Unveiling public sentiment
Analyzing commenter feedback on the Zurich E-Bike City research project

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Author(s):
Elliot, Catherine; Wicki, Michael (ID); Axhausen, Kay W. (ID)

Title
Unveiling Public Sentiment: Analyzing Commenter Feedback on the Zürich E-Bike City Research Project

Authors
Dr. Catherine Elliot (ETH Zurich)
Dr. Michael Wicki (ETH Zurich)
Prof. Kay Axhausen (ETH Zurich)

Abstract

This study explored public perceptions of an online newspaper article about transitioning Zurich to an E-Bike City (EBC). We employed an inductive qualitative content and thematic analysis of 361 relevant comments posted by 225 contributors.

All comments were separated into 969 individual statements which were then coded by the sentiments in each statement as well as general directions towards EBC (391 neutral, 356 positive, and 222 negative). Prominent themes included funding, street space allocation, safety, impacts on tradespeople, access issues and infrastructure. Pearson's correlations found significant clusters among these key themes, 1.) ETH Zurich researchers being commended and also critiqued for the study concept, 2.) accessibility, tradespeople, people with limited mobility, elderly, and deliveries; 3.) cyclist behavior, following road rules and pedestrians; and 4.) weather, bicycle and new ways of thinking.

The research unveils community concerns, expectations, and recommendations, offering insights for policymakers and urban planners. The findings emphasize the need for transparent communication regarding EBC financing, safety-focused road space reallocation, and considerations for tradespeople, the elderly, and those with mobility issues. Addressing these key points in future communications is vital to aligning strategies with public sentiment on sustainable urban transportation initiatives which would need voter support in future referendums.

Introduction

In recent years, urban centers worldwide have faced escalating challenges related to automobile traffic congestion, air and noise pollution, Greenhouse gas emissions, and limited mobility options (Pojani & Stead, 2017). In response to these escalating urban challenges of individual motorized travel, cities are increasingly turning to innovative transportation solutions to adapt to climate change and enhance urban air quality (Morrison et al., 2004; Yassin, 2019). Urban areas, which contribute to over 70% of greenhouse gas emissions (Internationale Energieagentur, 2012), are at the forefront of this transformation. Together, passenger cars and vans were responsible for 19% of the EU's total emissions of carbon dioxide gas emissions in 2020 (The European Environment Agency, 2024) and this remains a critical area for intervention as global urban populations are projected to rise from 55% in 2018 to 68% in 2050 (World Urbanization Prospects, 2018).

To address these issues, major cities globally are being compelled to reimagine their transportation frameworks drastically, aligning with the Paris Agreement's emissions reduction goals (Levels, 2020). In Switzerland, the idea to transition towards an E-Bike City encapsulates this shift. This approach explores the viability of reallocating urban street space to favor bikes and micromobility over private motorized vehicles, promising significant environmental sustainability, transportation justice, and public health improvements (Axhausen, 2023; Ballo et al., 2022).

This study delves into how an E-Bike-City might win public acceptance, crucial for successful policy implementation. It investigates the impact of information provision, policy design, and road space allocation on public opinion, reflecting on longitudinal survey data that includes responses to varying policy scenarios (Wicki & Kaufmann, 2023). This investigation here is vital for understanding the dynamic interaction between policy measures and public perceptions, which can profoundly influence the success of transformative urban mobility policies.

Existing research

Understanding public acceptance is fundamental for implementing transformative urban mobility policies, such as the E-Bike City (EBC) project in Zurich. As cities strive to reduce greenhouse gas emissions and enhance urban quality of life, the success of such policies hinges significantly on their acceptance by the local population (Schuitema, Steg, & Forward, 2010). Public acceptance is influenced by perceived personal and societal benefits, perceived fairness of the policy, and its alignment with individual values and beliefs.

In the context of the EBC project, challenges such as changing longstanding habits, reallocating road space, and managing public reactions to increased micromobility infrastructure are prominent. Research indicates that involving community members in the planning processes and providing clear, targeted information about the benefits—such as improved air quality and reduced traffic congestion—can significantly enhance public support (Allen, Gaunt, & Rye, 2006; Eliasson & Jonsson, 2011). Moreover, policies designed to be fair and equitable are crucial in addressing the diverse needs of urban populations, thereby enhancing their acceptability (Taeihagh, 2017).

Effective policy design, including thoughtful road space allocation and the integration of e-bikes into the public transport (PT) network, is critical and also highly depends on public opinion. The EBC project's approach in Zurich provides a case study on managing public perception through strategic information dissemination and engaging stakeholders in dialogue to foster a supportive environment for policy implementation (Wicki & Kaufmann, 2023). Information provision plays a pivotal role in shaping public opinion, where detailed and accurate portrayals of the project's impacts can help mitigate skepticism and build trust.

The literature underscores the importance of aligning public opinion with policy goals to ensure the effectiveness of urban mobility transformations. The dynamic interaction between policy measures and public perceptions, explored through surveys and public feedback mechanisms, provides critical insights that can guide the adjustment and refinement of policy strategies (Stadelmann-Steffen, 2011; Bolderdijk et al., 2017). Understanding these perceptions helps in designing policies that are not only technically sound but also widely accepted by the public and effective in achieving their intended outcomes.

Overall, the literature emphasizes the significance of public acceptance in successful urban mobility policy implementation, highlighting how perceptions and public sentiment directly influence the viability and effectiveness of initiatives like the EBC. Assessing public opinion from online newspaper comments on articles related to urban mobility and EBC projects provides valuable, real-time insight into community sentiments and concerns. This method allows policymakers and researchers to capture a broad spectrum of views, including spontaneous public reactions that might not be as readily apparent through structured surveys or formal consultations. Analyzing these comments can identify prevalent themes, misconceptions, and areas of resistance, which are crucial for adjusting policy designs, enhancing communication strategies, and ensuring that the initiatives align with the public's expectations and values. Such an approach not only helps in fine-tuning the policy to increase its acceptance but also serves as a barometer for public readiness and areas requiring more focused educational outreach.

Background

EBC is a 3-year collaborative research project with 9 sub-projects addressing transport challenges in the urban context of Zurich, Switzerland (Axhausen, 2023; Ballo et al., 2022). In Swiss cities and their surrounding urban areas (agglomerations), approximately two-thirds of all journeys are less than 6 kilometers in distance and ~45% of the total distance traveled during these short trips is currently by car (Bundesamt für Statistik, 2023). People who live short distances from their work hold great potential to shift out of their private cars and onto bicycles, particularly during their commuting trips (Bundesamt für Umwelt, 2023; Meyer de Freitas & Axhausen, 2022). Those living in hilly locations or further away from their destinations can gain motorized assistance offered by e-bikes (assistance up to 25kph) and speed pedelecs (assistance up to 45kph), showing a further propensity of replacing car trips in city agglomerations (6-16km), thus saving CO_2 emissions in comparison to driving (Meyer de Freitas & Axhausen, 2022; Philips et al., 2022). Moreover, combining PT with bicycles and e-bikes shows a promising path to sustainable rural-urban mobility (Kager et al., 2016; Kosmidis & Müller-Eie, 2024) for many living 15+kms from their workplace.

Changes to the city street design can be perceived as inconsistent with people's everyday lives as it can impact the traffic flow of transportation, parking availability, health, safety, accessibility, noise and air pollution exposure, aesthetics and greenery, economic impact (real estate value, attracting customers), and changes in wayfinding (esp. with one-way roads). Changes to street design, even simple ones, can provoke diverse reactions from the community, ranging from support to resistance. Public engagement and communication are, therefore, crucial to address concerns and garner acceptance, particularly if change proposals are viewed as radical, too far from current practices and would also require majority approval.

Reallocating public street space at the fundamental level as proposed by EBC requires the Swiss public to be informed through a consultation process before any major infrastructure changes. Moreover, certain laws would likely need to be challenged to reduce the amount of space allowed for parked and moving automobiles as current law protects the space they have been allotted on the road. For example, article 104, paragraph 2 of the Zurich Cantonal Constitution states that "The canton shall ensure an efficient state road network for private motorized private motorized traffic. Any reduction in the capacity of individual sections shall at least be compensated for in the surrounding road network." ["Der Kanton sorgt für ein leistungsfähiges Staatsstrassennetz für den motorisierten Privatverkehr. Eine Verminderung der Leistungsfähigkeit einzelner Abschnitte ist im umliegenden Strassennetz mindestens auszugleichen."] (Office for Mobility, 2021). As a result, we believe the public deserves the right to be aware of the EBC evidence-based vision, and the research that supports it. EBC researchers are therefore open to discussing their research with journalists in general media outlets as they are presented in a more accessible format for the public than journal articles. Peer-reviewed academic journals publishing EBC-related research require transportation expertise to understand so most ideas thus, are not written for to general public readership. Nevertheless, research institutions like ETH Zurich can advocate for evidence-based solutions to complex problems while highlighting issues that require attention, challenging prevailing norms, and researching possible changes in society for the greater good.

EBC researchers aim to illustrate EBC projects in an accessible way for the public whose lives may be impacted by the results, should they be implemented by the city of Zurich and the smaller surrounding cities (agglomerations). To improve public accessibility of our research, a dedicated EBC webpage has been created in English and German (www.ebikecity.ch) which contains Illustrations of all 9 subprojects, an animated explainer video, as well as maps and street images of Zurich streets now versus after an EBC transition. EBC research findings, therefore, are important to disseminate to the public in news and media outlets, for example, so that voters can have a sound understanding of difficult ideas in advance of voting.

One of the largest and most influential Swiss newspapers, Tages-Anzeiger, is published daily in German in Zurich, Switzerland. The article titled, "A city full of one-way streets and right of way for bicycles" ("Eine Stadt voller Einbahnstrassen und Vortritt fürs Velo") was published on 2 December 2023 and has attracted 435 unsolicited comments from readers in its online format (Malte Aeberli, 2023). The article highlighted the scope of the EBC project and provided visuals for the public to better understand what an EBC might look like in Zurich. This paper reviews the online comments from the newspaper article and aims to examine the paradox that lies within the qualitative comments to understand the travel behavior and attitude discourse during the initial launch of EBC in the public sphere. These comments help unveil public sentiment about the general acceptability of an EBC reorganisation versus the current status quo and they help us direct future communications to the public.

The research questions addressed are:
(i) What are the major themes and subthemes that emerge from the comments on the EBC article?
(ii) What is the frequency of positive, neutral, and negative comments towards EBC, and its major themes and subthemes?
(iii) What is the frequency of comments which support something, are against something or question something and what are their major themes and subthemes?

Methodology
A comprehensive thematic analysis was conducted on 432 comments from 225 unique messages. Employing an inductive approach, comments were systematically coded according to an established protocol (Braun & Clarke, 2006) for themes and sentiments, illuminating the diverse array of perspectives and concerns expressed by readers. Google Translate was used to directly translate all comments from German to English. When necessary, the "Klett Kleines Fachwoerterbuch Verkehrswesen" (German-English Transport dictionary) was used for clarification on technical transportation words and phrases. After this translation process, an English check was made by a native speaker of both English and Swiss German to check translations were accurate and grammatically correct. A total of 111 comments were eliminated as they were seen as not directly contributing to the topic of EBC. Typically, these were comments made in reply to others and were used for clarification between commenters. For example, two people engaged in a technical debate about the braking distance for bikes versus trams which was deemed unrelated. Since many comments were particularly long and contained several themes, we copied all of the remaining 321 comments individually into Chat GTP to transform them into paraphrased summaries. The command given to Chat GTP was, "Summarize these comments into individual points based on each themes or idea mentioned and indicate if the comments are for, against or neutral towards cycling and the EBC project: [comment was then inserted]." For example, a single 160-word comment was separated into 9 individual summarized paraphrases by Chat GTP. Each paraphrase was checked by the researcher and or clarified where necessary. Each phrase was then coded as positive, negative, or neutral towards biking or EBC and also coded inductively based on any other emerging themes with an unlimited number of codes possible for each paraphrased comment.

In total, 969 individual paraphrased comments were coded. Comments were individually marked into an excel sheet and themes were added as they emerged. In total, 151 specific themes emerged however those were then condensed into 91 more general themes. For example, several specific themes fit better into one larger general theme. For example, *bike, cyclist, cycling, cyclist behavior, bike path, cargo bike, bike trailer, bike parking,* and *bike-friendly* were all regrouped into one major theme called *bike/cyclist*. Since E-Bike City is the name of the project and unique comments were made in distinctly different ways about bikes versus e-bikes, the theme *e-bike* was kept separate from *bike*. The same grouping process followed for *motor vehicle/driver* with terms such as *driving, car, motorized vehicle* and *car driver behavior*.

Analysis

The content analysis unearthed a rich tapestry of themes and sentiments embedded within the public discourse surrounding the EBC initiative. As seen in Table 1, *bikes* were the most common themes, and most frequently mentioned with *EBC*, then *PT, motor vehicle, city/urban/Zurich, pedestrian, safety, and separate modes on streets*. *Motor vehicles* were often mentioned with *traffic/congestion, city/urban/ Zurich,* then *PT*. *Money/finance* was most frequently mentioned with *motor vehicles* then with *EBC*. *Pedestrians* were also mentioned with *EBC, PT*, and *safety. Vehicles* were also mentioned with *traffic congestion* and *city/urban/ Zurich*. Among the less frequent, but still relevant themes, *bikes* were mentioned with *weather/snow/rain, infrastructure, rules/regulations, e-bike/rider*, and *pleasant/enjoyable*. Also, *tradespeople* were mentioned with *motor vehicles, statistics or comparative information,* and *community/people/neighborhood*. *EBC* was also mentioned with *pleasant/enjoyable, researcher/science, comments EBC*, and *execute EBC. City/urban/Zurich* was mentioned with *motor vehicle, EBC*, and *community/neighborhood*.

Concerning the directional sentiment of the comments, there were 400 neutral comments, 354 positive comments towards bikes/biking/EBC, and 228 negative comments (Table 2). The most frequent positive comments related to *bikes* (115) and *EBC* (113), followed by *motor vehicle* (62), *pleasant/enjoyable* (45), and *city/urban/Zurich*(42). The most frequent negative comments related to *bikes* (62), *EBC* (39), *unrealistic/complicated* (38), *motor vehicle* (36), and *money/funding* (21). The most frequent neutral comments related to *bikes* (107), *motor vehicle* (92), *city/urban/Zurich* (57), and *PT* (56).

Considering the sub-themes, the overall sentiment was that offering more bike infrastructure as proposed in EBC would lead to more enjoyable and safer biking and e-biking for more people due to separation from vehicles and this would reduce our impact on the climate. Considering negative sub-themes, the overall sentiment was that EBC was an unrealistic/complicated/misleading and expensive project planned by researchers which is not inclusive for everyone, especially tradespeople and those with mobility issues who need vehicles and parking. Moreover, EBC was thought to cause more traffic congestion for cars, e-bikes were considered unsafe as they are too fast and don't follow road regulations, and biking in rain and snow is unrealistic for most people. Considering neutral sub-themes, the overall sentiment was also about including all people in the EBC plan, specifically tradespeople, those with mobility issues, and those who cannot ride a bike. The neutral comments also mentioned separating modes in the limited given street space, with alternative options/examples mentioned, particularly around improving pedestrian infrastructure and PT efficiently.

As the coding process commenced. There were a notable number of comments which specifically mentioned being in support of, against, or questioning something. Supportive comments were made regarding *bikes* (29), *EBC* (16), *PT* (13), and *motor vehicles* (12) (Table 3). Many of the supportive comments included a comparison to other cities where cycling infrastructure has impact bicycle ridership. There were comments specifically against the themes of *bikes* (28), *EBC* (22), and *motor vehicles* (21). The themes that were being questioned were *bikes* (13), *EBC* (7), and *EBC being unrealistic/complicated* (6). Overall, the themes of *bikes* and *EBC* had a nearly equal mix of comments in support of (29 and 16, respectively) and against (28, 22), with some questioning the themes as well (13, 7).

Among the minor themes, *funding*, *street space allocation*, *safety*, *tradespeople*, *equity for those who cannot ride a bike*, *bad weather*, and *infrastructure* emerged as prominent focal points, offering valuable insights into the multifaceted nature of public opinion. Sentiments ranged from enthusiastic support for cycling infrastructure suggested by EBC to apprehension and outright opposition about the practicality and feasibility of the EBC project.

Results and Discussion

The analysis of comments revealed a spectrum of viewpoints towards Zurich's EBC initiative. Some individuals, several who self-identified as *cyclists,* expressed fervent support for reallocating street space to accommodate more cycling infrastructure. Others voiced reservations regarding accessibility for those unable to bike, safety, parking, and the broader implications of such changes like where will tradespeople park and will more one-way roads increase car traffic and emissions. Additionally, varying attitudes towards cycling and entrenched transportation norms underscored the complexity of public sentiment and the challenges of effecting behavioral change.

The thematic analysis of public comments regarding the EBC initiative has provided insights into the complex interplay between community engagement and transportation policy development. Since most people are street users, no matter the mode they choose, they will have had experiences which could make them feel a sense of expertise to make comments on issues with a sense of authority. The problem is that these opinions often stem from emotions felt during an experience (i.e., feeling threatened or fearful after an unsafe situation with another mode). As a result, there tends to be polarization in people's experiences based on which modes they have had experience with and this can lead to emotionally loaded comments and can lead to *bikelash* in the media. Alternatively, EBC reallocates street space based on science which models how people use the road and what is needed to reduce emissions for the future. The comments reveal a spectrum of opinions that highlight both the enthusiasm for enhanced micromobility infrastructure and significant concerns about the practical aspects of such transformative urban changes. This duality underscores the need for policymakers and urban planners to not only promote the benefits of EBC for all people, their health and enjoyment, but also to actively address and mitigate concerns that may hinder public acceptance and participation.

The various and diverse responses emphasize the criticality of inclusivity in transportation planning. As Zurich works towards redefining its urban mobility, integrating feedback from all community segments—including those who are skeptical or resistant to change—is essential. This inclusive approach helps ensure that the transition to an EBC is inclusive. Moreover, by addressing the practical concerns raised, such as accessibility, safety, and the impact on access to cars when needed, the city can develop more refined strategies that align with the lived experiences and needs of its residents.

The findings also highlight the pivotal role of strategic communication in bridging the gap between policy intentions and public perceptions. Clear, consistent, and transparent communication can significantly enhance public understanding and acceptance of the EBC initiative. Informing the public about the environmental, health, and communal benefits of reduced car reliance, coupled with detailed explanations of how potential disruptions will be managed, can foster greater trust and cooperation between the city authorities and the community.

Additionally, this research into Zurich's street redesign provides critical lessons for other urban centers considering similar shifts towards sustainable mobility. The varied public reactions captured in the comments section of the Tages-Anzeiger article serve as a case study for the challenges and successes urban planners will face. Future research should focus on comparative analysis across different cities to identify common barriers and facilitators of public acceptance, enhancing the generalizability and applicability of the EBC model.

This research not only reinforces the importance of community-centered approaches in urban transportation planning but also provides a roadmap for effectively managing public perception and engagement. As cities worldwide strive to meet climate goals and improve urban livability, the lessons learned from Zurich's EBC initiative offer valuable insights for navigating the social dimensions of sustainable transportation policies. By continuing to prioritize dialogue and

transparency, urban planners can cultivate more resilient and adaptive urban environments that reflect the values and needs of their diverse populations.

Conclusion

As cities worldwide confront the escalating climate crisis, the imperative to overhaul transportation systems and pivot towards sustainability becomes increasingly urgent. The analysis of public perceptions of Zurich's EBC initiative, as discussed in the preceding sections, offers critical insights for policymakers and urban planners grappling with these challenges. These insights are particularly valuable as they reflect a broad spectrum of public sentiment, from enthusiastic support to cautious skepticism, illustrating the complex landscape of urban mobility transformation.

This research emphasizes the importance of aligning public engagement strategies with policy development to ensure the success of transportation initiatives aimed at reducing emissions and enhancing urban livability. By integrating community feedback into the planning and implementation phases, Zurich can not only refine its approach to developing an EBC but also foster greater public buy-in and participation. This is essential, as public acceptance is often a determinant of a policy's success or failure.

Moreover, the findings from Zurich's case study underscore the need for strategic communication and inclusive policy design, as discussed in the literature (Taeihagh, 2017; Eliasson & Jonsson, 2011). Transparently addressing public concerns and communicating the benefits of the EBC can mitigate resistance and enhance the perceived legitimacy and fairness of the initiative. This approach not only aids in overcoming initial public resistance but also supports long-term sustainability and policy resilience.

In conclusion, as Zurich and other global cities navigate the complexities of 21st-century transportation planning amidst climate change, the insights derived from public opinions on initiatives like the EBC are invaluable. They provide a roadmap for engaging communities effectively, designing policies that are both equitable and effective, and ultimately paving the way towards a more sustainable, equitable, and livable urban future. Understanding and responding to public sentiment, as highlighted through this study, is paramount to the successful implementation of transformative transportation initiatives that are crucial for meeting the environmental challenges of our time.

Table 1
Frequencies of 10 MAJOR THEMES and 28 sub themes by 10 MAJOR THEMES.

	Bike	Vehicle	EBC	City	PT	Money	Sep. Mode	Traffic	Ped	Safety	Total
BIKE/BIKE RIDER (Bike)	-	40	58	32	41	10	19	17	28	23	**284**
MOTOR VEHICLE/DRIVER (Vehicle)	40	-	11	28	19	16	14	33	6	3	**190**
E-BIKE CITY (EBC)	58	11	-	11	8	13	10	8	10	6	**181**
CITY/URBAN/ZURICH/CITY (City)	32	28	11	-	8	7	5	8	4	3	**116**
PUBLIC TRANSPORT (PT)	41	19	8	8	-	4	5	6	10	2	**108**
MONEY/FUNDING (Money)	10	16	13	7	4	-	0	2	1	1	**72**
SEPARATE MODES ON STREETS (Sep. Mode)	19	14	10	5	5	0	-	7	4	7	**68**
TRAFFIC/CONGESTION (Traffic)	17	33	8	8	6	2	7	-	4	4	**64**
PEDESTRIAN (Ped)	28	6	10	4	10	1	4	4	-	8	**50**
SAFETY	23	3	6	3	2	1	7	4	8	-	**49**
Tradesperson/services	6	16	8	4	6	5	2	2	0	0	**47**
Pleasant/enjoyable	15	2	18	4	3	1	2	2	0	1	**46**
Research(ers)/science	4	3	13	1	0	4	1	3	1	0	**44**
Infrastructure	21	0	11	3	2	3	6	1	6	5	**43**
Unrealistic/complicated/misleading	2	1	11	3	1	2	0	1	2	0	**43**
Community/people/neighborhood	6	11	4	11	0	4	2	0	1	1	**42**
E-bike/e-bike rider	15	4	5	6	1	0	0	2	4	6	**38**
Weather/snow/rain	22	4	1	1	6	0	0	1	1	1	**36**
Environment/climate/sustainability	4	9	7	7	2	0	0	4	0	1	**34**
Mobility impairment/cannot bike	10	3	1	2	6	0	0	0	0	0	**32**
Urban transport planning/city design	5	4	2	2	2	3	4	4	2	3	**29**
Rules/regulations/restrictions/policy	15	7	4	2	0	1	4	1	1	1	**28**
Inclusive/minorities	4	2	5	3	1	0	3	0	1	0	**28**
Politics/politicians	3	1	4	3	3	1	0	0	0	0	**27**
Execute EBC/test it	2	0	12	0	0	3	0	0	0	0	**26**
Statistics/data/comparative info	7	12	1	7	0	0	1	7	1	0	**25**
Age	6	3	3	2	4	0	0	1	1	1	**25**
Mobility/transport/traveling	3	2	5	6	0	0	3	0	2	0	**25**
Time	4	6	1	2	6	3	2	3	0	0	**24**
Accessibility	1	5	2	1	4	0	2	1	2	2	**23**
Comments EBC study	0	0	12	0	0	0	0	0	0	0	**23**
Need critical thinking/think differently	4	3	0	2	0	1	0	0	0	0	**22**
Reiterates something in article	4	9	2	2	1	1	3	2	1	1	**22**
Agglomeration/Rural	3	7	0	5	4	0	0	2	0	0	**22**
Shop/businesses/events/venues	3	3	4	3	2	3	1	0	0	0	**22**
(In)efficiency/(in)convenience	2	3	3	0	5	2	4	1	0	1	**21**
Deliveries	6	6	2	1	4	1	0	1	0	0	**20**
Future	2	3	5	2	0	0	3	1	0	0	**20**

Note: Only subthemes with 20 or more comments are presented. Totals express the frequency of each theme including those which are not presented in the table.

Table 2

Frequencies and percentages of 10 MAJOR THEMES and 28 sub themes by comment direction (neutral, positive, and negative).

	Neutral		Positive		Negative		Total
	Freq	%	Freq	%	Freq	%	**Freq**
BIKE/BIKE RIDER	107	38	115	40	62	22	**284**
MOTOR VEHICLE/DRIVER	92	48	62	33	36	19	**190**
E-BIKE CITY	29	16	113	62	39	22	**181**
CITY/URBAN/ZURICH	57	49	42	36	17	15	**116**
PUBLIC TRANSPORT	56	52	30	28	22	20	**108**
MONEY/FUNDING	33	46	18	25	21	29	**72**
SEPARATE MODES ON STREETS	28	41	30	44	10	15	**68**
TRAFFIC/CONGESTION	27	42	25	39	12	19	**64**
PEDESTRIAN	21	42	18	36	11	22	**50**
SAFETY	21	43	20	41	8	16	**49**
Tradesperson/services	19	40	12	26	16	34	**47**
Pleasant/enjoyable	1	2	45	98	0	0	**46**
Research(ers)/science	14	32	18	41	12	27	**44**
Infrastructure	16	37	23	53	4	9	**43**
Unrealistic/complicated/misleading	5	12	0	0	38	88	**43**
Community/people/neighborhood	18	44	17	41	7	17	**42**
E-bike/e-bike rider	7	18	20	53	11	29	**38**
Weather/snow/rain	13	36	6	17	17	47	**36**
Environment/climate/sustainability	8	24	17	50	9	26	**34**
Mobility impairment/cannot bike	18	56	7	22	7	22	**32**
Urban transport planning/city design	17	59	9	31	3	10	**29**
Rules/regulations/restrictions/policy	14	50	8	29	6	21	**28**
Inclusive/minorities	13	46	4	14	11	39	**28**
Politics/politicians	16	59	5	19	6	22	**27**
Execute EBC/test it	5	19	21	81	0	0	**26**
Statistics/data/comparative information	12	48	7	28	6	24	**25**
Age	16	64	4	16	5	20	**25**
Time	9	38	5	21	10	42	**24**
Accessibility	7	30	14	61	2	9	**23**
Commends EBC study	1	4	22	96	0	0	**23**
Mobility/transport/traveling	14	61	7	30	4	17	**23**
Need critical thinking/think differently	22	96	1	4	0	0	**23**
Reiterates something in article	6	27	15	68	1	5	**22**
Agglomeration/Rural	18	82	0	0	4	18	**22**
Shop/businesses/events/venues	13	59	2	9	7	32	**22**
(In)efficiency/(in)convenience	6	29	7	33	8	38	**21**
Deliveries	10	50	4	20	6	30	**20**
Future	6	30	13	65	1	5	**20**

Note: Only subthemes with 20 or more comments are presented. Totals express the frequency of each theme including those which are not presented in the table.

Table 3

Frequencies and percentages of 10 MAJOR THEMES and 28 sub themes by comment type (support, against, questions something).

	Support		Against		Questions		Total
	Freq.	%	Freq.	%	Freq.	%	Freq
BIKE/BIKE RIDER	**29**	41	**28**	40	**13**	19	70
E-BIKE CITY	**16**	36	**22**	49	**7**	16	45
MOTOR VEHICLE/DRIVER	12	33	**21**	58	3	8	36
PUBLIC TRANSPORT	**13**	52	10	40	2	8	25
CITY/URBAN/ZURICH	11	50	9	41	2	9	22
SEPARATE MODES ON STREETS	11	65	4	24	2	12	17
UNREALISTIC/COMPLICATED	0	0	11	65	**6**	35	17
PEDESTRIAN	4	25	10	63	2	13	16
TRADESPERSON/SERVICES	5	31	6	38	5	31	16
E-BIKE/E-BIKE RIDER	8	53	3	20	4	27	15
Money/funding	3	23	8	62	2	15	13
Traffic/congestion	5	45	3	27	3	27	11
Infrastructure	8	73	3	27	0	0	11
Safety	6	60	1	10	3	30	10
Research(ers)/science	4	40	2	20	4	40	10
Rules/regulations/restrictions/policy	6	60	3	30	1	10	10
Inclusive/minorities	6	60	2	20	2	20	10
Community/people/neighborhood	2	25	4	50	2	25	8
(In)efficiency/(in)convenience	3	38	2	25	3	38	8
Environment/climate/sustainability	2	29	4	57	1	14	7
Execute EBC/test it	6	100	0	0	0	0	6
Age	2	33	2	33	2	33	6
Time	2	33	3	50	1	17	6
Accessibility	4	67	2	33	0	0	6
Mobility/transport/traveling	4	67	1	17	1	17	6
Deliveries	1	17	2	33	3	50	6
Mobility impairment/cannot bike	3	50	0	0	3	50	6
Urban transport planning/city design	2	40	3	60	0	0	5
Weather/snow/rain	1	25	1	25	2	50	4
Future	3	75	1	25	0	0	4
Statistics/data/comparative information	0	0	1	25	3	75	4
Politics/politicians	1	33	2	67	0	0	3
Shop/businesses/events/venues	0	0	1	33	2	67	3
Need critical thinking/think differently	3	100	0	0	0	0	3
Commends EBC study	2	100	0	0	0	0	2
Agglomeration/Rural	1	50	1	50	0	0	2
Reiterates something in article	0	0	1	100	0	0	1
Total	189	42	177	39	84	19	450

Note: Only subthemes with 20 or more comments are presented. Totals, frequencies, and percentages only express the numbers presented in the table.

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