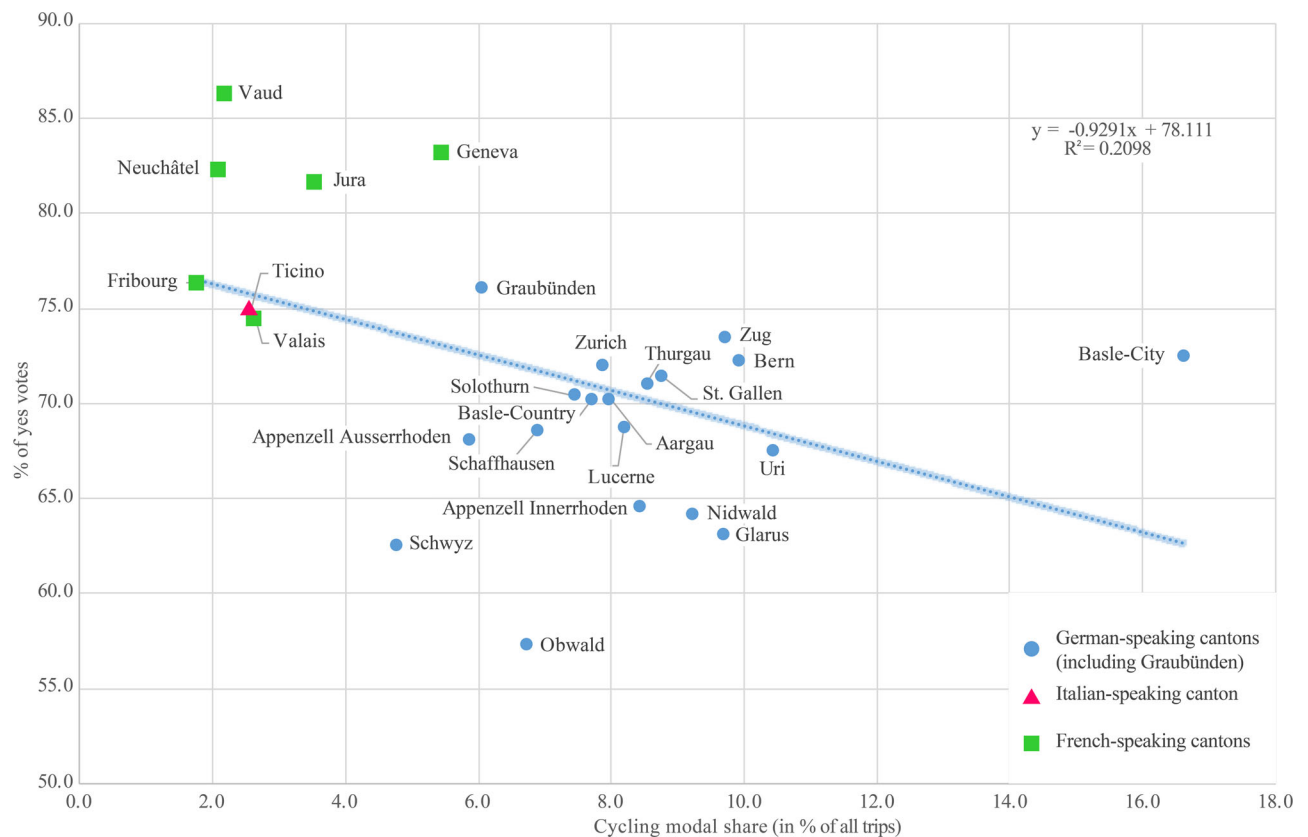


Figure 1. Acceptance to the vote and cycling modal share (Source: FORS, 2020; OFS & ARE, 2017).

While women are overrepresented among non-cyclists (59% vs. 45.7% in the whole sample⁷), they were more likely than men to vote ‘yes’, all other things being equal. Their vote could be explained by a smaller reliance on the car and a higher use of alternatives such as public transport and walking (OFS & ARE, 2017), by a latent demand for cycling hampered by current infrastructures and/or by a higher value placed on safety for themselves and others (Garrard et al., 2012). Concern for safety may also explain why people in their 40s were more likely to vote ‘yes’ than those under 30. They may be concerned for their own safety, but also for their children, who face unsuitable conditions on the roads for their cognitive and physical skills.

Only one income group stands out (the fourth and richest quartile), although with a low statistical significance. No effect was measured in terms of education and residential context. All other things being equal, people in the French-speaking part were more likely to vote ‘yes’. This could indicate a desire to catch up with the German-speaking part in terms of infrastructure.

The difference between linguistic regions led us to run an ecological analysis on the scale of the 26 cantons (Figure 1). A linear regression between cycling practice (measured by its modal share) and the acceptance rate shows a negative correlation ($r = -0.46$; $p < .05$). In other words, while an individual who cycles is more likely to vote yes than a non-cyclist, cantons

with a low modal share tended to vote more yes than the ones where cycling is more frequent. The higher residuals (e.g. the difference between the actual value and the one predicted by the model) are also found in French-speaking cantons, where the model underestimates the acceptance rate by about 10 points. This observation (as well as the fact that French-speakers welcome the intervention of the federal state more than the others; see Table 9) reinforces the interpretation of a desire to catch-up in the French part. While differences between linguistic regions are sometimes interpreted as cultural, this result shows a more complicated relationship that refers to traffic conditions, infrastructures, and public policies.

4.2. Arguments in favor

Regardless of how they had voted, interviewees had to say whether or not they agreed with the three most frequent arguments for the counterproposal (Table 5): (1) that, as cycling is ecological and good for health, it is necessary to develop cycle paths (86% agreed); (2) that it is necessary to do more for safety (82% agreed); and (3) that cycling could reduce congestion both on the road and in public transport (74%). The opponents’ scores are about 40 points lower than supporters, and about half do not see cycling as a credible alternative mode of transport.

⁷Women were also underrepresented among rare utility cyclists and frequent leisure cyclists. No gender differences were found among frequent utility cyclists and rare leisure cyclists.

⁸The number of interviewees is lower than in the other models as some of them agreed to give their opinion on the arguments of the campaign but not their vote.

Table 5. Agreement with arguments in favor of cycling in the Constitution (all interviewees who took part in the vote).

	All (N = 846)			Supporters (N = 646)			Opponents (N = 200)		
	Agree	Disagree	Don't know	Agree	Disagree	Don't know	Agree	Disagree	Don't know
It is necessary to do more for the safety of cyclists	82%	17%	1%	91%	8%	0%	57%	41%	2%
It is necessary to increase the fostering of cycling in order to reduce peaks in road traffic and to relieve public transport	74%	24%	2%	85%	14%	1%	46%	51%	3%
Cycling is ecological and good for health. It is therefore necessary to develop cycle paths	86%	12%	1%	96%	3%	1%	59%	38%	3%

Table 6. Logistic regressions on the arguments in favor of the counterproposal (all interviewees who took part in the vote).

		Safety (N = 758)		Relief of congestion (N = 754)		Environment and health (N = 750)	
		Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.
Cycling practice	Frequent use/utility	2.270	***	2.689	***	2.497	***
	Rare use/utility	1.836	ns	0.531	ns	1.615	ns
	Frequent use/leisure	1.930	**	1.449	ns	1.204	ns
	Rare use/leisure	1.590	*	0.926	ns	1.305	ns
	None (ref.)						
Gender	Men	0.705	**	0.743	*	0.885	ns
	Women (ref.)						
Age	18–29 (ref.)						
	30–39	0.873	ns	1.460	ns	4.026	***
	40–49	1.293	ns	1.178	ns	2.614	**
	50–59	0.976	ns	1.104	ns	2.650	***
	60–69	1.942	*	0.840	ns	2.365	**
	70+	1.233	ns	0.617	ns	1.545	ns
Income (household)	First quartile (poorest; ref.)						
	Second quartile	0.973	ns	1.016	ns	1.051	ns
	Third quartile	1.146	ns	1.007	ns	0.984	ns
	Fourth quartile (richest)	0.843	ns	1.519	ns	0.995	ns
Education	Compulsory school (ref.)						
	Vocational secondary	1.191	ns	0.756	ns	1.673	ns
	General secondary/higher professional training	1.374	ns	0.611	ns	2.466	**
	Tertiary	1.302	ns	0.699	ns	1.772	ns
Political values	Far left	2.175	**	3.462	***	2.840	***
	Left	0.968	ns	1.916	***	1.771	**
	Center (ref.)						
	Right	0.656	*	0.819	ns	0.755	ns
	Far right	0.302	***	0.562	ns	0.299	***
Residential context	Cities	1.166	ns	1.179	ns	1.010	ns
	Towns and suburbs (ref.)						
	Rural areas	1.185	ns	1.522	*	1.434	ns
Linguistic region	German-speaking (ref.)						
	French-speaking	1.386	ns	1.056	ns	1.181	ns
	Italian-speaking	2.224	**	1.379	ns	1.352	ns
Constant		0.521	ns	0.481	ns	0.253	***

N = 758. Pseudo R2: Cox & Snell = 0.096; Nagelkerke = 0.128; model sig. < 0.1.

N = 754. Pseudo R2: Cox & Snell = 0.159; Nagelkerke = 0.215; model sig. < 0.01.

N = 750. Pseudo R2: Cox & Snell = 0.152; Nagelkerke = 0.207; model sig. < 0.01.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Safety is the argument that is the least explained among the models, which shows its consensual nature. It attracted more cyclists than average, especially frequent utility cyclists who have to cohabit with motorized traffic (Table 6). Women are also more concerned about safety, as are people in their 60s, which indicates that this grows with age (the trend continues for people in their 70s but is not significant due to a declining practice). The agreement is particularly favored in the Italian-speaking part, which highlights a lack of cycling infrastructures.⁹ People on the (far) right are less convinced, as they may consider safety to be an individual

responsibility (e.g. behavior, high-viz, helmet) rather than related to infrastructures.

The potential of cycling to reduce congestion is strongly supported by regular utility cyclists (who already rely less on public transport and cars), while no significant differences are found between leisure cyclists and non-cyclists. Women agree more with this argument, which may indicate a preference for avoiding cars and public transport modes, although we cannot directly test the hypothesis. Surprisingly, rural dwellers are more convinced than their counterparts in denser areas where congestion is more frequent. Finally, a political gradient is observed: the potential of cycling as a means of transport declines from the (far) left to the (far) right.

This gradient is also observed for environmental and health considerations. Cyclists are more convinced by this argument than non-cyclists (although this is only significant

⁹In a survey among bike commuters (Rérat, 2021a), 33% of commuters from Italian-speaking Switzerland said that they feel unsafe on their home-work trip (14% for Switzerland). On the cantonal level, there is a strong correlation between the share of commuters feeling unsafe and the acceptance rate ($r = 0.58$; $p < .01$).

for frequent utility cyclists). While no gender difference is observed, age plays a role, as people between 30 and 70 are more likely to agree than the younger and older age brackets. This could be explained by health issues: people in their twenties are less worried about being sedentary, while those over 70 may not feel concerned anymore. As for the other two arguments, no difference is found between income groups and education (with the exception of general secondary). The residential context (urbanity and linguistic region) is not relevant either.

Supporters were asked at the outset of the survey an open question about their arguments (Table 7). About 40% stated the development and fostering of cycling (in details, 15% mentioned utility cycling, 13% the cycle network and 13% gave other arguments such as the importance of cycling and of not supporting only the car). A further argument is that increased safety on the roads will make cycling more attractive (14%). Environmental issues (19%) appear to be much more important than health (aggregated with other reasons).

These answers look very similar to the three main arguments identified in the debates (Table 5). The major difference relates to health that was integrated with environment in the closed questions (third argument). It appears much less important in the open question. This may be explained by a discourse that focuses on the risk of accidents when cycling and an understatement of the positive impacts of regular physical activity on health. Arguments relating to cycling as a sport and as an asset for tourism, which were also put forward by proponents of the counterproposal, seem to have rarely been a deciding argument to vote yes as it was almost not mentioned.

Table 7. Arguments of the supporters (coded answers to an open question; Tresch et al., 2018).

	% of the 1015 answers given by the 646 supporters
Development and fostering of cycling	40%
<i>Regular use of cycling</i>	15%
<i>Development of the cycle network</i>	13%
<i>Other (importance; support not only to the car)</i>	13%
Environmental issues	20%
<i>Environmentally friendly mobility</i>	15%
<i>Other (fluidity of traffic, climate)</i>	5%
Road safety	14%
Constitutional considerations (role of the Confederation, etc.)	8%
Generality	5%
Recommendations from political parties	4%
Other reasons (e.g. health, tourism)	6%
Don't know	3%
Total	100%

4.3. Arguments against

The main counterargument relates to federalism (46%) (Table 8). Even among supporters, one third felt that this task lies in the hands of cantons and municipalities. The lack of need given current infrastructures receives a high share of agreement among opponents (77%) but much less among supporters (21%), representing a big difference in opinion. A (smaller) difference is also seen regarding the argument that it would be unfair to give more space to cycling to the detriment of other modes (50% vs. 20%).

Only people on the far right are more likely than average to claim that bike routes are already excellent and that no constitutional article is therefore needed (Table 9). This view is strongly opposed by people on the left, frequent utility cyclists and voters from the French-/Italian-speaking regions.

The same political cleavage applies to federalism. People on the left see much less problem with a Confederation intervention, although a difference appears between utility and leisure cyclists. Leisure cyclists benefit from a well-developed network in Switzerland and are less likely to see the need for a federal intervention, while utility cyclists are much more critical. French-speakers welcome this intervention more, which may be explained by a lack of commitment from their cantons and municipalities and by a more interventionist view of the state. Arguments relating to federalism also become more popular with age.

Frequent utility cyclists do not agree with the argument that it is unfair to develop and promote cycling at the expense of other modes (the trend is similar but not significant for the other cyclists). People below 30 are more likely to agree with this argument, which may be due to the financial barriers they face using public transport or getting a driving license. Rural dwellers are also more likely to agree, as they are more car-dependent. Far right voters see fostering cycling as unfair, which reveals attitudes and values that impact modal choices.

In comparison to the counterarguments in the public debates (Table 8), the open question in the survey shows a more critical view of cycling by opponents (Table 10). 10% state that developing infrastructures would be inefficient, another 10% that it would be too expensive, and 25% say that they have negative perceptions of cyclists (seen as lacking consideration, breaking the rules, etc.). These arguments were somewhat silenced in the campaign and reveal an issue of the legitimacy of velomobility in respect to the dominant system of automobility. Finally, 31% of the opponents put forward constitutional considerations.

Table 8. Agreement with arguments against cycling in the Constitution (all interviewees who took part in the vote).

	All (N = 846)			Supporters (N = 646)			Opponents (N = 200)		
	Agree	Disagree	Don't know	Agree	Disagree	Don't know	Agree	Disagree	Don't know
The Swiss cycle path network is already excellent.	36%	61%	3%	21%	77%	2%	77%	17%	6%
There is no need for a constitutional article									
Cycle paths fall within the remit of municipalities and cantons. The Confederation should not get involved	46%	51%	3%	34%	62%	4%	78%	21%	1%
It is unfair to give more space to cycling to the detriment of other transport modes	28%	69%	3%	20%	77%	3%	50%	46%	3%

Table 9. Logistic regressions on the arguments against the vote (all interviewees who took part in the vote).

		Lack of need (N = 736)		Federalism (N = 739)		Unfairness (N = 741)	
		Exp(B)	Sig.	Exp(B)	Sig.	Exp(B)	Sig.
Cycling practice	Frequent use/utility	0.495	**	0.570	**	0.487	**
	Rare use/utility	0.521	ns	0.244	*	0.390	ns
	Frequent use/leisure	0.563	ns	0.689	ns	0.725	ns
	Rare use/leisure	0.571	ns	0.768	ns	0.622	ns
Gender	None (ref.)						
	Women (ref.)						
Age	Men	0.815	ns	1.104	ns	1.374	ns
	18–29 (ref.)						
Age	30–39	1.066	ns	1.679	ns	0.307	*
	40–49	0.840	ns	0.905	ns	0.337	ns
	50–59	1.350	ns	2.958	*	0.453	*
	60–69	1.198	ns	2.214	ns	0.298	**
	70+	2.070	ns	4.110	**	0.449	*
Income (household)	First quartile (poorest; ref.)						
	Second quartile	0.613	ns	1.267	ns	0.758	ns
	Third quartile	1.135	ns	1.164	ns	0.789	ns
	Fourth quartile (richest)	0.885	ns	1.134	ns	0.642	ns
Education	Compulsory school (ref.)						
	Vocational secondary	1.971	ns	1.145	ns	3.553	ns
	General secondary/higher professional training	2.102	ns	1.388	ns	4.521	*
Political values	Tertiary	1.346	ns	1.000	ns	2.404	ns
	Far left	0.170	***	0.288	***	0.000	ns
	Left	0.208	***	0.232	***	0.608	ns
	Center (ref.)						
	Right	0.868	ns	0.877	ns	0.950	ns
Residential context	Far right	1.848	*	2.380	***	1.957	*
	Cities	1.206	ns	0.989	ns	1.329	ns
	Towns and suburbs (ref.)						
Linguistic region	Rural areas	1.200	ns	1.004	ns	1.903	**
	German-speaking (ref.)						
	French-speaking	0.286	***	0.410	***	0.795	ns
Constant	Italian-speaking	0.353	*	0.560	ns	0.719	ns
		0.271		0.199	ns	0.157	*

N = 739. Pseudo R2: Cox & Snell = 0.146; Nagelkerke = 0.169; model sig. < 0.01.

N = 739. Pseudo R2: Cox & Snell = 0.169; Nagelkerke = 0.255; model sig. < 0.01.

N = 741. Pseudo R2: Cox & Snell = 0.082; Nagelkerke = 0.160; model sig. < 0.05.

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table 10. Arguments of the opponents (coded answers to an open question; Tresch et al. 2018).

	% of 233 answers given by 200 opponents
Critique of developing and promoting cycling	36%
Discomfort with/dislike of cyclists	25%
Sufficient infrastructure/inefficient development	10%
Constitutional considerations	31%
Responsibility of the cantons (and not of the federal state)	15%
No place in the Constitution	16%
Financial reasons	10%
Generality	6%
Other reasons	3%
Recommendations from political parties	4%
Confusion	3%
Don't know	6%
Total	100%

5. Conclusion

In 2018, the majority of Swiss citizens voted that the fostering of cycling be included in the Constitution. The varying propensity to agree with the vote and the main arguments of the campaign bring important elements to the politics of velomobility. Developing alternatives to automobility often does not go unchallenged, and the literature has analyzed the contestation of specific cycling infrastructures (e.g. Wild et al., 2018) and the competing political ideologies (e.g.

Henderson, 2013; Henderson & Gulrud, 2019). This paper has had the unique opportunity to analyze a vote on cycling on the national scale with individual data from a post-vote survey.

Bicycle advocates, with other organizations from the fields of mobility, health, environment and left-wing political parties, launched a popular initiative to enshrine the fostering of cycling in the Swiss Constitution. The text was criticized by the government and the Parliament for its compulsory wording and its potential derogation of subsidiary principles. A counterproposal was proposed with more cautious—but diluted—wording, which was supported by some of the major opponents of the initiative (parties from the center and the right, a car lobby, etc.).

Cycling advocates have managed to put cycling on the political agenda in a country where debates have traditionally focused on the competition and synergies between road and rail. Public values (related to the importance given to safety, environment and health) explain a level of support that goes beyond just cyclists (Manville & Cummins, 2015; Manville & Levine, 2018; Palm & Handy, 2018). It is to be noted that, at the level of principles, or reasons for supporting the counterproposal, the vote does not lead to a direct competition with the other modes (space, budget, etc.), which may have decreased opposition. The high acceptance rate is also explained by the consensual framing of the vote (utility,

leisure, sport tourism; urban and mountainous regions; safety as a core argument). This result goes in the direction of Tapp et al. (2016) argument to decouple cycling from any set of underpinning values and to simply present it as a practical form of transport. The strategy of framing broadly cycling could inspire other cycling advocates. However, this strategy will sooner or later become more concrete and raise heated debates about the way road space can be (re)distributed.

The varying propensity to vote ‘yes’ and to agree with the arguments of the campaign constitutes an indicator of the support for cycling and of its image. The main explanatory factor refers to voters’ cycling practice. Cyclists were more likely to say ‘yes’ and to practise what Aldred (2010) refers to as cycling citizenship. They have a private interest in the counterproposal and are more likely to benefit from it (Plam & Handy, 2018). They are also more aware of the lack of infrastructures (Hansla et al., 2017). Voting behavior may also be interpreted as representing a desire (or reluctance for non-cyclists) to promote velomobility and to challenge the dominant system of automobility. These interpretations are reinforced by a higher proportion of positive votes among frequent utility cyclists than among leisure or occasional cyclists.

The second most important factor is political leaning: a left–right gradient is observed in the propensity to say ‘yes’ and for all arguments. People on the left were more likely to vote ‘yes’ and to agree with the arguments for the campaign (safety, reduction of congestion, environmental and health benefits), while people on the right were more likely to agree with counterarguments (excellent existing cycling network, federalism, unfair to promote cycling). Far right voters are the only group to have said ‘no’, and center and right parties supported the counterproposal but were initially against the initiative. This hints that differences would be more marked in the case of concrete projects. The role of political ideologies echoes the findings in Copenhagen and San Francisco (Henderson, 2013; Henderson & Gulsrud, 2019) and highlights the need to gain a deeper understanding of the underlying values of modal choices and the images of transportation modes as well as the ways in which perceptions of cycling could change in the light of current issues (pandemic, global changes, energy transition, etc.).

While cycling is sometimes depicted as a more male, young, urban and middle-to-upper-class practice (e.g. Hoffmann, 2016; Ibsen & Olesen, 2018; Stehlin, 2015), support for the counterproposal did not vary significantly between social classes (no difference according to the level of education; slight effect for the higher income group), age or residential context. Women voted more in favor and were more concerned about safety (a result found in other studies; see Garrard et al., 2012), a trend that may be interpreted as a latent demand and a higher expectation regarding the benefits (Hansla et al., 2017), as cycling fostering would lead to better circulation conditions.

This latent demand is also found at the cantonal level, as is a desire to “catch up” to other cantons with a higher modal share of cycling. There is a negative correlation between the modal share of cycling and the rate of

acceptance of the counterproposal. This is the opposite of what was observed on the individual level, where people who cycle were much more likely to vote in favor. The rate of acceptance is particularly high in French-speaking cantons, whose vote, as well as their lower reluctance regarding the Confederation’s intervention, can be interpreted as an urge to implement cycling urbanism. While differences between linguistic areas are sometimes interpreted as being cultural, this result shows a more complicated relationship that refers to traffic conditions, infrastructures and public policies.

Further research is needed on the implementation of cycling urbanism. First, ethnographic methods could address the influence of public values versus personal interest (in other words, cycling as a positive social outcome or as a potential personal practice) (Hansla et al., 2017). They could analyze what lies behind the opposition to cycling in regard to the dominant system of automobility and political values. Second, historical accounts could explain how political positions might change with the renaissance of cycling and in a context characterized by the sanitary crisis, climate change and the urge to rethink mobility. Third, while the vote has given cycling a high legitimacy, it refers to non-binding principles. The implementation of cycle lanes will represent a critical test and may be contested (Furness, 2010; Wild et al., 2018; Wilson & Mitra, 2020). Cycling won endorsement twice in 2020: in the city of Zurich, 70.5% accepted an initiative to build 50 km of cycling expressways, and 58% of the citizens of the canton of Geneva agreed that 4,000 parking spaces could be removed for bicycle and bus lanes. These votes were much more hotly debated, and many projects, such as temporary infrastructures implemented during the pandemic, or projects of cycling infrastructures and pedestrianization in smaller cities, are being contested through referendums. Their analysis would make it possible to further understand how the politics of velomobility is supported across social groups and spatial contexts.

Acknowledgment

The authors thank the reviewers for their thoughtful and constructive comments as well as Anke Tresch and her team for the discussion before the survey.

ORCID

Patrick R erat  <http://orcid.org/0000-0001-6980-3336>

References

- Aldred, R. (2010). ‘On the outside’: Constructing cycling citizenship. *Social & Cultural Geography*, 11(1), 35–52. <https://doi.org/10.1080/14649360903414593>
- Baehler, D., & R erat, P. (2020). Between ecological convictions and practical considerations – profiles and motivations of residents in car-free housing developments in Germany and Switzerland. *Geographica Helvetica*, 75(2), 169–181. <https://doi.org/10.5194/gh-75-169-2020>

- Balkmar, D., & Summerton, J. (2017). Contested mobilities: Politics, strategies and visions in Swedish bicycle activism. *Applied Mobilities*, 2(2), 151–165. <https://doi.org/10.1080/23800127.2017.1293910>
- Böhm, S., Jones, C., Land, C., & Paterson, M. (Eds.). (2006). *Against automobility*. Blackwell.
- Castillo-Manzano, J. I., & Sánchez-Braza, A. (2013). Can anyone hate the bicycle? The hunt for an optimal local transportation policy to encourage bicycle usage. *Environmental Politics*, 22(6), 1010–1028. <https://doi.org/10.1080/09644016.2012.740936>
- Christiansen, P. (2020). The effects of transportation priority congruence for political legitimacy. *Transportation Research Part A: Policy and Practice*, 132, 61–76. <https://doi.org/10.1016/j.tra.2019.11.005>
- Eurostat. (2020). *Eurostat regional yearbook* Publications Office. <https://doi.org/10.2785/98733>
- Ferster, C., Laberee, K., Nelson, T., Thigpen, C., Simeone, M., & Winters, M. (2021). From advocacy to acceptance: Social media discussions of protected bike lane installations. *Urban Studies*, (5), 941–958. <https://doi.org/10.1177/0042098020938252>
- FORS. (2020). *VOTO studies: Standardized post-vote surveys, 2016–2020 [Dataset]*. FORS. forsbase.unil.ch.
- Furness, Z. M. (2010). *One less car: Bicycling and the politics of automobility*. Temple University Press.
- Garrard, J., Handy, S., & Dill, J. (2012). Women and cycling. In J. Pucher & R. Buehler (Eds.), *City cycling* (pp. 211–234). MIT Press.
- Goodyear, S. (2014). Why bike lovers should be happy about ‘bikelash’. *Bloomberg CityLab*. <https://www.bloomberg.com/news/articles/2014-09-15/why-bike-lovers-should-be-happy-about-bikelash>
- Hansla, A., Hysing, E., Nilsson, A., & Martinsson, J. (2017). Explaining voting behavior in the Gothenburg congestion tax referendum. *Transport Policy*, 53, 98–106. <https://doi.org/10.1016/j.tranpol.2016.10.003>
- Henderson, J. (2013). *Street fight: The politics of mobility in San Francisco*. University of Massachusetts Press.
- Henderson, J., & Gulrud, N. M. (2019). *Street fights in Copenhagen: Bicycle and car politics in a green mobility city*. Routledge.
- Hoffmann, M. L. (2016). *Bike lanes are white lanes: Bicycle advocacy and urban planning*. University of Nebraska Press.
- Ibsen, M. E., & Olesen, K. (2018). Bicycle urbanism as a competitive advantage in the neoliberal age: The case of bicycle promotion in Portland. *International Planning Studies*, 23(2), 210–224. <https://doi.org/10.1080/13563475.2017.1402675>
- Iyengar, S., & Kinder, D. R. (2010). *News that matters: Television and American opinion* (Updated ed.). University of Chicago Press.
- Koglin, T., & Rye, T. (2014). The marginalisation of bicycling in Modernist urban transport planning. *Journal of Transport & Health*, 1(4), 214–222. <https://doi.org/10.1016/j.jth.2014.09.006>
- Kriesi, H., & Trechsel, A. H. (2008). *The politics of Switzerland: Continuity and change in a consensus democracy*. Cambridge University Press. <https://doi.org/10.1017/CBO9780511790676>
- Krizek, K. J., Barnes, G., & Thompson, K. (2009). Analyzing the effect of bicycle facilities on commute mode share over time. *Journal of Urban Planning and Development*, 135(2), 66–73. [https://doi.org/10.1061/\(ASCE\)0733-9488\(2009\)135:2\(66\)](https://doi.org/10.1061/(ASCE)0733-9488(2009)135:2(66))
- Linder, W., & Mueller, S. (2017). *Schweizerische Demokratie: Institutionen-Prozesse-Perspektiven* (4., vollständig überarbeitete und aktualisierte Auflage). Haupt Verlag.
- Manville, M., & Cummins, B. (2015). Why do voters support public transportation? Public choices and private behavior. *Transportation*, 42(2), 303–332. <https://doi.org/10.1007/s11116-014-9545-2>
- Manville, M., & Levine, A. S. (2018). What motivates public support for public transit? *Transportation Research Part A: Policy and Practice*, 118, 567–580. <https://doi.org/10.1016/j.tra.2018.10.001>
- Mattioli, G., Roberts, C., Steinberger, J. K., & Brown, A. (2020). The political economy of car dependence: A systems of provision approach. *Energy Research & Social Science*, 66, 101486. <https://doi.org/10.1016/j.erss.2020.101486>
- Newman, P., & Thornley, A. (1996). *Urban planning in Europe: International competition, national systems and planning projects*. Routledge.
- Nilsson, A., von Borgstede, C., & Biel, A. (2004). Willingness to accept climate change strategies: The effect of values and norms. *Journal of Environmental Psychology*, 24(3), 267–277. <https://doi.org/10.1016/j.jenvp.2004.06.002>
- OFS & ARE. (2017). *Comportement de la population en matière de transports: Résultats de microrecensement mobilité et transports 2015* (Office fédéral de la statistique et Office fédéral du développement territorial). OFS.
- Palm, M., & Handy, S. (2018). Sustainable transportation at the ballot box: A disaggregate analysis of the relative importance of user travel mode, attitudes and self-interest. *Transportation*, 45(1), 121–141. <https://doi.org/10.1007/s11116-016-9728-0>
- Rérat, P. (2021a). *Cycling to work. An analysis of the practice of utility cycling*. Springer Nature.
- Rérat, P. (2021b). The rise of the e-bike: Towards an extension of the practice of cycling? *Mobilities*, 16(3), 423–439. <https://doi.org/10.1080/17450101.2021.1897236>
- Sherriff, G. (2015). Voting on sustainable transport: Communication and governance challenges in Greater Manchester’s ‘congestion charge’ referendum. *Local Environment*, 20(12), 1507–1530. <https://doi.org/10.1080/13549839.2014.911267>
- Siemiatycki, M., Smith, M., & Walks, A. (2016). The politics of bicycle lane implementation: The case of Vancouver’s Burrard Street Bridge. *International Journal of Sustainable Transportation*, 10(3), 225–235. <https://doi.org/10.1080/15568318.2014.890767>
- Stehlin, J. (2015). Cycles of investment: Bicycle infrastructure, gentrification, and the restructuring of the San Francisco Bay Area. *Environment and Planning A: Economy and Space*, 47(1), 121–137. <https://doi.org/10.1068/a130098p>
- Tamedia. (2018). *Tamedia Abstimmungsfrage. Eidgenössische Volksabstimmung vom 23. September 2018*. Tamedia.
- Tapp, A., Davis, A., Nancarrow, C., & Jones, S. (2016). Great Britain adults’ opinions on cycling: Implications for policy. *Transportation Research Part A: Policy and Practice*, 89, 14–28. <https://doi.org/10.1016/j.tra.2016.05.001>
- Tresch, A., Bernhard, L., Lauener, L., & Scaperrotta, L. (2018). *Enquête VOTO relative à la votation populaire fédérale du 23 septembre 2018*. FORS/ZDA/LINK.
- Urry, J. (2004). The ‘system’ of automobility. *Theory, Culture & Society*, 21(4–5), 25–39. <https://doi.org/10.1177/0263276404046059>
- Vigar, G. (2017). The four knowledges of transport planning: Enacting a more communicative, trans-disciplinary policy and decision-making. *Transport Policy*, 58, 39–45. <https://doi.org/10.1016/j.tranpol.2017.04.013>
- Walks, A. (2015a). Driving the vote? Automobility, ideology, and political partisanship. In *The urban political economy and ecology of automobility* (pp. 199–220). Routledge.
- Walks, A. (Ed.). (2015b). *Urban political economy and ecology of automobility: Driving cities, driving inequality, driving politics*. Routledge.
- Walks, A. (2015c). Stopping the ‘War on the car’: Neoliberalism, Fordism, and the politics of automobility in Toronto. *Mobilities*, 10(3), 402–422. <https://doi.org/10.1080/17450101.2014.880563>
- Wild, K., Woodward, A., Field, A., & Macmillan, A. (2018). Beyond ‘bikelash’: Engaging with community opposition to cycle lanes. *Mobilities*, 13(4), 505–519. <https://doi.org/10.1080/17450101.2017.1408950>
- Wilson, A., & Mitra, R. (2020). Implementing cycling infrastructure in a politicized space: Lessons from Toronto, Canada. *Journal of Transport Geography*, 86, 102760. <https://doi.org/10.1016/j.jtrangeo.2020.102760>