applied sciences

MDPI

Article

Mobility Patterns of Students: Evidence from Tricity Area, Poland

Agnieszka Szmelter-Jarosz * and Michał Suchanek

Faculty of Economics, University of Gdańsk, Armii Krajowej 119/121, 81-824 Sopot, Poland; michal.suchanek@ug.edu.pl

* Correspondence: a.szmelter@ug.edu.pl

Abstract: Generational change is one of the vital socioeconomic forces affecting the global economic environment. In many studies, the youngest generations are presented as the ones changing the market trends. This can also be observed in areas of travel demand and mobility patterns. However, research on those topics in many countries, for many societies, is scarce. This study aimed to examine the travel behavior of Polish young adults, namely students living in the Tricity area. Factor analysis and ANOVA were used to analyze the data gathered via an online survey assessing the characteristics of mobility patterns of students born between 1981 and 1999. Factor analysis allowed grouping the attitudes towards traveling among those young adults (Y Generation, Y's, Y Gen). Three factors were identified, and they were associated with luxury and self-expression, freedom and comfort, safety and environmental friendliness. The driver's characteristics were the least consistent with the classic image of typical Y's, and those using the active commute—the most. In turn, the largest group were people using public transport, which partially presented convergent opinions with drivers and users of the active commute. It turned out that the car drivers, active commuters and respondents utilizing public transport differed not only in their behavior and presentation of Y Gen characteristics but also in their attitude towards categories such as comfort, desire for luxury, economy or ecology. This study is a complex analysis of the mobility patterns of students in the Tricity area. It presents the set of variables influencing the travel demand of the chosen age group. The study also compares the presented travel choices with those declared by representatives of other nations. Finally, it indicates the next research problems to be addressed in future research.

Keywords: mobility choices; active transport; sustainable mobility; urban transport; Y Generation; travel behavior; travel demand; millennials

Citation: Szmelter-Jarosz, A.; Suchanek, M. Mobility Patterns of Students: Evidence from Tricity Area, Poland. *Appl. Sci.* **2021**, *11*, 522. https://doi.org/10.3390/app11020522

Received: 15 November 2020
Accepted: 4 January 2021
Published: 7 January 2021

1. Introduction

A group of various socioeconomic trends, including the generational transition, causes changes in the global economic environment. According to Strauss-Howe generational theory [1], there are recurring generational cycles, which change the priorities of societies in various world regions. The differences in this matter also relate to mobility patterns, which are a result of those changing priorities but are also forces in the social and physical environment [2–4].

In the literature, both the Y Generation and mobility patterns are called in many different ways, which causes ambiguities in defining the state-of-the-art in the discussed topic. Mobility patterns are described as mobility choices [5], travel choices [6], travel demand [7–9]. In the identified literature, the Y Generation is called "tech-savvy consumers" [6,10], "millennials" or "millennial generation" [11–14], "next-generation" [3], "digital generation" or "digital natives" [15], "generation of flip-flops and iPods" [14,16], "Internet aboriginals" [17], "click generation" and "echo boomers" [14]. This study combines all of the available approaches, unifies and organizes them to build a coherent picture of the generation as a basis for further analysis.

According to Howe and Strauss (1991), the millennials (Y's, Y Gens) are open, optimistic, rational, cooperative team players and rule followers. In comparison with the older generations, Y's are more positive, less, e.g., focused on environmental issues and believing in collective power. On the other hand, they have elevated expectations and want to have everything they desire [18]. They are not attached to money or property [19,20]. Those are the reasons for the quick adaptation of the sharing economy services within this group. Y Generation will probably play a predominant role in the global market in the next years [21] because of their growing purchasing power. Due to their specific attitudes and behavior, they constitute an interesting object of mobility research, especially in urban areas [22,23].

Despite the wide range of research papers and market analyses on mobility patterns or choices, the research in those areas was scarce for Poland, including Tricity. Therefore, this study can partially fill this gap and present the topic from a different perspective, starting a scientific discussion and be a paper for further analysis and a basis for comparisons with subsequent studies. Moreover, it can help the policymakers verify their policies and tools for monitoring the travels of young people and addressing their needs. However, we leave it for judgment to the readers of the article.

Therefore, the main aim of the paper is to examine the mobility patterns of Polish young adults, to be more specific—students in the Tricity area, taking into consideration their choices of the transport mode (car, public transport, active transport). To address this problem, we designed a survey questionnaire based on literature review results and implemented the statistical analysis to expand the survey results. This approach allowed us to identify the main characteristics of mobility patterns. This study, in turn, is aimed at being a base for the subsequent studies.

The paper is structured as follows: First, the literature review results are presented to describe the state-of-the-art being a basis for the online survey carried out in the Tricity area in November and December 2018. The review results justified the design of the questionnaire. The next part presents the methods used to gather and analyze the data. The results section explores mobility patterns of the surveyed Polish students, taking into account, e.g., gender differences and a range of reasons, priorities and choices of young adults. The next part contains a discussion and comparison of our study and those presented in the literature review. The last section concludes the paper, presents its limitations and indicates the future research directions and plans.

2. Literature Review

2.1. Method

The literature review section was prepared with the use of the approach of Tranfield, Denyer and Smart [24], a systematic review of literature sources for socioeconomic research to identify the characteristics of the travel behavior of representatives of the Polish Y Generation (people born between 1981 and 1999). The Boolean logic and Buldeo Rai et al. approach [25] were used to search the sources in one round and refine them (see Table 1). The literature review allowed for the identification of the characteristics of the Y Generation's mobility patterns and thus—was the basis for constructing the survey questionnaire (see Section 3.1). Finally, 10 of 12 initially indicated search engines and 34 of 58 papers were included in the literature review.

Table 1. The process of literature database creation (27–28.11.2018).

Search Criteria	Publication Search Engine										
	DOAJ	EBSCOhost	EMERALD	Infona	SAGE	SCOPUS	Science Direct	Springer	Wiley	WoS	Google Scholar
After search *	1	14	1	3	3	2	14	1	6	4	20
After removing duplicates	58										
After abstracts verification	48										
After text analysis	34										

* "y generation" or "millennial*" and "mobility" (in title or abstract) and "car" (in the text); publication year: 2009 and later, English language, only full-text records.

During the procedure, some literature sources were eliminated because of non-compatibility, with the main aim of this study. In the case of others, research results were only partially included in the review. Those were related to analyzing the mobility of the Z generation (people born after 2000) [2], mobility-as-a-service [26], only for single young adults [27], but mostly to work mobility [14,28] tourism [15,17,18,29–32].

2.2. Results

Examining cohort-specific mobility patterns is a popular area of research. They are related to the general characteristics of lifestyle and vary over time, so usually, every ten years, new research results can be offered to verify the previous mobility trends for the particular generations. The lifestyle of people is also changing—they live longer, are healthier, better educated, and that is why they report demand for specific mobility services than the ones indicated for people over 50 years old and people younger than 30 years old [10]. Hopkins [33] stated the mobility of young adults is still under-researched. Delbosc and Nakanishi think the opposite—that there is an explosion for examining the millennial generation's travel behavior in the last few years [34]. The research toolkit used for this research is very rich and based on different fields of knowledge. In the defined literature, researchers used the theory of planned behavior [35–37], social cognitive theory [38,39], energy cultures framework approach [11,33], and socioecological models described by Sigurdardottir et al. [22] to explain the mobility choices of young adults. A popular method in the e-mobility area was life cycle assessment [40].

Most of the generational mobility studies were made with use of surveys [41,42], interviews [33,43], travel diaries [44] and observations [42,45]. This way, the primary data can be obtained directly from the respondents and voices of different groups of customers become known. Especially interview is treated not as a stand-alone method, but usually supplementary to surveys or observations [46]. Lately, using the data from IT providers whose applications are installed on mobile devices [47] is a very popular source of data.

Similarly, methods for data analysis can be divided into a few parts. The widest group of methods concern the multicriteria methods like best-worst method (BWM) [48], PROMETHEE (Preference Ranking Organisation METHod for Enrichment Evaluations) [49], ELECTRE (Elimination Et Choin Traduisant la Realite) [50], DEMATEL (DEcision MAking Trial and Evaluation Laboratory) [51], AHP (Analytical Hierarchy Process), ANP (Analytic Network Process) [50], fuzzy methods [52] and many others. The methods other than multicriteria ones usually cover a large number of statistical analysis approaches like cluster analysis [53], nonparametric tests [54], ANOVA (Analysis of Variance) [55], factor analysis [56]. There is also a wide range of studies using qualitative methods [43,57,58].

Mobility patterns change over the life course. The number of vehicle kilometers traveled (VKT) is peaking at the age of 30–39 and is then decreasing. In general, women aged 18–30 are significantly more mobile than their men counterparts [59]. They are more likely to choose active transport modes and public transport [60]. In the older cohorts, the gender gap is still visible. Therefore, low mobility applies to young men. According to Tilley and Houston [59], when women are in a relationship, their mobility decreases. On the other hand, an important factor in this aspect is raising children—women having at least one child are making more and shorter trips than non-mothers. Another direction of research is taking into consideration the matter of residential choices [61] because, in many societies, Y's choose dense urban areas [10,20,62] to live in and have access to many facilities they need [6,16,37,63]. However, it also depends on their life course stage [62]—having children causes changing the residential choice for suburban areas (because of lower real estate prices).

Special attention in examining the mobility patterns should be paid to the power of habits, including imitating family members and friends. In this field, habits were analyzed in the literature regarding mobility [64] as a whole and micromobility (e.g., cycling, skateboarding) [65]. Haustein et al. argued that habits are, together with social and personal norms, the most significant variables creating mobility patterns [66]. They

influence the mobility behavior, opinions and attitudes of an individual. In this regard, they define habits as follows: "theory of habit is that people do what they do not only because they intend to or feel morally obliged to do it but also because they successfully did it before in similar situations." [66] A very similar approach to defining habit is presented by Tsafarakis et al. [64].

Why is the Y Generation (Y Gen) so specific and needs to be verified separately in the area of mobility? First of all, the Y Gen is perceived and—according to the empirical research—defined as less likely to learn to drive [12,43,63], to own cars (more willing to share a car than buy one) and to drive, in the same time being sustainable and focused on reducing greenhouse gas emissions [9,11]. According to the research of Circella et al. Y Gens compared with the X Generation, are two times more likely to ride a bike, three times more likely to use Uber or Lyft and five times more likely to take a work or school shuttle [10], but still, those are not big numbers—3.5% Y's would like to ride a bike, 1.2% to use sharing economy solutions and 3.9% would use a shuttle [63]. The full literature review until 2014 was made by Hopkins and Stephenson [11] and indicated those characteristics valid for USA, Canada, UK, Sweden, Norway, South Korea, Japan, Australia, Switzerland, Spain and Netherlands. A very detailed description of the available research results about Y Gen mobility was also made by Circella et al. [63].

Another characteristic of the Y Generation's mobility is a high tendency to use many modes of transport (multimodality). This trend is developing because of the undisturbed access to real-time information about timetables by using mobile applications [67–69]. However, the young couples with children still prefer car mobility, so the growing importance of multimodality and so-called soft modes occurs for young adults without children, both single and in a relationship [9]. Car-oriented mobility is peaking when child-bearing and declining into retirement [34]. The mobility biographies (mobility behavior related to the stage of the life course) would also be helpful to create the transport market offer, especially sharing economy services [70,71]. What is more, having children pushes young people towards car-oriented mobility patterns, and later, when they are older, they keep having the same priorities and habits in the mobility area [34]. Changing mobility over the life course became a popular direction of research.

The analysis of mobility patterns concerns the following stages over the life course: leaving home, completing the education, entering the workforce, getting married (or being in a long-term relationship), having children, leaving home by children and retirement [29,34,66,72–75]. Apart from the last two mentioned phases, all the others may concern the Y Gen representatives. However, their life course changes very fast (they leave home, then after a few years get married, after some time they decide to have children, etc.). Therefore, dividing the Y Gen mobility studies into smaller age groups is fully justified. Different mobility patterns can be observed for teenagers [73], the middle Y's [7] and the oldest ones [63].

All those explanations of reasons for changes in mobility patterns of young people must include local and national context, also in the cultural and regional dimension. Different results were obtained for Germany [9,53,66,70], United Kingdom [7,59,67], Netherlands [4], Belgium [60], Denmark [22,61], Finland [20], Spain [37], Greece [73], Australia [12,34], New Zealand [33] than for Canada [27,62,69], USA [6,10,16,63,68,72,74–76], Ghana [29] and other countries in combined research [21,77].

3. Research Method

3.1. Survey Method

The aim of the survey was to examine the mobility patterns of Polish young adults, but also compare their attitudes to those identified in the literature, mainly presenting the patterns of the same cohort in other countries. At the time of carrying out the survey, there were no data about mobility patterns for Polish society—no national travel survey was made for this country.

The survey had 23 questions about general opinions and attitudes of Ys (to verify if they present similar general characteristics to Ys in other societies) and current transport choices. Many researchers agree that it is the attitude towards the car, not its ownership, which is the most significant aspect of transport attitudes in general. A car, in this sense, is not only a means of transport but an artifact of a generation (mostly for Baby Boomers), an object defining or even enhancing social status [78–80]. Residuals of this attitude are still visible, and the goal of the study was to verify the intensity of this attitude and verify if it affects the current transport decisions. This is why these attitudes were collected in regards to the car and not other means of transport and a car was a point of interest of many questions.

The questionnaire was divided into survey items about general opinions and behaviors, transport behavior and demographical items. It was based on a couple of papers (for some—on available questionnaires, for some—only research results tables) [4,9,11,43,77,81] and contained closed (dominating), open and semi-open questions, 5 or 10-point scale questions, disjunctive and conjunctive questions regarding attitudes, behaviors and opinions. Although the 5-point scale is accepted and widely used in research, a 10-point Likert scale was required for measuring the opinions of respondents. Using the end-defined wide scale is justified in urban studies by Cummin and Gullone [82] and was accepted as a reliable source for statistical analysis [83]. It is more sensitive to differences in opinions or behaviors of different respondents and possible to be turned into a 5-point scale if needed.

Filtering questions aimed to define groups of young adults with particular attitudes and choices. To validate and verify the proposed questionnaire, a pilot study was carried out among students born in 1997 (42 students). Then, the questionnaire was corrected according to the pilot group's comments. Those improvements included clarification of three questions: about the characteristics of the Y Generation, about the characteristics of car and place of living. Some of the sentences and statements in the primary questionnaire in those questions were not perceived by pilot group members as easy to understand. After amendments and validation, the URL link of the survey was made available for potential respondents, young adults studying at universities in the Tricity area.

The mentioned participants group was recruited with the use of a purposive strategy [84,85] based on the inclusion criteria that the participant should be born between 1981 and 1999, be a Polish citizen and a student of a university located in the Tricity area. Because usually, the return ratio is very low, to increase the number of participants and database needed to verify the research hypotheses, a snowball sampling method [86,87], a nonprobability approach was applied. The URL link was shared on social media to increase the probability of reaching more respondents. According to Polish data for territorial units, the population of students in 2018 in the Tricity area was 78,120 people, including 45,393 women (58.11%) and 32,727 men (41.89%) [88].

Finally, 306 people took part in the survey; 304 filled questionnaires were valid for further analysis. The collected research sample is similar to the population in terms of gender, personal status and age structure. In addition, due to the very nature of the sampling method, the occupancy is in line with the overall assumed population. Aggregated details for the research sample are presented in Table 2. It lasted an average of 13.8 min with a median value of 14.2 min and ranging from 9 to 43 min.

The authors were aware that reaching a random sample group was difficult to implement in such kind of study. However, the structure of respondents in the survey is similar to that of the population (61.84% women, 38.15% men). Even if research results cannot be extrapolated to the entire population, they provide essential information on the transport preferences of young adults in the studied area.

Table 2. The research sample.

Category	Result
Year of birth	1981–1989 10.85%; 1990–1999 89.15%
Sex	Female 61.84%; male 38.15%
Personal status	Single 41.12%; in a relationship 52.30%; married 6.58%
Place of residence	City 500,000 persons or more 18.09%; city 200,000–500,000 persons 37.83%; city 100,000–200,000 persons 7.24%; city, 50,000–100,000 persons 9.21%; city less than 50,000 persons 17.43%; countryside, suburban zone 6.25%; countryside 3.95%
Housing status	Own flat/house (without mortgage) 6.25%, own flat/house (mortgage) 4.60%, flat/house owned by family 34.87%, rented flat 48.02%, dormitory 6.25%
Household size	One person 6.91%; Two persons 40.13%; Three, four or five persons 49.01%; more than 53.95%
Kids in the household (0–16 years old)	Yes 10.2%; no 89.8%
Monthly income per person	500 PLN or less 3.95%; 500–1000 PLN 11.18%; 1000–1500 PLN 19.73%; 1500–2000 PLN 22.70%; 2000–3000 PLN 19.41%; 3000–5000 PLN 16.45%; more than 5000 6.58%
Driving license	Yes 88.81%; no, but intend to do 7.24%; no, no intention to do 3.95%
Main commute mode	Car 36.84%, public transport 54.28%, active commute 8.88%

3.2. Data Analysis

The respondents were asked to declare whether they agree or disagree with several general statements defining Generation Y [3–5,11,16,21,31,33,43,70]. These statements are presented in Table 3, along with a percentage of respondents agreeing with them. All of the following data analysis was carried out using Dell Statistica 13 software.

Table 3. The Generation Y characteristics.

Statement	Percentage of Respondents
Work is not only a duty; it should give pleasure	78.76%
I often send texts, emails and messages on social networks	75.16%
I am open to people of other races and nationalities	74.18%
I like learning new things; I must not do the same thing all my life	72.55%
I regularly text someone over a longer time, e.g., half an hour	72.22%
Flexible hours and my personal life are important for me	71.90%
My goal is to make so much money that I can buy anything I want	69.28%
I want to achieve a work-life balance	66.01%
I am often in a rush, and I want to have things right away	65.69%
I would rather consult important decisions than make them on my own	65.36%
I do not like being imposed on anything	65.36%
I believe I do not need to have everything in life	62.42%
I want to have constant access to information channels	57.52%
I do not always follow rules	56.86%
I do not want to start a family just now	51.63%
I care about my appearance a lot	45.42%
I am online almost all the time	43.14%
I am familiar with most new technologies	36.27%
I believe divorces are necessary. There is nothing wrong with people getting divorced	34.97%
I prefer freedom and flexibility in life over a safe, but boring job	34.64%
I can multitask; e.g., I could technically drive a car and use Facebook at the same time	34.64%
I think I am unique	28.76%
I lose motivation quickly	28.43%
I often question authority	24.18%
I make money so as to spend it. I do not like putting money saving money	18.63%
I think older generations, e.g., my parents, do not understand the modern world	14.71%
Having fun is more important to me than work	13.40%
I would rather call someone on messenger than meet face-to-face	6.21%

Most of the respondents agree with the statements considered as specific for Ys, especially the ones connected with being open to other people, being online, caring about flexibility and looking for pleasure in professional career and work as well as in everyday life. The statements, which seemed to raise the most controversy, were the ones about

preferring to call someone instead of meeting them face-to-face and the ones on thinking older generations do not understand the world and fun is a priority in life. Based on the analysis of reliability (Cronbach's alpha = 0.73), the answers were summed up, and an indicator of the intensity of Y Gen characteristic attitudes was calculated (Y Gen) by summing up the responses to the questions. This was carried out as a regular sum; no weighing was applied. The higher the value of the indicator, the more in line someone is with Y Gen characteristics. The average value of the indicator was 23.66, with a standard deviation of 5.41. The Shapiro–Wilk test had a p-value of 0.18, proving a normal distribution of the indicator.

The respondents were asked to declare how much attention they pay to different values connected with traveling. As mentioned before, the responses were measured on a Likert scale from 1 to 10. Then, factor analysis was applied to identify the latent beliefs behind these 11 statements. Table 4 shows the results of the factor analysis, in which three significant factors were identified, which explained 69% of the total variability. Varimax rotation was applied, factor loadings higher than 0.60 are bolded.

Table 4. Values attributed to travel.

Variable	Factor 1	Factor 2	Factor 3
Taking care of the environment	−0.17	−0.11	**0.80**
Unlimited mobility	−0.27	**−0.81**	−0.03
Travel comfort	−0.49	**−0.67**	−0.01
High-quality of living	**−0.73**	−0.18	−0.30
Luxurious life	**−0.84**	0.00	−0.27
Entertainment	**−0.82**	0.01	0.07
Recreation	**−0.80**	−0.03	0.21
Self realization	**−0.73**	0.13	0.27
Seeking new impressions	**−0.80**	0.26	0.12
Being original	**−0.76**	0.35	0.03
Presenting own wealth	**−0.72**	0.21	−0.31

The first factor clearly groups together the feelings connected not with the travel itself but with experiencing way life in a specific way. This factor represents the strive for luxury, new impressions and entertainment. The second factor represents the desire to travel in a comfortable and flexible way, as proven by high factor loadings for the variables representing unlimited mobility and travel comfort. The last factor, clearly separate from the first two, represents the feeling of necessity to take care of the environment.

Afterward, the respondents were asked to declare what features of a car are the most important to them. They were asked to declare to what extent they agree with the importance of the features on a Likert scale from 1 to 10. A factor analysis was applied to find out if these qualities can be grouped. Table 5 shows the results of the factor analysis in which three factors were identified, explaining 67% of the total variability. Varimax rotation was applied; factor loadings above 0.60 are highlighted.

Table 5. Features important in a car.

Variable	Factor 1	Factor 2	Factor 3
Environmental friendliness	−0.11	−0.02	**0.81**
Low use cost	−0.11	**0.81**	0.17
Low purchase cost	0.00	**0.80**	−0.10
Durability	0.25	**0.76**	0.22
Comfort	0.57	0.34	0.44
Safety	0.29	0.35	**0.68**
Speed	**0.71**	0.20	−0.11
Luxury	**0.83**	−0.03	0.05
Entertainment	**0.70**	0.02	0.05
Functionality	0.54	0.40	0.27
Brand	**0.73**	−0.11	0.05

The factors are distinctly separate from each other. The first factor groups together the features associated with a luxurious car, which is also fast and provides entertainment, which is often associated with specific car brands. Comfort and functionality also have relatively high factor loadings here. The second factor represents the user's desire for the car to be as economical and sturdy as possible, as proven by high factor loadings for low use and purchase cost as well as durability. The last factor groups together the desires for the car to be safe and "green".

4. Results

An analysis of variance (ANOVA) was performed to look for differences in the Generation Y characteristics between the groups of users of different commute modes. As shown in Figure 1, the differences in the intensity of Y's attitudes are reflected very visibly by choice of the commute mode. The figure presents the average values of the Y Gen variable (the intensity of the Generation Y characteristics in a given respondent) depending on the dominant mode of transport used by that person. The car drivers agree the least with the statements, followed by the users of the public transport, while active commuters agree the most with the Y's attitudes. The post hoc analysis revealed that all the differences are statistically significant. The p-value for Levene's test was 0.87, proving that the variances are homogenous.

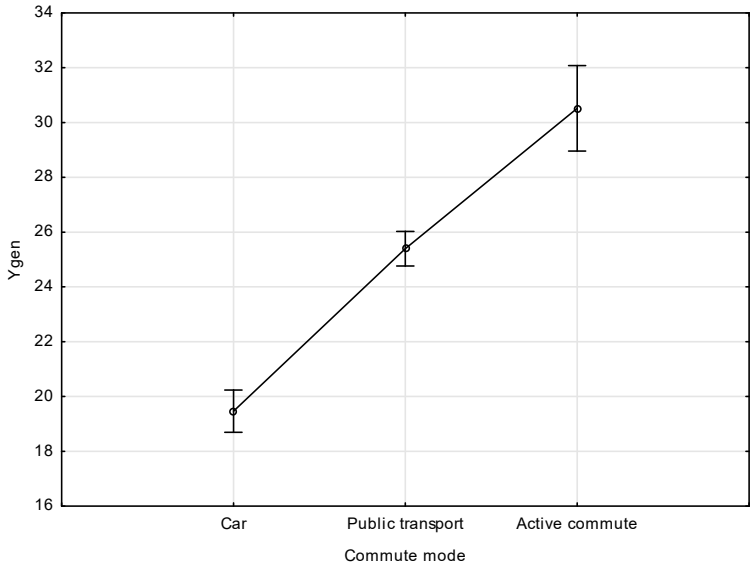

Figure 1. Differences in Generation Y characteristics between users of different commute modes.

Afterward, a multivariate analysis of variance was applied to verify the differences in the intensity of the three latent factors representing different values connected with traveling. The dependent variables were the three factors previously identified, and the categorical variable was the commute mode of choice. The results of the analysis are shown in Figure 2. The graph presents how the respondents agree with the three factors representing different travel-related values: quality and entertainment (V_Fac_1), comfort and unlimited mobility (V_Fac_2), as well as environmental friendliness (V_Fac_3). The Wilks Lambda was equal to 0.94, resulting in a p-value of 0.001, meaning that there are statistically significant differences between the users of different commute modes when it comes to the travel-related values treated as a whole. Specifically, the post hoc analysis revealed there are differences in the second factor representing the importance of travel comfort and flexibility. Interestingly enough, active commuters are characterized by much higher values of that factor than the people traveling by car or using public transport, meaning they value comfort and flexibility the most.

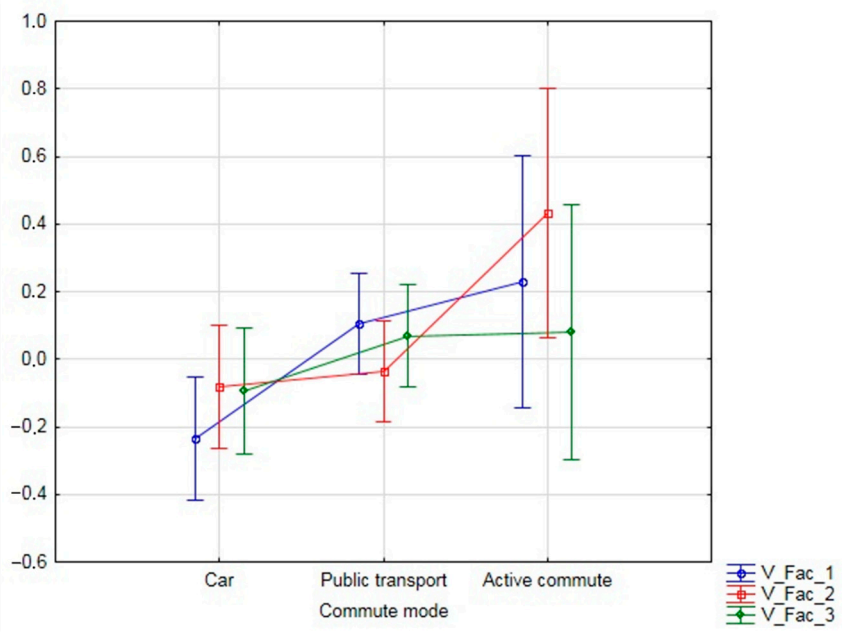

Figure 2. Differences in travel-related values between users of different commute modes.

There were no significant differences in the values of the two remaining factors. Despite the differences in the covariance matrices proven by the M Box test, the means and standard deviations are not collinear, which allows treating the results as statistically valid.

Lastly, the multivariate analysis of variance was applied to verify if the respondents differ in the attitude towards the importance of different car features depending on their primary commute mode. The three factors identified in regards to the car features were treated as the dependent variables, with the main commute mode being the categorical variable. The results are presented in Figure 3.

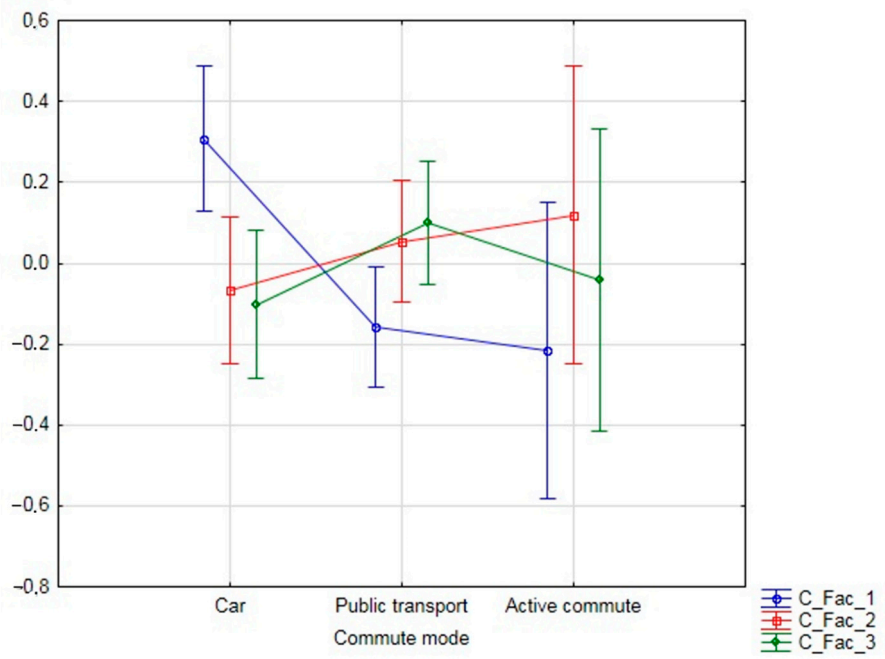

Figure 3. Differences in important car features between users of different commute modes.

The graph shows which characteristics of the car are most important to the users of the three main commute modes. The values are represented by three factors, grouping the

values together. The first factor shows the desire for the car to be luxurious and entertaining (C_Fac_1), the second one shows the economical values—the car's reliability and low use cost (C_Fac_2), while the third factor shows the car's greenness and safety. There are statistically significant differences between the value attributed to the different types of car features depending on the main commute mode, as proven by a Wilks Lambda of 0.93 with a p-value of 0.002. The post hoc analysis revealed statistically significant differences in the values of the first factor representing the luxury and entertainment associated with driving a car. The respondents who actually drive a car as their transport mode of choice are characterized by much higher values of this factor, meaning that they attribute much higher values to the cars' luxurious features than the respondents who travel by public transport or prefer active transport modes. The Levene's test proved that the variances are homogenous (p-value = 0.65), and the M Box test proved that the covariance matrices are equivalent (p-value = 0.36), thus proving the statistical validity of the results.

Factor analysis has allowed grouping attitudes towards traveling among Y's. The first factor was associated with luxury and self-expression through the use of specific transport modes, which manifests itself in shaping the mobility pattern. The second is connected with freedom, flexibility and comfort. The last one presents ecological attitudes. In the case of analysis for one selected mode—car transport, it turned out that they are similar to some extent. The first factor was connected with luxury and entertainment, the second—with economic issues, asset efficiency, and the third—with safety and environmental friendliness. The driver's characteristics were the least consistent with the classic image of typical Y's, and those using the active commute (which were few)—the most. In turn, the largest group were people using public transport, which partially presented convergent opinions with drivers and users of an active commute.

5. Discussion

The research results allow comparing the attitudes and choices in the mobility area made by Polish students—young adults living in the Tricity area and people of the same age living in different countries. This comparison may also include the level of matching of these characteristics of the Polish Y Generation to the well-established description of this generation contained in the identified subject literature and literature on similar topics, oscillating around mobility, transport and general descriptions of the studied cohort.

This study partially confirmed the characteristics of the Y Generation, such as impatience, openness to other nations and races, willingness to achieve work-life balance (including flexible working hours) [53], being digital natives [15], consumerism and getting job satisfaction [55,89], willingness to learn new things [90], unwillingness to be forced to follow traditional schemes [59]. However, the respondents partially present features related to those that are attributed to the X Generation: high priority given to work, propensity to save, preferring face-to-face meetings instead of contacts in the virtual sphere, respect for older generations, consultation on important decisions instead of compulsive behaviors [8,10,62,77].

This testifies to the fact that the characteristics of the Polish Generation Y differ from the "classical" description presented in other societies, especially Western European [4,7,9,33,34,53,61,67,70,71,73]. Perhaps this is due to the country's political and economic past that still to this day affects the post-communist societies of Central and Eastern Europe, also affecting the generation that was born in the era of capitalism but influenced by parents who remember the times of socialism [91]. Unfortunately, no similar data for the same topic was available about the Y Generation in other countries with a history similar to Poland, so such comparisons are impossible to be made.

The active Polish commuters presented the attitudes most compatible with the characteristics of the Ys described in the literature for Canadian [62], Swedish [92], British [93], German [4,9] societies. They also presented a high level of environmental awareness, broadly described also by Schwarz [94] and Sigurdardottir et al. [22].

The main transport mode for the surveyed young adults is public transport, which is confirmed by other research to be very popular in Poland and for many years one of the highest levels in Europe [95–97]. In turn, in the USA, young adults, probably because of the strong commitment to car culture, usually drive alone (68.8%) or carpool (9.2%) [63], thus developing different, car-oriented mobility patterns [98]. This car culture was also observed in the UK [93], to some extent, in Germany [7] and Australia [99]. In the multi-country studies, the respondents declare willingness to buy or lease a car [21], but are also, in general, interested in shared economy solutions and non-car transport modes—public transport and active modes [55]. This, consequently, can lead to the conclusion that they have strong ecological attitudes. What is more, the Y Generation's travel demand is decreasing [8,9,62,75]. However, despite the growing ecological awareness, Y Generation is still attached to the car, and this will probably increase even more in the future when they start the next life stage (employment, having children) [59,70].

The respondents in the three subgroups (car drivers, public transport commuters and active commuters) presented significantly different opinions about comfort and unlimited mobility delivered by the primary means of transport. What was interesting, the active commuters were the group that rated this area higher than the remaining two respondent subgroups. However, surprisingly, they did not differ in the matter of environmental friendliness, and quality and entertainment, which again may lead to the compatibility of Polish students in the Tricity area with the main characteristics of the Y Generation presented in the literature and to a conclusion that they are focused on entertainment, new technologies, high-quality and eco-friendly solutions. Similar results were obtained by Heinen and Ogilvie [93] and Newbold and Scott [62].

This study shows that car drivers value the features accompanying the use of a car associated with luxury and convenience much more than other travelers. This confirms the conclusion identified in the literature that despite the growing ecological awareness, especially among young people [22,43,66,100], the car culture is still present [101], and the car is associated positively, being a determinant of lifestyle and social status [63,99]. Therefore, the "peak car" phenomenon, widely discussed in the literature and described as the saturation of the mobility market car-related transport and the decline in the popularity of this travel mode [16,18,102] is impossible to confirm in our study for young adults in the Tricity area. Maybe the youngest generations can change the approach to the car, grounded by the older cohorts. This should be verified in 20–30 years and probably will be related to the mobility habits they establish now (see Section 2.2).

Nevertheless, it should be noted that the majority of surveyed young Poles use other commute modes than cars, although the percentage of people with a driving license indicates that they can actively use the car in the future, including the on-demand sharing economy solutions. This can be true, especially since these people are at an early life-stage, they are usually not married, they do not have children, nor do they own a flat. These stages of life are ahead of them, and as the literature indicates, the usual attachment to the car grows with the elements that build the stage of starting a family. However, the environmental attitudes of young adults are so strong, and environmental awareness [78,103] so developed that perhaps this effect will be offset by the use of shared mobility and mobility-as-a-service [104,105]. Changes in mobility patterns will certainly be different, and attitudes presented by young adults—depending on other life choices (place of work, place of residence, number of children, etc.) [6]. Despite car attachment, these solutions allow sharing the assets and minimizing the negative impact of the car on the environment, air and health of residents [106], especially in urban areas.

The study confirmed and enhanced the previous research made by the authors presenting similar results about the eco-friendliness of car users, including car drivers [107]. As well, the real and potential use of the sharing economy solutions like Mobility-as-a-Service was presented by the surveyed group what is compatible with the results obtained, especially for the cohort born between 1991 and 1999 [107,108]. Generally, among the surveyed student group, similarly to more general Y Gen groups studied in previous studies, people

indicating car as the primary means of transport are less eco-friendly and flexible than the others, so they do not present a picture of a "typical Y" [107,109]. Similar to [109], respondents declared preferring the car to other means of transport, and that is why car-sharing is perceived as the right solution for young people. The power of habit is visible because young adults, to some extent, replicate the patterns from their parents. Therefore, the "car culture" still influences mobility among the Y Generation. However, their positive attitudes towards sharing transport means can cause big changes in mobility markets.

6. Conclusions

The Y Generation is perceived as more environment-friendly than previous cohorts, willing to use active travel modes and use many travel modes (are multimodal) and sharing economy or on-demand solutions by using mobile applications. On the other hand, they are less willing to get driving licenses or own a car. However, they still prefer a car as a transport means. Women are more willing to travel, but their mobility level decreases when being in a relationship and having children, which is an element of the stage of their life course.

This paper is one of a cycle of papers about mobility patterns in Poland. In the previous papers, authors focused on showing the environmental awareness and attitudes of Generation Y in the area of travel choices [107]. The authors made several works about similar topics to present, e.g., (but not limited to) car-related mobility patterns of this generation [108] or transport behavior in the Tricity area [106]. Those previous studies, together with the current one, are aimed at starting the scientific discussion on the topic of changing mobility patterns to implement sustainable urban mobility.

The results of the survey data analysis allowed for the detailed description of the complex research problem, which definitely is the character of mobility patterns of young Poles, students living in Tricity, being a part of the broadly described Y Generation. Despite many literature items addressing this issue, there was no comprehensive study about one or more societies in Central and Eastern Europe. Compilation of the research about cohort-specific mobility patterns is completely justified because the life stages of young people have constantly been changing. Consequently, this paper is one of the first about the mobility patterns of Polish young adults, more specifically, students from the Tricity area, using the above-mentioned research approach and scope of the research problem. It fills the existing literature gap and allows for the comparisons between mobility choices of people of the same age, living in similar cultural circles, but different countries and cities. The paper mentions similarities and differences between representatives of Tricity's Y Gen and those living in other countries and leads to the conclusion that some basic elements of Y Generation characteristics are the same for different nations, especially environmental consciousness.

The results described in the paper can serve a wide range of different urban logistics stakeholders to adjust their activities to the demand characteristics presented by Y Generation mobility in the Tricity area, but probably for the other Polish urban areas as well. The wider audience can use the paper to design their research and discuss the results. Among the stakeholders, the most important would be a local authority (or authorities) responsible for local transport policy, implementing sustainable urban mobility plans, monitoring the service providers on local mobility market, designing the environmental policy in the city, etc. [58] Moreover, public and private transport companies can verify their offer according to the needs of young adults. Of course, the presented results do not fully cover the topic of mobility patterns but provide essential data on demand as well as on the reasons for choosing a mode of transport or a particular service. A broader group of stakeholders who can benefit from this research also includes the broadly understood scientific and research community, residents and other city users [110]. This is important, especially because of very limited studies about this topic for Poland.

Despite the value of the results, this study has a few limitations. First, using non-random sampling in the survey makes the research results impossible to be presented

as valid for the whole population of young adults in the Tricity area and Y Generation in Poland as a whole. What is more, the paper presents the data only for a part of the Y Generation, namely only the students. However, it indicates possible results for the described cohort, so the next research on this topic is planned to be carried out. Second, the survey covered only the current mobility choices of the chosen group of people, not their future plans, which may turn out to be different from those presented by other generations. The comparison of the mobility choices in the Tricity area is impossible because in Poland there are no national travel surveys like in other countries—Denmark [22,61], USA [8,75], Germany and UK [7], Greece [111], Canada [27,62]. Nevertheless, despite the mentioned limitations, the described research results are promising, valuable (especially given the fact that they are ones of the first of such kind for Poland and Central and Eastern Europe) and provide many future research possibilities and can also serve as a basis for further studies. Therefore, the authors' future research plans are to be focused on studying the random samples of the Polish Y Generation and also the other cohorts.

There are some predictions that in 20 or 30 years, the Y Generation can present the same mobility patterns as the X Generation today because their life course will be similar [34]. This is the hypothesis to be tested by the research in the far future. In the study of Garikapati et al. [16], those differences were visible not for all mobility patterns but for non-motorized modes and public transport. Polzin et al. [112] proved that Y Generation presents different travel behavior than the preceding generations when being at the same age as Y's are now, and identified several factors such as residential location, race, employment and economic status, living arrangements, licensure status. In the subsequent studies, a more complex analysis will be made to compare the set of variables influencing the mobility patterns of young adults to sets presented in the literature [11,33]. In addition, the peak travel phenomenon is the next scientific problem to be tested. These research areas should and will be addressed in future research.

Author Contributions: Conceptualization, M.S. and A.S.-J.; methodology, M.S. and A.S.-J.; software, M.S.; validation, M.S. and A.S.-J.; formal analysis, M.S.; investigation, M.S. and A.S.-J.; resources, A.S.-J.; data curation, M.S.; writing—original draft preparation, M.S. and A.S.-J.; writing—review and editing, M.S. and A.S.-J.; visualization, M.S.; supervision, A.S.-J.; project administration, A.S.-J.; funding acquisition, M.S. and A.S.-J. All authors have read and agreed to the published version of the manuscript.

Funding: The APC was funded by University of Gdańsk.

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Not applicable.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. Strauss, W.; Howe, N. *Generations: The History of America's Future 1584 to 2069*; Harper Collins: Morrow, GA, USA, 1991.
2. Haveman, M.; Tillmann, V.; Stöppler, R.; Kvas, Š.; Monninger, D. Mobility and Public Transport Use Abilities of Children and Young Adults With Intellectual Disabilities: Results From the 3-Year Nordhorn Public Transportation Intervention Study. *J. Policy Pract. Intellect. Disabil.* **2013**, *10*, 289–299. [CrossRef]
3. Ralph, K.; Voulgaris, C.T.; Taylor, B.D.; Blumenberg, E.; Brown, A.E. Millennials, built form, and travel insights from a nationwide typology of U.S. neighborhoods. *J. Transp. Geogr.* **2016**, *57*, 218–226. [CrossRef]
4. Simons, D.; Clarys, P.; De Bourdeaudhuij, I.; de Geus, B.; Vandelanotte, C.; Deforche, B. Why do young adults choose different transport modes? A focus group study. *Transp. Policy* **2014**, *36*, 151–159. [CrossRef]
5. Berliner, A.; Circella, G.; Gudz, E.; Fulton, L. *Generation Y: Lifestyles and Mobility Choices of Millennials in California, and the Motivations behind Them*; Institute of Transportation Studies, University of California: Davis, CA, USA, 2015.
6. Circella, G.; Berliner, R.M.; Lee, Y.; Handy, S.L.; Alemi, F.; Tiedeman, K.; Fulton, L.; Mokhtarian, P.L. *The Multimodal Behavior of Millennials: Exploring Differences in Travel Choices between Young Adults and Gen Xers in California*; Institute of Transportation Studies, University of California: Davis, CA, USA, 2017.
7. Kuhnimhof, T.; Buehler, R.; Dargay, J. A New Generation. Travel Trends for Young Germans and Britons. *Transp. Res. Rec. J. Transp. Res. Board* **2011**, *2230*, 58–67. [CrossRef]
8. McDonald, N.C. Are millennials really the "go-Nowhere" Generation? *J. Am. Plan. Assoc.* **2015**, *81*, 90–103. [CrossRef]

9. Kuhnimhof, T.; Buehler, R.; Wirtz, M.; Kalinowska, D. Travel trends among young adults in Germany: Increasing multimodality and declining car use for men. *J. Transp. Geogr.* **2012**, *24*, 443–450. [CrossRef]
10. Berliner, R.M.; Aultman-Hall, L.; Circella, G. Exploring the Self-Reported Long-Distance Travel Frequency of Millennials and Generation X in California. *Transp. Res. Rec. J. Transp. Res. Board* **2018**, *2672*, 208–218. [CrossRef]
11. Hopkins, D.; Stephenson, J. Generation Y mobilities through the lens of energy cultures: A preliminary exploration of mobility cultures. *J. Transp. Geogr.* **2014**, *38*, 88–91. [CrossRef]
12. Wundersitz, L.; Bailey, T.; Raftery, S.; Baldock, M.; Smith, R. Are young adults' choice of travel mode changing? In Proceedings of the 2015 Australasian Road Safety Conference, Gold Coast, Australia, 14–16 October 2015; pp. 1–6.
13. Vukic, M.; Kuzmanovic, M.; Kostic Stankovic, M. Understanding the Heterogeneity of Generation Y's Preferences for Travelling: A Conjoint Analysis Approach. *Int. J. Tour. Res.* **2015**, *17*, 482–491. [CrossRef]
14. Stojanová, H.; Tomšík, P.; Tesařová, E. The Approach To the Work Mobility in Generation Y—Enthusiasm for Change—Enthusiasm for Change. *Hum. Resour. Manag. Ergon.* **2015**, *IX*, 83–96.
15. Dimova, L. Millennials' Travel Motivation and Desired Activities within a Destination: A Comparative Study of America and the United Kingdom. Ph.D. Thesis, Instituto Universitario de Lisboa, Lisboa, Portugal, 2015.
16. Garikapati, V.M.; Pendyala, R.M.; Morris, E.A.; Mokhtarian, P.L.; McDonald, N.C. Activity Patterns, Time Use, and Travel of Millennials: A Generation in Transition? *Transp. Rev.* **2016**, *36*, 558–584. [CrossRef]
17. Sziva, I.; Zoltay, R.A. How to catch the critical Generation?—The interests, and travel needs of Generation Y during cultural travels. In Proceedings of the TCL2016 Conference, Budapest, Hungary, 16–17 June 2016; pp. 554–564.
18. Raunio, J.M. *Understanding the Travel Behavior of Generation Y*; MID Sweden University: Sundsvall, Sweden, 2014.
19. Uba, C.D.; Chatzidakis, A. Understanding engagement and disengagement from pro-environmental behaviour: The role of neutralization and affirmation techniques in maintaining persistence in and desistance from car use. *Transp. Res. Part A Policy Pract.* **2016**, *94*, 278–294. [CrossRef]
20. Czepkiewicz, M.; Ottelin, J.; Ala-Mantila, S.; Heinonen, J.; Hasanzadeh, K.; Kyttä, M. Urban structural and socioeconomic effects on local, national and international travel patterns and greenhouse gas emissions of young adults. *J. Transp. Geogr.* **2018**, *68*, 130–141. [CrossRef]
21. Dewalska-Opitek, A. Transport System Telematics Generation Y Consumer preferences and mobility choices—An empirical approach. *Arch. Transp. Syst. Telemat.* **2017**, *10*, 17–23.
22. Sigurdardottir, S.B.; Møller, M.; Teasdale, T.W. Drivers of Sustainable Future Mobility: Understanding Young People's Travel Trends and the Mediating Factors of Individual Mobility Intentions. Ph.D. Thesis, DTU Transport, Kongens Lyngby, Denmark, 2013.
23. Fernandez-Heredia, A.; Fernandez-Sanchez, G. Processes of civic participation in the implementation of sustainable urban mobility systems. *Case Stud. Transp. Policy* **2019**. [CrossRef]
24. Tranfield, D.; Denyer, D.; Smart, P. A systematic review of literature on offshoring of value chain activities. *Br. J. Manag.* **2003**, *14*, 207–222. [CrossRef]
25. Buldeo Rai, H.; Verlinde, S.; Merckx, J.; Macharis, C. Crowd logistics: An opportunity for more sustainable urban freight transport? *Eur. Transp. Res. Rev.* **2017**, *9*, 1–13. [CrossRef]
26. Fan, Y.; Chen, Q.; Douma, F.; Liao, C.-F. *Smartphone-Based Travel Experience Sampling and Behavior Intervention among Young Adults*; University of Minnesota: Minneapolis, MN, USA, 2012.
27. Young, M.; Lachapelle, U. Transportation behaviours of the growing Canadian single-person households. *Transp. Policy* **2017**, *57*, 41–50. [CrossRef]
28. Kwok, H. Gender differences of the Generation y towards geographical mobility by work: Cases in family change. *Int. J. Humanit.* **2013**, *9*, 197–205. [CrossRef]
29. Porter, G.; Hampshire, K.; Abane, A.; Robson, E.; Munthali, A.; Mashiri, M.; Tanle, A. Moving young lives: Mobility, immobility and inter-generational tensions in urban Africa. *Geoforum* **2010**, *41*, 796–804. [CrossRef]
30. Yen, T.L. *A Study of Generation Y Travel Behaviour in Malaysia*; Universiti Teknologi Malaysia: Skudai, Malaysia, 2015.
31. Yusop, N.D.B.M.; Zin, M.A.A.B.M.; Kurniawan, I. Girinsah the Behavior Analysis Generation Y in Using Search Engine for. *Tour. Hosp. Essent. J.* **2015**, *V*, 911–920.
32. Faat, F.; Nasir, N.H.M.; Nor, N.M.S.M. Domestic travel behaviour among Generation Y. *J. Tour. Hosp. Culin. Arts* **2017**, *9*, 75–84.
33. Hopkins, D. Destabilising automobility? The emergent mobilities of generation Y. *Ambio* **2017**, *46*, 371–383. [CrossRef]
34. Delbosc, A.; Nakanishi, H. A life course perspective on the travel of Australian millennials. *Transp. Res. Part A Policy Pract.* **2017**, *104*, 319–336. [CrossRef]
35. Ajzen, I. The theory of planned behavior. *Organ. Behav. Hum. Decis. Process.* **1991**, *50*, 179–211. [CrossRef]
36. Ajzen, I. The theory of planned behaviour: Reactions and reflections. *Psychol. Health* **2011**, *26*, 1113–1127. [CrossRef]
37. Lopez-Carreiro, I.; Monzon, A. Evaluating cycling behaviour of Millennials in Vitoria-Gasteiz. *Transp. Res. Procedia. XIII Conf. Transp. Eng. CIT2018* **2018**, *33*, 171–178. [CrossRef]
38. Bandura, A. Human Agency in Social Cognitive Theory. *Am. Psychol.* **1989**. [CrossRef]
39. Bandura, A. Social cognitive theory. In *Handbook of Theories of Social Psychology: Volume 1*; SAGE Publications Ltd.: New York, NY, USA, 2012; ISBN 9781446249215.

40. Stamp, A.; Lang, D.J.; Wäger, P.A. Environmental impacts of a transition toward e-mobility: The present and future role of lithium carbonate production. *J. Clean. Prod.* **2012**, *23*, 104–112. [CrossRef]
41. Wittwer, R.; Hubrich, S. What Happens Beneath the Surface? Evidence and Insights into Changes in Urban Travel Behaviour in Germany. *Transp. Res. Procedia* **2016**, *14*, 4304–4313. [CrossRef]
42. Buliung, R.N.; Kanaroglou, P.S. Urban form and household activity-travel behavior. *Growth Chang.* **2006**. [CrossRef]
43. Hopkins, D. Can environmental awareness explain declining preference for car-based mobility amongst generation Y? A qualitative examination of learn to drive behaviours. *Transp. Res. Part A Policy Pract.* **2016**, *94*, 149–163. [CrossRef]
44. Kamruzzaman, M.; Hine, J. Participation index: A measure to identify rural transport disadvantage? *J. Transp. Geogr.* **2011**, *19*, 882–899. [CrossRef]
45. te Morsche, W.; La Paix Puello, L.; Geurs, K.T. Potential uptake of adaptive transport services: An exploration of service attributes and attitudes. *Transp. Policy* **2019**. [CrossRef]
46. World Bank. *Electric Mobility and Development*; World Bank: Washington, DC, USA, 2018.
47. Chan, J. *Using Google Data to Understand Canadian Movement Reductions during the COVID-19 Pandemic*; Social Science Research Network: Amsterdam, The Netherlands, 2020.
48. Moslem, S.; Campisi, T.; Szmelter-Jarosz, A.; Duleba, S.; Nahiduzzaman, K.M.; Tesoriere, G. Best–Worst Method for Modelling Mobility Choice after COVID-19: Evidence from Italy. *Sustainability* **2020**, *12*, 6824. [CrossRef]
49. Macharis, C.; Springael, J.; De Brucker, K.; Verbeke, A. PROMETHEE and AHP: The design of operational synergies in multicriteria analysis. Strengthening PROMETHEE with ideas of AHP. *Eur. J. Oper. Res.* **2020**, *153*, 307–317. [CrossRef]
50. Solecka, K. Electre III method in assessment of variants of integrated urban public transport system in Cracow. *Transp. Probl.* **2014**, *9*, 83–96.
51. Kijewska, K.; Torbacki, W.; Iwan, S. Application of AHP and DEMATEL methods in choosing and analysing the measures for the distribution of goods in Szczecin region. *Sustainability* **2018**, *10*, 2365. [CrossRef]
52. Vith, S.; Oberg, A.; Höllerer, M.A.; Meyer, R.E. Envisioning the 'Sharing City': Governance Strategies for the Sharing Economy. *J. Bus. Ethics* **2019**, *159*, 1023–1046. [CrossRef]
53. Wittwer, R. Cluster-analytical-creation of a Typology of Young Adults'Travel Behavior in Germany. *Procedia Soc. Behav. Sci.* **2014**, *160*, 64–73. [CrossRef]
54. Siren, A.; Haustein, S. Baby boomers' mobility patterns and preferences: What are the implications for future transport? *Transp. Policy* **2013**, *29*, 136–144. [CrossRef]
55. Haustein, S.; Nielsen, T.A.S. European mobility cultures: A survey-based cluster analysis across 28 European countries. *J. Transp. Geogr.* **2016**, *54*, 173–180. [CrossRef]
56. Julsrud, T.E.; Priya Uteng, T. Technopolis, shared resources or controlled mobility? A net-based Delphi-study to explore visions of future urban daily mobility in Norway. *Eur. J. Future Res.* **2015**, *3*, 10. [CrossRef]
57. Paddeu, D.; Parkhurst, G.; Fancello, G.; Fadda, P.; Ricci, M. Multi-Stakeholder Collaboration in Urban Freight Consolidation Schemes: Drivers and Barriers To Implementation. *Transport* **2018**, *33*, 913–929. [CrossRef]
58. Dubois, G.; Peeters, P.; Ceron, J.P.; Gössling, S. The future tourism mobility of the world population: Emission growth versus climate policy. *Transp. Res. Part A Policy Pract.* **2011**, *45*, 1031–1042. [CrossRef]
59. Tilley, S.; Houston, D. The gender turnaround: Young women now travelling more than young men. *J. Transp. Geogr.* **2016**, *54*, 349–358. [CrossRef]
60. Simons, D.; De Bourdeaudhuij, I.; Clarys, P.; de Geus, B.; Vandelanotte, C.; Van Cauwenberg, J.; Deforche, B. Choice of transport mode in emerging adulthood: Differences between secondary school students, studying young adults and working young adults and relations with gender, SES and living environment. *Transp. Res. Part A Policy Pract.* **2017**, *103*, 172–184. [CrossRef]
61. Figueroa, M.J.; Nielsen, T.A.S.; Siren, A. Comparing urban form correlations of the travel patterns of older and younger adults. *Transp. Policy* **2014**, *35*, 10–20. [CrossRef]
62. Newbold, K.B.; Scott, D.M. Driving over the life course: The automobility of Canada's Millennial, Generation X, Baby Boomer and Greatest Generations. *Travel Behav. Soc.* **2017**, *6*, 57–63. [CrossRef]
63. Circella, G.; Fulton, L.; Alemi, F.; Berliner, R.M.; Tiedeman, K.; Mokhtarian, P.L.; Handy, S. *What Affects Millennials' Mobility? PART I: Investigating the Environmental Concerns, Lifestyles, Mobility-Related Attitudes and Adoption of Technology of Young Adults in California*; University of California: Davis, CA, USA, 2016.
64. Tsafarakis, S.; Gkorezis, P.; Nalmpantis, D.; Genitsaris, E.; Andronikidis, A.; Altsitsiadis, E. Investigating the preferences of individuals on public transport innovations using the Maximum Difference Scaling method. *Eur. Transp. Res. Rev.* **2019**, *11*. [CrossRef]
65. Sharpe, S. The aesthetics of urban movement: Habits, mobility, and resistance. *Geogr. Res.* **2013**, *51*, 166–172. [CrossRef]
66. Haustein, S.; Klöckner, C.A.; Blöbaum, A. Car use of young adults: The role of travel socialization. *Transp. Res. Part F Traffic Psychol. Behav.* **2009**, *12*, 168–178. [CrossRef]
67. Le Vine, S.; Latinopoulos, C.; Polak, J. What is the relationship between online activity and driving-licence-holding amongst young adults? *Transportation* **2014**, *41*, 1071–1098. [CrossRef]
68. Villwock-Witte, N.; Clouser, K. *Mobility Mindset of Millennials in Small Urban and Rural Areas: Technical Memorandum Survey Findings-Transportation*; Western Transportation Institute: Bozeman, MT, USA, 2016.

69. Nash, S.; Mitra, R. *Travel Behaviour and Residential Location of the Millennials: A Case Study of Post-Secondary Students from Four Toronto-Area Universities*; Ryerson University: Toronto, ON, Canada, 2018.
70. Döring, L.; Albrecht, J.; Scheiner, J.; Holz-Rau, C. Mobility Biographies in Three Generations—Socialization Effects on Commute Mode Choice. *Transp. Res. Procedia* **2014**, *1*, 165–176. [CrossRef]
71. Wang, C.; Quddus, M.; Enoch, M.; Ryley, T.; Davison, L. Exploring the propensity to travel by demand responsive transport in the rural area of Lincolnshire in England. *Case Stud. Transp. Policy* **2015**, *3*, 129–136. [CrossRef]
72. Blumenberg, E.; Taylor, B.D.; Smart, M.; Ralph, K.; Wander, M.; Brumbaugh, S. *What's Youth Got to Do with It? Exploring the Travel Behavior of Teens and Young Adults*; Institute of Transportation Studies, UCLA: Los Angeles, CA, USA, 2012.
73. Kamargianni, M.; Polydoropoulou, A. Generation Y's Travel Behavior and Perceptions of Walkability Constraints. *Transp. Res. Rec. J. Transp. Res. Board* **2014**, *2430*, 59–71. [CrossRef]
74. Lavieri, P.S.; Garikapati, V.M.; Bhat, C.R.; Pendyala, R.M. Investigation of Heterogeneity in Vehicle Ownership and Usage for the Millennial Generation. *Transp. Res. Rec. J. Transp. Res. Board* **2017**, *2664*, 91–99. [CrossRef]
75. Bradley, M.; Greene, E.; Spitz, G.; Coogan, M.; McGuckin, N. The millennial dilemma: Changes in travel behavior or changes in survey behavior. *Transp. Res. Procedia Conf. Transp. Surv. Methods* **2018**, *32*, 291–300. [CrossRef]
76. Golub, A.; Satterfield, V.; Serritella, M.; Singh, J.; Phillips, S. Assessing the barriers to equity in smart mobility systems: A case study of Portland, Oregon. *Case Stud. Transp. Policy* **2019**, *7*, 689–697. [CrossRef]
77. Parment, A. Generation Y vs. Baby Boomers: Shopping behavior, buyer involvement and implications for retailing. *J. Retail. Consum. Serv.* **2013**, *20*, 189–199. [CrossRef]
78. Zhou, M.; Wang, D. Generational differences in attitudes towards car, car ownership and car use in Beijing. *Transp. Res. Part D Transp. Environ.* **2019**, *72*. [CrossRef]
79. Muromachi, Y. Experiences of past school travel modes by university students and their intention of future car purchase. *Transp. Res. Part A Policy Pract.* **2017**, *104*. [CrossRef]
80. Steg, L. Car use: Lust and must. Instrumental, symbolic and affective motives for car use. *Transp. Res. Part A Policy Pract.* **2005**, *39*. [CrossRef]
81. Oakil, A.T.M.; Manting, D.; Nijland, H. Determinants of car ownership among young households in the Netherlands: The role of urbanisation and demographic and economic characteristics. *J. Transp. Geogr.* **2016**, *51*, 229–235. [CrossRef]
82. Cummins, R.A.; Gullone, E. Why we should not use 5-point Likert scales: The case for subjective quality of life measurement. In Proceedings of the Second International Conference on Quality of Life in Cities, Singapore, 8–10 March 2000; pp. 74–93.
83. Norman, G. Likert scales, levels of measurement and the "laws" of statistics. *Adv. Health Sci. Educ.* **2010**, *15*, 625–632. [CrossRef]
84. Mason, J. Qualitative researching. *Appl. Geogr.* **1997**. [CrossRef]
85. Patton, M.Q. *Qualitative Research and Evaluation Methods*; Sage Publications, Inc.: Thousand Oaks, CA, USA, 2002; ISBN 978-0761919711.
86. Noy, C. Sampling knowledge: The hermeneutics of snowball sampling in qualitative research. *Int. J. Soc. Res. Methodol.* **2008**. [CrossRef]
87. Biernacki, P.; Waldorf, D. Snowball Sampling: Problems and Techniques of Chain Referral Sampling. *Sociol. Methods Res.* **1981**. [CrossRef]
88. Statistics Poland. *Data for Territorial Units*; Statistics Poland: Warsaw, Poland, 2020.
89. Schubach, E.; Zimmermann, J.; Noack, P.; Neyer, F.J. Me, Myself, and Mobility: The Relevance of Region for Young Adults' Identity Development. *Eur. J. Pers.* **2016**, *30*, 189–200. [CrossRef]
90. Cho, M.; Bonn, M.A.; Han, S.J. Generation Z's sustainable volunteering: Motivations, attitudes and job performance. *Sustainability* **2018**, *10*, 1400. [CrossRef]
91. Decker, B.; Hećimović, H.; Wołek, M. Sustainable Urban Mobility Planning in Central Eastern Europe: Case Examples from Poland and Croatia. *Procedia Soc. Behav. Sci.* **2012**, *48*, 2748–2757. [CrossRef]
92. Johansson, K.; Hasselberg, M.; Laflamme, L. Young adolescents' independent mobility, related factors and association with transport to school. A cross-sectional study. *BMC Public Health* **2010**, *10*, 1–9. [CrossRef]
93. Heinen, E.; Ogilvie, D. Variability in baseline travel behaviour as a predictor of changes in commuting by active travel, car and public transport: A natural experimental study. *J. Transp. Health* **2016**, *3*, 77–85. [CrossRef] [PubMed]
94. Schwarz, N. Urban form revisited-Selecting indicators for characterising European cities. *Landsc. Urban Plan.* **2010**, *96*, 29–47. [CrossRef]
95. Hebel, K. Travel behaviour survey of urban inhabitants conducted in Polish cities. The theoretical and practical aspects. *Int. J. Man. Cases* **2016**, *18*, 4–21.
96. Okraszewska, R.; Romanowska, A.; Wołek, M.; Oskarbski, J.; Birr, K.; Jamroz, K. Integration of a multilevel transport system model into sustainable Urban mobility planning. *Sustainability* **2018**, *10*, 479. [CrossRef]
97. Jaśkiewicz, M.; Besta, T. Heart and mind in public transport: Analysis of motives, satisfaction and psychological correlates of public transportation usage in the Gdańsk-Sopot-Gdynia Tricity Agglomeration in Poland. *Transp. Res. Part F Traffic Psychol. Behav.* **2014**, *26*, 92–101. [CrossRef]
98. Szmelter, A.; Woźniak, H. New Mobility Behaviours and Their Impact on Creation of New Business Models. *Torun Bus. Rev.* **2015**, *15*, 79–95. [CrossRef]

99. Delbosc, A.; Currie, G. Using discussion forums to explore attitudes toward cars and licensing among young Australians. *Transp. Policy* **2014**, *31*, 27–34. [CrossRef]
100. Firnkorn, J.; Müller, M. What will be the environmental effects of new free-floating car-sharing systems? The case of car2go in Ulm. *Ecol. Econ.* **2011**, *70*, 1519–1528. [CrossRef]
101. Goodwin, P. Peak Travel, Peak Car and the Future of Mobility. *Int. Transp. Forum* **2012**, *13*, 41.
102. Metz, D. Saturation of demand for daily travel. *Transp. Rev.* **2010**, *30*, 659–674. [CrossRef]
103. Becker, H.; Ciari, F.; Axhausen, K.W. Comparing car-sharing schemes in Switzerland: User groups and usage patterns. *Transp. Res. Part A Policy Pract.* **2017**, *97*, 17–29. [CrossRef]
104. Hensher, D.A. Future bus transport contracts under a mobility as a service (MaaS) regime in the digital age: Are they likely to change? *Transp. Res. Part A Policy Pract.* **2017**, *98*, 86–96. [CrossRef]
105. Fioreze, T.; de Gruijter, M.; Geurs, K. On the likelihood of using Mobility-as-a-Service: A case study on innovative mobility services among residents in the Netherlands. *Case Stud. Transp. Policy* **2019**, *7*, 790–801. [CrossRef]
106. Suchanek, M.; Pawłowska, J. Effects of Transport Behaviour on Public Health: A Study on the Students in the Tricity Area. In *New Research Trends in Transport Sustainability and Innovation, TranSopot Conference*; Suchanek, M., Ed.; Springer: Cham, Switzerland, 2018; pp. 28–36.
107. Suchanek, M.; Szmelter-Jarosz, A. Environmental aspects of generation Y's sustainable mobility. *Sustainability* **2019**, *11*, 3204. [CrossRef]
108. Szmelter, A. Car-related mobility patterns of Polish Y generation—implications for future urban transport. *Transp. Res. Procedia* **2019**, *39*, 514–524. [CrossRef]
109. Szmelter-Jarosz, A. Mobility choices of the Generation Y in Poland. *J. Econ. Manag.* **2019**, *36*, 84–104. [CrossRef]
110. Lebeau, P.; Macharis, C.; Van Mierlo, J.; Janjevic, M. Improving policy support in city logistics: The contributions of a multi-actor multi-criteria analysis. *Case Stud. Transp. Policy* **2018**, *6*, 554–563. [CrossRef]
111. Papaioannou, P.; Politis, I.; Nikolaidou, A. Steps towards Sustaining a SUMP Network in Greece. *Transp. Res. Procedia* **2016**, *14*, 945–954. [CrossRef]
112. Polzin, S.E.; Chu, X.; Godfrey, J. The impact of millennials' travel behavior on future personal vehicle travel. *Energy Strategy Rev.* **2014**, *5*, 59–65. [CrossRef]