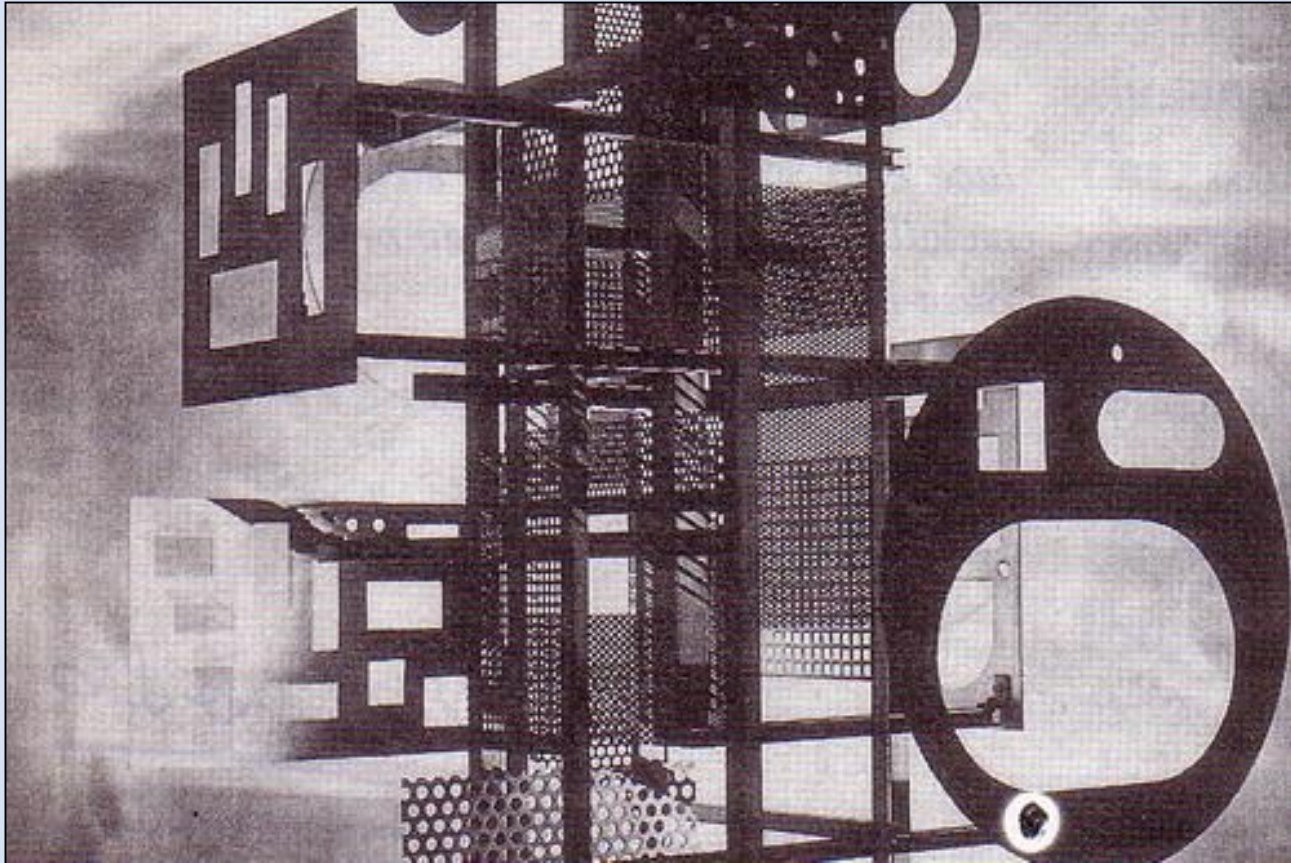


# Form in the Machine

*Tracing Imitation and Influence in the American Haiku*



Hoyt Long & Richard Jean So  
University of Chicago

# Translations of Foreign Poetry into US Journals, 1915-1930

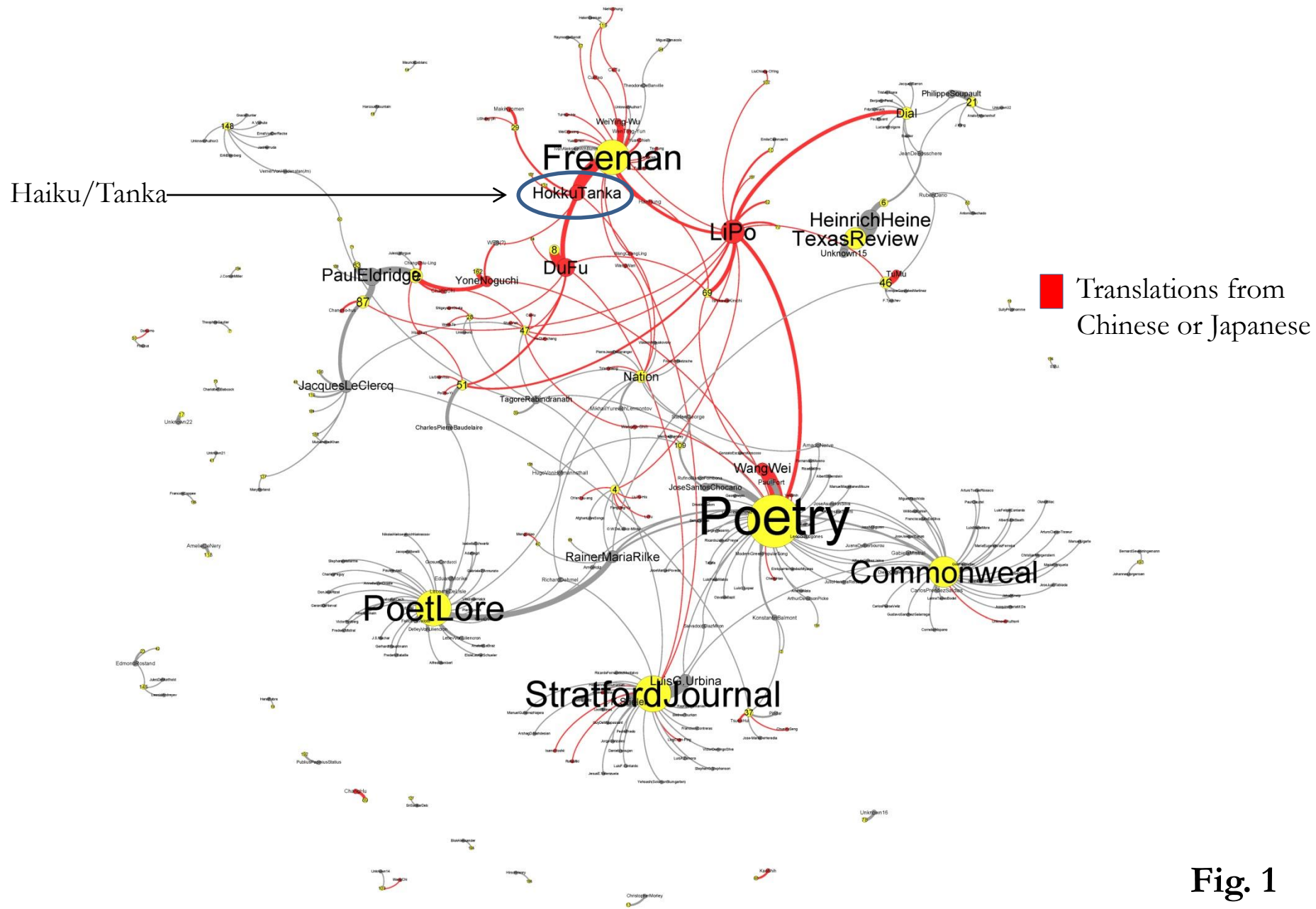


Fig. 1

From *Survey of Modernist Poetry* (Riding and Graves, 1927)

The beech-leaves are silver  
For lack of the tree's blood.

At your kiss my lips  
Become like the autumn beech-leaves.

○—○—○—○—○—○—○—○

An old willow with hollow branches  
Slowly swayed his few high bright tendrils  
And sang:

Love is a young green willow  
Shimmering at the bare wood's edge.

○—○—○—○—○—○—○—○

As cool as the pale wet leaves of lily-of-the-valley  
She lay beside me in the dawn.

○—○—○—○—○—○—○—○

Among twenty snowy mountains  
The only moving thing  
Was the eye of the black bird

Fig. 2

**From *Survey of Modernist Poetry* (Riding and Graves, 1927)**

Who was the inventor of the style of the first two pieces, Mr. Aldington or Mr. Williams? or yet H.D. or F.S. Flint?....In the two last pieces, who is responsible for the form? Who first thought of imitating the Japanese *hokku* form? Or rather who first thought of imitating the French imitations of the *hokku* form? Did Mr. Aldington suggest a slightly shorter poem to Mr. Stevens or Mr. Pound or did Mr. Pound suggest a slightly longer poem to Mr. Aldington, etc., or did Mr. Pound and Mr. Stevens and Mr. Aldington and Mr. Williams decide, as mutual pairs, to work as a school team, or did Mr. Williams and Mr. Stevens and Mr. Aldington and Mr. Pound pair off, as being by nationality more pairable?



## *Hokku, haikai, and haiku in the Google Books Corpus (1890-1930)*

Google books Ngram Viewer

Graph these comma-separated phrases:  ☒ case-insensitive

between  and  from the corpus  with smoothing of  [Search lots of books](#)

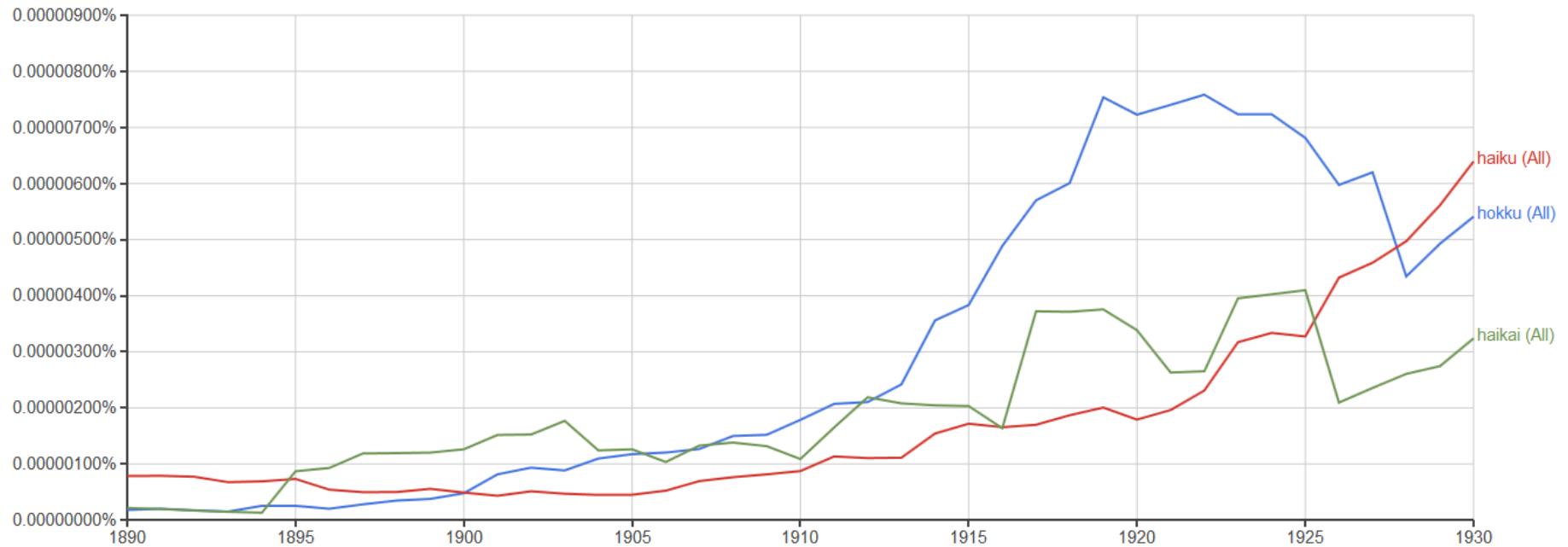


Fig. 4

POETRY: *A Magazine of Verse*

I come to you as a grown child  
Who has had a pig-headed father;  
I am old enough now to make friends.  
It was you that broke the new wood,  
Now is a time for carving.  
We have one sap and one root—  
Let there be commerce between us.

IN A STATION OF THE METRO

The apparition of these faces in the crowd :  
Petals on a wet, black bough .

*Ezra Pound*

**“In a Station of the Metro”  
Ezra Pound  
(April, 1913)**

**Fig. 5**

## Distribution of *Hokku* Texts in Corpus (about 400 in total)

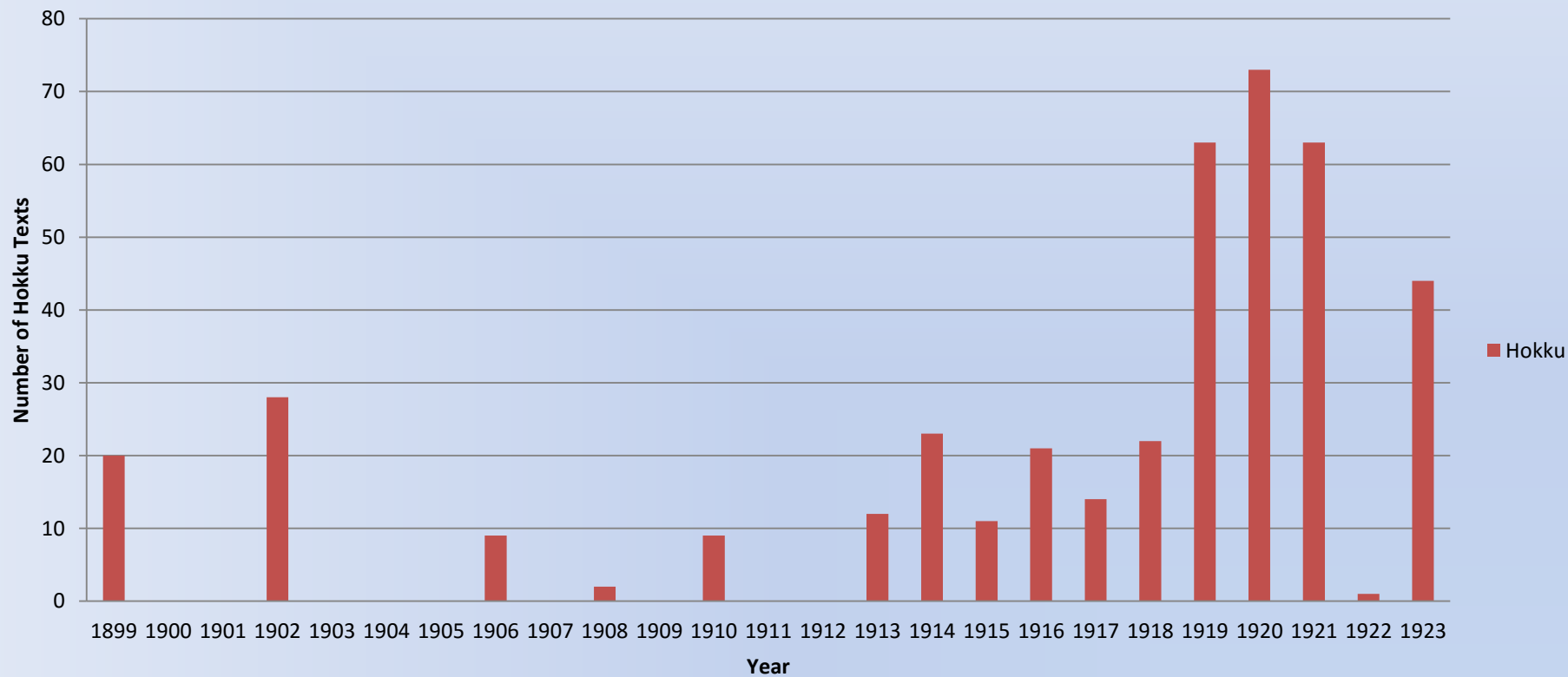


Fig. 6

## Changing Poem Lengths in *Poetry Magazine*

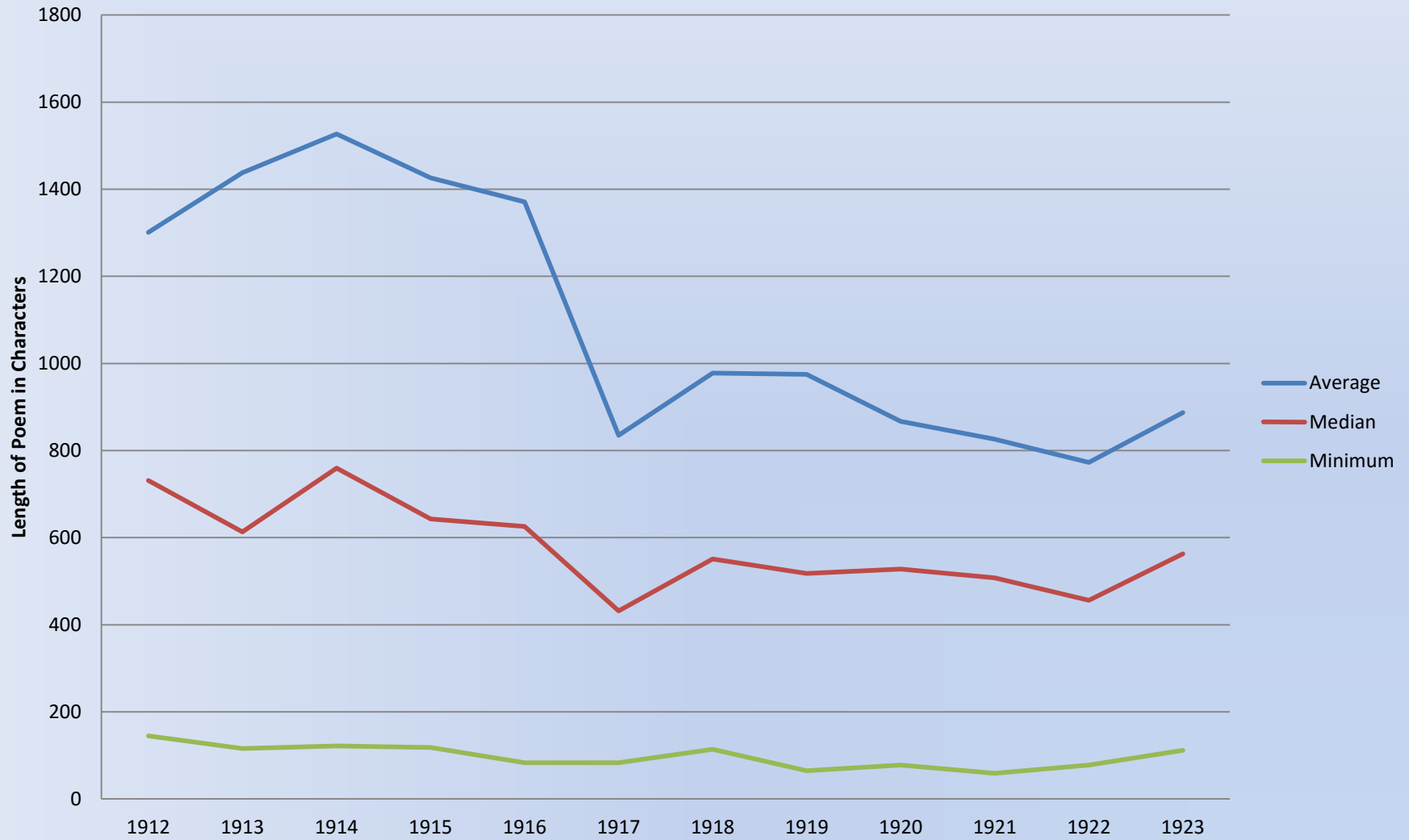


Fig. 7



# Transforming *Hokku* into Machine Interpretable Form

## Poem as Raw Text

So cold I cannot sleep; and as  
I cannot sleep, I'm colder still.

*Author Unknown; A 1902 translation  
by Basil Hall Chamberlain*

## Poem as a tokenized “bag-of-words”

['so', 'cold', 'i', 'can', 'not', 'sleep', 'and', 'as', 'i', 'can', 'not', 'sleep',  
'i'm', 'colder', 'still']

## Poem as “bag-of-words” without stopwords (i.e., function words)

['so', 'cold', 'sleep', 'colder', 'still']

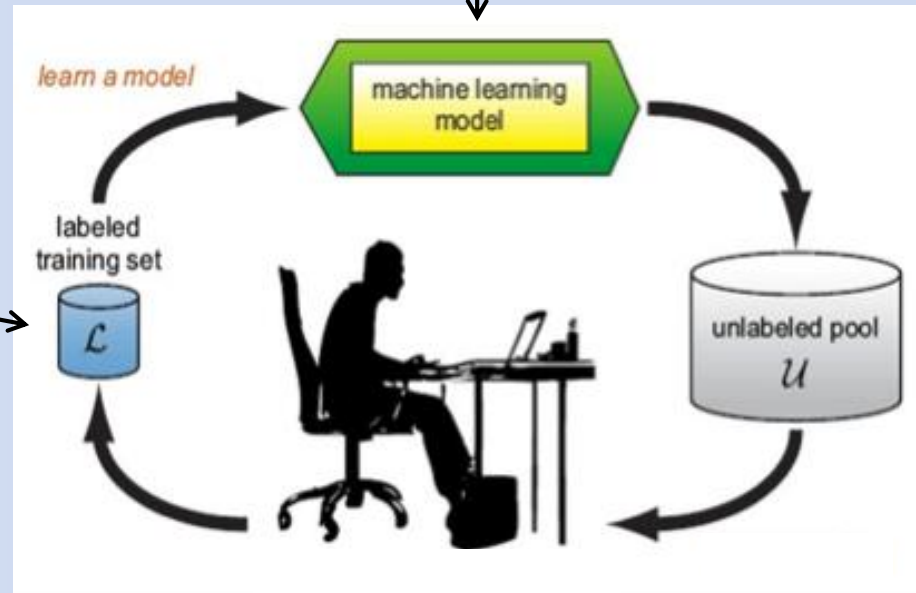
## Poem as **labeled** feature set (note that word-order is irrelevant)

[{'cold': True, 'colder': True, 'less\_than\_20\_syl': True, 'sleep': True,  
'still': True, 'so': True}, **'haiku'**]

Fig. 8

# The Machine Learning Workflow

Classification Algorithm  
(Naïve Bayes)



Labeled  
Haiku and  
Non-Haiku  
Feature Sets

Haiku and  
Non-Haiku  
Feature Sets  
with Labels  
Withheld

Fig. 9

## Probability Measures based on Machine Learning Outcome

Word	Label	Probability
sky = True	not-ha : haiku =	5.7 : 1.0
shall = True	not-ha : haiku =	5.0 : 1.0
sea = True	not-ha : haiku =	5.0 : 1.0
man = True	not-ha : haiku =	4.3 : 1.0
last = True	not-ha : haiku =	3.7 : 1.0
snow = True	haiku : not-ha =	3.7 : 1.0
earth = True	not-ha : haiku =	3.7 : 1.0
blue = True	not-ha : haiku =	3.7 : 1.0
pass = True	not-ha : haiku =	3.7 : 1.0
voice = True	haiku : not-ha =	3.7 : 1.0
white = True	not-ha : haiku =	3.0 : 1.0
house = True	haiku : not-ha =	3.0 : 1.0
child = True	not-ha : haiku =	3.0 : 1.0
give = True	not-ha : haiku =	3.0 : 1.0
lo = True	haiku : not-ha =	3.0 : 1.0
sun = True	not-ha : haiku =	3.0 : 1.0
life = True	not-ha : haiku =	2.3 : 1.0
full = True	haiku : not-ha =	2.3 : 1.0
things = True	haiku : not-ha =	2.3 : 1.0
morning = True	haiku : not-ha =	2.3 : 1.0

“snow” is  
3.7 times  
more likely  
to appear in  
a haiku text

“sky” is 5.7 times  
more likely to  
appear in a non-  
haiku text as in a  
haiku text

Fig. 10

## Accuracy Scores for Text Classification

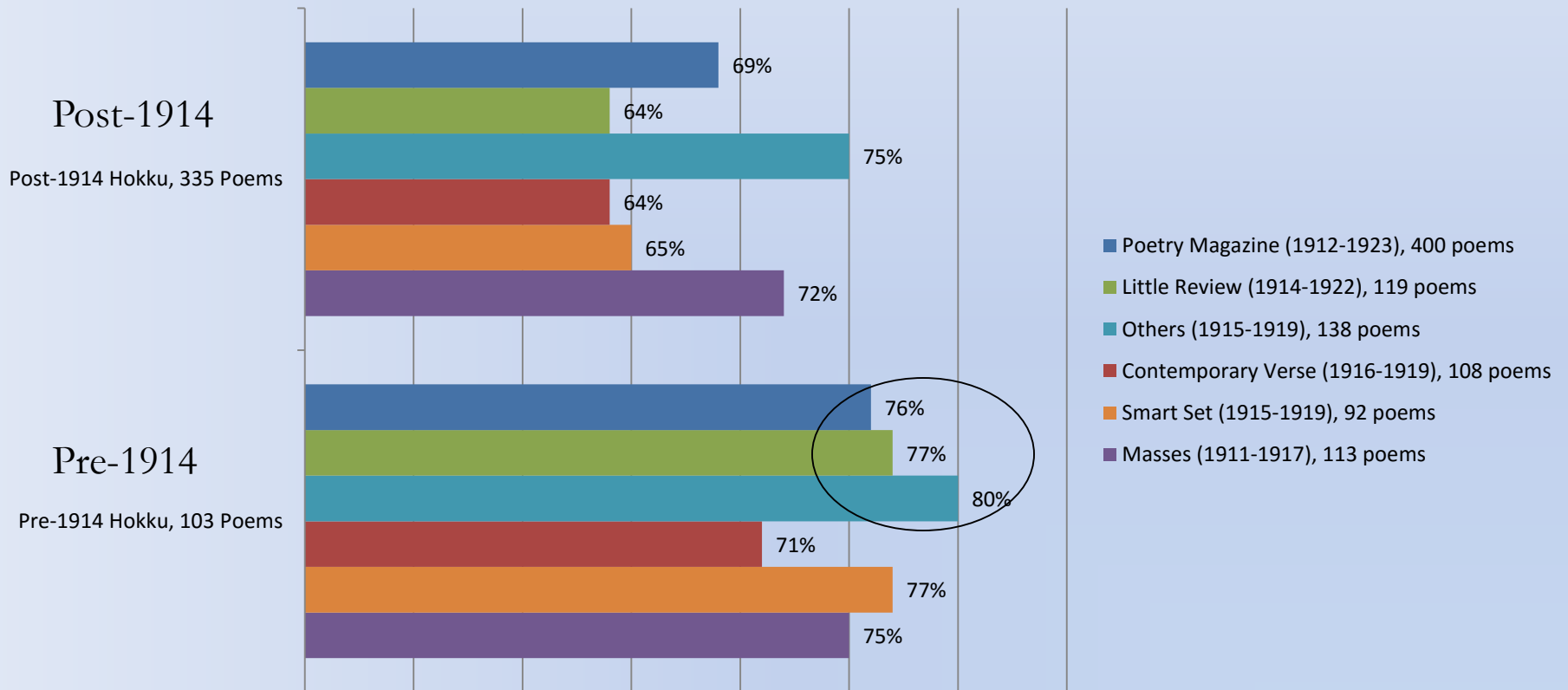
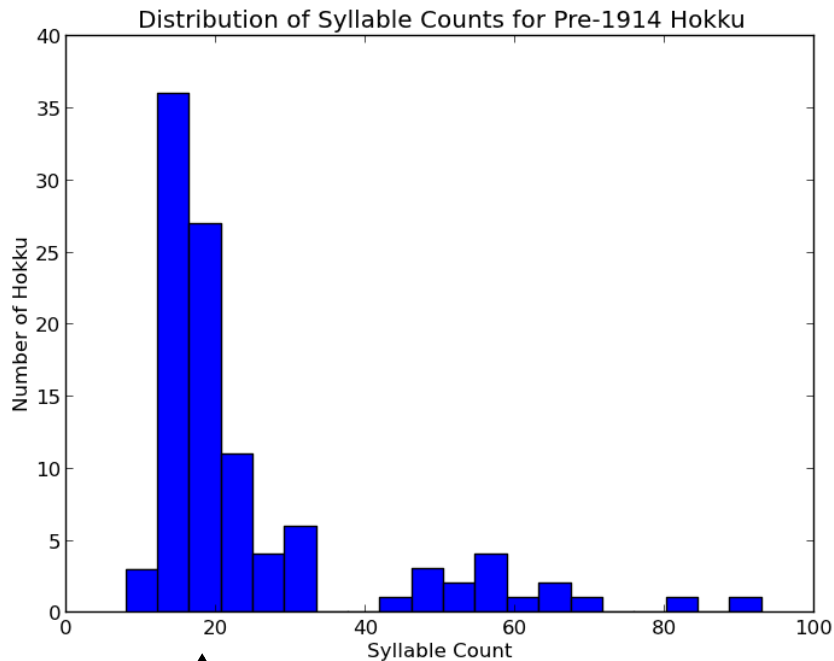
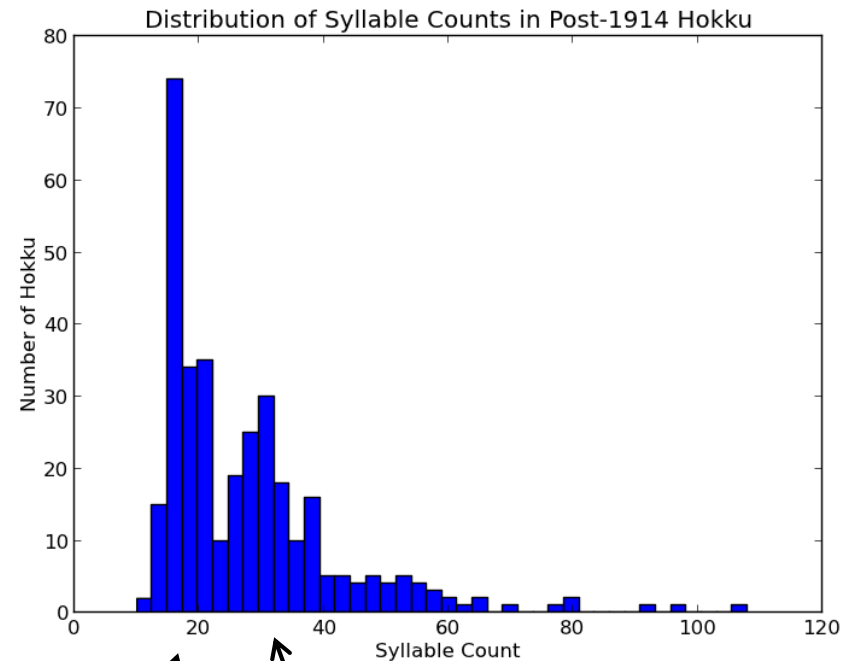


Fig. 11

# Using Syllable Counts as a Feature



Majority grouped  
around 16 to 20  
syllables



One grouping  
around 16 to 22  
syllables

One grouping  
around 30 syllables

**Fig. 12**

# Accuracy Scores for Text Classification



Fig. 13



Being thirsty,  
I filled a cup with water,  
And, behold! Fuji-yama lay upon the water,  
Like a dropped leaf!

In the orchard fall the apples  
Tud - tud - tud - and rot  
The world hungers for food for love for life  
Yet in the orchard fall the apples  
Tud - tud - tud - and rot  
And the worms grin

It was an icy day. We buried the cat,  
Then took her box  
And set match to it  
In the back yard. Those fleas that escaped  
Earth and fire  
Died by the cold.

### THE DRY YEAR

No rain stirs; And the dust  
On floors is still; The moonlit nights  
Like dust  
Or withered leaves.

- Yvor Winters (1923)

### CHINOISERIE

Is it the moon afar  
Yonder appears?  
Nay !-'tis the evening star  
Seen through my tears.

- J.K. Wetherill (1915)

### IN THE GARDEN

I have come into the garden.  
It is spring-time and there are flowers everywhere  
Even on the tails of the peacocks.

- Malcolm Erskine (1917)

### A SWALLOW

A swallow flicks my shoulder  
And turns off in the twilight  
A twitter on the terrace,  
A spot against the skylight.

- Lyon Sharman (1917)

**Fig. 15**