

# *Appendices*

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# Appendix A

## ~ Survey Distributed

### Acoustics in the Hospitality Industry Survey

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Please answer questions 1 –7 with regard to your own attitude towards any generalised setting.

1. How much noise do you like in bars/restaurants/cafes?

Not much		Some		A lot
1	2	3	4	5

2. Does noise influence your choice of bar/restaurant/cafe?

Not much		Some		A lot
1	2	3	4	5

3. How much noise do you expect in a bar/restaurant/cafe?

Not much		Some		A lot
1	2	3	4	5

4. When you choose a bar/restaurant/café are you concerned that there will be loud music?

Not at all		Somewhat		Very
1	2	3	4	5

5. Are you distracted by noises associated with kitchen or bar/counter areas?

Not at all		Somewhat		Very
1	2	3	4	5

6. Are you conscious of noises other occupants make?

Not at all		Somewhat		Very
1	2	3	4	5

7. Do you find it hard to relax in noisy environments?

Not at all		Somewhat		Very
1	2	3	4	5

8. Do you find it hard to relax in quiet environments?

Not at all		Somewhat		Very
1	2	3	4	5

*Please answer the following questions in relation to the current environment/space you are in.*

**9. Is speech intelligibility important to you?**

Not at all		Some		A lot
1	2	3	4	5

**10. How much effort does conversation require?**

Very little		Some		A lot
1	2	3	4	5

**11. Do you find it difficult to hear?**

Not at all		Somewhat		A lot
1	2	3	4	5

**12. Do you find it difficult to be heard by others?**

Not at all		Somewhat		A lot
1	2	3	4	5

**13. Does noise impair your conversations at all?**

Not at all		Some		A lot
1	2	3	4	5

**14. Is your attention diverted by other occupant's conversations?**

Not at all		Some		A lot
1	2	3	4	5

**15. How much control do you feel you have over the current acoustic environment?**

None		Some		A lot
1	2	3	4	5

**16. How would you rate the level of noise at present?**

Excessive		Reasonable		Low
1	2	3	4	5

**17. Would you rate the noise levels at present as acceptable?**

Not at all		Somewhat		Very
1	2	3	4	5

**18. Do you feel your conversations are being overheard?**

Not at all		Somewhat		A lot
1	2	3	4	5

**19. Do you feel you have enough speech privacy at present?**

Not at all		Somewhat		A lot
1	2	3	4	5

**20. What level do you consider the music to be playing at?**

Not at all		Some		Too Loud
1	2	3	4	5

**21. Do you feel that noises at present have meaning and are necessary in this environment?**

Not at all		Some		A lot
1	2	3	4	5

**22. Does the level of noise affect your mood for the worse?**

Not at all		Some		A lot
1	2	3	4	5

**23. What source of sound is the most predominant (please tick one)?**

- Other people
- Music
- Kitchen sources
- Outside sources (e.g. traffic)
- Chairs/tables scraping
- Bottles/glasses
- Other

**24. Do you find some noise sources at present more annoying than others? (please tick one)**

- Yes
- No

If Yes, please state which:.....

**25. How much on average, would you frequent each of these environments? (please tick one for each)**

	2-3 times a week	once a week	once a fortnight	once a month	less than once a month
Bars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cafés	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Restaurants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**26. Out of these four environments, which would you expect to have the most favourable conditions for communication? (please tick one)**

- Café
- Bar
- Restaurant
- Restaurant/Bar

Name of Bar/Restaurant:.....

Your Age:.....

Sex: M F

How many people are at your table or are you interacting with?:.....

Age range of people you are interacting with (please circle one):  
<25 25-35 36-45 46-60 >60

Occupation:.....

How loud do you normally listen to music at home in relation to average speech level?

Very quiet                                  Average                                  Very loud  
1                                  2                                  3                                  4                                  5

Do you prefer to listen to live or recorded music (please circle one)?

Live                                  Recorded

Do you think your hearing is normal?                                  Yes                                  No

If NO, please briefly describe your hearing difficulty.

*Thank you for participating in this survey. The information you have provided will be a great assistance in our research to understand and analyse the current acoustic situation in such hospitality environments as this, particularly in relation to speech intelligibility and acoustical comfort. All information you have provided is completely anonymous and confidential, and is being used purely for research purposes.*

## Appendix B

### ~ Factor Analysis Results

Tables present the main factors with appropriate overall label, correlations/weightings of individual questions, and percentage of variance explained by the factor overall.

#### 1 – Bars

Factor	Main Questions (r>0.5)				% of Variance
<b>1 – Environmental Awareness</b>	<b>6</b>	<b>4</b>	<b>2</b>	<b>9</b>	<b>17.1</b>
	.786	.755	.734	.543	
<b>2 - Degree of Effort</b>	<b>13</b>	<b>11</b>	<b>10</b>		<b>9.4</b>
	.749	.713	.516		
<b>3 - Acceptability</b>	<b>17</b>	<b>22</b>			<b>8.0</b>
	.868	.816			
<b>4 – Noise Sensitivity</b>	<b>3</b>	<b>7</b>	<b>1</b>		<b>6.8</b>
	.772	.608	.602		
<b>5 - Age</b>	<b>Age</b>				<b>5.3</b>
	.872				
<b>6 - Control</b>	<b>15</b>				<b>5.0</b>
	.754				
<b>7 – Perceived Noise Level</b>	<b>16</b>	<b>20</b>			<b>3.9</b>
	.821	.645			
<b>8 - Privacy</b>	<b>18</b>	<b>8</b>			<b>2.4</b>
	.844	.771			

#### 2 – Cafes

Factor	Main Questions (r>0.5)					% of Variance
<b>1- Degree of Effort</b>	<b>13</b>	<b>14</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>16.8</b>
	.798	.790	.757	.747	.605	
<b>2- Noise Sensitivity</b>	<b>1</b>	<b>21</b>	<b>7</b>	<b>3</b>		<b>9.1</b>
	.591	.585	.562	.544		
<b>3 - Age</b>	<b>Age</b>					<b>6.9</b>
	.816					
<b>4 – Perceived Noise Level</b>	<b>20</b>	<b>16</b>				<b>3.1</b>
	.502	.498				

### 3 – Restaurants

Factor	Main Questions ( $r > 0.5$ )					% of Variance
<b>1 – Degree of Effort</b>	<b>12</b>	<b>13</b>	<b>11</b>	<b>10</b>	<b>22</b>	<b>22.1</b>
	.809	.785	.780	.730	.535	
<b>2 – Noise Sensitivity</b>	<b>6</b>	<b>5</b>	<b>2</b>	<b>7</b>		<b>7.8</b>
	.805	.731	.714	.548		
<b>3 - Privacy</b>	<b>19</b>	<b>18</b>				<b>7.3</b>
	.867	.744				
<b>4 – Age</b>	<b>Age</b>					<b>6.1</b>
	.801					
<b>5 - Environmental Awareness</b>	<b>9</b>	<b>1</b>				<b>5.5</b>
	.704	.545				
<b>6 – Acceptability</b>	<b>16</b>	<b>17</b>				<b>4.6</b>
	.737	.656				

### 4- All Three Categories Combined

Factor	Main Questions ( $r > 0.5$ )					% of Variance
<b>1 – Degree of Effort</b>	<b>11</b>	<b>13</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>16.3</b>
	.768	.762	.682	.674	.507	
<b>2 – Noise Sensitivity</b>	<b>6</b>	<b>5</b>				<b>6.9</b>
	.738	.596				
<b>3 – Acceptability</b>	<b>21</b>	<b>17</b>				<b>5.1</b>
	.564	.551				
<b>4 – Age</b>	<b>Age</b>					<b>4.5</b>
	.767					
<b>5 – Environmental Awareness</b>	<b>1</b>	<b>9</b>				<b>3.8</b>
	.602	.533				
<b>6 – Perceived Noise Level</b>	<b>20</b>					<b>2.5</b>
	.656					

(Note that not all of the factors considered to account for a significant amount of variance in the survey, that is eigenvalues over 1.0, were used for further analysis in the results. Only significant ones are presented in these tables.)

## Appendix C

### ~ Social Characteristics of the Sample

#### C.1. Restaurant 1

Age	Male		Female		Total	
	No.	%	No.	%	No.	%
≤25	0	0	1	8.3	1	5
25-35	6	86	10	83	16	84
36-45	1	28	1	8.3	2	11
46-60	0	0	0	0	0	0
≥60	0	0	0	0	0	0
<b>Total</b>	<b>7</b>	<b>37</b>	<b>12</b>	<b>63</b>	<b>19</b>	<b>100</b>

Average: 27

Range (min-max): 14 - 48

#### C.2. Restaurant 2

Age	Male		Female		Total	
	No.	%	No.	%	No.	%
≤25	0	0	4	33	4	20
25-35	4	50	4	33	8	40
36-45	4	50	4	33	8	40
46-60	0	0	0	0	0	0
≥60	0	0	0	0	0	0
<b>Total</b>	<b>8</b>	<b>40</b>	<b>12</b>	<b>60</b>	<b>20</b>	<b>100</b>

Average: 33

Range (min-max): 22 - 45

#### C.3. Restaurant 3

Age	Male		Female		Total	
	No.	%	No.	%	No.	%
≤25	7	50	3	75	10	56
25-35	6	43	0	0	6	33
36-45	1	7	1	25	2	11
46-60	0	0	0	0	0	0
≥60	0	0	0	0	0	0
<b>Total</b>	<b>14</b>	<b>78</b>	<b>4</b>	<b>63</b>	<b>18</b>	<b>100</b>

Average: 31

Range (min-max): 19 - 76



#### C.4. Café 1

Age	Male		Female		Total	
	No.	%	No.	%	No.	%
≤25	0	0	4	33	4	20
25-35	7	88	6	50	13	65
36-45	1	13	2	17	3	15
46-60	0	0	0	0	0	0
≥60	0	0	0	0	0	0
<b>Total</b>	<b>8</b>	<b>40</b>	<b>12</b>	<b>60</b>	<b>20</b>	<b>100</b>

Average: 30

Range (min-max): 22 - 41

#### C.5. Café 2

Age	Male		Female		Total	
	No.	%	No.	%	No.	%
≤25	0	0	2	12	2	10
25-35	1	25	7	44	8	40
36-45	1	25	7	44	8	40
46-60	2	50	0	0	0	0
≥60	0	0	0	0	0	0
<b>Total</b>	<b>4</b>	<b>20</b>	<b>16</b>	<b>80</b>	<b>20</b>	<b>100</b>

Average: 35

Range (min-max): 19 - 76

#### C.6. Café 3

Age	Male		Female		Total	
	No.	%	No.	%	No.	%
≤25	5	45	6	75	11	58
25-35	3	27	2	25	5	26
36-45	1	9	0	0	1	5
46-60	2	18	0	0	2	0
≥60	0	0	0	0	0	0
<b>Total</b>	<b>11</b>	<b>58</b>	<b>8</b>	<b>42</b>	<b>19</b>	<b>100</b>

Average: 29

Range (min-max): 21 - 55

#### C.7. Café 4

Age	Male		Female		Total	
	No.	%	No.	%	No.	%
≤25	1	8	1	14	2	10
25-35	4	31	3	43	7	35
36-45	3	23	0	0	3	15
46-60	2	15	2	29	4	20
≥60	3	23	1	14	4	20
<b>Total</b>	<b>13</b>	<b>65</b>	<b>7</b>	<b>35</b>	<b>20</b>	<b>100</b>

Average: 41

Range (min-max): 22 - 64

### C.8. Bar 1

Age	Male		Female		Total	
	No.	%	No.	%	No.	%
≤25	0	0	4	50	4	21
25-35	5	45	3	38	8	42
36-45	5	45	0	0	5	26
46-60	1	9	1	13	2	11
≥60	0	0	0	0	0	0
<b>Total</b>	11	55	8	42	19	100

Average: 33

Range (min-max): 18 – 57

### C.9. Bar 2

Age	Male		Female		Total	
	No.	%	No.	%	No.	%
≤25	3	20	3	60	6	30
25-35	7	47	1	20	8	40
36-45	5	33	1	20	6	30
46-60	0	0	0	0	0	0
≥60	0	0	0	0	0	0
<b>Total</b>	15	75	5	25	20	100

Average: 30

Range (min-max): 21 - 44

### C.10. Bar 3

Age	Male		Female		Total	
	No.	%	No.	%	No.	%
≤25	5	100	14	93	19	95
25-35	0	0	1	7	1	5
36-45	0	0	0	0	0	0
46-60	0	0	0	0	0	0
≥60	0	0	0	0	0	0
<b>Total</b>	5	25	15	75	20	100

Average: 20

Range (min-max): 18 - 30

### C.11. Bar 4

Age	Male		Female		Total	
	No.	%	No.	%	No.	%
≤25	5	50	5	56	10	53
25-35	2	20	2	22	4	21
36-45	2	20	1	11	3	16
46-60	1	10	1	11	2	11
≥60	0	0	0	0	0	0
<b>Total</b>	10	53	9	47	19	100

Average: 30

Range (min-max): 21 – 53

### C.12. Restaurants Overall

<i>Age</i>	<b>Male</b>		<b>Female</b>		<b>Total</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
$\leq 25$	7	24	8	29	15	26
25-35	16	55	14	50	30	53
36-45	6	21	6	21	12	21
46-60	0	0	0	0	0	0
$\geq 60$	0	0	0	0	0	0
<b>Total</b>	29	51	28	49	57	100

Average: 27

### C.13. Cafes Overall

<i>Age</i>	<b>Male</b>		<b>Female</b>		<b>Total</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
$\leq 25$	6	17	13	30	19	24
25-35	15	42	18	42	33	42
36-45	6	17	9	21	15	19
46-60	6	17	2	5	8	10
$\geq 60$	3	8	1	2	4	5
<b>Total</b>	36	46	43	54	79	100

Average: 34

### C.14. Bars Overall

<i>Age</i>	<b>Male</b>		<b>Female</b>		<b>Total</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
$\leq 25$	8	22	26	70	34	47
25-35	14	39	7	19	21	29
36-45	12	33	2	5	14	19
46-60	2	6	2	5	4	5
$\geq 60$	0	0	0	0	0	0
<b>Total</b>	36	49	37	51	73	100

Average: 28

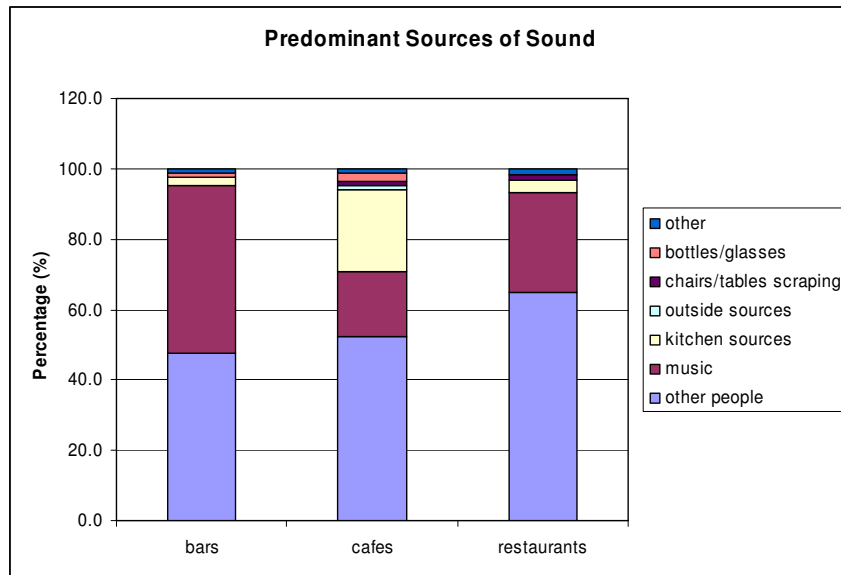
## Appendix D

### ~ Predominant Sources of Sound

**Table D.1. Distribution of Sound Sources**

	Count			Percentage (%)		
	bars	cafes	restaurants	bars	cafes	restaurants
other people	39	45	39	47.6	52.3	65.0
music	39	16	17	47.6	18.6	28.3
kitchen sources	2	20	2	2.4	23.3	3.3
outside sources	0	1	0	0.0	1.2	0.0
chairs/tables scraping	0	1	1	0.0	1.2	1.7
bottles/glasses	1	2	0	1.2	2.3	0.0
other	1	1	1	1.2	1.2	1.7
<b>total</b>	<b>82</b>	<b>86</b>	<b>60</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Figure 2: Distribution of Sound Sources in Each of the Environments.**

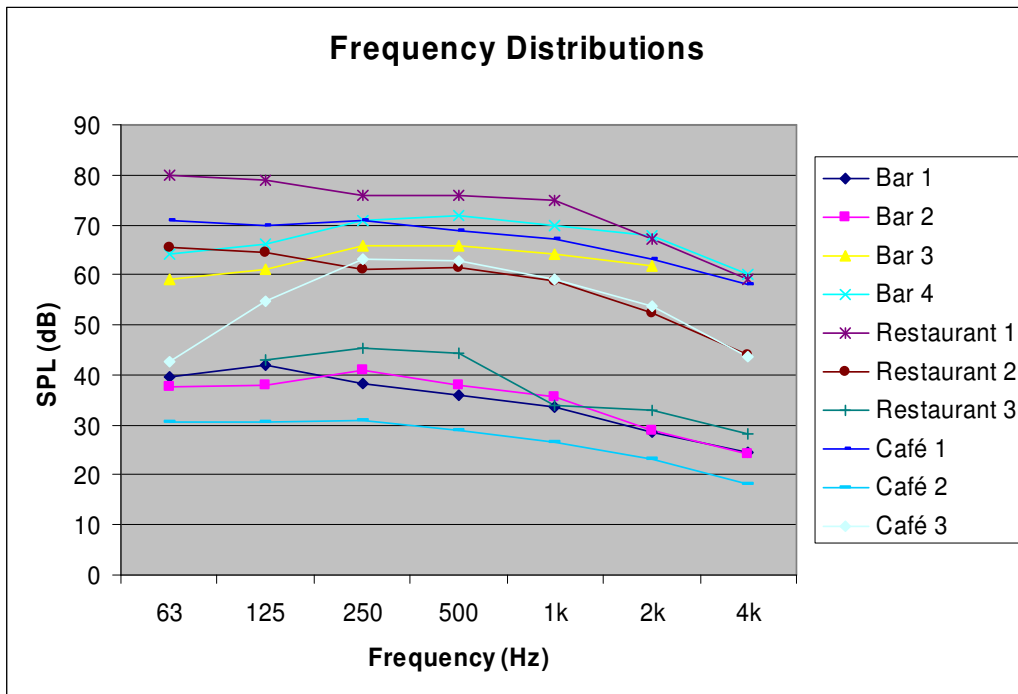


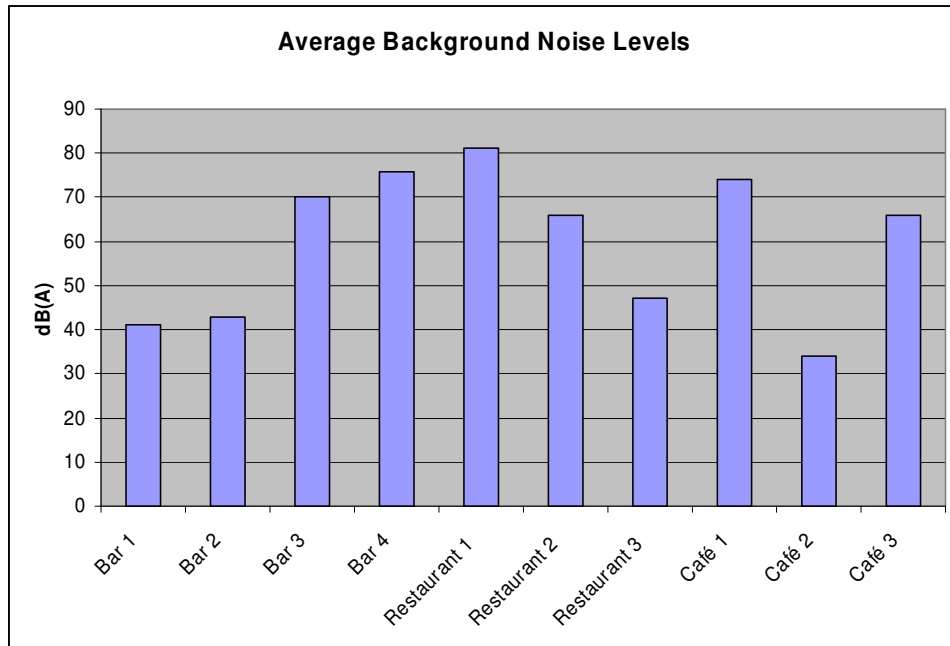
# Appendix E

## ~ Physical Characteristics of the Environments

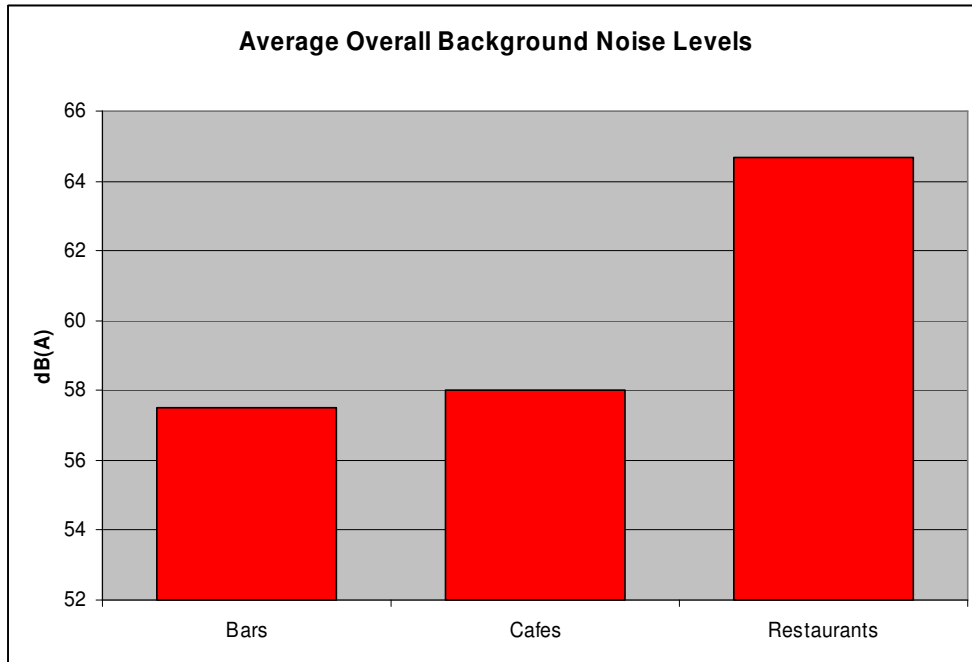
### E.1. Background Sound Level Recordings

Octave Centre Frequency (Hz)	125	250	500	1000	2000	4000	8000	Average dB(A)
Bar 1	40	42	38	36	34	29	24	41
Bar 2	38	38	41	38	36	29	24	43
Bar 3	59	61	66	66	64	62	-	70
Bar 4	64	66	71	72	70	68	60	76
Restaurant 1	80	79	76	76	75	67	59	81
Restaurant 2	65	64	61	61	59	52	44	66
Restaurant 3	-	43	45	44	34	33	28	47
Café 1	71	70	71	69	67	63	58	74
Café 2	31	30	31	29	27	23	18	34
Café 3	43	55	63	63	59	54	44	66





Average Background Sound Level	
	dB(A)
<b>Bars</b>	58
<b>Cafes</b>	58
<b>Restaurants</b>	65
<b>Average</b>	<b>60</b>



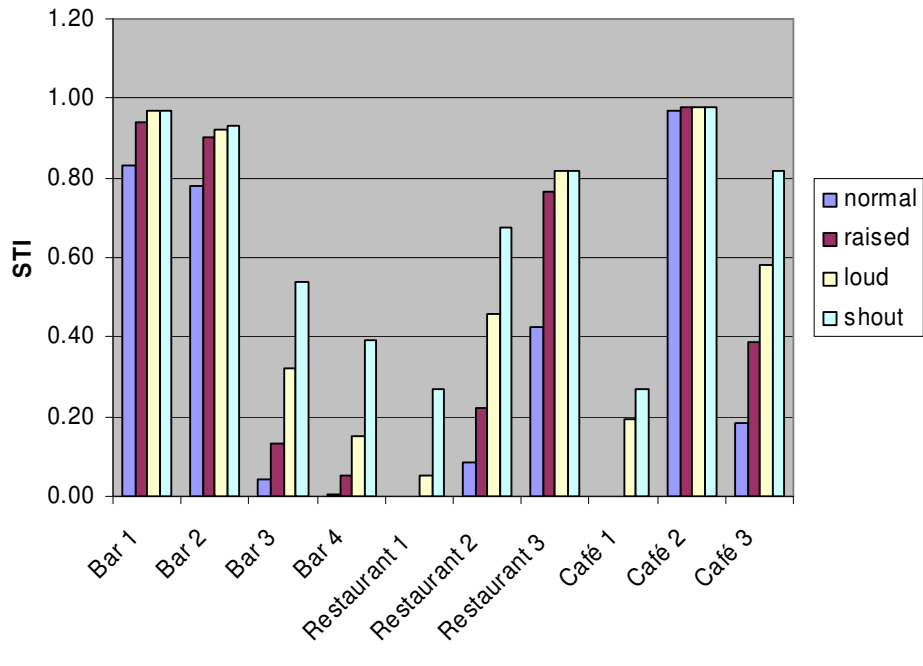
## E.2. Speech Intelligibility Indices

	normal	raised	loud	shout	Average
Bar 1	0.83	0.94	0.97	0.97	<b>0.93</b>
Bar 2	0.78	0.90	0.92	0.93	<b>0.88</b>
Bar 3	0.04	0.13	0.32	0.54	<b>0.26</b>
Bar 4	0.01	0.05	0.15	0.39	<b>0.15</b>
Restaurant 1	0.00	0.00	0.05	0.27	<b>0.08</b>
Restaurant 2	0.08	0.22	0.46	0.68	<b>0.36</b>
Restaurant 3	0.43	0.77	0.82	0.82	<b>0.71</b>
Café 1	0.00	0.00	0.19	0.27	<b>0.12</b>
Café 2	0.97	0.98	0.98	0.98	<b>0.98</b>
Café 3	0.18	0.39	0.58	0.82	<b>0.49</b>

### Overall Average

	normal	raised	loud	shout	Average
Bars	0.41	0.51	0.59	0.71	<b>0.55</b>
Cafes	0.58	0.45	0.58	0.69	<b>0.58</b>
Restaurants	0.17	0.33	0.44	0.59	<b>0.38</b>

**STI Ratings for each Speech Level and Venue**





## *Appendix F*

### *~ Comparison of Means*

	Bars	Restaurants	Cafés	Bars	Restaurants	Cafés
<b>Question</b>	<i>Average</i>			<i>Percentage (%)</i>		
<b>1</b>	3	1.84	1.91	33.3	-1.9	0.0
<b>2</b>	3.29	3.21	3.16	2.2	-0.4	-1.8
<b>3</b>	2.21	2.37	2.2	-2.21	0.0	0.0
<b>4</b>	2.73	3.04	2.94	-6.1	4.8	1.3
<b>5</b>	2.41	2.32	2.38	1.8	-2.1	0.3
<b>6</b>	2.73	2.98	2.90	-5.0	4.0	1.1
<b>7</b>	2.68	3.02	2.93	-6.9	5.0	1.8
<b>8</b>	2.30	1.93	1.86	13.4	-4.9	-8.5
<b>9</b>	4.03	3.97	4.07	0.2	-1.3	1.1
<b>10</b>	2.96	2.67	2.59	8.1	-2.6	-5.5
<b>11</b>	2.37	2.31	2.07	5.4	2.5	-7.9
<b>12</b>	2.25	2.30	2.17	0.4	2.6	-3.0
<b>13</b>	2.96	2.67	2.68	6.9	-3.8	-3.2
<b>14</b>	2.50	2.45	2.38	2.4	0.2	-2.6
<b>15</b>	0.99	0.71	0.84	13.7	-6.5	43.0
<b>16</b>	2.15	1.96	2.22	4.0	-12.8	53.4
<b>17</b>	2.85	2.55	2.58	18.7	-1.7	36.8
<b>18</b>	2.10	1.87	2.00	5.3	-5.9	0.6
<b>19</b>	2.65	2.54	2.19	19.1	17.6	26.9
<b>20</b>	2.86	2.81	2.25	8.2	6.6	-14.8
<b>21</b>	2.33	2.38	2.43	-4.6	-2.1	54.5
<b>22</b>	2.11	2.21	2.26	-3.9	0.7	3.2

## Appendix G

### ~ Inferential Statistics

#### G.1. Correlations between Main Subjective Factors

		ACCE PT	ENVIRO AW	DOFE	NS	CONTR OL	NSELV L	PRIVA CY
Pearson Correlation	ACCEPT	1.000	.397	.622	.316	.219	.335	.299
	ENVIROAW	.397	1.000	.397	.633	.160	.414	.176
	DOFE	.622	.397	1.000	.346	.407	.587	.261
	NS	.316	.633	.346	1.000	.031	.352	.074
	CONTROL	.219	.160	.407	.031	1.000	.340	.139
	NSELVL	.335	.414	.587	.352	.340	1.000	.139
	PRIVACY	.299	.176	.261	.074	.139	.139	1.000
Sig. (1- tailed)	ACCEPT	.	.000	.000	.002	.026	.001	.004
	ENVIROAW	.000	.	.000	.000	.078	.000	.059
	DOFE	.000	.000	.	.001	.000	.000	.010
	NS	.002	.000	.001	.	.392	.001	.258
	CONTROL	.026	.078	.000	.392	.	.001	.109
	NSELVL	.001	.000	.000	.001	.001	.	.109
	PRIVACY	.004	.059	.010	.258	.109	.109	.
N	ACCEPT	80	80	80	80	80	80	80
	ENVIROAW	80	80	80	80	80	80	80
	DOFE	80	80	80	80	80	80	80
	NS	80	80	80	80	80	80	80
	CONTROL	80	80	80	80	80	80	80
	NSELVL	80	80	80	80	80	80	80
	PRIVACY	80	80	80	80	80	80	80

**(a) Bars**

**(b) Cafes**

		ACCEPT	DOFE	NS	NSELVL	AGE
Pearson Correlation	ACCEPT	1.000	.391	.291	.331	-.128
	DOFE	.391	1.000	.332	.220	-.024
	NS	.291	.332	1.000	.045	-.029
	NSELVL	.331	.220	.045	1.000	-.089
	AGE	-.128	-.024	-.029	-.089	1.000
Sig. (1-tailed)	ACCEPT	.	.000	.005	.002	.133
	DOFE	.000	.	.002	.027	.418
	NS	.005	.002	.	.348	.400
	NSELVL	.002	.027	.348	.	.220
	AGE	.133	.418	.400	.220	.
N	ACCEPT	77	77	77	77	77
	DOFE	77	77	77	77	77
	NS	77	77	77	77	77
	NSELVL	77	77	77	77	77
	AGE	77	77	77	77	77

**(c) Restaurants**

		ACCEP T	AGE	DOFE	NS	PRIVA CY	ENVIRO AW
Pearson Correlation	ACCEPT	1.000	-.038	.065	.197	.261	.168
	AGE	-.038	1.000	.121	-.061	.044	.044
	DOFE	.065	.121	1.000	.239	.194	.526
	NS	.197	-.061	.239	1.000	.224	.433
	PRIVACY	.261	.044	.194	.224	1.000	.018
Sig. (1-tailed)	ENVIROAW	.168	.044	.526	.433	.018	1.000
	ACCEPT	.	.388	.311	.067	.023	.101
	AGE	.388	.	.181	.323	.371	.370
	DOFE	.311	.181	.	.034	.071	.000
	NS	.067	.323	.034	.	.044	.000
N	PRIVACY	.023	.371	.071	.044	.	.446
	ENVIROAW	.101	.370	.000	.000	.446	.
	ACCEPT	59	59	59	59	59	59
	AGE	59	59	59	59	59	59
	DOFE	59	59	59	59	59	59
	NS	59	59	59	59	59	59
	PRIVACY	59	59	59	59	59	59
	ENVIROAW	59	59	59	59	59	59

G.2. Correlations between Objective Measures and Subjective Factors

**(a) Bars**

		ACCEPT	DBA
Pearson Correlation	ACCEPT	1.000	-.017
	DBA	-.017	1.000
Sig. (1-tailed)	ACCEPT	.	.440
	DBA	.440	.
N	ACCEPT	80	80
	DBA	80	80

		ACCEPT	STI.NORM	STI.RAIS	STI.LOUD	STI.SHOU
Pearson Correlation	ACCEPT	1.000	.016	.015	.018	.019
	STI.NORM	.016	1.000	.999	.991	.983
	STI.RAIS	.015	.999	1.000	.995	.989
	STI.LOUD	.018	.991	.995	1.000	.999
	STI.SHOU	.019	.983	.989	.999	1.000
Sig. (1-tailed)	ACCEPT	.	.444	.446	.438	.434
	STI.NORM	.444	.	.000	.000	.000
	STI.RAIS	.446	.000	.	.000	.000
	STI.LOUD	.438	.000	.000	.	.000
	STI.SHOU	.434	.000	.000	.000	.
N	ACCEPT	80	80	80	80	80
	STI.NORM	80	80	80	80	80
	STI.RAIS	80	80	80	80	80
	STI.LOUD	80	80	80	80	80
	STI.SHOU	80	80	80	80	80





		DBA	STI.NORM	STI.RAIS	STI.LOUD	STI.SHOU
Pearson Correlation	DBA	1.000	-.961	-.985	-.994	-.941
	STI.NORM	-.961	1.000	.994	.927	.812
	STI.RAIS	-.985	.994	1.000	.961	.868
	STI.LOUD	-.994	.927	.961	1.000	.972
	STI.SHOU	-.941	.812	.868	.972	1.000
Sig. (1-tailed)	DBA	.	.000	.000	.000	.000
	STI.NORM	.000	.	.000	.000	.000
	STI.RAIS	.000	.000	.	.000	.000
	STI.LOUD	.000	.000	.000	.	.000
	STI.SHOU	.000	.000	.000	.000	.
N	DBA	60	60	60	60	60
	STI.NORM	60	60	60	60	60
	STI.RAIS	60	60	60	60	60
	STI.LOUD	60	60	60	60	60
	STI.SHOU	60	60	60	60	60

		V13	STI.NOR M	STI.RAIS	STI.LOUD	STI.SHOU
Pearson Correlation	V13	1.000	-.117	-.113	-.110	-.108
	STI.NORM	-.117	1.000	.999	.991	.983
	STI.RAIS	-.113	.999	1.000	.995	.989
	STI.LOUD	-.110	.991	.995	1.000	.999
	STI.SHOU	-.108	.983	.989	.999	1.000
Sig. (1-tailed)	V13	.	.157	.165	.172	.177
	STI.NORM	.157	.	.000	.000	.000
	STI.RAIS	.165	.000	.	.000	.000
	STI.LOUD	.172	.000	.000	.	.000
	STI.SHOU	.177	.000	.000	.000	.
N	V13	76	76	76	76	76
	STI.NORM	76	76	76	76	76
	STI.RAIS	76	76	76	76	76
	STI.LOUD	76	76	76	76	76
	STI.SHOU	76	76	76	76	76

**(b) Cafes**

		ACCEPT	DBA
Pearson Correlation	ACCEPT	1.000	-.141
	DBA	-.141	1.000
Sig. (1-tailed)	ACCEPT	.	.141
	DBA	.141	.
N	ACCEPT	60	60
	DBA	60	60

		ACCEPT	STI.NOR M	STI.RAIS	STI.LOU D	STI.SHOU U
Pearson Correlation	ACCEPT	1.000	.141	.144	.142	.129
	STI.NORM	.141	1.000	.973	.942	.793
	STI.RAIS	.144	.973	1.000	.994	.911
	STI.LOUD	.142	.942	.994	1.000	.951
	STI.SHOU	.129	.793	.911	.951	1.000
Sig. (1-tailed)	ACCEPT	.	.142	.137	.139	.162
	STI.NORM	.142	.	.000	.000	.000
	STI.RAIS	.137	.000	.	.000	.000
	STI.LOUD	.139	.000	.000	.	.000
	STI.SHOU	.162	.000	.000	.000	.
N	ACCEPT	60	60	60	60	60
	STI.NORM	60	60	60	60	60
	STI.RAIS	60	60	60	60	60
	STI.LOUD	60	60	60	60	60
	STI.SHOU	60	60	60	60	60



		STI.NOR M	DOFE	NS	NSELVL	ACCEPT	AGE
Pearson Correlation	STI.NORM	1.000	.191	-.023	.160	.158	.324
	DOFE	.191	1.000	.325	.194	.465	-.028
	NS	-.023	.325	1.000	.157	.339	-.123
	NSELVL	.160	.194	.157	1.000	.382	.271
	ACCEPT	.158	.465	.339	.382	1.000	-.065
	AGE	.324	-.028	-.123	.271	-.065	1.000
Sig. (1-tailed)	STI.NORM	.	.076	.432	.115	.119	.006
	DOFE	.076	.	.006	.072	.000	.417
	NS	.432	.006	.	.119	.005	.179
	NSELVL	.115	.072	.119	.	.002	.020
	ACCEPT	.119	.000	.005	.002	.	.314
	AGE	.006	.417	.179	.020	.314	.
N	STI.NORM	58	58	58	58	58	58
	DOFE	58	58	58	58	58	58
	NS	58	58	58	58	58	58
	NSELVL	58	58	58	58	58	58
	ACCEPT	58	58	58	58	58	58
	AGE	58	58	58	58	58	58

		STI.RAIS	DOFE	NS	NSELVL	ACCEPT	AGE
Pearson Correlation	STI.RAIS	1.000	.185	-.024	.166	.157	.292
	DOFE	.185	1.000	.325	.194	.465	-.028
	NS	-.024	.325	1.000	.157	.339	-.123
	NSELVL	.166	.194	.157	1.000	.382	.271
	ACCEPT	.157	.465	.339	.382	1.000	-.065
	AGE	.292	-.028	-.123	.271	-.065	1.000
Sig. (1-tailed)	STI.RAIS	.	.082	.428	.106	.120	.013
	DOFE	.082	.	.006	.072	.000	.417
	NS	.428	.006	.	.119	.005	.179
	NSELVL	.106	.072	.119	.	.002	.020
	ACCEPT	.120	.000	.005	.002	.	.314
	AGE	.013	.417	.179	.020	.314	.
N	STI.RAIS	58	58	58	58	58	58
	DOFE	58	58	58	58	58	58
	NS	58	58	58	58	58	58
	NSELVL	58	58	58	58	58	58
	ACCEPT	58	58	58	58	58	58
	AGE	58	58	58	58	58	58

		STI.LOU D	DOFE	NS	NSELVL	ACCEPT	AGE
Pearson Correlation	STI.LOUD	1.000	.179	-.024	.166	.154	.271
	DOFE	.179	1.000	.325	.194	.465	-.028
	NS	-.024	.325	1.000	.157	.339	-.123
	NSELVL	.166	.194	.157	1.000	.382	.271
	ACCEPT	.154	.465	.339	.382	1.000	-.065
	AGE	.271	-.028	-.123	.271	-.065	1.000
Sig. (1-tailed)	STI.LOUD	.	.089	.428	.106	.125	.020
	DOFE	.089	.	.006	.072	.000	.417
	NS	.428	.006	.	.119	.005	.179
	NSELVL	.106	.072	.119	.	.002	.020
	ACCEPT	.125	.000	.005	.002	.	.314
	AGE	.020	.417	.179	.020	.314	.
N	STI.LOUD	58	58	58	58	58	58
	DOFE	58	58	58	58	58	58
	NS	58	58	58	58	58	58
	NSELVL	58	58	58	58	58	58
	ACCEPT	58	58	58	58	58	58
	AGE	58	58	58	58	58	58

		STI.SHOU U	DOFE	NS	NSELVL	ACCEPT	AGE
Pearson Correlation	STI.SHOU	1.000	.150	-.023	.155	.135	.195
	DOFE	.150	1.000	.325	.194	.465	-.028
	NS	-.023	.325	1.000	.157	.339	-.123
	NSELVL	.155	.194	.157	1.000	.382	.271
	ACCEPT	.135	.465	.339	.382	1.000	-.065
	AGE	.195	-.028	-.123	.271	-.065	1.000
Sig. (1-tailed)	STI.SHOU	.	.130	.431	.122	.157	.071
	DOFE	.130	.	.006	.072	.000	.417
	NS	.431	.006	.	.119	.005	.179
	NSELVL	.122	.072	.119	.	.002	.020
	ACCEPT	.157	.000	.005	.002	.	.314
	AGE	.071	.417	.179	.020	.314	.
N	STI.SHOU	58	58	58	58	58	58
	DOFE	58	58	58	58	58	58
	NS	58	58	58	58	58	58
	NSELVL	58	58	58	58	58	58
	ACCEPT	58	58	58	58	58	58
	AGE	58	58	58	58	58	58

		DBA	STI.NOR M	STI.RAIS	STI.LOU D	STI.SHOU U
Pearson Correlation	DBA	1.000	-1.000	-.977	-.947	-.802
	STI.NORM	-1.000	1.000	.973	.942	.793
	STI.RAIS	-.977	.973	1.000	.994	.911
	STI.LOUD	-.947	.942	.994	1.000	.951
	STI.SHOU	-.802	.793	.911	.951	1.000
Sig. (1-tailed)	DBA	.	.000	.000	.000	.000
	STI.NORM	.000	.	.000	.000	.000
	STI.RAIS	.000	.000	.	.000	.000
	STI.LOUD	.000	.000	.000	.	.000
	STI.SHOU	.000	.000	.000	.000	.
N	DBA	60	60	60	60	60
	STI.NORM	60	60	60	60	60
	STI.RAIS	60	60	60	60	60
	STI.LOUD	60	60	60	60	60
	STI.SHOU	60	60	60	60	60

		V13	STI.NOR M	STI.RAIS	STI.LOUD	STI.SHOU
Pearson Correlation	V13	1.000	.135	.112	.099	.056
	STI.NORM	.135	1.000	.973	.942	.793
	STI.RAIS	.112	.973	1.000	.994	.911
	STI.LOUD	.099	.942	.994	1.000	.951
	STI.SHOU	.056	.793	.911	.951	1.000
Sig. (1-tailed)	V13	.	.152	.197	.226	.336
	STI.NORM	.152	.	.000	.000	.000
	STI.RAIS	.197	.000	.	.000	.000
	STI.LOUD	.226	.000	.000	.	.000
	STI.SHOU	.336	.000	.000	.000	.
N	V13	60	60	60	60	60
	STI.NORM	60	60	60	60	60
	STI.RAIS	60	60	60	60	60
	STI.LOUD	60	60	60	60	60
	STI.SHOU	60	60	60	60	60

**(c) Restaurants**

		ACCEPT	DBA
Pearson Correlation	ACCEPT	1.000	-.228
	DBA	-.228	1.000
Sig. (1-tailed)	ACCEPT	.	.040
	DBA	.040	.
N	ACCEPT	60	60
	DBA	60	60

		ACCEPT	STI.NOR M	STI.RAIS	STI.LOU D	STI.SHOU U
Pearson Correlation	ACCEPT	1.000	.262	.252	.210	.162
	STI.NORM	.262	1.000	.994	.927	.812
	STI.RAIS	.252	.994	1.000	.961	.868
	STI.LOUD	.210	.927	.961	1.000	.972
	STI.SHOU	.162	.812	.868	.972	1.000
Sig. (1-tailed)	ACCEPT	.	.021	.026	.053	.108
	STI.NORM	.021	.	.000	.000	.000
	STI.RAIS	.026	.000	.	.000	.000
	STI.LOUD	.053	.000	.000	.	.000
	STI.SHOU	.108	.000	.000	.000	.
N	ACCEPT	60	60	60	60	60
	STI.NORM	60	60	60	60	60
	STI.RAIS	60	60	60	60	60
	STI.LOUD	60	60	60	60	60
	STI.SHOU	60	60	60	60	60





		DBA	STI.NORM	STI.RAIS	STI.LOUD	STI.SHOU
Pearson Correlation	DBA	1.000	-.961	-.985	-.994	-.941
	STI.NORM	-.961	1.000	.994	.927	.812
	STI.RAIS	-.985	.994	1.000	.961	.868
	STI.LOUD	-.994	.927	.961	1.000	.972
	STI.SHOU	-.941	.812	.868	.972	1.000
Sig. (1-tailed)	DBA	.	.000	.000	.000	.000
	STI.NORM	.000	.	.000	.000	.000
	STI.RAIS	.000	.000	.	.000	.000
	STI.LOUD	.000	.000	.000	.	.000
	STI.SHOU	.000	.000	.000	.000	.
N	DBA	60	60	60	60	60
	STI.NORM	60	60	60	60	60
	STI.RAIS	60	60	60	60	60
	STI.LOUD	60	60	60	60	60
	STI.SHOU	60	60	60	60	60

		V13	STI.NORM	STI.RAIS	STI.LOUD	STI.SHOU
Pearson Correlation	V13	1.000	.183	.222	.311	.368
	STI.NORM	.183	1.000	.994	.926	.809
	STI.RAIS	.222	.994	1.000	.961	.866
	STI.LOUD	.311	.926	.961	1.000	.971
	STI.SHOU	.368	.809	.866	.971	1.000
Sig. (1-tailed)	V13	.	.082	.046	.008	.002
	STI.NORM	.082	.	.000	.000	.000
	STI.RAIS	.046	.000	.	.000	.000
	STI.LOUD	.008	.000	.000	.	.000
	STI.SHOU	.002	.000	.000	.000	.
N	V13	59	59	59	59	59
	STI.NORM	59	59	59	59	59
	STI.RAIS	59	59	59	59	59
	STI.LOUD	59	59	59	59	59
	STI.SHOU	59	59	59	59	59

### G.3. Demographic Correlations

		ACCEPT	AGE	SEX
Pearson Correlation	ACCEPT	1.000	.031	-.139
	AGE	.031	1.000	-.191
	SEX	-.139	-.191	1.000
Sig. (1-tailed)	ACCEPT	.	.325	.021
	AGE	.325	.	.003
	SEX	.021	.003	.
N	ACCEPT	214	214	214
	AGE	214	214	214
	SEX	214	214	214

		V16	AGE	SEX
Pearson Correlation	V16	1.000	.044	.152
	AGE	.044	1.000	-.192
	SEX	.152	-.192	1.000
Sig. (1-tailed)	V16	.	.263	.013
	AGE	.263	.	.003
	SEX	.013	.003	.
N	V16	211	211	211
	AGE	211	211	211
	SEX	211	211	211



**(a) Bars**

		DOFE	HEARING
Pearson Correlation	DOFE	1.000	.218
	HEARING	.218	1.000
Sig. (1-tailed)	DOFE	.	.028
	HEARING	.028	.
N	DOFE	78	78
	HEARING	78	78

**(b) Cafes**

		DOFE	HEARING
Pearson Correlation	DOFE	1.000	-.011
	HEARING	-.011	1.000
Sig. (1-tailed)	DOFE	.	.462
	HEARING	.462	.
N	DOFE	79	79
	HEARING	79	79

**(c) Restaurants**

		DOFE	HEARING
Pearson Correlation	DOFE	1.000	.223
	HEARING	.223	1.000
Sig. (1-tailed)	DOFE	.	.046
	HEARING	.046	.
N	DOFE	58	58
	HEARING	58	58

# Appendix H

~ ANSI Speech Level Curves 53.5 (1997)

