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s r **l** r
r s **l** r **l** r r r rr r s
s s r s s s

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l - r **l** r s r , r **l** r

Abstract

r **l** s r **l** rr s s r **l** r s r **l** s s r **l** r s s r s s

The image shows a large grid of handwritten cursive letters 'r' and 's' in various styles, including different fonts and sizes, arranged in a grid pattern. A large diagonal watermark 'Authors Personal Copy' is overlaid across the grid.

2. Methods

2.1. Subjects

2.2. Apparatus and materials

Figure 1 shows the stimuli used in the experiment. The stimuli were generated by concatenating two fragments of the vowel space. The first fragment (UC fragment) contained 100 different vowel space points, each consisting of a unique combination of the three dimensions of vowel space: height (low, mid, high), frontness (central, near-front, near-back), and depth (near-high, near-low). The second fragment (AP fragment) contained 100 different vowel space points, each consisting of a unique combination of the two dimensions of vowel space: height (low, mid, high) and frontness (central, near-front, near-back). The stimuli were presented in a pseudorandom order, with each vowel space point appearing once in each fragment.

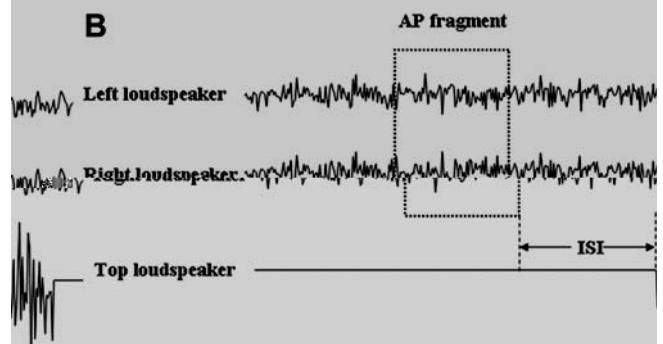
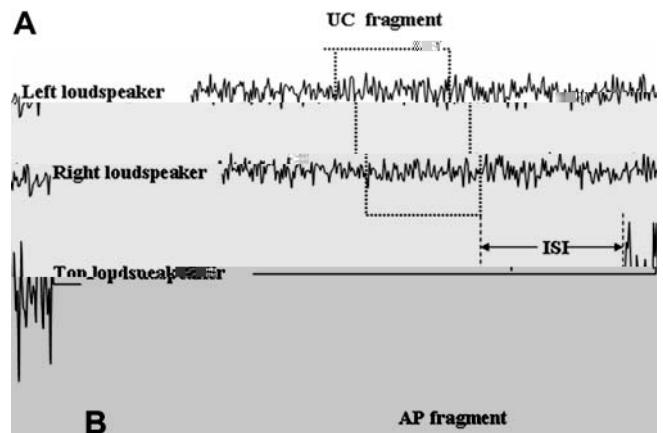


Figure 2 shows the stimuli used in the experiment. The stimuli were generated by concatenating two fragments of the vowel space. The first fragment (UC fragment) contained 100 different vowel space points, each consisting of a unique combination of the three dimensions of vowel space: height (low, mid, high), frontness (central, near-front, near-back), and depth (near-high, near-low). The second fragment (AP fragment) contained 100 different vowel space points, each consisting of a unique combination of the two dimensions of vowel space: height (low, mid, high) and frontness (central, near-front, near-back). The stimuli were presented in a pseudorandom order, with each vowel space point appearing once in each fragment.

2.3. Procedures

2.3.1. Stage 1: perceptual learning

Figure 3 shows the stimuli used in the experiment. The stimuli were generated by concatenating two fragments of the vowel space. The first fragment (UC fragment) contained 100 different vowel space points, each consisting of a unique combination of the three dimensions of vowel space: height (low, mid, high), frontness (central, near-front, near-back), and depth (near-high, near-low). The second fragment (AP fragment) contained 100 different vowel space points, each consisting of a unique combination of the two dimensions of vowel space: height (low, mid, high) and frontness (central, near-front, near-back). The stimuli were presented in a pseudorandom order, with each vowel space point appearing once in each fragment.

s s r ss r s r r r r - s s
 r s s r s r s r r r r s s r
 s r s ss s s s s s s s s s ,
 s s r s r s r s r s s s
 r r s s r r s r s r
 s s s

2.3.2. Stage 2: emotional learning (auditory fear conditioning)

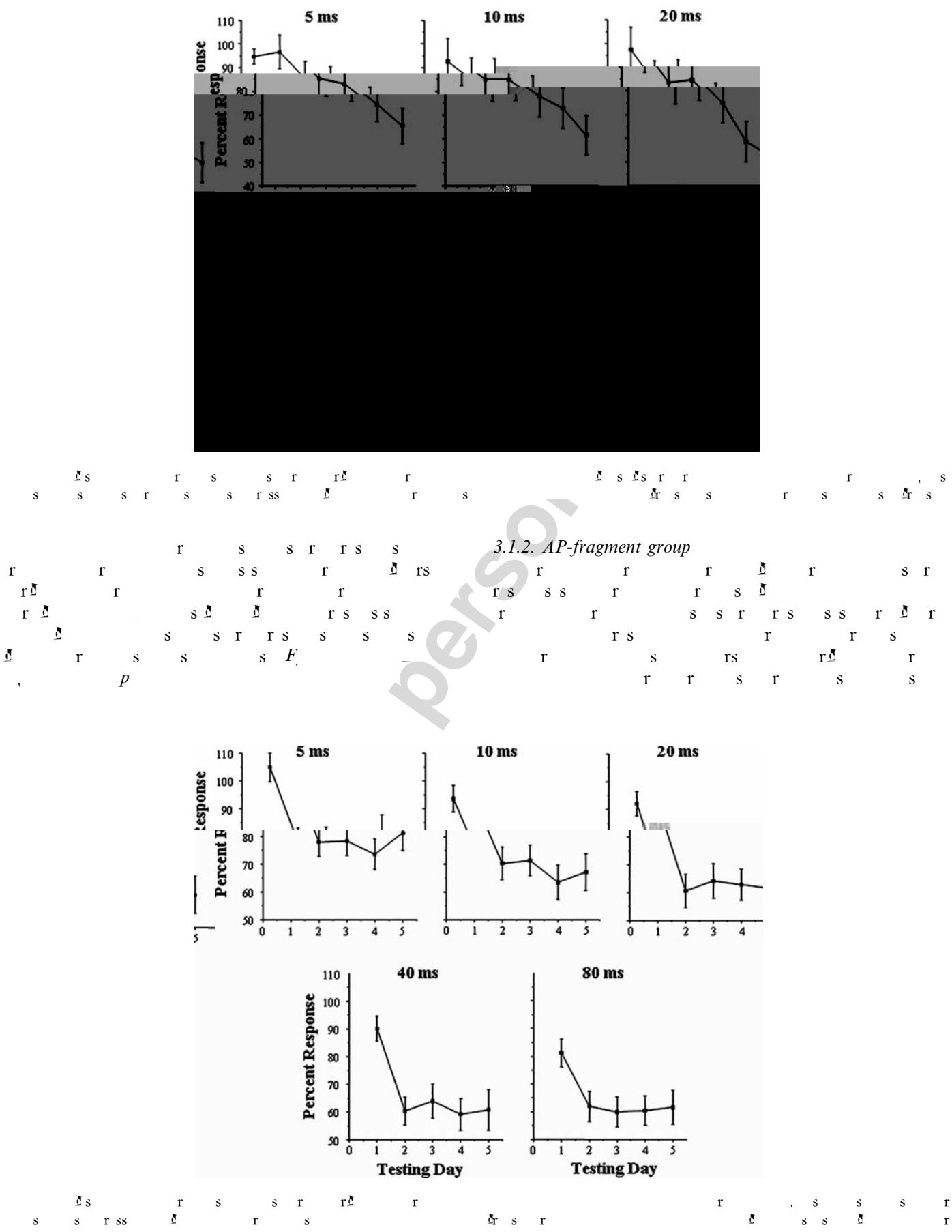
2.4. Statistical analysis

$$\begin{array}{ccccccc}
 & r & s & s & r & s & \text{L} \\
 & s & r & s & r & s & r \\
 r & & r & & & s & r s \\
 s & r & s & r & s & r & s \\
 r s & s & . & s & s & \text{L} & \text{L} \\
 r \text{L} & r s & s = & \% \times (& s & r & s \\
 & r & s / & & s & r & s \\
 & & \text{L} & r & s & \text{L} & \text{L} \\
 r & s & \text{L} & r & s & s & r \\
 r & & s , & s & s & s & s \\
 & & r & r & s & s & s \\
 & & - & & \text{L} & / & r \\
 & r & s & r & r & r & \text{L}
 \end{array}$$

3. Results

3.1. Stage 1: perceptual learning

3.1.1. UC-fragment group



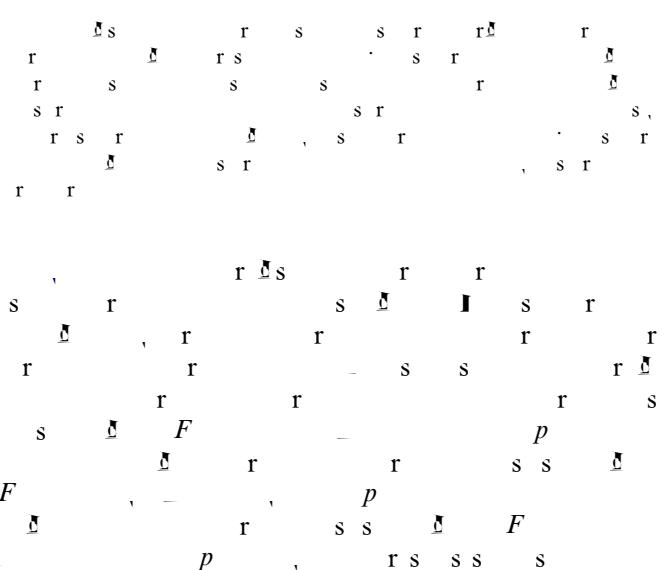
r s I s r rs r
 r s s r s s r r r
 F r s s r s r s r s s
 r s r s s s r r r
 s r r s r s p , r
 r s s s r r , s s
 s r r s r s r r r
 s r r p , r I r r
 r r r r r r r r
 r s r s s s s I s s s
 s s s s s s I r r r
 r F , p , r I r
 r s s s s s I r r
 r s s s s s s s s
 s r r r r r r r r s
 r s s r s r s s s s s
 s r r s r s s s s s
 F

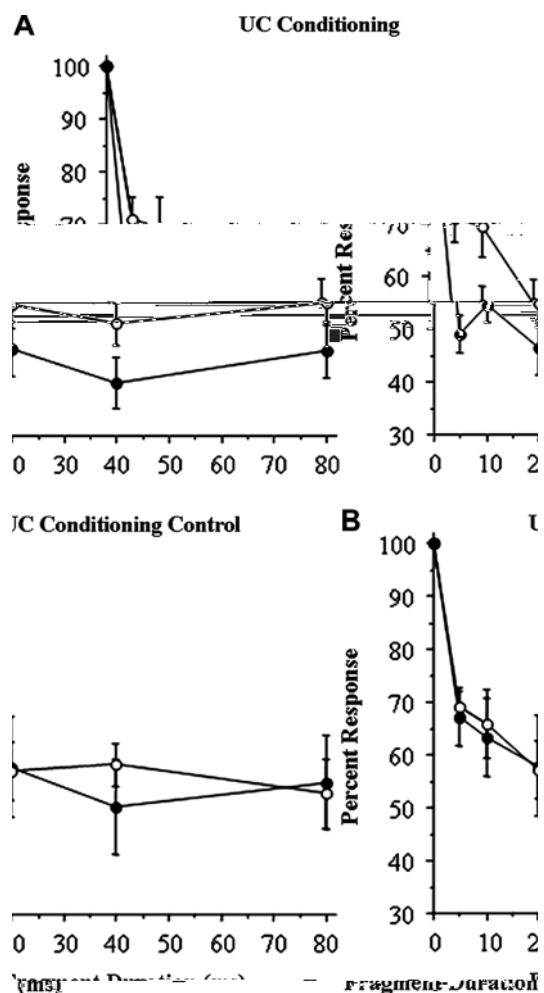
3.2. Stage 2: emotional learning

s r s r r s r r s r
 r s r r r r s r s r
 s r s s I r s s s s
 r r r r s s r s r s
 r r r s s / r s r /
 I r r s r r s / r s
 r / I r r s r r s
 r s r r r / I r r
 s r s r s r r s
 s s r r s r r s
 r s s r s r r , r s
 r r r r r s r r

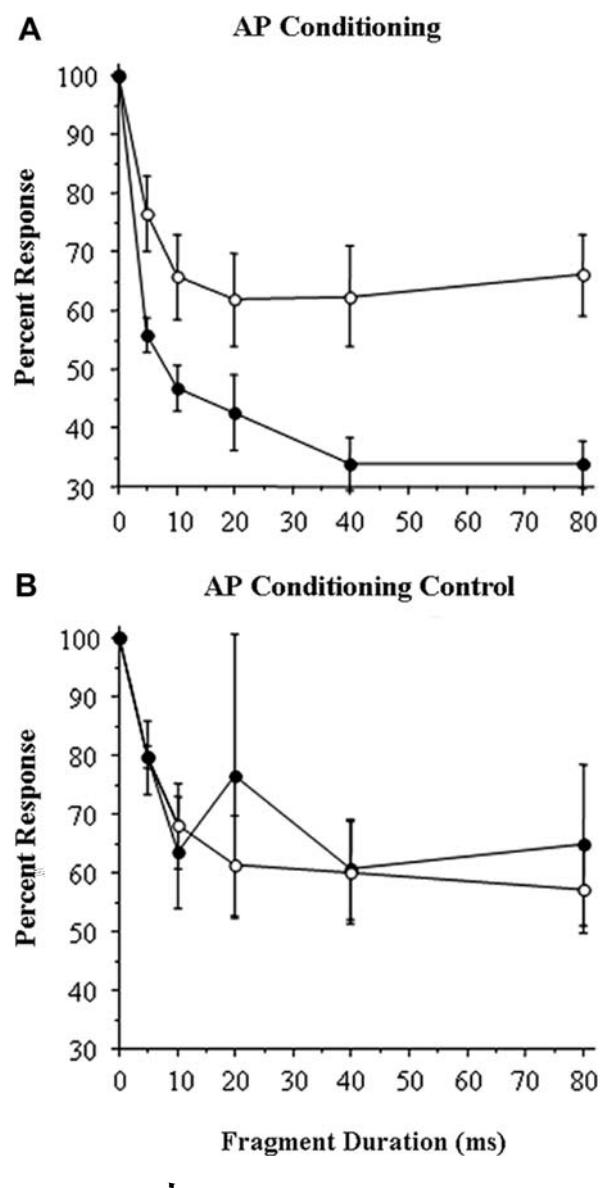
3.2.1. UC-fragment group

I r s , r r r s r
 s , r r s r





	r	s	r	r	s	s	s	r
r	r	s	r	r	r	r	r	s
r	s	r	r	r	r	r	r	r
r	s	r	s	r	r	s	r	r
s	r	r	s	s	r	r	s	r
s	r	r	r	r	r	r	s	r
r	s	r	s	r	s	r	r	r
s	r	r	s	r	s	r	r	r
F	-	r	s	r	p	,	r	r
s	r	r	s	s	-	,	s	s
r	s	r	r	r	r	,	r	r
s	r	r	s	r	s	r	r	r
,	,	X	,	r	,	-	s	s
r	s	s	r	r	r	,	,	,
r	s	s	r	F	-	,	s	s
p	r	F	-	r	r	,	p	r
F	,	-	,	p	,	,	s	r
s	r	r	s	s	s	,	s	s
r	F	-	F	-	-	,	,	p



3.2.2. AP-fragment group

Author's personal copy

4.4. Differences between detection of the UC fragment and detection of the anti-phase fragment

Acknowledgements

The image shows a single staff of musical notation. The staff consists of vertical stems with horizontal dashes at regular intervals. These dashes are filled with either the letter 'r' or 's', representing different note heads. The pattern of 'r's and 's's repeats in a regular sequence. A large, semi-transparent watermark with the text "Authorised personal copy" is oriented diagonally across the page, covering a significant portion of the staff.