Meaning & Poeticness:
Automatic Evaluation of Poetry and Poetry Translation

MeanPoet

Lexical-based metrics? No!

```
Wer reitet so spät durch Nacht und Wind?
Es ist der Vater mit seinem Kind.
Er hat den Knaben wohl in dem Arm,
Er faßt ihn sicher, er hält ihn warm.
```
Johann Wolfgang von Goethe, 1782
Meter 4444 iambic, rhyme AABB

Rhyme*, consistent meter
Low score because of creative translation

No rhyme, no meter pattern
..yet "best" hypothesis (according to BLEU)

Idea:
Combine multiple features & calibrate to
human judgement

```
Who rides so late through the night and wind?
It is the father with his child.
He has the boy in his arms;
he holds him safely, he keeps him warm.
```
Translation R. Wigmore, reference
Meter 4434 iambic, rhyme ----(?)

```
Who rides so late on a night so wild?
A father, through darkness and wind, with his child.
He holds the youngster. His arm is tight
To keep him warm in the cold of the night.
```
Translation A.Z. Foreman, hypothesis
Meter 4544 dactylic, rhyme AABB, BLEU 19, ChrF$_2$ 53

```
Who is riding so late, with his child,
through night and wind? It is the father who
In his arms he holds the boy,
He holds him safely, warm he keeps him.
```
Translation V. Zouhar, (adversarial) hypothesis
Meter 4534 iambic, rhyme ----, BLEU 38, ChrF$_2$ 69

Original in CS, DE & PL for context; translations: (ref) Roman Kostovski, (hyp) Václav Z. J. Pinkava

Evaluate translation | Translate poem | Recite poem

Source poem
```
Sbohem a kdybychom se nikdy nesetkali
bylo to překrásné a bylo toho dost
Sbohem a kdybychom si spolu schůzku dali
možná že nepřijdem že přijde jiný host

Es war schön, aber alles hat ein Ende
Sei stumm, Kirchenglocke, ich kenne diese Traurigkeit schon
Kuss, Taschentuch, Sirene, Schiffsglocke
drei- oder viermal lächeln und dann in Ruhe gelassen werden

Žegnaj i jeśli już nie będziemy rozmawiać
niech mała pamięć pozostanie za nami
zwiewna jak chusteczka prostsza niż pocztówka
i trochę odurzający jak zapach blichtru
```

Reference translation
```
Farewell, and if we no longer meet
Our time was marvelous - we've shared enough
Farewell, and soon our dates will be
With someone new, someone else's love

Our time was marvelous but all things end
Be silent knell your sorrow is quite clear
A kiss, a handkerchief, a ship's bell, a siren
One last smile as we part from here

Farewell and if we never speak again
Let a small memory of us unfold
Lighter than a handkerchief fluttering in the wind
Tempting as the scent of gleaming gold
```

Hypothesis translation
```
Goodbye and if we should not ever meet anew
it really was delightful and quite enough for some
Goodbye and if we should yet make a rendezvous
maybe instead of us another guest will come

It really was delightful but everything has an end
Hush tolling bell I know that sadness from before
A kiss a napkin siren ship's bell to portend
three or four smiles and then to be alone once more

Goodbye and if we should not ever speak again
let there be something left a keepsake what we meant
as airy as a napkin more than a postcard plain
with a supposed scent of gilded ornament
```

Source meter (regularity)
N/A

Reference meter (regularity)
4544 5553 4565 (0.33)

New meter (regularity)
5656 6666 5665 (0.44)

Source rhyme (accuracy, target)
N/A

Reference rhyme (accuracy, target)
ABAB ?DDD EF?F (0.61, ABCB)

New rhyme (accuracy, target)
ABAB CDCD EFEF (1.00, ABAB)

Score
0.820

What to evaluate translation against?
○ Source & Reference   ○ Source   ● Reference

Evaluate

Log

Explanation (sum of last column)

Variable	Coefficient	Value	Multiplied value
Meter similarity	0.50	0.89	0.44
Line similarity	0.10	1.00	0.10
Rhyme similarity	0.20	1.00	0.20
BLEU	0.10	0.36	0.04
Meaning	0.10	0.39	0.04

Ideas welcome!   Vilém Zouhar, Mrinmaya Sachan's group @ **ETH** *zürich*