

Survey report on “Perfect city and ideal city transportation in Young Peoples’ mind”

Background

According to a survey report conducted by UN, the city population proportion will reach 55% all over the world. It is the mark of entering into city age. However, more and more people have doubted the city and lives in city because of the expansion of city disease. A survey was conducted by some scholars to investigate the people’ attitudes towards city life, the results shows that: Most of them are dissatisfied with the city city life; Only 25% of Americans hold the opinion that city refers to best living surroundings, 30% of them loves life in countryside, 44% prefer surroundings in little town or country; the Europeans hold similar negative opinion. Which kind of city will make life better? What kind of life attitude and practice will make city better? The youngsters are the future of city, however, what perfect city and its traffic like in their opinions.

Reseach content

This survey is based on the undergraduates in Tongji University, the valid sample number is 56. Among the valid samples, males are 20, covered 35.7; females are 36, covered 64.3%. The interviews are mainly 85s and 90s. Their outcome per month mainly in the range of 801-1200 yuan(51.8%), traffic fees mainly range from 51-100 yuan(46.4%). Most of the interviews are from east China.

After encoding and checking the input data, we use SPSS 16.0 software to calculate and analyze this data. The detailed characters are listed in Table 1

Table 1 Basic Information

Information Tables	Types	numbers	proportion
Gender	male	20	35.7
	female	36	64.3
age	below 18	1	1.8
	18 to19	13	23.2
	19 to20	26	46.4
	20 to 21	9	16.1
	Upon 21	7	12.5
Direction the sample come from	Western region	8	14.3
	Central region	5	8.9
	East region	43	76.8
outcome/ per month	Below 400 yuan	2	3.6
	401 to 800 yuan	21	37.5
	801 to 1200 yuan	29	51.8
	1201 to 1600 yuan	3	5.4
	Upon 1601 yuan	1	1.8
subjects	Liberal arts	46	82.1

	science	10	17.9
traffic fees/ per month	Below 50 yuan	19	33.9
	51 to 100 yuan	26	46.4
	101 to 150 yuan	0	0
	151 to 200 yuan	9	16.1
	Upon 200 yuan	2	3.6
Traffic fees/monthly outcome	Below 10%	35	62.5
	10% to 20%	16	28.6
	20% to 30%	2	3.6
	30% to 40%	2	3.6
	Upon 40%	1	1.8

Statistics and analysis

1. Ideal city

(1) Function of city transportation and mode of transportation

Survey result shows that in respect of ideal traffic condition in city, 56.1% of the respondents consider safty as the chief element and 35.1% of them choose convinient as secondary element, 31.6% of them think speed is at third position. Factor analysis of the 7 variable shows that cumulative variances contribute 76.644%. After the basis rotates the extraction of common factor says that the first common factor is convenient and networked, the second is speedy and three-dimensional, the third is humanity, the fourth is safty and aestheticization. People who emphise convenience pay little attention to networked element. The more speediness they demand the less three-dimensional aspect they require. After the analysis on the correlation between common factor and independent variable, sex, major, area, living expenses of month and transportation cost of month make little influence to condition. Age has influence to common factor of convenient and networked, safty and aestheticization. Spearman rank correlation coefficient of age and the common factor of convenient and networked is 0.274, which means the two element has positive correlation. Age and the common factor of safty and aestheticization shows negative correlation, and the correlation coefficient is 0.250. That means we should particularly emphasis on the different demand of different age level of people in the future urban construction.

Table 2 Factor analysis of urban transport demands

Option	Factor			
	1	2	3	4
Convenient	.859			
networked	-.791		.	
speediness	.	-.799	.	
three-dimension	.	.759	.	-
humanity	.	-	-.962	-
safty	-		.	.888
aestheticization	.304	.	.	.498

(2)Ideal modes of city transportation

According to data ,82.1% of the respondents think that walking and bicycling are still exist as a kind of trip mode; 78.6% of the respondents disapprove that city transportation(such as train and ships) should be replaced; 70.2% of the respondents think that high speed rail and subway should be widely used. Sex has no relation to them. There is correlation between age and the option of high speed rail and subway should be widely used (Correlation coefficient is 0.239). It suggests that with the increase in age ,people has lower need in speedness,and ask for other requirement. The people who agree with walking and bicycling are still exist as a kind of trip mode also approve that high speed rail and subway should be widely used, which are the consequence of modern culture and the concept of low carbon and environmental protection. That means it is necessary that the need in speedness and convenient should be satisfied ,at the same time the concept of healthy and environmental protection should become a important objective that young people seek.

Table 3 urban transportation

option	Quite disagreement	Disagreement	Just so so	Relative agreement	Agreement
Walking and bicycling are still good choices	2 (3.6%)	0	1 (1.8%)	7 (12.5%)	46 (82.1%)
City transportation(such as train and ships) should be replaced	16 (28.6%)	28 (50%)	10 (17.9%)	1 (1.8%)	1 (1.8%)
High Speed Rail and subway should be widely used	2 (3.6%)	4 (7.1%)	9 (16.1%)	15 (26.8%)	26 (46.4%)
The private cars will take the lead in future.	12 (21.4%)	19 (33.9%)	19 (33.9%)	6 (10.7%)	0
People will take public transportation in future	2 (3.6%)	5 (8.9%)	15 (26.8%)	20 (35.7%)	14 (25%)

(3)Ideal transportation space and ideal modes of city transportation

According to survey data, 85.7% of the respondents think that parking lot should be built underground or in three-dimension; 83.9% of the respondents don' t think that traffic land should occupy the residential land; 85.8% of the respondents consider that land utilization rate of traffic (such as bus board or signs) should be improved; 60.7% of the respondents choose the option that more overpass should be built to improve land utilization. There is a negative correlation between sex and the option of parking lot should be built underground or in three-dimension (P<0.1,sex as

dummy variable),and the correlation coefficient is -0.23,which means male emphasize parking space less than female. Age has a positive correlation with the option of traffic land should occupy the residential land(correlation coefficient is 0.275),which means the older people are the higher quality of transportation and life they require . The contradiction between the two should be balanced. Major correlate to the option of traffic land should occupy the residential land and land utilization rate of traffic (such as bus board or signs) should be improved.(art=1;other=0, correlation coefficient is 0.302 and 0.270),which shows that people pay more and more attention to urban life and sociality of transportation. The social function should be improved.

Table 4 findings of the ideal space transportation

option	Quite disagreement	Disagreement	Just so so	Relative agreement	Agreement
Parking lot should be built underway or in three-dimension	2 (3.6%)	0	6 (10.7%)	21 (37.5%)	27 (48.2%)
Traffic should not cover the living spaces	2 (3.6%)	2 (3.6%)	5 (8.9%)	18 (32.1%)	29 (51.8%)
Improve the Land Utilization of traffic (such as bus board or signs)	2 (3.6%)	0	6 (10.7%)	17 (30.4%)	31 (55.4%)
Should build more overpass to improve Land Utilization	2 (3.6%)	6 (10.7%)	14 (25%)	20 (35.7%)	14 (25%)

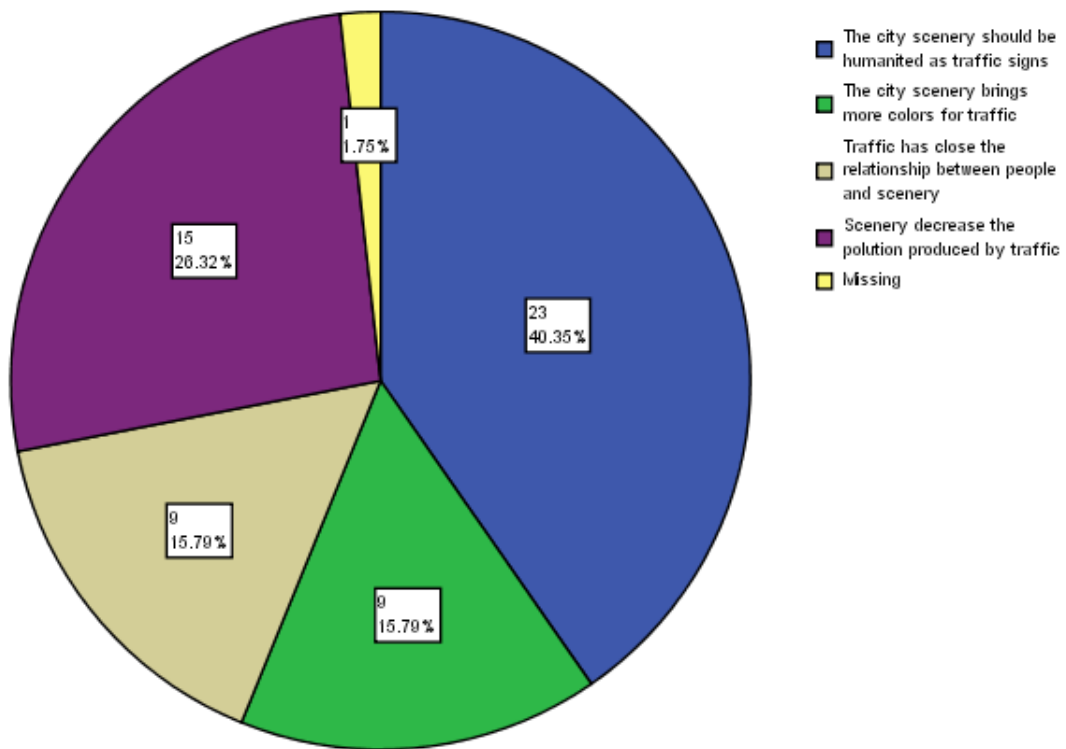
Table 5 the findings of Bivariate correlations

		Parking lot should be built underway or in three-dimension
Gender	Pearson Correlation	-0.23
	Sig. (2-tailed)	0.07
	N	194
Age		Traffic should not cover the living spaces
	Pearson Correlation	0.275
	Sig. (2-tailed)	0.482
	N	56
Major	Pearson Correlation	0.302
	Sig.(2-tailed)	0.082
	N	56

(4) Urban landscape and consciousness of transportation

In respect of ideal traffic and urban landscape,they prefer traffic sign with humanity(41.1%),and green sights which can decrease traffic pollution(26.8%), urban landscape can bring more colour to traffic(16.1%), Traffic pulls close the distance between people and urban landscape(16.1%). The different of option shows the combination of transportation space ,function and urban landscape. Gender, age and other independent variables have no correlation with this. That shows urban landscape as a kind of function attached to transportation in most young people'mind ,it is not very important which form to be used.

Figure 1 the ideal relationship between transportation and urban landscape



In respect of consciousness of transportation ,96.4% of the respondents choose observe traffic regulations and maintain traffic orders; pay attention to the environmental protection and resources save takes 83.9%;the proportion of pay attention to the disadvantaged groups while driving is 64.3%; Use public transportation instead of private transportation occupy a proportion of 60.7%. Data shows that Sex, age and other independent variables have no correlation with

consciousness of transportation, which means consciousness of transportation is like kind of public common sense . People hope that order and fairness should be achieved by observance instead of appeal .

Table 6 the rules of urban traffic

option	Frequences	percentage
Pay attention to the environmental protection and resources save	47	83.9
Keep the rules and maintain traffic orders	54	96.4
Use public transportation instead of private transportation	34	60.7
Pay attention to the Vulnerable people while driving	36	64.3
Total	171	305.4%

(5) Informatization of transportation and Clean transportation

At the development of traffic informatization aspect, develop informatization way of traffic management holds larger proportion (89.3%),and Using the information techniques to improve transformation of traditional transportation takes up 71.4%, Completing the traffic data management and improving the development and application of intelligent transportation occupy 67.9% and 69.6% respectively. Data shows that there are correlation between major and Using the information techniques to improve transformation of traditional transportation, (df=2, p=0.018) traffic cost of month and completing the traffic data management (df=4, p=0.011) , monthly outlay and completing the traffic data management(df=3, p=0.041). Chi-squared statistic shows that professional respondents have more multiple need of transportation function, and people with more traffic cost ask for better service in aspect of transportation information.

Tabel 7 urban information traffic

option	Frequences	percentage
Use the information techniques to improve transformation of classic transportation.	40	71.4
Manage the traffic in information methods	50	89.3
Complete the traffic data managements	38	67.9
Improve the development and application of smart transportation systems	39	69.6
Total	167	298.2%

According to the survey data ,¹85.7% of the respondents think that we should improve the utilization rate of vehicle recycling ; 92.9% of the respondents think that the utilization rate of energy should be improved;the approval proportion of choosing increase the use of clean energy in transportation and control the sound pollution are 94.7% and 94.6% ; increase the percentage of greenery coverage and increase greenbelt defending area in city obtain 89.3% and 83.9% of the

¹ p<0.1 or p<0.05.

respondents' approval respectively. There is dependency relation between age and the utilization rate of energy should be improved (df=4, p=0.063, Chi-Square=8.942), the approval proportion of choosing increase the use of clean energy in transportation (df=3, p=0.0026 Chi-Square=9.266). Domicile of origin are found related to controlling the sound pollution (df=6, p=0.036, Chi-Square=13.459) and vehicle emissions (df=6, p=0.005, Chi-Square=18.611). Major is relevance with increasing the percentage of greenery coverage (df=6, p=0.002, Chi-Square=21.477) and greenbelt defending area in city (df=6, p=0.05, Chi-Square=12.614). There is correlation between age and increasing the percentage of greenery coverage(df=3, p=0.085, Chi-Square=6.633), increasing greenbelt defending area in city (df=3, p=0.047, Chi-Square=7.970). Those results suggest that major, age and domicile of origin of young people make the influence to the anticipation and cognition of clean transportation. Young person's trait should be considered in future life and transportation development of city.

Table 8 urban green transportation

option	Quite disagreement	Disagreement	Just so so	Relative agreement	Agreement
Improve the traffic recycling rate	1 (1.8%)	1 (1.8%)	6 (10.7%)	18 (32.1%)	30 (53.6%)
Improve the utilization rate of energy	2 (3.6%)	1 (1.8%)	1 (1.8%)	15 (26.8%)	37 (66.1%)
Improve the use of green energy in transportation	1 (1.8%)	0	4 (7.1%)	13 (23.2%)	38 (67.9%)
Control the voice pollution	2 (3.6%)	0	1 (1.8%)	16 (28.6%)	37 (66.1%)
Control the gas pollution	2 (3.6%)	0	1 (1.8%)	11 (19.6%)	42 (75%)
Improve the green areas in cities	2 (3.6%)	0	4 (7.1%)	10 (17.9%)	40 (71.4%)
Improve the green protection in cities	2 (3.6%)	0	7 (10%)	15 (26.8%)	32 (57.1%)

2. Transportation and society

(1) Ideal transportation and city life

According to the survey result shows, it is not obvious that some factors, such as gender and months living expenses, are on the difference to the specific requirements of the life in a city, while age has a correlation with "traffic network covers comprehensive, go to where can be quite convenient"(Df = 3, p = 0.098, Chi-costing = 6.309), "improve convenient degree of traffic tool change" (Df = 3, p = 0.09, Chi-costing = 6.484), improve traffic tools' intelligent level (Df = 4, p =

0.035, Chi-costing = 10.329), and "improve the speed of traffic tools, save time" (Df = 4, p = 0.016, Chi-costing = 12.140). Furthermore, there is also a correlation between major and traffic tools' intelligent level (df=8, p=0.062, Chi-Square=14.867). Above these show that young people of different ages have difference requirements in ideal city life and the traffic, so that it should divide the young people with different age stages to understand their different needs to traffic and life. In addition, it is also worth considering that the expertness has special requirements to traffic.

Tabel 9 Ideal transportation and city life

option	Quite disagreement	Disagree-ment	Just so so	Relative agreement	Agreement
Very convenient to travel because of wide traffic network	2 (3.6%)	0	13 (23.2 %)	15 (26.8%)	26 (46.4%)
Very convenient to travel because of good traffic planning	2 (3.6%)	1 (1.8%)	4 (7.1 %)	20 (35.7%)	29 (51.8%)
Imprve the convenience of transportation switching	2 (3.6%)	0	3 (5.4 %)	19 (33.9%)	32 (57.1%)
Improve intelligence of transportation tools	2 (3.6%)	3 (5.4%)	7 (12.5 %)	26 (46.4%)	18 (32.1%)
Improve the speed	2 (3.6%)	2 (3.6%)	4 (7.1 %)	19 (33.9%)	29 (51.8%)
Lower the cost	3 (5.4%)	1 (1.8%)	3 (5.4 %)	16 (28.6%)	33 (58.9%)

(2) Transportation management

According to the finding known that there are 91.1% informants who think traffic management should be followed by people-oriented principle;67.9% ones think that should pay attention to the principle of publicity and transparency;57.1% ones think that should strengthen principle of public's participational extent; 50% ones think that should strengthen the legal protection ability; and 7.1% ones think that should be oriented by the government.

It is known from the binary logistic regression analysis to the above data that the various influences are not obvious among other independent variables and traffic management principle on condition that the variables are assigned again, except gender has certain influence with "traffic management should be oriented by the government". Standardized regression coefficient of gender and "traffic management should be oriented by the government"(1=male,0=female)(p≤0.1)is 2.587,male's score on this aspect is 13.289 times than

that of female. Besides, factor analysis to options, the accumulative contribution rate to variance is 58.167%, KMO is 0.332. Although the model goodness-of-fit is not high, traffic management principle is still considered it focuses mainly on in fair and effective execution on top.

Tabel 10 factor analysis of transportation management

option	factor	
	1	2
traffic management should be followed by people-oriented principle	.851	.152
traffic management should pay attention to the principle of publicity and transparency	-.739	.330
traffic management should strengthen the legal protection ability	.408	.373
traffic management should be oriented by the government	-.119	-.851
traffic management should strengthen principle of public's participational extent	-.120	.669

Table 11 logistic regression analysis of gender and traffic control principle

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1(a)	gender (male=1)	2.587	1.192	2.333	1	.077	13.289

(3)Transportation fairness

Survey data shows that there is dependency relation between monthly cost on transportation and the option of particular vehicle and trip mode for disadvantaged groups (df=4, p=0.077², Chi-Square=8.416), and fair right of using transportation vehicle(df=4, p=0.027, Chi-Square=10.993). Age has correlation with continuity service should be provided (df=1, p=0.033, Chi-Square=4.525). Domicile of origin has correlation with appeal decrease of discrimination against disadvantaged groups. (df=2, p=0.052, Chi-Square=5.901) Monthly outlay is also has correlation with appeal decrease of discrimination against disadvantaged groups (df=3, p=0.043, Chi-Square=8.149). That suggests different types of disadvantaged groups have different kinds of needs. What they have in common is continuity service and lower or free cost

Besides, in the respect of comprehension of transportation fairness, area of respondents has influence to the public transportation should avoid interference of power (df=2, p=0.048, Chi-Square=6.072) and benefits and treating different groups equally (df=2, p=0.083,

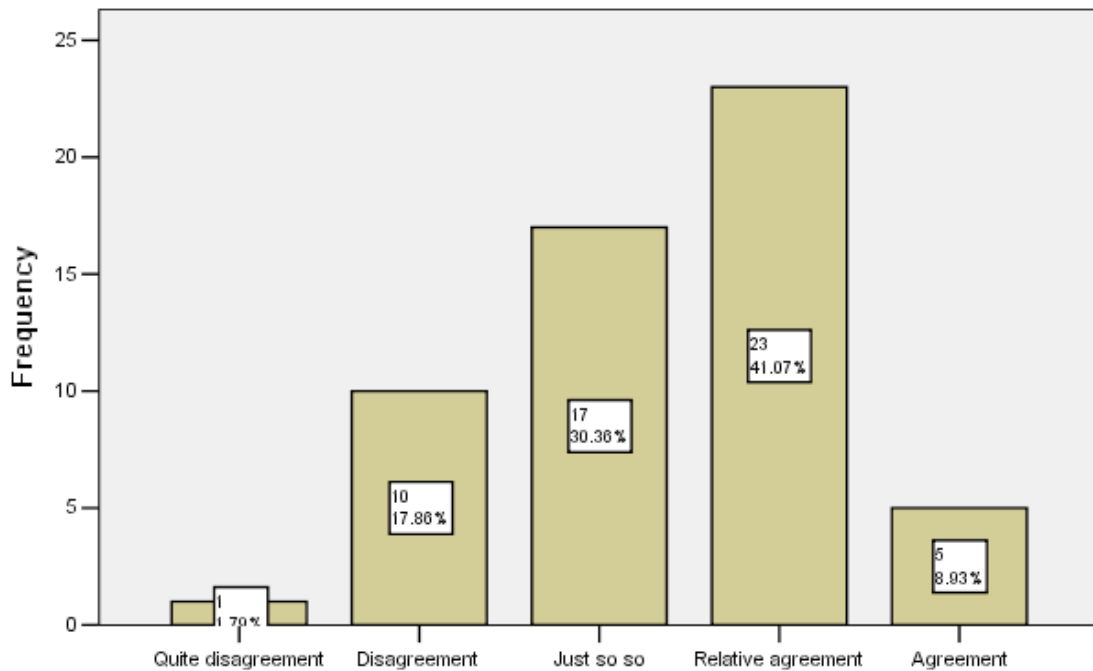
² p<0.1

Chi-Square=4.987) . That' because the social problem caused by fast development of city transportation have drawn many attention and triggered many disscution .

(4) Urban culture and city image

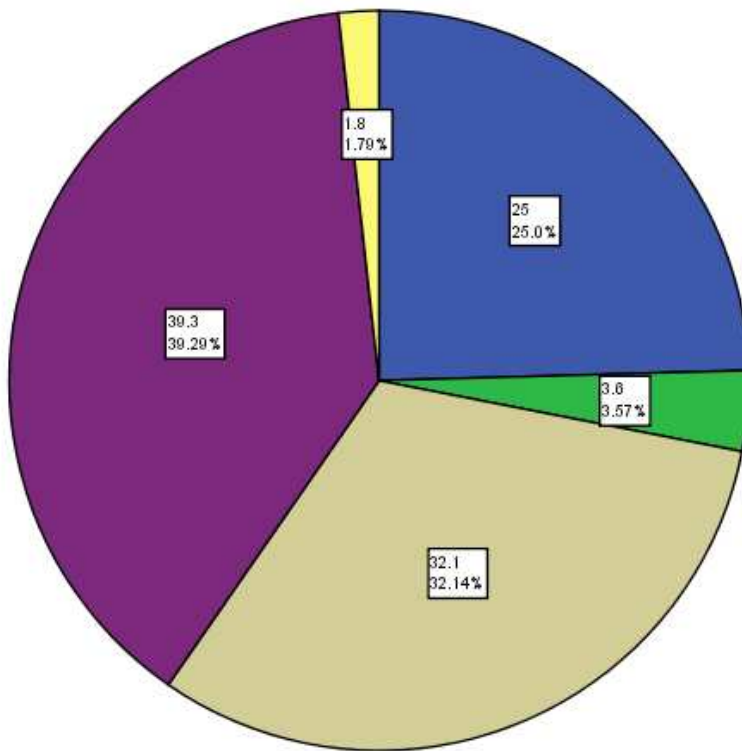
According to the statistical data, independent variable has no obvious relation to urban culture and city image . 50% of the respondents think that traffic in city contributes a lot to the integration and development of urban population. 30.4% of the respondents choose ordinary;and 19.7% of them disagree. That suggests more humanity element should be added into future city transportation planning ,which can develop a city comprehensively.

Figure 2 the impact of urban transport upon development and integration of the urban population



As to the effect the ideal urban transportation on urban image, 25.0% of the respondents think that ideal traffic culture can reveal creativity and application of science and technology of the city; 3.6% agree with traffic culture improving historical atmosphere in city; 32.1% think that it reveals the life atmosphere of the city;and 39.3% of them choose it can improve modern cultural level of the city. We can see that respondents hold a positive opinion towards this option. It will be the very important thing that how to integrate urban image into city transportation planning.

Figure 3 the function of ideal municipal transportation culture upon urban image



- reveal creativity and application of science and technology of the city
- improve historical atmosphere in city
- reveal the life atmosphere of the city
- improve modern cultural level of the city
- Missing