

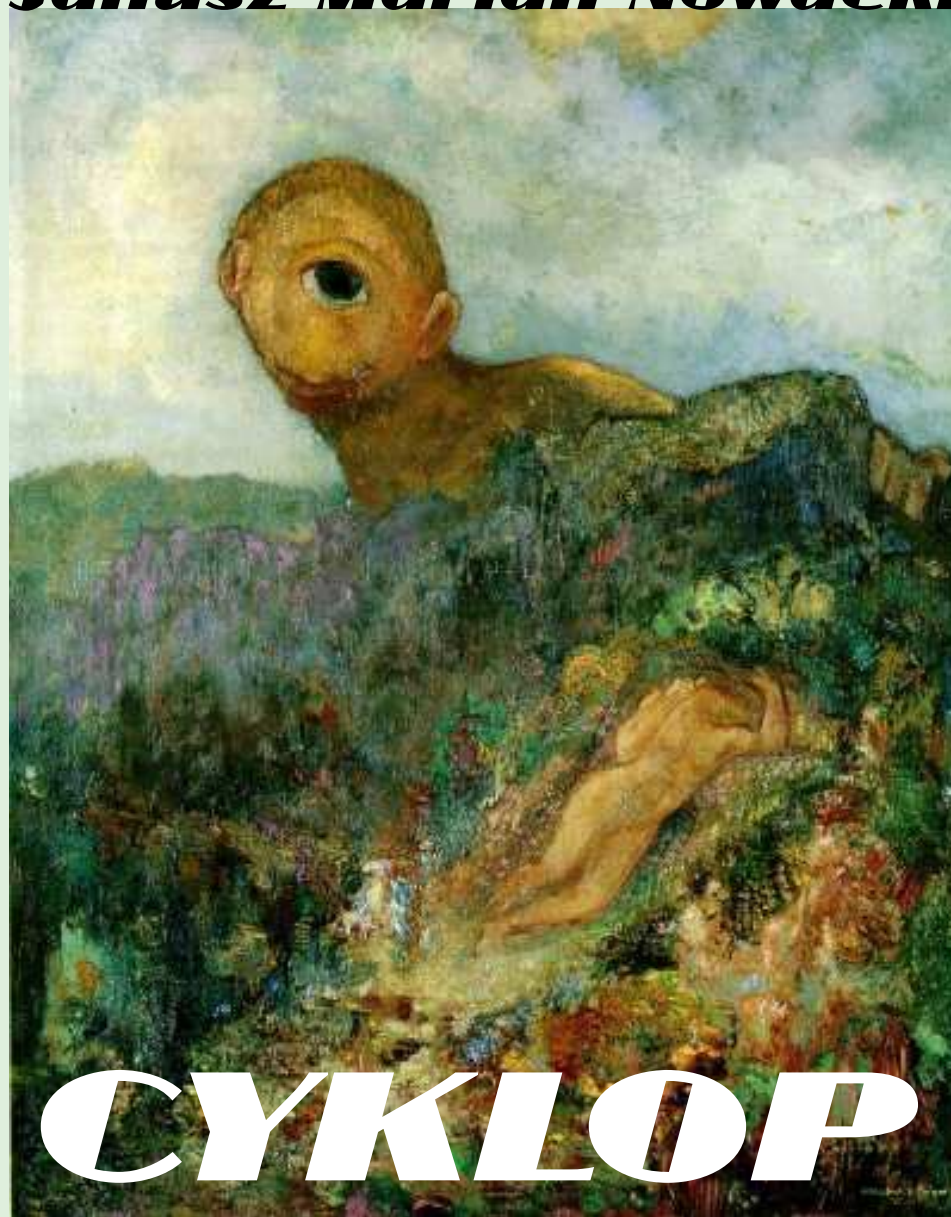




„The Cyclops“ Odilon Redon (1914)



Janusz Marian Nowacki



CYKLOP – Italic?

ABCD
EFGHIJKL̄MNO
PQRSTUVWXYZ
aąbcćdeęfghijk
ł̄mnoópqrs̄stu
vwxxyzźż
0123456789



CYKLOP – Oblique?

A B C



CYKLOP – Oblique?

A B C

CYKLOP – Upright?

A B C



CYKLOP – Italic

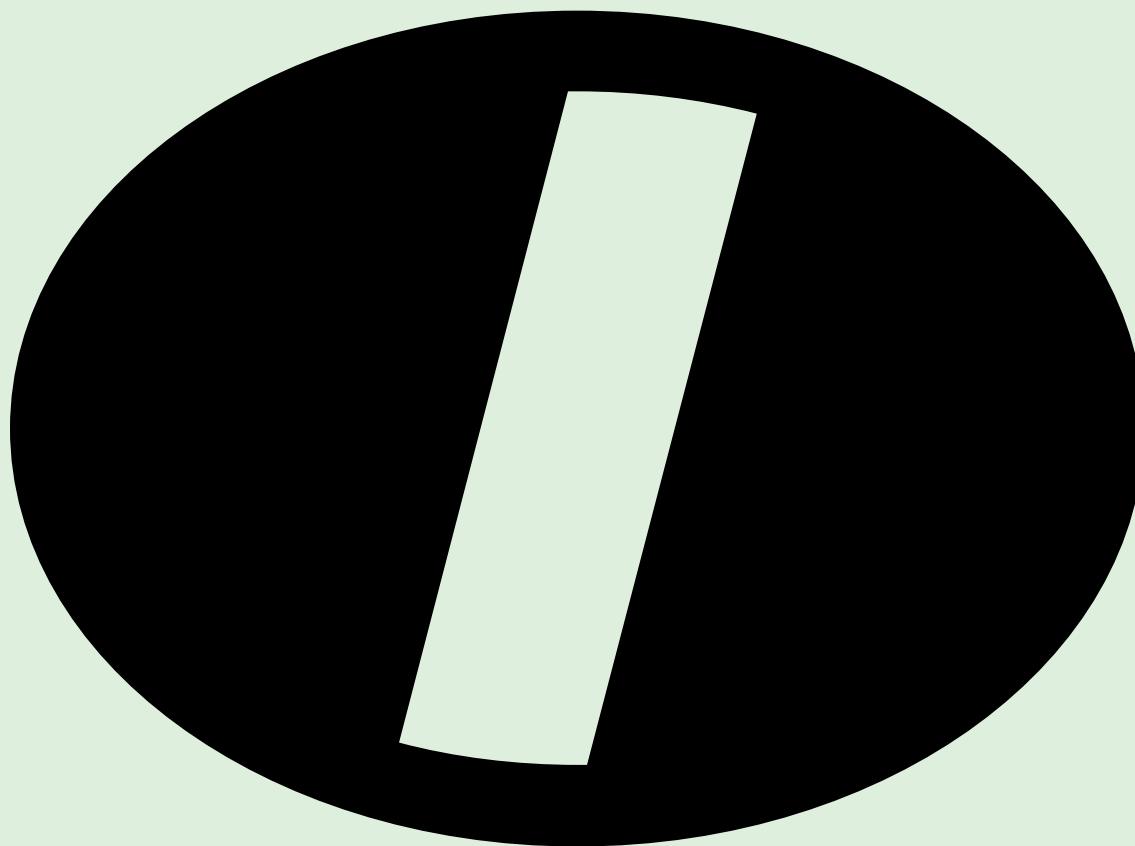
A B C

CYKLOP – Regular

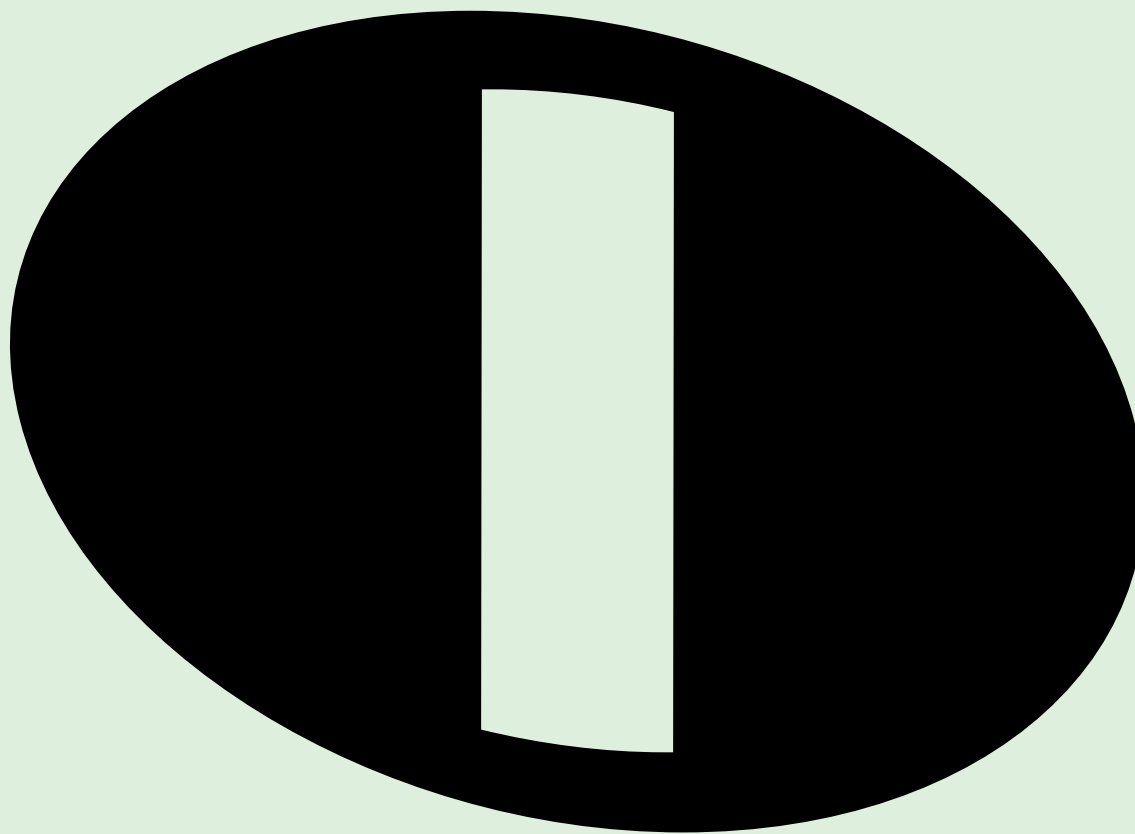
A B C



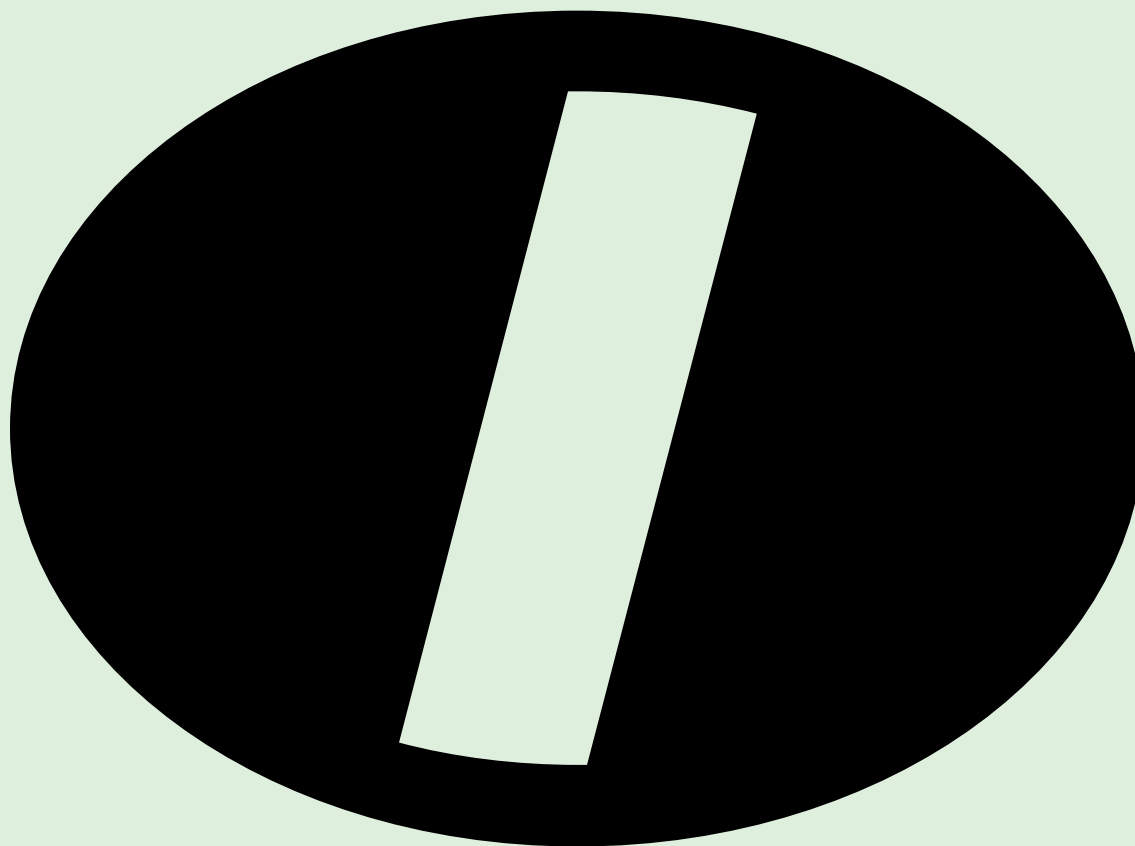
CYKLOP – Oblique?



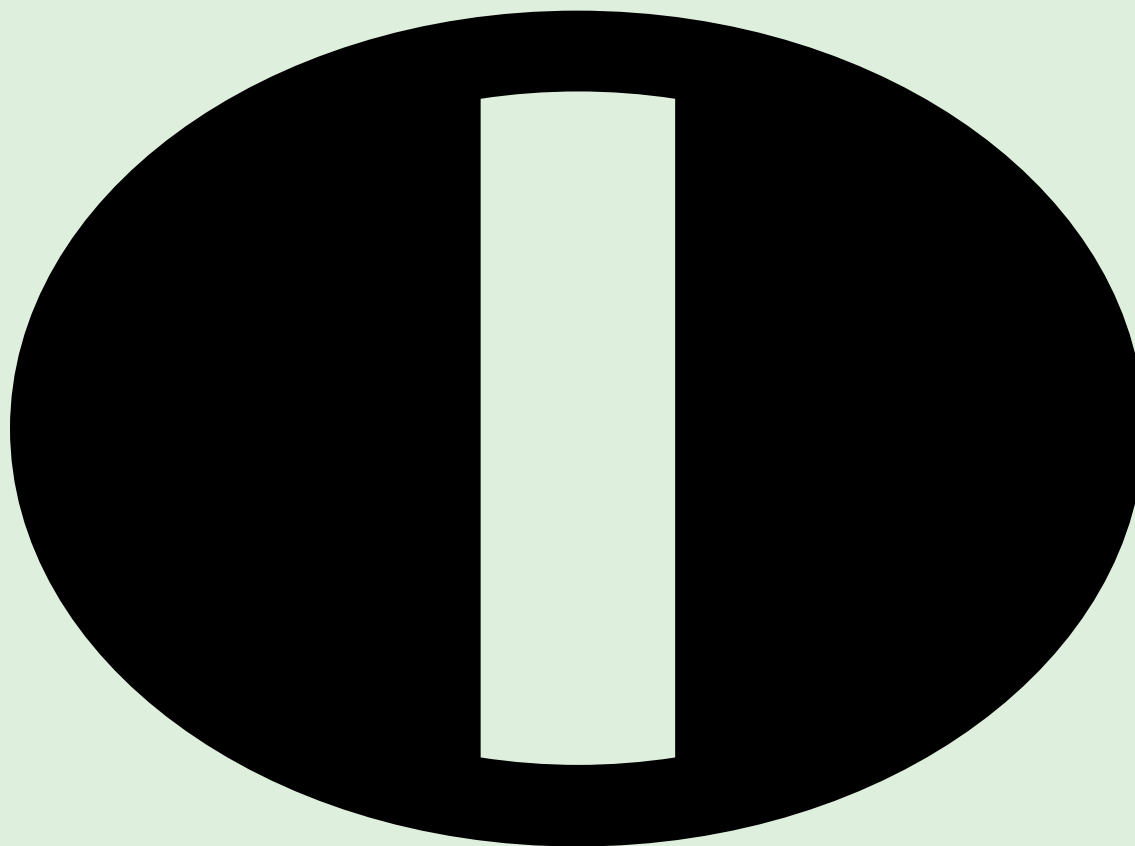
CYKLOP – Upright?



CYKLOP – Oblique?



CYKLOP – Regular



CYKLOP – Regular

A B C D

E F G H I J K L M N O

P Q R S T U V W X Y Z

a b c ć d e ę f g h i j k

ł m n o ó p q r s ś t u

v w x y z ź ż

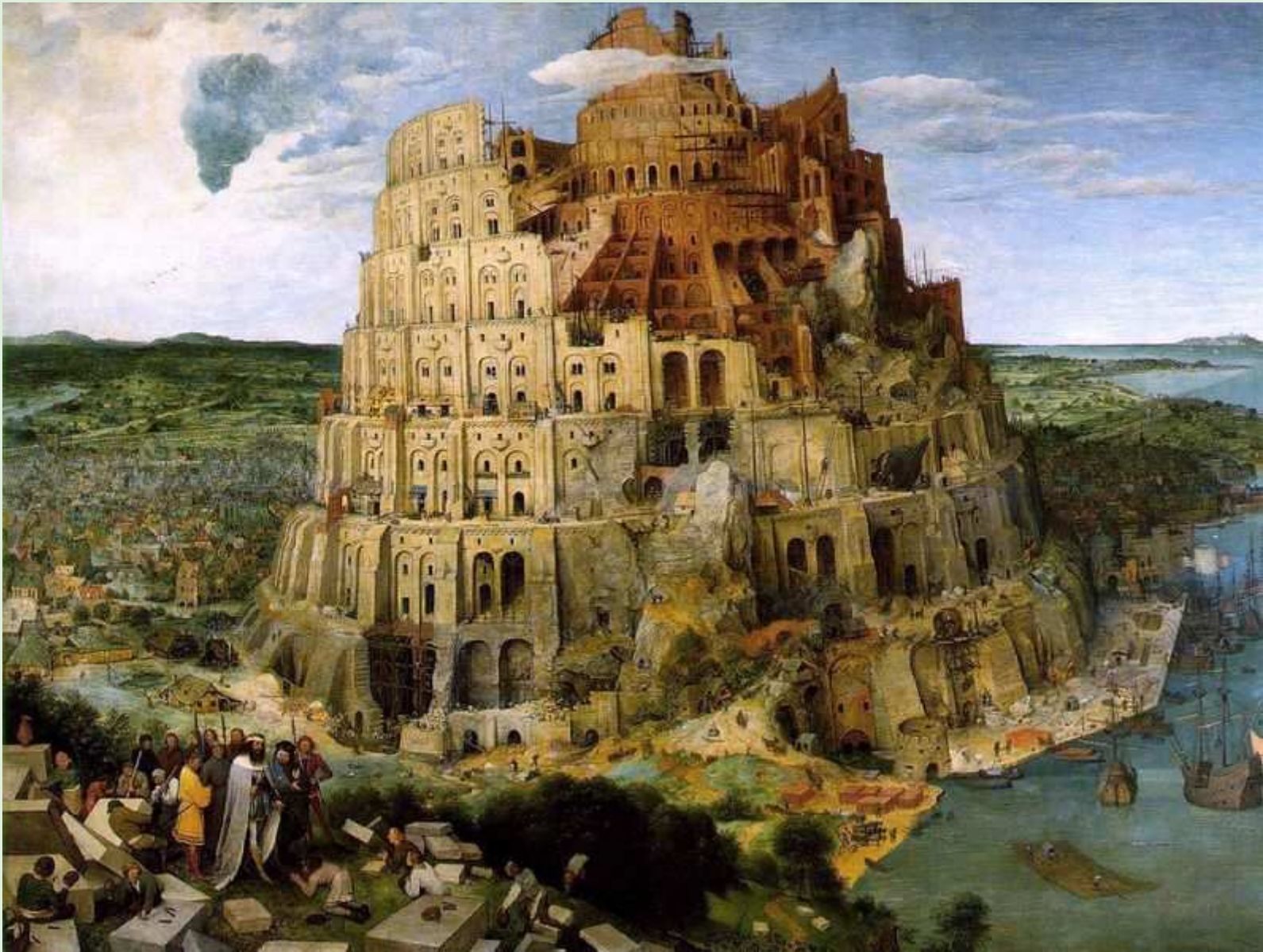
0 1 2 3 4 5 6 7 8 9



Applied Husology

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„The Tower of Babel” Pieter Brueghel the Elder (1563)



TEX plain + TFM fonts T5

Microtypographic TEXpert Co.

Hàn Thế Thành

86-300 GRUDZIĄDZ – POLAND

ul. Śniadeckich 82/47



$\text{T}_{\text{E}}\text{X}$ plain + TFM fonts T5

Hàn Thế Thành



TEX plain + TFM fonts T5

Hàn Thế Thành

Hàn Thế Thành

The right keyboard layout is needed or mouse actions

Hàn Thế Thành

H\char160n Th\char184\ Th\char160nh

We must remember codes, readability problem

Hàn Thế Thành

H\‘an Th\?e Th\‘anh

Knuth's ideas are used for 25 years, we are used to them, but not all diacritics are covered

Hàn Th\?e Thành



TEX plain + TFM fonts T5

acute — `\def\'#1{{\accent19 #1}}`

tilde — `\def\~#1{{\accent"7E #1}}`

dieresis — `\def\"#1{{\accent"7F #1}}`



TEX plain + TFM fonts T5

acute — `\def\'#1{{\accent19 #1}}`

tilde — `\def\~#1{{\accent"7E #1}}`

dieresis — `\def\"#1{{\accent"7F #1}}`

`\char136` =  `\'L` =  `\char137` =  `\v L` = 



The Tower of Babel is alive and kicking

EC

`\def\"a{\char228}` ä

`\def\"o{\char246}` Ö

`\def\"e{\char235}` ë

`\def\"A{\char196}` Ä

`\def\"O{\char214}` Ö

`\def\'E{\char203}` È

QX

`\def\"a{\char228}` ä

`\def\"o{\char246}` Ö

`\def\"e{\char235}` ë

`\def\"A{\char196}` Ä

`\def\"O{\char214}` Ö

`\def\'E{\char203}` È



The Tower of Babel is alive and kicking

EC

`\def\ua{\char160}` ä
`\def\uA{\char128}` Ä
`\def\vc{\char163}` ě
`\def\vc{\char131}` Ě
`\def\'L{\char136}` Ĺ
`\def\.I{\char157}` Ī

QX

`\def\ua{\char160}`
`\def\uA{\char128}` €
`\def\vc{\char163}` ®
`\def\vc{\char131}` >
`\def\'L{\char136}` <
`\def\.I{\char157}` {



X₃TEX

Plain T_EX accenting commands work only with TFM and have known disadvantages

No similar way of entering accented letters for OpenType fonts where there is no information about design size of letters

However we can create macros using UNICODE codes or postscript character names



X_ET_EX

If we know the PostScript name of the character:

```
\def\glyph#1{\XeTeXglyph\the\XeTeXglyphindex"#1"\relax}
```

```
H\glyph{agrave}n Th\glyph{ecircumflexacute} Th\glyph{agrave}nh
```

If we know the UNICODE code:

```
H\char"00E0n Th\char"1EBF\ Th\char"00E0nh
```



The Tower of Babel is alive and kicking

X_ƎT_ƎX Accenting proposal for OTF fonts

```
\def\defaccent#1#2{
  \def#1##1{%
    \expandafter\ifx\csname uni:#2:##1\endcsname\relax % not fixed
    \errhelp{Go on, I'll ignore the accent.}%
    \errmessage{The accent is not fixed for using with \string#1}%
    {##1}\else
    \ifnum\XeTeXcharglyph\csname uni:#2:##1\endcsname=0 % absent from font
    \errhelp{Go on, I'll ignore the accent.}%
    \errmessage{The accented letter is absent from the current font}%
    {##1}\else
    \XeTeXglyph\XeTeXcharglyph\csname uni:#2:##1\endcsname
    \fi
  \fi
  \fi
}%
}
\def\fixaccent#1#2#3{\expandafter\def\csname uni:#1:#2\endcsname{"#3 }}
```



The Tower of Babel is alive and kicking

X_YTeX Accenting proposal for OTF fonts

```
\defaccent\v{caron}
```

```
\fixaccent{caron}{C}{010C}
```

```
\fixaccent{caron}{c}{010D}
```

```
\fixaccent{caron}{D}{010E}
```

```
\fixaccent{caron}{d}{010F}
```

```
\fixaccent{caron}{E}{011A}
```

```
\fixaccent{caron}{e}{011B}
```

```
\fixaccent{caron}{L}{013D}
```

```
\fixaccent{caron}{l}{013E}
```


```
\fixaccent{caron}{N}{0147}
```

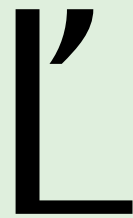
```
\fixaccent{caron}{n}{0148}
```


```
\fixaccent{caron}{R}{0158}
```

```
\fixaccent{caron}{r}{0159}
```

...

\"A = 

\v L = 

\'L = 

```
\defaccent\"{dieresis}
```

```
\fixaccent{dieresis}{A}{00C4}
```

```
\fixaccent{dieresis}{a}{00E4}
```

```
\fixaccent{dieresis}{E}{00CB}
```

```
\fixaccent{dieresis}{e}{00EB}
```

```
\fixaccent{dieresis}{I}{00CF}
```

```
\fixaccent{dieresis}{i}{00EF}
```

```
\fixaccent{dieresis}{O}{00D6}
```

```
\fixaccent{dieresis}{o}{00F6}
```

```
\fixaccent{dieresis}{U}{00DC}
```

```
\fixaccent{dieresis}{u}{00FC}
```

```
\fixaccent{dieresis}{Y}{0178}
```

```
\fixaccent{dieresis}{y}{00FF}
```

...



What Knuth missed?

Hàn Thế Thành
(`ecircumflexacute`)



What Knuth missed?

Hàn Thê Thành
(`\ecircumflexacute`)

Thành proposes — `H\‘an Th\’\ecircumflex\ Th\‘anh`



What Knuth missed?

Hàn Thê Thành

(`\ecircumflexacute`)

Thành proposes — `H\‘an Th\’\ecircumflex\ Th\‘anh`

B. Jackowski proposes — `H\‘an Th\’\^e\ Th\‘anh`



What Knuth missed?

Hàn Thê Thành
(`\ecircumflexacute`)

Thành proposes — `H\‘an Th\’\ecircumflex\ Th\‘anh`

B. Jackowski proposes — `H\‘an Th\’\^e\ Th\‘anh`

J.M. Nowacki proposes — `H\‘an Th\^’e\ Th\‘anh`



What Knuth missed?

Hàn Thê Thành
(`\ecircumflexacute`)

Thành proposes — `H\‘an Th\’\ecircumflex\ Th\‘anh`

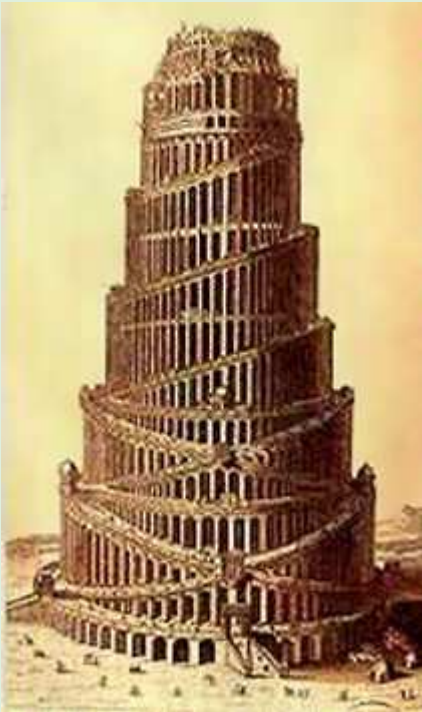
B. Jackowski proposes — `H\‘an Th\’\^e\ Th\‘anh`

J.M. Nowacki proposes — `H\‘an Th\^’e\ Th\‘anh`

**Any solution will be good
but only if becomes standard**



Where to go?



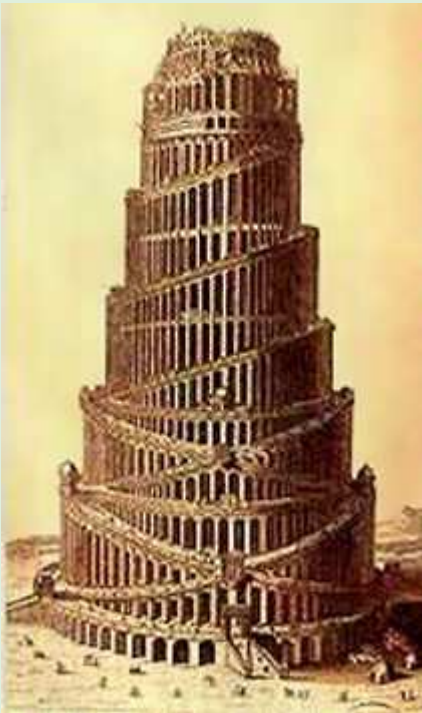
Athanasius Kircher.

\TeX allows entering of accented letters for languages foreign to a user.
OpenType fonts contain several hundred properly designed characters.
Knuth's solution must be extended.
All dictators are here in Bachotek, and there is a lot of time untill morning.



The Tower of Babel is alive and kicking

„Hanging gardens” are our future



Athanasius Kircher.

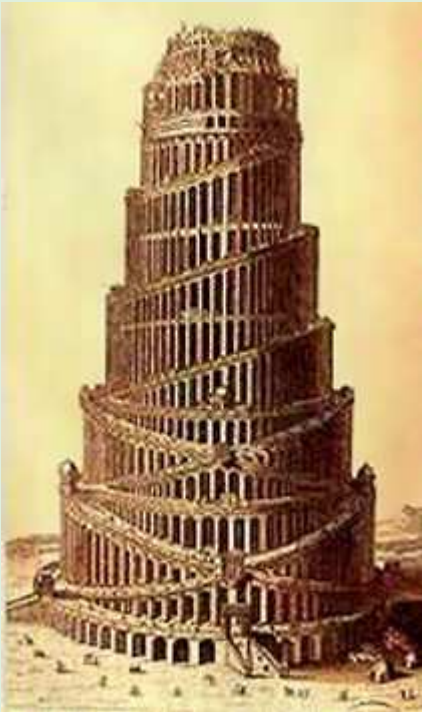


Martin Heemskerck



The Tower of Babel is alive and kicking

„Hanging gardens” are our future



Athanasius Kircher.



Martin Heemskerck

Almost like in Bachotek



www.jmn.pl

