

# Arbitrary Precision and Arbitrary $n$ -grams

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## Sentence Generation

For sentence generation, we did not include our unknown processing, and do not convert the first occurrence of each word to an unknown token.

Each subsection contains two examples from the Shakespeare corpus and two from War and Peace. These corpora were chosen because they were determined at rough glance to be the easiest to parse and had the fewest problematic.

### Unsmoothed

#### Unigrams

Bring in Take made the pass a Caesar in gold well leave

Exeunt . hope , and Milan your A Will thy have Come the . .  
advantage , together your either to '

He fell other along " therefore , and had about He chief shorten now  
him life . something

I had transference shrugged man with you The lit . to lift the her  
had he . and have the hand individuals dragging the , place been to  
Natasha in inside . revelry hide nation room beaming eager all of  
the the , remounts to

#### Bigrams

Enter LYSANDER , and you lie dull actor on my speech , an ordinary  
pitch , Loyal and full of our tongues , see , That which physic to my  
horse for her youth and sealed bags Of base earth ; Though twenty  
several mistress will you have done To have found .

Silence , who .

The horses ' familiar to the army , envy and looked questioningly :  
"You won't be thus depriving him of the estate with his will send me  
forty thousand men in choosing her governess kept saying good-by .

I have begun to Tushin and yet further battles , the man in the defense of that temple , they were standing beside whom you seen in the battle of dry branches of meeting it has brought the smile Berg with a mocking , and even impossible to be long paced angrily .

### Trigrams

How - traitor ?

The Greeks upon advice , Hath alter'd that good wisdom Whereof I know by their christen names , Unless thou tell her so .

No , but it can't be helped It happens to the first to arrive , Princess , I think .

Rostopchin , coming to Petersburg , look out at night his feet .

### Smoothed

#### Unigram

th ! come Lear things of the I

me . I

they its intimate just such But There the them said shout irresistible always heard none with and of dinner had To

day good-natured Secondly same , joyful on talking the appeared advantage . unreasoning men by

#### Bigram

Hector .

I arrest thee here , which time , that his fault , and blows .

But my wife should have nobody and ask the enemy was too .

Say it's farther .

#### Trigram

She would have made fair work !

Come , my lord , I'll bring you to please his Majesty , Herod of Jewry dare not say he is much abus'd with tears thou keep'st command .

All that he had no news from the chase .

If I decline the honor of the bushes .

Trigrams lead to more comprehensible sentences, which is to be expected, and bigrams are barely useful. The unigrams also seemed to produce longer sentences; it's possible that trigrams and bigrams lead to a progression from