SCALE	QUESTIONNAIRE

Perception of urban parks' soundscape questionnaire

Date: **Location:**

Start time: **End time:**

Section 1

How old are you?   (   )

What is your gender?

1
2

○ Male
○ Female

Do you have any companion with you during this visit?

1
2
3
4
5

○ Alone
○ Two people
○ Three to five people
○ Small family
○ Big family

What is the highest level of education you have completed?

1
2
3
4
5
6
7
8
9

○ Primary school
○ Secondary school
○ Secondary school graduate
○ Trade/technical/vocational college
○ Trade/technical/vocational college graduate
○ Some college
○ College graduate
○ Some postgraduate work
○ Post graduate degree

What is your occupational status?

1
2
3
4
5

○ Employed
○ Unemployed
○ Retired
○ Student
○ Other

What is your monthly income? (RMB)

1
2
3
4
5

○ ＜1000
○ 1000-4000
○ 4000-7000
○ 7000-10000
○ ＞10000

Where do you live for a long time ?

1
2

○ Village
○ City

What is your residential status?

1 ──────┼──────
2 ──────┼──────
3 ──────┼──────

○ Local resident
○ Tourist
○ Oher

What is the distance from your current residence to here?

1 ──────┼──────
2 ──────┼──────
3 ──────┼──────
4 ──────┼──────
5 ──────┼──────

○ 0-500
○ 500-1500
○ 1500-3000
○ 3000-4500
○ ＞4500

How often do you visit this place?

1 ──────┼──────
2 ──────┼──────
3 ──────┼──────
4 ──────┼──────
5 ──────┼──────
6 ──────┼──────

○ Rarely
○ Several times in a year
○ Once in a month
○ Once in a weak
○ Twice or thrice in a weak
○ Everyday

How long have you been here?

1 ──────┼──────
2 ──────┼──────
3 ──────┼──────
4 ──────┼──────

○ ＜30min
○ 30min-1h
○ 1-3h
○ ＞3h

What kind of activities do you usually do here？

1 ──────┼──────
2 ──────┼──────
3 ──────┼──────
4 ──────┼──────
5 ──────┼──────
6 ──────┼──────
7 ──────┼──────
8 ──────┼──────

○ Parent-child activities
○ Fitness and health activities
○ Sports and leisure activities
○ Social activities
○ Specialized activities
○ Quiet activities
○ Public participation activities
○ Other

Section 2

What is the **occurrence** of **birds** sound in this place？

○ Never ○ Occasionally ○ Moderately ○ Frequently ○ Always

PO

1 ──┼── Never
2 ──┼── Occasionally
3 ──┼── Moderately
4 ──┼── Frequently
5 ──┼── Always

(trigger)

How loud is this sound in this place?

○ Very quiet ○ Quiet ○ Moderate ○ Loud ○ Very loud

Do you like this sound in this place?

○ Very negative ○ Negative ○ Moderate ○ Positive ○ Very positive

Can you see the visual source of this sound at here?

○ Yes ○ No

What is the **occurrence** of **insects** sound in this place？

PL	
1	Very quiet
2	Quiet
3	Moderate
4	Loud
5	Very loud

PR	
1	Very negative
2	Negative
3	Moderate
4	Positive
5	Very positive

VS	
1	Yes
2	No

○ Never   ○ Occasionally   ○ Moderately   ○ Frequently   ○ Always

----
(trigger)

How loud is this sound in this place?

○ Very quiet   ○ Quiet   ○ Moderate   ○ Loud   ○ Very loud

Do you like this sound in this place?

○ Very negative   ○ Negative   ○ Moderate   ○ Positive   ○ Very positive

Can you see the visual source of this sound at here?

○ Yes   ○ No

What is the **occurrence** of **leaves rustling** sound in this place?

○ Never   ○ Occasionally   ○ Moderately   ○ Frequently   ○ Always

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(trigger)

How loud is this sound in this place?

○ Very quiet   ○ Quiet   ○ Moderate   ○ Loud   ○ Very loud

Do you like this sound in this place?

○ Very negative   ○ Negative   ○ Moderate   ○ Positive   ○ Very positive

Can you see the visual source of this sound at here?

○ Yes   ○ No

What is the **occurrence** of **ducks** sound in this place?

○ Never   ○ Occasionally   ○ Moderately   ○ Frequently   ○ Always

----
(trigger)

How loud is this sound in this place?

○ Very quiet   ○ Quiet   ○ Moderate   ○ Loud   ○ Very loud

Do you like this sound in this place?

○ Very negative   ○ Negative   ○ Moderate   ○ Positive   ○ Very positive

Can you see the visual source of this sound at here?

○ Yes   ○ No

What is the **occurrence** of **dogs** sound in this place?

○ Never   ○ Occasionally   ○ Moderately   ○ Frequently   ○ Always

----
(trigger)

How loud is this sound in this place?

○ Very quiet   ○ Quiet   ○ Moderate   ○ Loud   ○ Very loud

Do you like this sound in this place?

○ Very negative   ○ Negative   ○ Moderate   ○ Positive   ○ Very positive

Can you see the visual source of this sound at here?

○ Yes   ○ No

What is the **occurrence** of **wind** sound in this place?

○ Never   ○ Occasionally   ○ Moderately   ○ Frequently   ○ Always

----
(trigger)

How loud is this sound in this place?

○ Very quiet   ○ Quiet   ○ Moderate   ○ Loud   ○ Very loud

Do you like this sound in this place?

○ Very negative   ○ Negative   ○ Moderate   ○ Positive   ○ Very positive

What is the **occurrence** of **water** sound in this place?

○ Never   ○ Occasionally   ○ Moderately   ○ Frequently   ○ Always

----
(trigger)

How loud is this sound in this place?

○ Very quiet   ○ Quiet   ○ Moderate   ○ Loud   ○ Very loud

Do you like this sound in this place?

○ Very negative   ○ Negative   ○ Moderate   ○ Positive   ○ Very positive

Can you see the visual source of this sound at here?

○ Yes   ○ No

What is the **occurrence** of **square dancing** sound in this place?

○ Never   ○ Occasionally   ○ Moderately   ○ Frequently   ○ Always

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(trigger)

How loud is this sound in this place?

○ Very quiet   ○ Quiet   ○ Moderate   ○ Loud   ○ Very loud

Do you like this sound in this place?

○ Very negative   ○ Negative   ○ Moderate   ○ Positive   ○ Very positive

Can you see the visual source of this sound at here?

○ Yes   ○ No

What is the **occurrence** of **broadcast music** sound in this place?

○ Never   ○ Occasionally   ○ Moderately   ○ Frequently   ○ Always

----
(trigger)

How loud is this sound in this place?

○ Very quiet   ○ Quiet   ○ Moderate   ○ Loud   ○ Very loud

Do you like this sound in this place?

○ Very negative   ○ Negative   ○ Moderate   ○ Positive   ○ Very positive

Can you see the visual source of this sound at here?

○ Yes   ○ No

What is the **occurrence** of **singing** sound in this place?

○ Never   ○ Occasionally   ○ Moderately   ○ Frequently   ○ Always

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(trigger)

How loud is this sound in this place?

○ Very quiet   ○ Quiet   ○ Moderate   ○ Loud   ○ Very loud

Do you like this sound in this place?

○ Very negative   ○ Negative   ○ Moderate   ○ Positive   ○ Very positive

Can you see the visual source of this sound at here?

○ Yes   ○ No

What is the **occurrence** of **instrument** sound in this place?

○ Never　　○ Occasionally　　○ Moderately　　○ Frequently　　○ Always

----
(trigger)

How loud is this sound in this place?

○ Very quiet　　○ Quiet　　○ Moderate　　○ Loud　　○ Very loud

Do you like this sound in this place?

○ Very negative　　○ Negative　　○ Moderate　　○ Positive　　○ Very positive

Can you see the visual source of this sound at here?

○ Yes　　○ No

What is the **occurrence** of **lawn mowing** sound in this place?

○ Never　　○ Occasionally　　○ Moderately　　○ Frequently　　○ Always

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(trigger)

How loud is this sound in this place?

○ Very quiet　　○ Quiet　　○ Moderate　　○ Loud　　○ Very loud

Do you like this sound in this place?

○ Very negative　　○ Negative　　○ Moderate　　○ Positive　　○ Very positive

Can you see the visual source of this sound at here?

○ Yes　　○ No

What is the **occurrence** of **construction** sound in this place?

○ Never　　○ Occasionally　　○ Moderately　　○ Frequently　　○ Always

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(trigger)

How loud is this sound in this place?

○ Very quiet　　○ Quiet　　○ Moderate　　○ Loud　　○ Very loud

Do you like this sound in this place?

○ Very negative　　○ Negative　　○ Moderate　　○ Positive　　○ Very positive

Can you see the visual source of this sound at here?

○ Yes　　○ No

What is the **occurrence** of **engine** sound in this place?

○ Never　　○ Occasionally　　○ Moderately　　○ Frequently　　○ Always

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(trigger)

How loud is this sound in this place?

○ Very quiet　　○ Quiet　　○ Moderate　　○ Loud　　○ Very loud

Do you like this sound in this place?

○ Very negative　　○ Negative　　○ Moderate　　○ Positive　　○ Very positive

Can you see the visual source of this sound at here?

○ Yes　　○ No

What is the **occurrence** of **bicycle riding** sound in this place？

○Never　　○Occasionally　　○Moderately　　○Frequently　　○Always

(trigger)

> **How loud is this sound in this place？**
>
> ○　Very quiet　　○Quiet　　○Moderate　　○Loud　　○Very loud
>
> **Do you like this sound in this place？**
>
> ○Very negative　　○Negative　　○Moderate　　○Positive　　○Very positive
>
> **Can you see the visual source of this sound at here?**
>
> ○Yes　　　　　　○No

What is the **occurrence** of **surrounding speech** in this place？

○Never　　○Occasionally　　○Moderately　　○Frequently　　○Always

(trigger)

> **How loud is this sound in this place？**
>
> ○　Very quiet　　○Quiet　　○Moderate　　○Loud　　○Very loud
>
> **Do you like this sound in this place？**
>
> ○Very negative　　○Negative　　○Moderate　　○Positive　　○Very positive
>
> **Can you see the visual source of this sound at here?**
>
> ○Yes　　　　　　○No

What is the **occurrence** of **playing children** sound in this place？

○Never　　○Occasionally　　○Moderately　　○Frequently　　○Always

(trigger)

> **How loud is this sound in this place？**
>
> ○　Very quiet　　○Quiet　　○Moderate　　○Loud　　○Very loud
>
> **Do you like this sound in this place？**
>
> ○Very negative　　○Negative　　○Moderate　　○Positive　　○Very positive
>
> **Can you see the visual source of this sound at here?**
>
> ○Yes　　　　　　○No

What is the **occurrence** of **footsteps** sound in this place？

○Never　　○Occasionally　　○Moderately　　○Frequently　　○Always

(trigger)

> **How loud is this sound in this place？**
>
> ○　Very quiet　　○Quiet　　○Moderate　　○Loud　　○Very loud
>
> **Do you like this sound in this place？**
>
> ○Very negative　　○Negative　　○Moderate　　○Positive　　○Very positive
>
> **Can you see the visual source of this sound at here?**
>
> ○Yes　　　　　　○No

What is the **occurrence** of **diabolo** sound in this place?

○Never ○Occasionally ○Moderately ○Frequently ○Always

(trigger)

How loud is this sound in this place?

○ Very quiet ○Quiet ○Moderate ○Loud ○Very loud

Do you like this sound in this place?

○Very negative ○Negative ○Moderate ○Positive ○Very positive

Can you see the visual source of this sound at here?

○Yes ○No

What is the **occurrence** of **train** sound in this place?

○Never ○Occasionally ○Moderately ○Frequently ○Always

(trigger)

How loud is this sound in this place?

○ Very quiet ○Quiet ○Moderate ○Loud ○Very loud

Do you like this sound in this place?

○Very negative ○Negative ○Moderate ○Positive ○Very positive

Can you see the visual source of this sound at here?

○Yes ○No

What is the **occurrence** of **automobile** sound in this place?

○Never ○Occasionally ○Moderately ○Frequently ○Always

(trigger)

How loud is this sound in this place?

○ Very quiet ○Quiet ○Moderate ○Loud ○Very loud

Do you like this sound in this place?

○Very negative ○Negative ○Moderate ○Positive ○Very positive

Can you see the visual source of this sound at here?

○Yes ○No

What is the **occurrence** of **motorbike** sound in this place?

○Never ○Occasionally ○Moderately ○Frequently ○Always

(trigger)

How loud is this sound in this place?

○ Very quiet ○Quiet ○Moderate ○Loud ○Very loud

Do you like this sound in this place?

○Very negative ○Negative ○Moderate ○Positive ○Very positive

Can you see the visual source of this sound at here?

○Yes ○No

Section 3

Are you satisfied with the overall sound environment in this place?

1 —————|————— ○ Very unsatisfied
2 —————|————— ○ Unsatisfied
3 —————|————— ○ Neither satisfied, nor unsatisfied
4 —————|————— ○ Satisfied
5 —————|————— ○ Very satisfied

What do you think of the loudness of this place?

1 —————|————— ○ Very low
2 —————|————— ○ Low
3 —————|————— ○ Moderately
4 —————|————— ○ Loud
5 —————|————— ○ Very loud

Do you think this sound environment annoyed?

1 —————|————— ○ Not annoyed at all
2 —————|————— ○ Slightly annoyed
3 —————|————— ○ Moderately annoyed
4 —————|————— ○ Very annoyed
5 —————|————— ○ Extremely annoyed

Figure S1. The questionnaire and each questions' scale

Table S1 Generalized linear model between each of the perception parameters of individual sounds and five dimensions of factors (Only when p value of factors showed significance, their corresponding model's number of observations and goodness of fit were reported).

			PO					PL					PR					VS				
			F1	F2	F3	F4	F5	F1	F2	F3	F4	F5	F1	F2	F3	F4	F5	F1	F2	F3	F4	F5
Natural sounds	Birds		No. of obs =2034 (1/df) Deviance =1.802 AIC=3.429					-					No. of obs =1559 (1/df) Deviance = 0.679 AIC=2.455					No. of obs =1558 (1/df) Deviance = 0.238 AIC=1.409				
		Coefficient			0.064	0.074	0.132						-0.123				0.052	0.097			0.030	-0.042
		Sig. (2-tailed)			0.030*	0.012*	0.000***						0.000***				0.012**	0.000***			0.013*	0.001**
	Insects		No. of obs =2034 (1/df) Deviance =1.429 AIC=3.198					No. of obs =1011 (1/df) Deviance = 0.926 AIC=2.767					No. of obs =1009 (1/df) Deviance =1.078 AIC=2.919					No. of obs =1010 (1/df) Deviance = 0.167 AIC=1.057				
		Coefficient	0.248		0.096					-0.089			-0.159	0.079				0.046			0.029	-0.033
		Sig. (2-tailed)	0.000***		0.000***					0.003**			0.000***	0.014*				0.002**			0.008*	0.000***
	Dogs		No. of obs =2034 (1/df) Deviance = 0.665 AIC=2.433					No. of obs =546 (1/df) Deviance = 0.906 AIC= 2.751					No. of obs =545 (1/df) Deviance =1.140 AIC=2.980					-				
		Coefficient				-0.045				-0.090	-0.131					-0.207						
		Sig. (2-tailed)				0.012*				0.017*	0.001**					0.000***						

Ducks		No. of obs =2034 (1/df) Deviance = 0.605 AIC=2.338	-	No. of obs =195 (1/df) Deviance = 0.862 AIC=2.720	-
	Coefficient	0.035 0.054 0.042		-0.203 0.187	
	Sig. (2-tailed)	0.038* 0.002** 0.014*		0.022* 0.010*	
Leaves rustling		No. of obs =2034 (1/df) Deviance =1.557 AIC=3.283	No. of obs =1348 (1/df) Deviance = 0.869 AIC= 2.703	No. of obs =1344 (1/df) Deviance = 0.775 AIC=2.588	No. of obs =1328 (1/df) Deviance = 0.157 AIC= 0.993
	Coefficient	0.192 0.062 0.054		0.052 0.054	0.053
	Sig. (2-tailed)	0.000*** 0.025* 0.026*		0.025* 0.026*	0.000***
Wind		No. of obs =2034 (1/df) Deviance =1.584 AIC=3.301	-	No. of obs =1305 (1/df) Deviance = 0.824 AIC=2.649	-
	Coefficient	0.135 -0.081			0.071
	Sig. (2-tailed)	0.000*** 0.003***			0.004**
Water		No. of obs =2034 (1/df) Deviance =1.136 AIC=2.969	No. of obs =344 (1/df) Deviance =1.041 AIC=2.895	-	No. of obs =345 (1/df) Deviance = 0.085 AIC= 0.390
	Coefficient	0.094 0.078	0.192		-0.049
	Sig. (2-tailed)	0.000*** 0.001***	0.006**		0.002**
Mech Square dancing		No. of obs =2034 (1/df) Deviance =1.779	No. of obs =664 (1/df) Deviance =1.276	No. of obs =664 (1/df) Deviance =1.103	No. of obs =662 (1/df) Deviance = 0.149

		Column 1	Column 2	Column 3	Column 4
		AIC=3.417	AIC=3.091	AIC=2.945	AIC= 0.943
	Coefficient	-0.162	-0.132	-0.263 -0.166	0.066
	Sig. (2-tailed)	0.000***	0.003**	0.000*** 0.000***	0.000***
Broadcast music		No. of obs =2034 (1/df) Deviance =2.387 AIC=3.710	-	No. of obs =1306 (1/df) Deviance = 0.947 AIC=2.788	No. of obs =1243 (1/df) Deviance = 0.215 AIC=1.309
	Coefficient	0.155		-0.054 -0.077	0.059
	Sig. (2-tailed)	0.000***		0.048* 0.004**	0.000***
Singing		No. of obs =2034 (1/df) Deviance =1.317 AIC=3.116	No. of obs =380 (1/df) Deviance =1.124 AIC=2.970	No. of obs =379 (1/df) Deviance =1.104 AIC=2.952	No. of obs =371 (1/df) Deviance = 0.132 AIC= 0.833
	Coefficient	-0.155 -0.111 -0.058 -0.064	-0.122 -0.103 -0.164	-0.134	0.069
	Sig. (2-tailed)	0.000** 0.000** 0.021* 0.011*	0.012* 0.048* 0.003**	0.015*	0.000***
Instrument		-	-	-	-
	Coefficient				
	Sig. (2-tailed)				
Lawn mowing (Artificial sounds)		No. of obs =2034 (1/df) Deviance = 0.201 AIC=1.239	No. of obs =117 (1/df) Deviance =1.018 AIC=2.906	-	-
	Coefficient	0.031 0.019 -0.023	-0.228		
	Sig. (2-tailed)	0.002** 0.049* 0.021*	0.028*		

		Model 1	Model 2	Model 3	Model 4
Construction sound		No. of obs =2034 (1/df) Deviance = 0.981 AIC=2.822	-	No. of obs =528 (1/df) Deviance = 0.550 AIC=2.251	No. of obs =525 (1/df) Deviance = 0.207 AIC=1.276
	Coefficient	0.090 0.058		-0.088 0.095	0.066
	Sig. (2-tailed)	0.000** 0.008***		0.004** 0.004**	0.007**
Engine		No. of obs =2034 (1/df) Deviance = 0.534 AIC=2.215	-	No. of obs =180 (1/df) Deviance = 0.936 AIC=2.805	-
	Coefficient	0.035 0.038 0.044		-0.270	
	Sig. (2-tailed)	0.027* 0.017* 0.006**		0.000***	
Bicycle riding		No. of obs =2034 (1/df) Deviance = 0.783 AIC=2.596	No. of obs =548 (1/df) Deviance = 0.764 AIC=2.580	-	-
	Coefficient	0.070 -0.066 -0.047	-0.076		
	Sig. (2-tailed)	0.000*** 0.001** 0.016*	0.030*		
Surrounding speech		No. of obs =2034 (1/df) Deviance =1.441 AIC=3.206	No. of obs =1943 (1/df) Deviance = 0.789 AIC=2.604	No. of obs =1946 (1/df) Deviance = 0.689 AIC=2.469	-
	Coefficient	0.210 -0.151 0.071	0.088 -0.096	-0.150 -0.086	
	Sig. (2-tailed)	0.000*** 0.000*** 0.007**	0.000*** 0.000***	0.000*** 0.000***	

		Model 1	Model 2	Model 3	Model 4
Playing children		No. of obs =2034 (1/df) Deviance = 1.722 AIC=3.384	No. of obs =1560 (1/df) Deviance = 0.870 AIC=2.702	No. of obs =1561 (1/df) Deviance = 0.914 AIC=2.752	No. of obs =1550 (1/df) Deviance = 0.071 AIC= 0.208
	Coefficient	0.273 0.068 -0.255	0.099 -0.095	-0.213 -0.102 -0.090	-0.013
	Sig. (2-tailed)	0.000*** 0.019* 0.000***	0.000** 0.000**	0.000** 0.000** 0.000**	0.041*
Footsteps		No. of obs =2034 (1/df) Deviance =1.738 AIC=3.394	No. of obs =1602 (1/df) Deviance = 0.827 AIC=2.652	No. of obs =1603 (1/df) Deviance = 0.633 AIC=2.385	No. of obs =1591 (1/df) Deviance = 0.086 AIC= 0.397
	Coefficient	0.231 -0.065	-0.051 -0.066	-0.148 -0.071	0.020
	Sig. (2-tailed)	0.000*** 0.026*	0.027* 0.003***	0.000** 0.000**	0.010*
Diabolo		No. of obs =2034 (1/df) Deviance = 0.287 AIC=1.594	-	-	-
	Coefficient	-0.053 0.041 0.040			
	Sig. (2-tailed)	0.000*** 0.000*** 0.001***			
Train		No. of obs =2034 (1/df) Deviance = 0.456 AIC=2.057	-	No. of obs =177 (1/df) Deviance = 0.627 AIC=2.404	-
	Coefficient	0.073 0.073 -0.054		-0.159	
	Sig. (2-tailed)	0.000*** 0.000*** 0.000***		0.008**	

		F1 / F2 related	F2	F3 / F4	F5
Automobile		No. of obs =2034 (1/df) Deviance =2.056 AIC=3.561	No. of obs =823 (1/df) Deviance =1.051 AIC=2.895	No. of obs =822 (1/df) Deviance = 0.923 AIC=2.765	No. of obs =802 (1/df) Deviance = 0.166 AIC=1.051
	Coefficient	-0.067 0.141 -0.146 -0.149	-0.121 0.085	-0.138 -0.174	0.043
	Sig. (2-tailed)	0.035* 0.000*** 0.000*** 0.000***	0.001** 0.013*	0.000*** 0.000***	0.005**
Motorbike		No. of obs =2034 (1/df) Deviance = 0.526 AIC=2.199	No. of obs =269 (1/df) Deviance = 0.999 AIC=2.859	No. of obs =268 (1/df) Deviance = 0.820 AIC=2.661	-
	Coefficient	-0.071 -0.056 -0.049 -0.035 -0.068	-0.167 -0.253	-0.125	
	Sig. (2-tailed)	0.000*** 0.000*** 0.002** 0.027* 0.000***	0.006** 0.000**	0.019*	

Notes: F1: Age and familiarity of site, F2: Educational and Economic condition, F3: Companion and type of recreational use, F4: Gender, F5: Length of Stay. Significant differences are marked with *(p < 0.05), ** (p< 0.01) and ***(p<0.001).