

**Supplementary Information for “Summary statistics in auditory perception”
by McDermott, J.H., Schemitsch, M. & Simoncelli, E.P.**

The supplementary information includes one table and two figures.

Table S1

File 1	File 2
1 Applause - rhythmic	Applause - large auditorium
2 Motorcycle idling	Idling boat
3 IBM electric typewriter	Manual typewriter
4 Bees, recording 2	Bee swarm
5 Frying bacon	Crunching cellophane
6 Castanets - rhythmic	Castanets - steady
7 Summer day in the south	Insects in a swamp
8 Fast running river	River running over shallows
9 Wind whistling	Wind moaning
10 Enthusiastic applause, recording 2	Enthusiastic applause, recording 1
11 Bathroom sink	Bath being drawn
12 Shaking coins	Pouring coins
13 Industrial machinery	Construction site ambience
14 Insects in a swamp	Summer day in the south
15 Bee swarm	Bees, recording 2
16 Ship anchor being raised	Pneumatic drills at road works
17 Sparrows - large excited group	Birds in tropical forest
18 Horse trotting on cobblestones	Horse and buggy on bridge
19 River running over shallows	Fast running river
20 Heavy rain falling and dripping	Heavy rain on hard surface
21 Linotypes	City room teletype
22 Fire - burning room	Fire, recording 1
23 Pneumatic drills at road works	Construction site ambience
24 Teletype, recording 2	City room teletype
25 Electric adding machine	Teletype, recording 2
26 Water running into sink	Bathroom sink
27 Bath being drawn	Bathroom sink
28 Stream near small waterfall	River running over shallows
29 Bulldozer	Waterfall
30 Fire - forest inferno	Fire, recording 1
31 Newspaper printing press	Construction site ambience
32 City room teletype	Teletype, recording 2
33 Static	Radio static
34 Metal lathe	Blender
35 Frogs - large group	Frogs by lake, recording 2
36 Rain in the woods, recording 2	Jungle rain
37 Frogs by lake	Frogs - large group
38 Rain in the woods, recording 1	Jungle rain
39 Kitchen sink disposal	Air conditioner
40 Radio static	Static
41 Construction site ambience	Pneumatic drills at road works
42 Enthusiastic applause, recording 1	Enthusiastic applause, recording 2
43 Jungle rain	Rain in the woods, recording 1
44 Rain	Rain in the woods, recording 1
45 Heavy rain on hard surface	Rain in the woods, recording 2
46 Applause - large crowd	Applause - large auditorium
47 Waterfall	Air conditioner
48 Blender	Metal lathe
49 Applause - large auditorium	Applause - large crowd
50 Air conditioner	Waterfall

Table S1. List of textures used in Experiments 1-3. In Experiment 1, both textures in each pair were used. In Experiments 2 and 3, only the first texture in each pair was used.

Figure S1

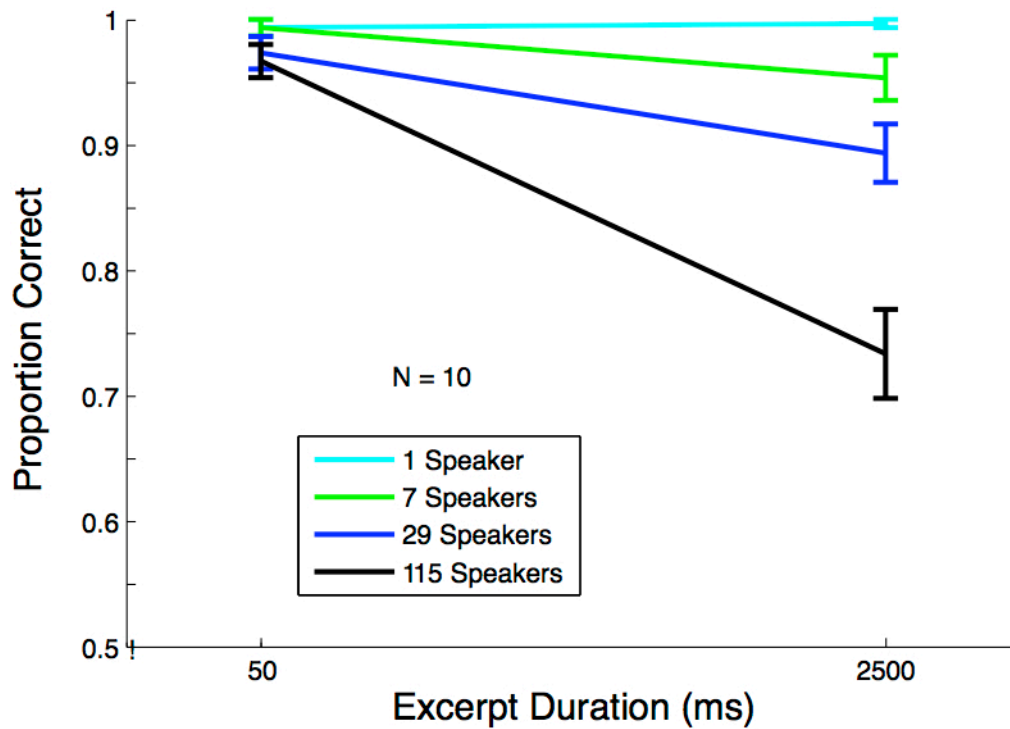


Figure S1. Exemplar discrimination results for speech textures without added noise. The experiment was identical to Experiment 4 but for the absence of noise. It is apparent that the interaction between duration and mixture density is present, but that a ceiling effect obscured any differences between the short- and long-duration single-speaker conditions. This ceiling effect motivated the addition of noise in Experiment 4, as the noise served to bring performance below ceiling.

Figure S2

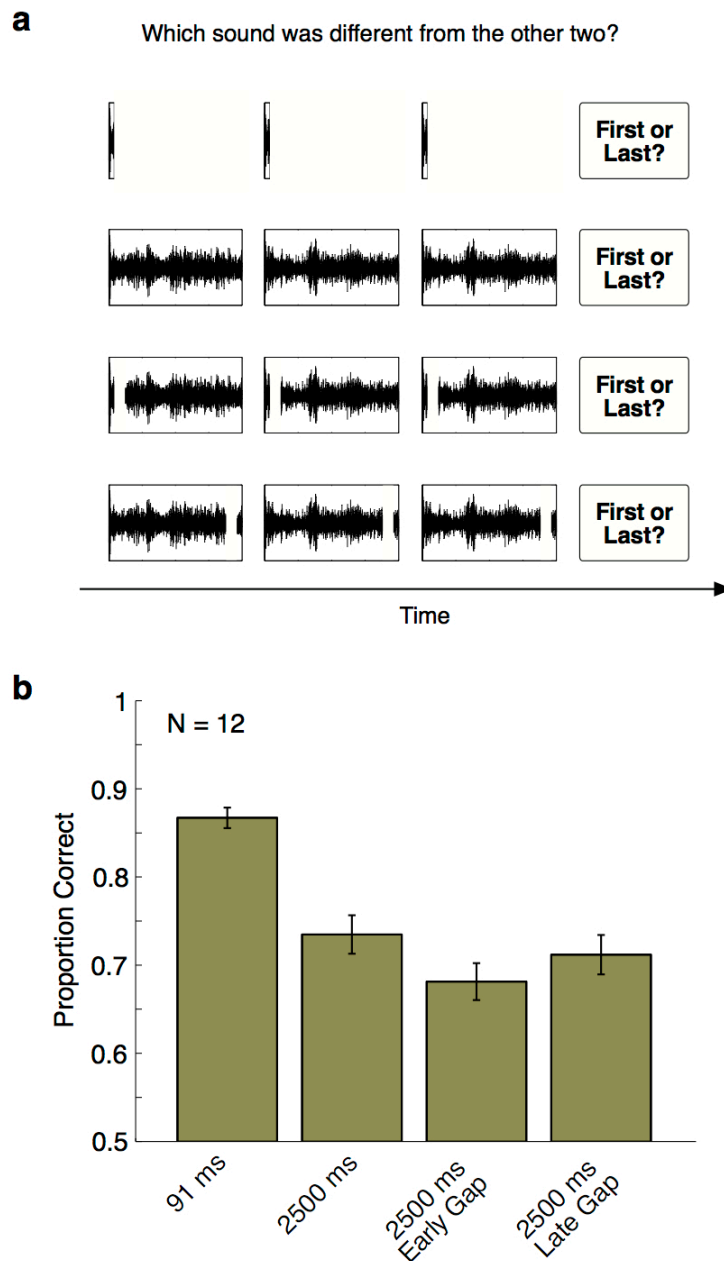


Figure S2. Exemplar discrimination for texture excerpts with gaps.

a) Schematic of trial structure. The first two conditions were identical to the fixed inter-onset-interval conditions of Experiment 3. The last two conditions presented 2500ms excerpts with 200ms silent gaps either 91ms after the beginning of the excerpt, or 91ms before the end.

Participants were instructed that the gaps might make the experiment easier by helping them to focus their attention on the short segment within the longer sound.

Schematics are drawn to scale.

b) Results of experiment. Performance was worse for long excerpts than short, as in Experiment 3, and the gaps did not facilitate discrimination. An ANOVA on the three 2500ms conditions revealed no significant

difference between those conditions ($F(2,22) = 1.07$, $p = .36$). The 12 subjects who participated had not taken part in the other experiments. Each subject completed two sessions of trials, each containing 50 trials per condition for a total of 200 trials per session. The textures used were the same as those in Experiments 2 and 3.