A   Appendix Figures and Tables

Figures 6, 7 and Tables 3, 4, 5, 6 are shown on the next pages.

B   Limitations

We analyzed intonational boundaries based on duration measures only, while other prosodic features such as pitch contour and intensity also play important roles. Nevertheless, several studies report that the presence of an intonational boundary can be identified based on duration measures only, and that pitch and intensity are less stable factors (Kjelgaard and Speer, 1999; Bögels et al., 2010; Pauker et al., 2011). We also did not differentiate between different levels of boundary strength, a distinction made by the Tones and Break Indices (ToBI) system (Silverman et al., 1992). Future analyses could benefit from incorporating this distinction to better capture the complexity of intonational boundaries.
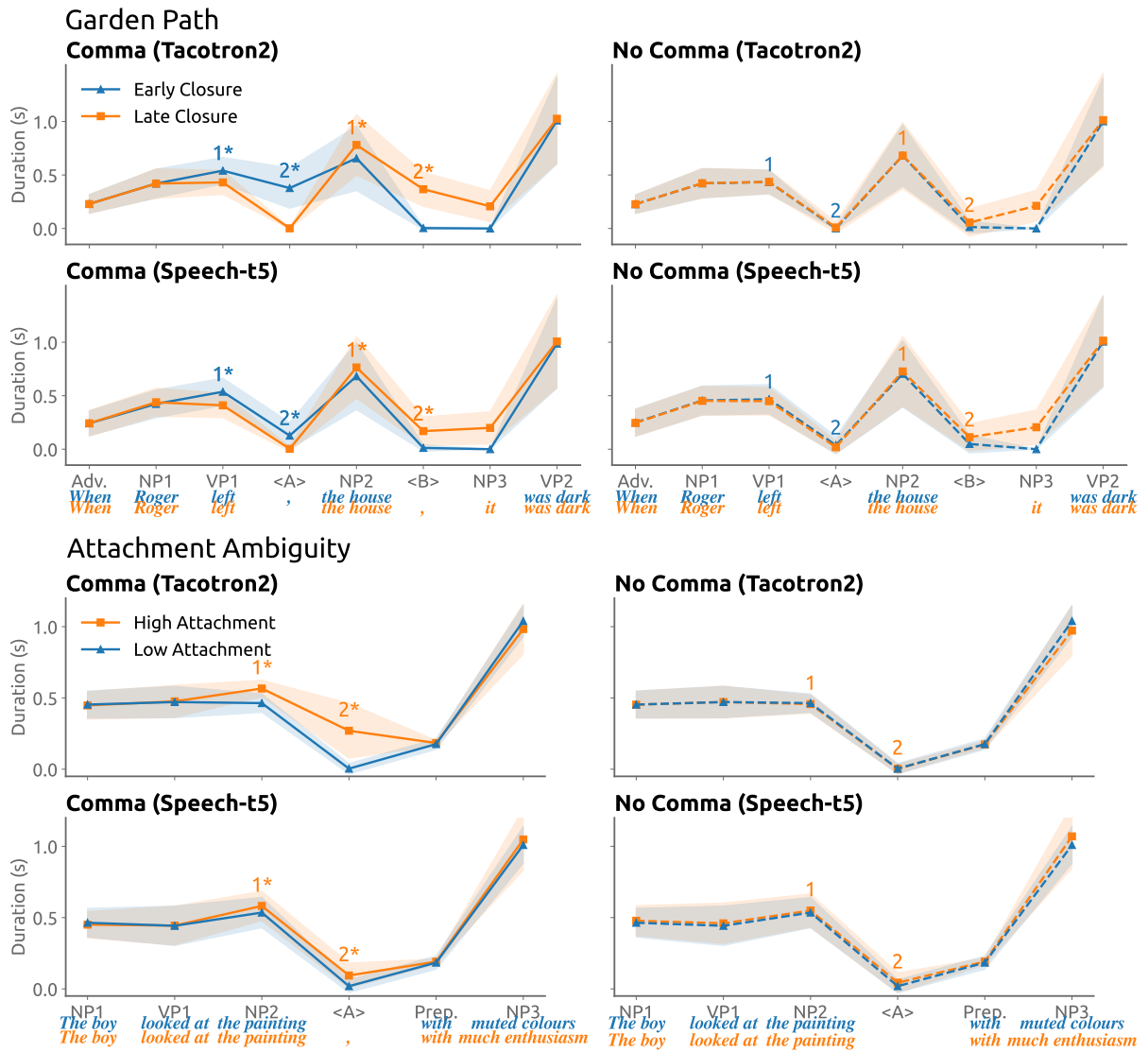
Figure 6: Average durations of sentence regions in garden path sentences (top) and sentences with attachment ambiguity (bottom), generated by Tacotron2 and Speech-T5. An intonational boundary consists of *lengthening* at the pre-boundary position (1), and insertion of a *pause* at the syntactic boundary position (2); asterisks indicate the presence of these effects. Example sentences are annotated on the x-axes; shading indicates the standard deviation across sentences.

Table 3: Garden path stimuli for Experiment 1. Sentences were presented in two forms: **early closure** (without the word in brackets) and **late closure** (with the word in brackets).

Stimulus
Whenever John walks the dogs (*cats*) are chasing him.
Because John studied the material (*it*) is clearer now.
When Whitesnake plays the music (*it*) is loud.
When Tim presents the lectures (*they*) are interesting.
When the original cast performs the plays (*they*) are funny.
When Madonna sings the song (*it*) is a hit.
Whenever John swims the channel (*it*) is choppy.
When Roger left the house (*it*) was dark.
Whenever Frank performs the show (*it*) is fantastic.
Because Mike phoned his mother (*she*) is relieved.
When the clock strikes the hour (*it*) is midnight.
Whenever the guard checks the door (*it*) is locked.
If Laura folds the towels (*they*) are neat.
If George programs the computer (*it*) is sure to crash.
If Charles babysits the children (*they*) are happy.
When the maid cleans the rooms (*they*) are immaculate.
Before Jack deals the cards (*they*) are shuffled.
While the boy read books (*televisions*) were stolen.
When the dog bites cats (*mice*) run away.
When the man batted balls (*players*) covered the field.
While the man parked cars (*bikes*) were waiting.
After the puppy licked kids (*parents*) were laughing.
Because snakes eat mice (*toads*) hide.
When a bear approaches people (*dogs*) come running.
After the chef cooked cake (*coffee*) was served.
While the artist painted clouds (*stars*) were appearing.
As the cat climbed trees (*leaves*) were falling.
As John hunted the frightened deer (*it*) escaped through the woods.
When Anne visited the British relatives (*they*) were moving to London.
When Rita washed her favorite sweater (*it*) was torn to shreds.
When Joan left her old boyfriend (*he*) stalked her for two months.
While the assistant measured the delicate fabric (*it*) ripped and frayed.
When Greg returned the new car (*it*) was operating smoothly.
Because Cecelia baked the delicious homemade bread (*it*) was served at breakfast.
Even when Todd cleaned the small kitchen (*it*) smelled like old garbage.
Because Grandma knitted wool sweaters (*they*) would appear under the Christmas tree.
Because Maria read the financial news (*it*) was always at her fingertips.
As Sam pounded the thin metal (*it*) ripped and broke into pieces.
When Sonya painted the kitchen walls (*they*) were covered into obvious drops.
As Lia typed the eviction notice (*it*) was cancelled.
When Tina supervised the night crew (*it*) was very efficient.
As Gary watched the drunken workmen (*they*) stumbled off the platform.
When the sheriff patrolled the whole area (*it*) was very safe.
When the musician conducted the symphony orchestra (*it*) was at its peak.
When Molly sang the drinking songs (*they*) sounded like opera.

Table 4: Examples of attachment ambiguity stimuli for Experiment 1. Two prepositional phrases were constructed for each stimulus, the former creating a semantic bias towards high (VP) attachment, the latter creating a semantic bias towards low (NP) attachment.

Stimulus
The boy looked at the painting *with much enthusiasm / with muted colors*.
The woman described the table *with much enthusiasm / with the smooth surface*.
The man bought the vase *with much happiness / with red dots*.
The girl found the chair *with much ease / with blue stripes*.
The artist inspected the house *with much interest / with wooden details*.

Table 5: Example sentences and counts of selected dependency labels, taken from the Simple Wikipedia Corpus.

Dependency Label	Example	Count
Conjunction (conj)	Most links are blue, but they can be any color.	420
Adverbial clause modifier (advcl)	Unless the cache is cleared, the link will always stay dark blue.	161
Relative clause modifier (relcl)	Animals are eukaryotes with many cells, which have no rigid cell walls.	49
Appositional modifier (appos)	Almost all animals have neurons, a signalling system.	47
Clausal complement (ccomp)	In Thailand, stingray leather is used in wallets and belts.	67
Open clausal complement (xcomp)	Genes say to the cell what to do, like a language.	70

Category	Pause	Example
as (preposition)	no	She was hired as the new manager of the team.
as (conjunction)	yes	She left early as she had an important meeting to attend.
for (preposition)	no	The child picked up the toy for his friend who had dropped it.
for (conjunction)	yes	The child picked up the toy for he wanted to play with it.
to (preposition)	no	The man gave the book to his sister who wanted it.
to (infinitive)	yes	The man read the book to learn more about history.
with (preposition, high attach.)	yes	The boy looked at the painting with genuine interest.
with (preposition, low attach.)	no	The boy looked at the painting with muted colors.

Table 6: Example sentences for our evaluation set for the fine-tuning experiments: each function word can be used in two different ways, one of which is associated with a pause.
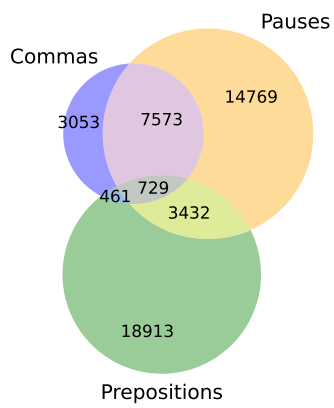
Figure 7: Counts of frequent prepositions, commas and pauses, as well as their overlap, in a subset of the training data of Parler-TTS.