

Praat을 이용한 음향 분석 및 음성 전사

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순서

01

말소리의 음향적 특성

02

Praat의 TextGrid를 활용한 전사하기

03

TextGrid에 전사하기

04

Q & A



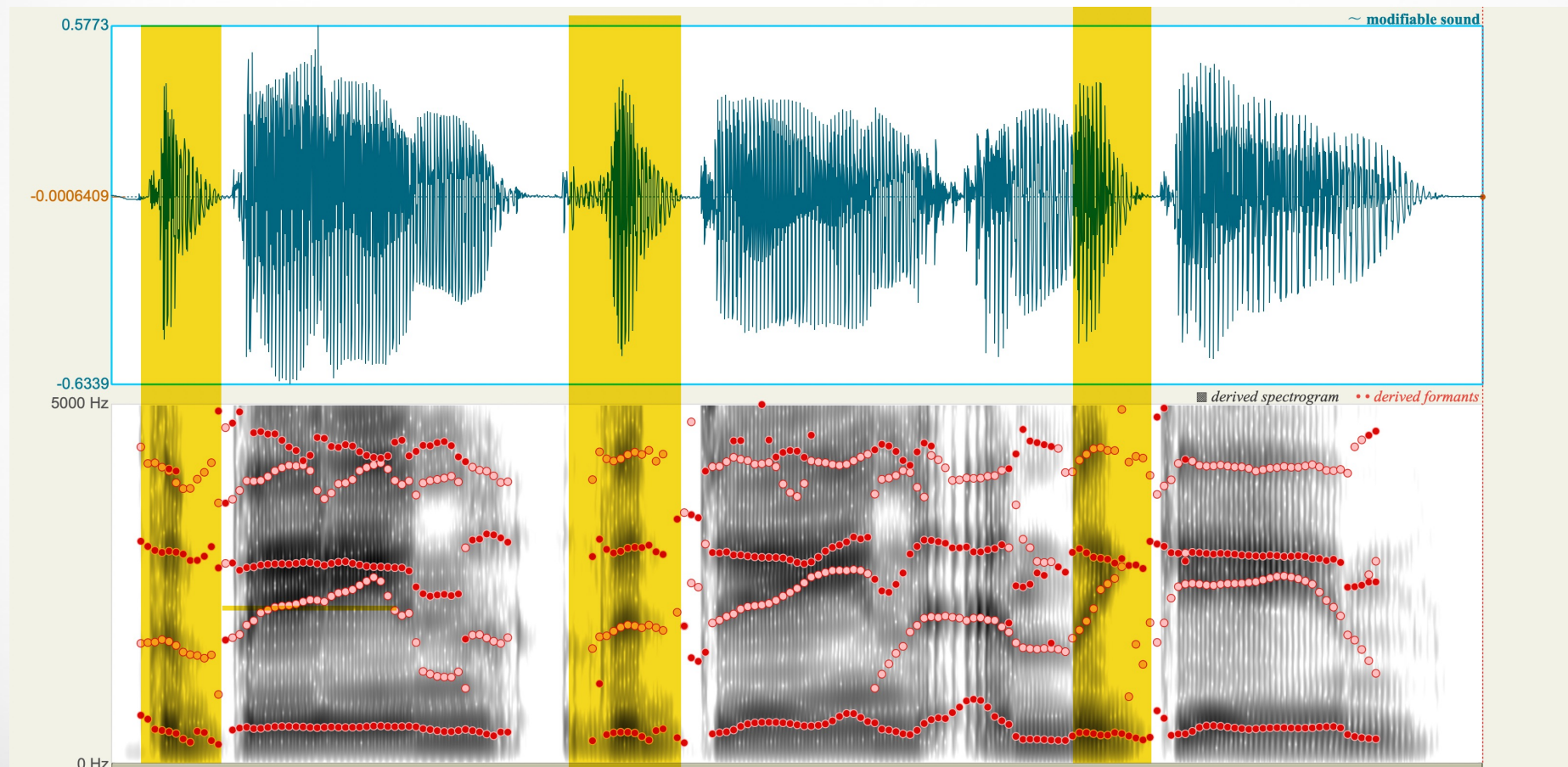


01

말소리의 음향적 특성

동일 음소의 음향적 변이

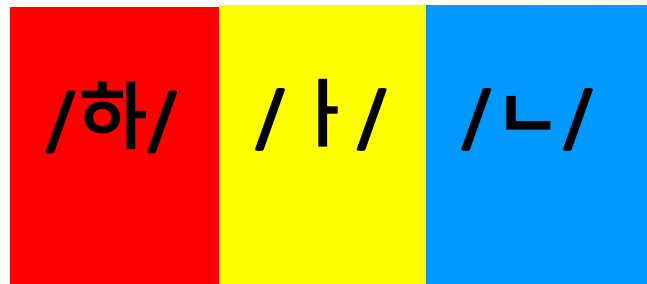
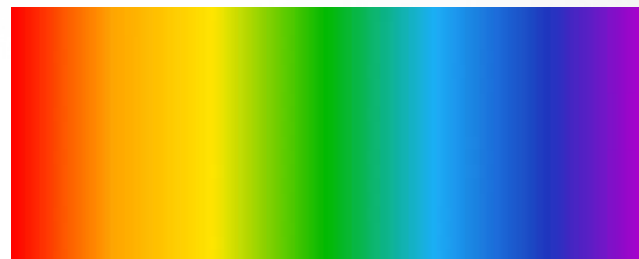
The bane the dane and the gain



분절하기



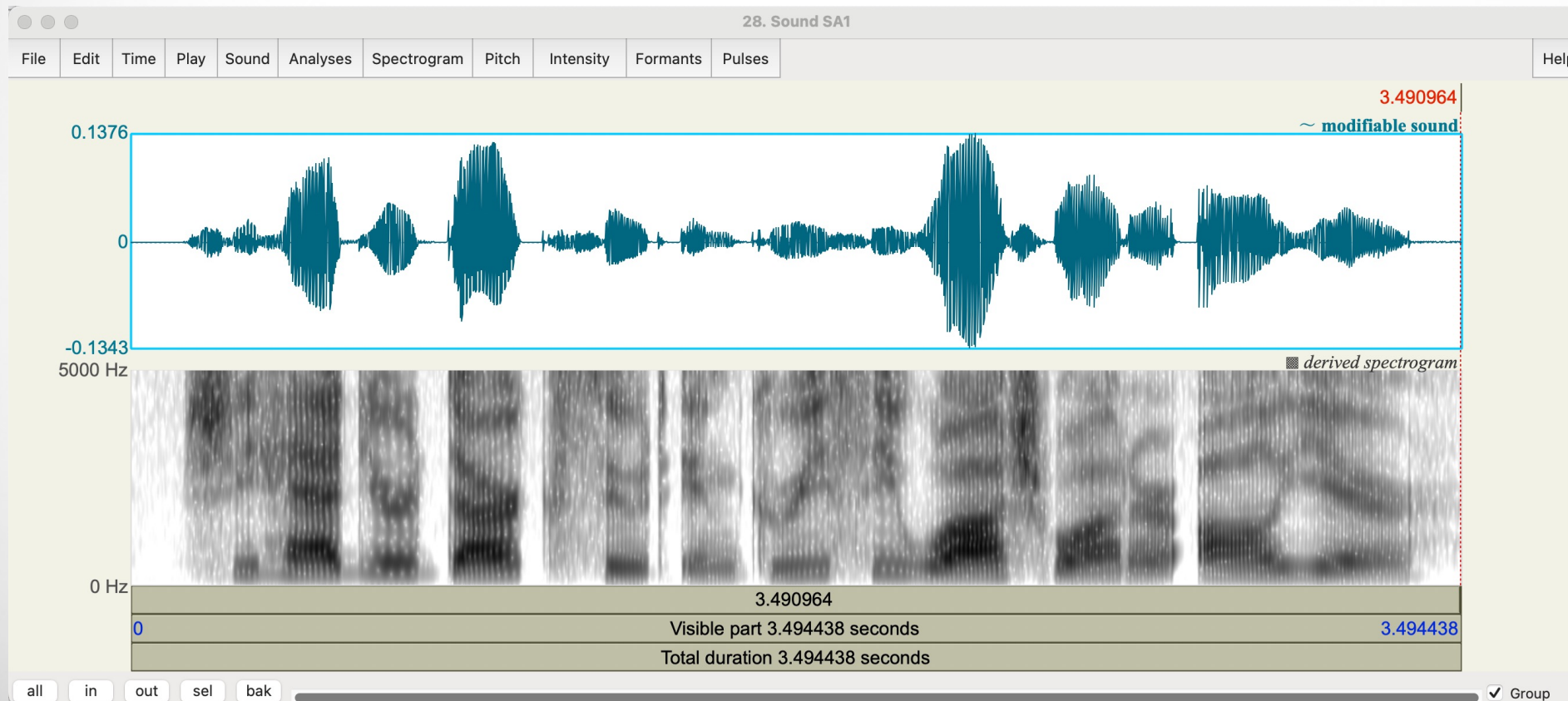
How do we turn a smooth, **continuous-changing input** into **a series of discrete segments**?





The Segmentation Problem

- We hear a series of discrete words, even though there are no discernible measurable breaks in the signal.
- How do we do that!? – Nobody really knows.

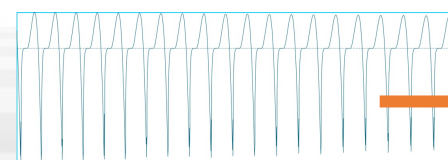
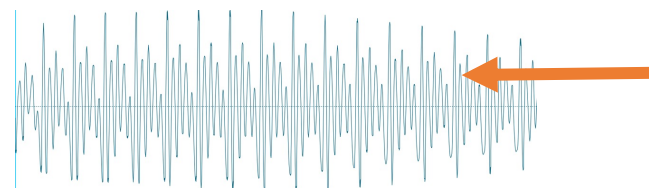


음성 산출의 Source-Filter 이론

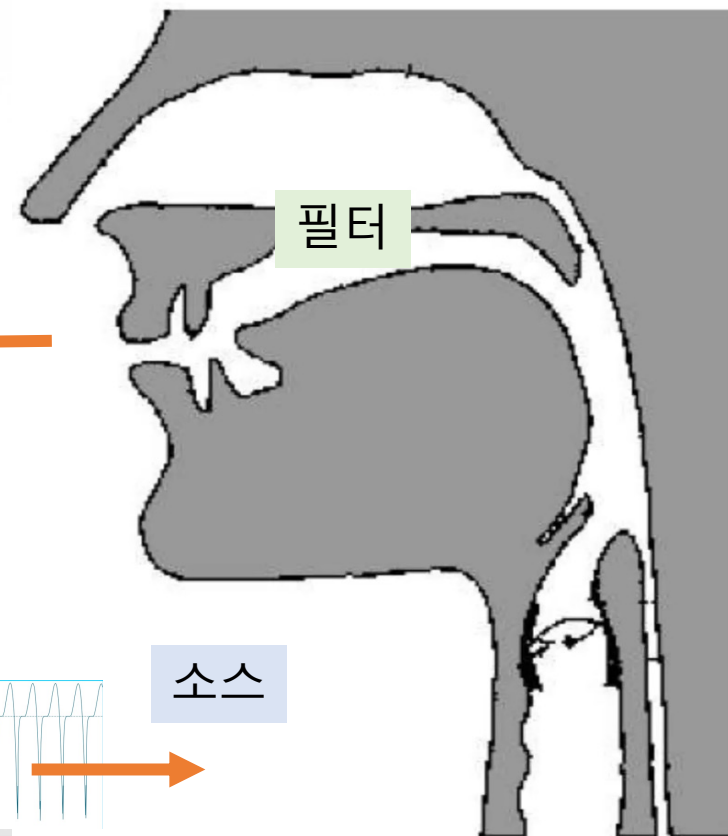
- Source-filter theory of speech production
(= the **acoustic** theory of speech production).

소스 + 필터

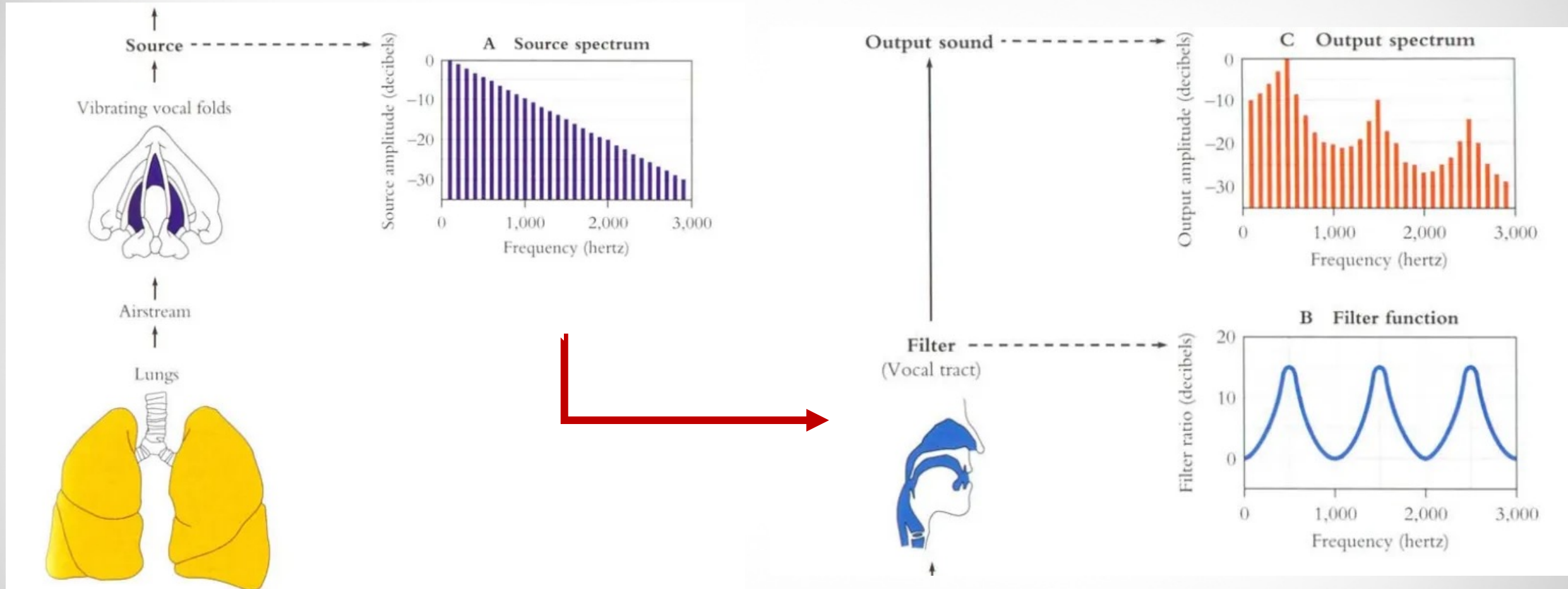
한 남성이 낮은 피치(pitch)로 [어] 소리를 낸다고
가정



소스



소스-필터 모델





한국어 말소리의 분류

자음

자음 체계표						
조음위치 조음방법		양순음 (두입술소리)	치조음 (잇몸소리)	경구개음 (센입천장소리)	연구개음 (여린입천장소리)	후음 (목청소리)
파열음	예사소리	ㅂ	ㄷ		ㄱ	
	된소리	ㅃ	ㄸ		ㄲ	
	거센소리	ㅍ	ㅌ		ㅋ	
파찰음	예사소리			ㅈ		
	된소리			ㅉ		
	거센소리			ㅊ		
마찰음	예사소리		ㅅ			ㅎ
	된소리		ㅆ			
비음		ㅁ	ㄴ		ㅇ	
유음			ㄹ			

모음

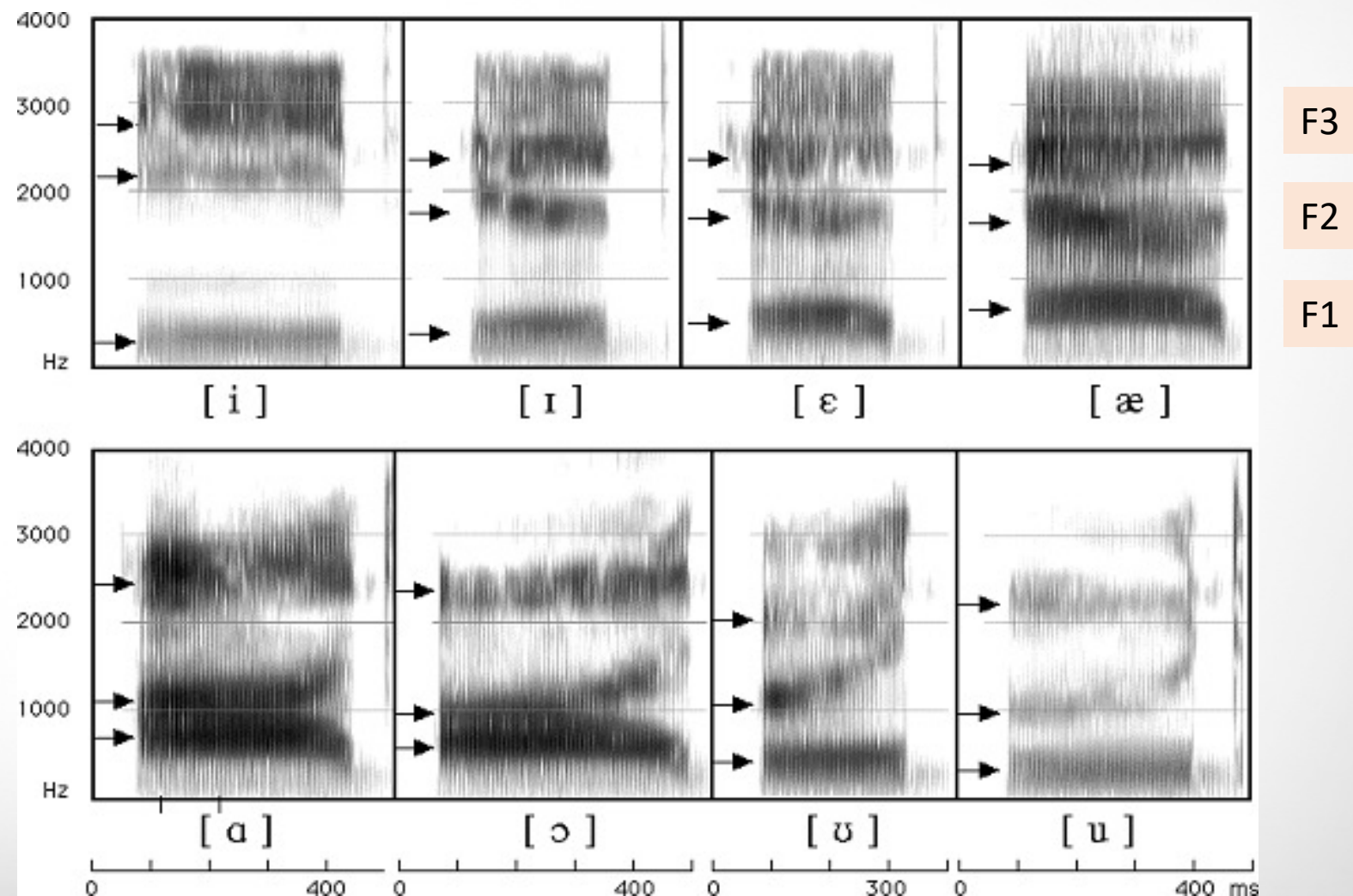
단모음 체계표					
혀의 앞뒤		전설모음		후설모음	
혀의 높이	입술 모양	평순	원순	평순	원순
고모음		ㅣ	ㅍ	ㅡ	ㅜ
중모음		ㅓ	ㅕ	ㅗ	ㅛ
저모음		ㅑ		ㅓ	



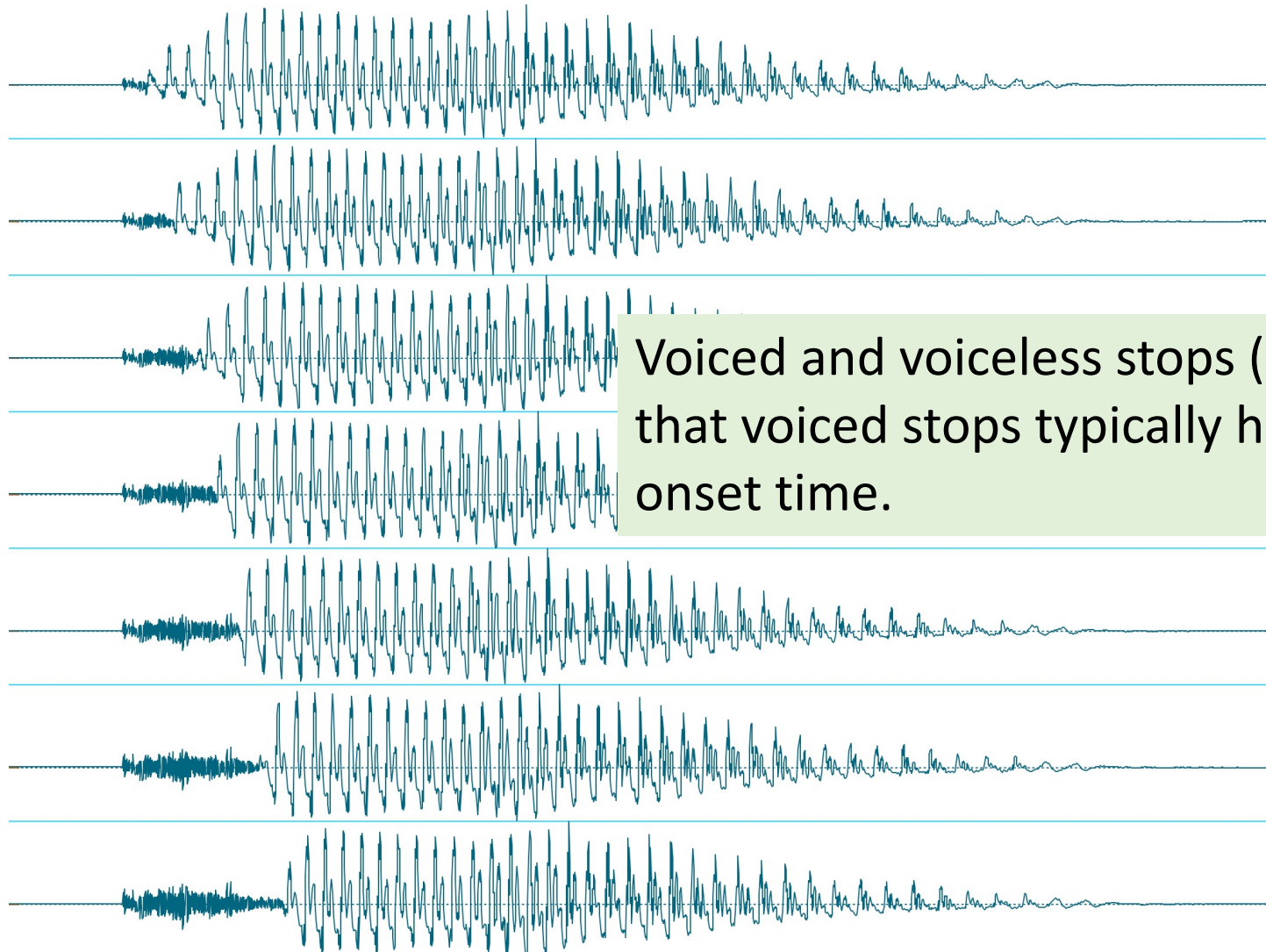
Looking at vowels on a spectrogram

Vowels are distinguished by **formant (resonant) frequencies**

a.k.a. Formants
F1, F2, F3, etc.



Voice onset time! (VOT)



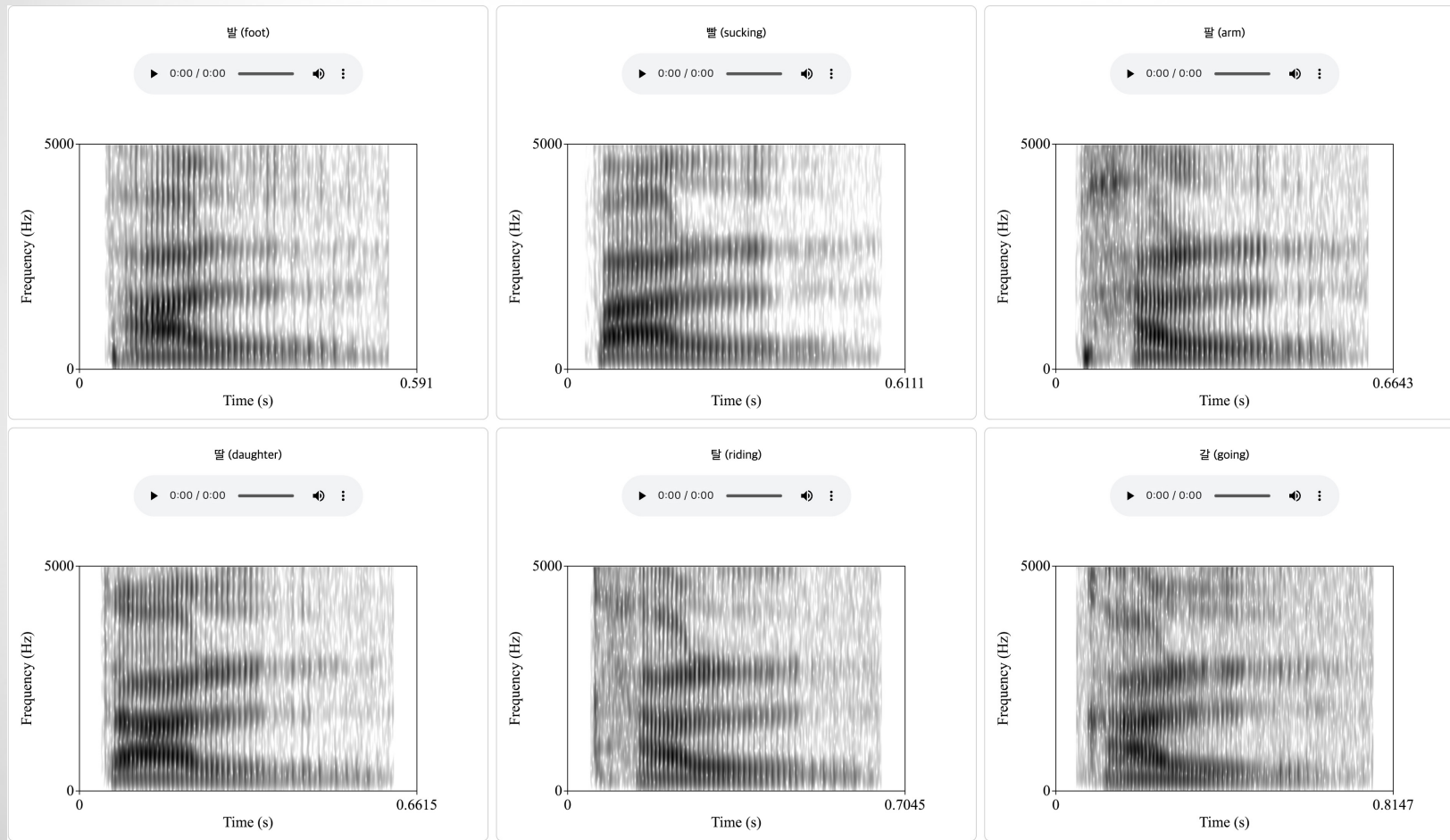
Voiced and voiceless stops (in English) differ in that voiced stops typically have **shorter** voice onset time.



02

표준 한국어 음소

Korean/index.html







03


Praat 다운받기

<https://www.fon.hum.uva.nl/praat/>





Praat: doing phonetics by computer




Download Praat:

- * [Macintosh](#), [Windows](#)
- * [Linux](#), [Chromebook](#), [Raspberry Pi](#)
- * ([FreeBSD](#), [SGI](#), [Solaris](#), [HPUX](#))
- * [the source code](#)

Information on Praat:


- * Introductory tutorial: choose **Intro** from Praat's **Help** menus.
- * Extensive manuals and tutorials: in Praat's **Help** menus.
- * [Beginner's manuals by others](#).
- * Paul Boersma's [publications](#) on algorithms and tutorials.



[Paul](#)

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 The Netherlands



[David](#)

Questions, problems, solutions:

1. Many problems can be solved by upgrading to [version 6.1.53](#) of Praat.
2. Make sure you have read the [Intro](#) from Praat's **Help** menu.
3. If that does not help, use the **Search** button in Praat's manual window.
4. Or consult the [Frequently Asked Questions](#) directly.
5. There is a user group on the Internet: the [Praat User List](#).
6. If none of the above helps, you may send mail to paul.boersma@uva.nl.

Functionality

The following gives you an idea of the features of the Praat program. The links take you into the web copy of the manual. The same manual is also available from Praat's Help menus, in which case you can do searches.

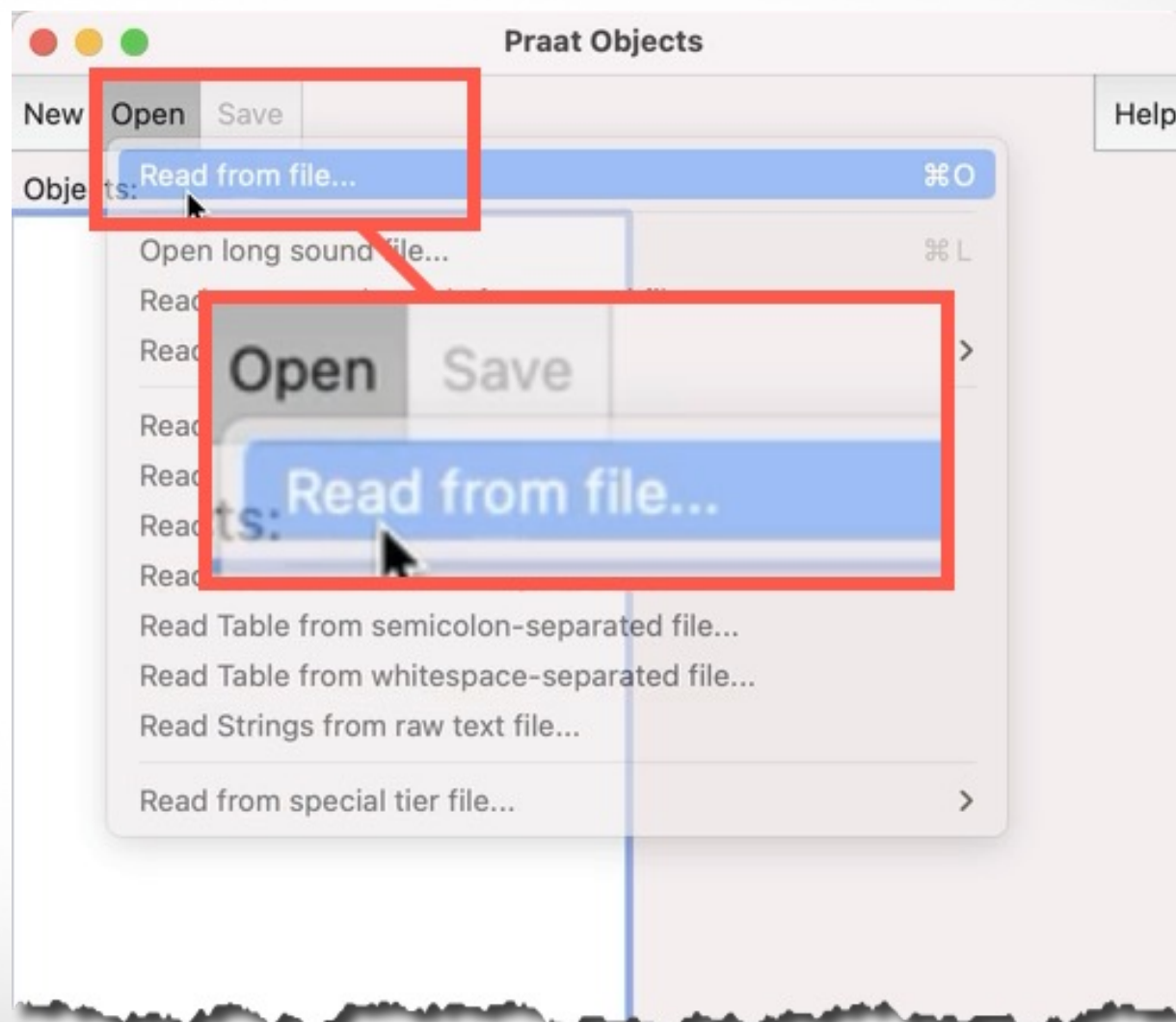
Speech analysis:

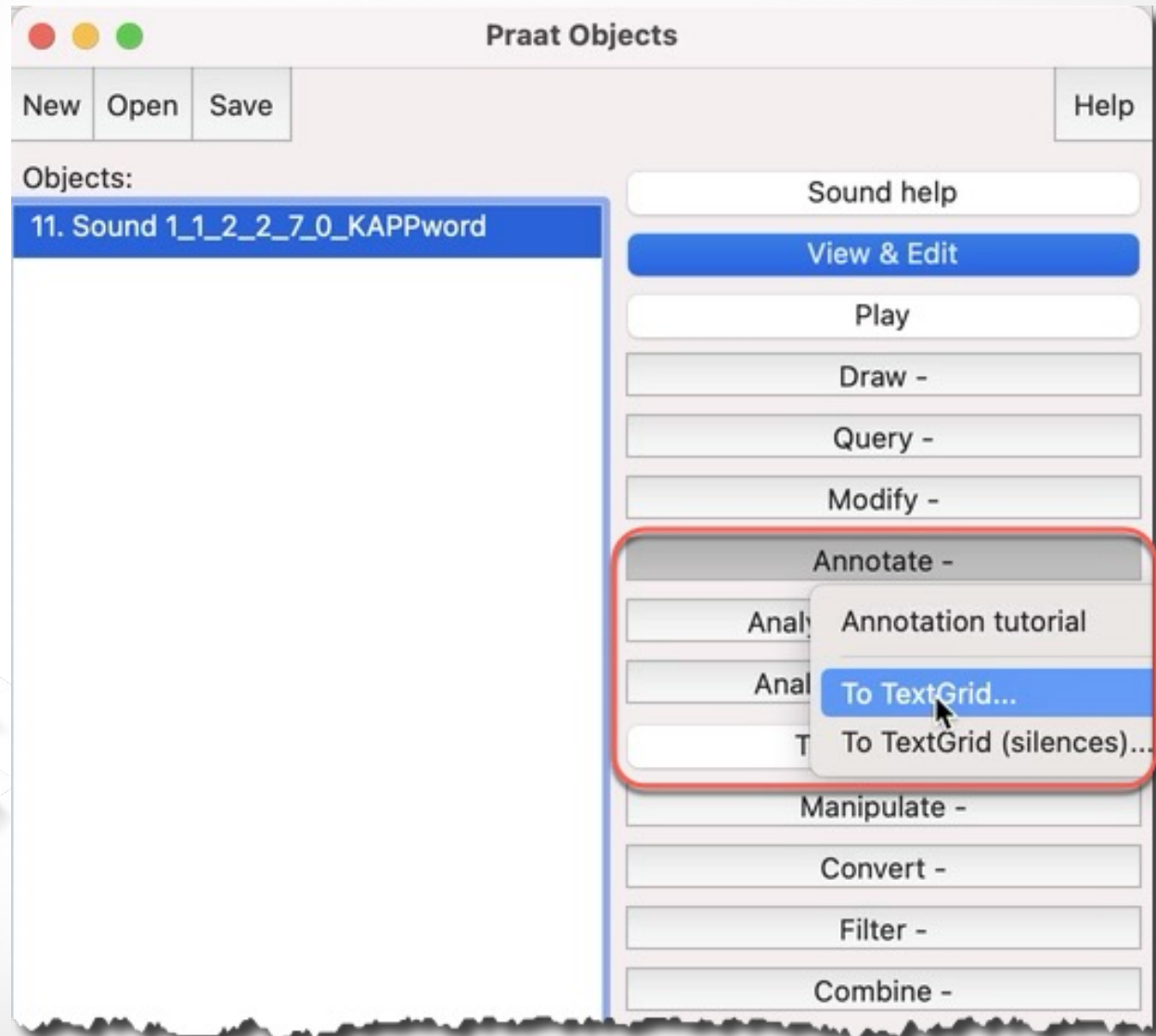
Speech synthesis:



04

TextGrid 만들기







Praat Objects

New

Open

Save

Help

Objects:

11. Sound 1_1_2_2_7_0_KAPPword

Sound help

View & Edit

Play

Draw -

Query -

Sound: To TextGrid

All tier names:

조사재 아동

child adult

Which of these are point tiers?

조사재 아동

Help

Standards

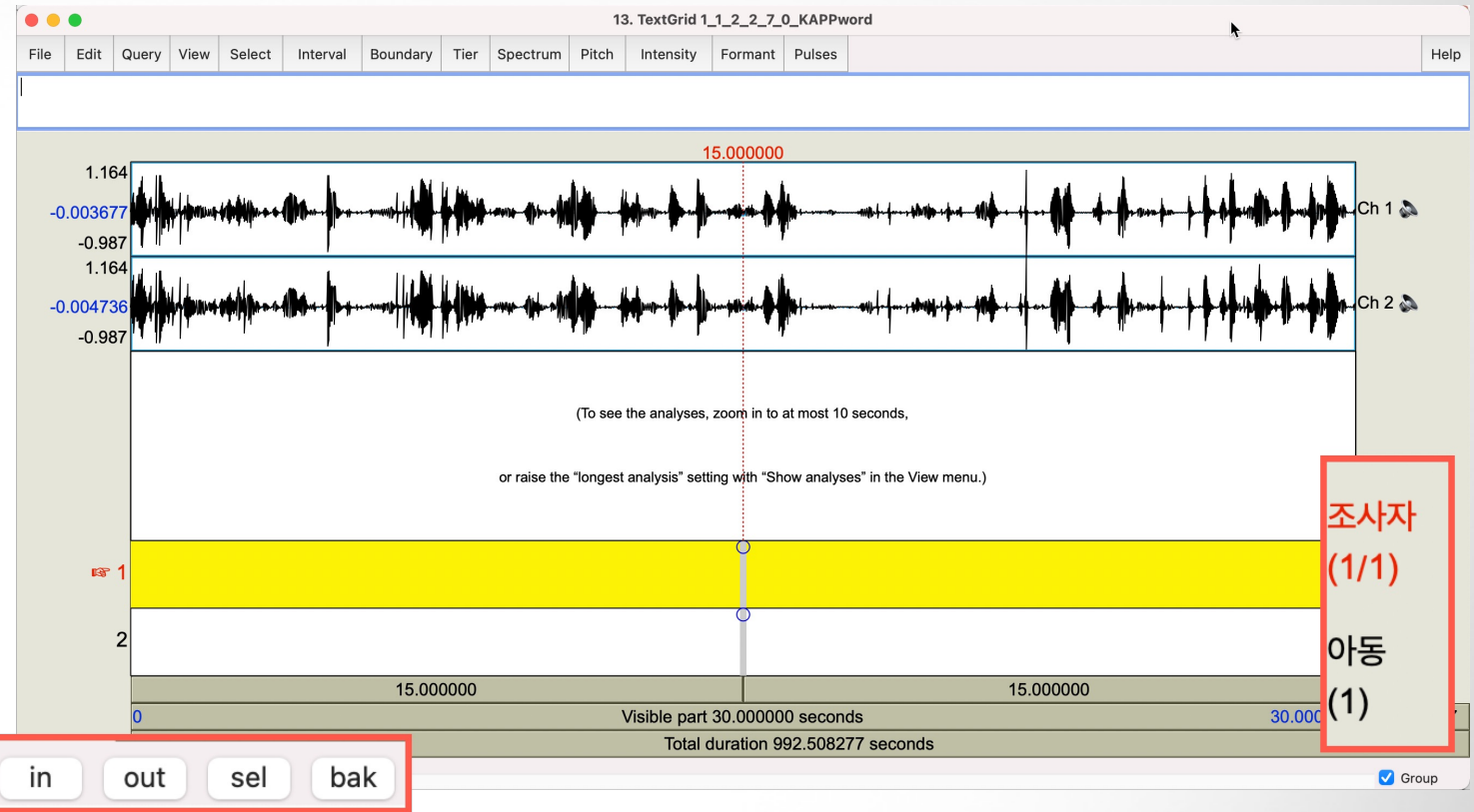
Convert -





05

TextGrid에 전사하고 저장하기



CTRL + S : 저장하기

01

zoom in & out

02

경계 표시 및 이동

03

경계 지우기

04

저장 하기





04

Q & A

THANK YOU

