# Beinecke MS 408

# 1 Introduction

In Section 3, mainly to promote easier readability and comparability, a transcription of the manuscript is provided, based on a transliteration by Takahashi (1999). Takahashi's transliteration is obtained in an automatically capitalized version of the *European* or *Extensible Voynich Alphabet* (EVA), using the *Interlinear Transcription Archive Extractor* by Schwerdtfeger (2004).<sup>1</sup> It is then converted back into glyphs using a font by Bettencourt (2019).

Using the manuscript's reproduction in Clemens (2016) and the scans provided by Yale University's Beinecke Rare Book and Manuscript Library (2004), Takahashi's transliteration is compared with what I am able to make out of the manuscript. Glyphs that I interpret in another way than Takahashi are printed in orange, showing my interpretation. Removed spaces are marked with — and added spaces are indicated by —. For sake of simplicity, places, where the writing is interrupted by illustrations, are also marked by spaces. Especially the recognition of spaces in running text is sometimes very difficult; therefore, my adjustments in this — just as in any other — regard should be taken with a certain amount of caution. In total, I made changes in 76 places of Takahashi's transliteration.

Each line of the transcription is preceded by a locator in square brackets, informing the reader about the element a line is part of (i.e., paragraph, title, or label) and assigning the line a number. For example, a line located at [P2, 9] is part of the page's second paragraph (P2) and is counted as the overall ninth line (9) on this page.

<sup>1</sup> Schwerdtfeger (2004) builds on an online archive of Voynich transcriptions that was maintained by Jorge Stolfi (1998). For a general overview of transcription efforts, see Zandbergen (2023).

# 2 Analysis

# 2.1 Glyph Frequencies

Based on a transliteration by Takahashi (see Section 1), a first basic analysis of glyph frequencies can be performed.

Glyph	Count
0	25,468
С	20,070
٥	17,856
9	17,655
α	14,281
c	$13,\!314$
8	12,973
`	11,660
9	$10,\!518$
ľ	9,996
5	$7,\!456$
จ	6,141
11	5,968
1	5,423
d d	4,501
<b>₽</b>	2,886
	1,406
8	1,116
#	976
ff P	938
1 <sup>9</sup> 4₽	425
<b>4</b>	224
S P	96
<b>₽</b>	80
Τ	72
Χ	35
٨	9
۲	2

# 3 Transcription

# Folio 1, Recto

8000110

```
Paccos offax ar affarry door doro offeres of 1602 doorso
     Cos Faths Faths are Fath Willam Fill o Fo Faths ofoos
     OS UNIBSOS SSOND OF OBLIVE BOD ON DELO PO OPLIVE FILED
     Gallo 90 GIIA GIIAS SAISTO OPPOROS SOOMO COOMO GIIO
     8017-9 ccca? ctally ctall 6015
     980701259
     920 Fo.2 (1.08) office of the coeffice of the coeffice of the coefficient of the coeffici
     8011 202 ctog 2089
[T2, 10]
     psooft So Gras
[P3, 11]
     Sagabosta obos Proffe osts Sago Prosats Probe Y
     UNDER 629122 Crosoco Collo 20216 Cresto 6021 021/10
     tog effecy fosarry effect effects arrived the ogenity of
     Said only cros osand crosand cros offand sad after fos
     8a110 detheog too coop dog coop coop lot cag
     to cros todal lity licy sof crosall to lices
900 flower ochlard the $9898 offer 8aroffer
     Stepths Vist Visses executes early sail and effective
     8cca? &cotta 110 olla 117 ccco Pcco tollog ctros 8aoctla
     coll coop crop sand office
[T3, 21]
     GIII 2010
     os os es essent es essenta essentantes essentantes estas
     Feath 2022 Fab Unia Past Sab Rash Unab 2020 Unos
     coso farro coarro offog sarro far ctoog sarro ctoogsar
     gorceg ollag ollg sarry olloreg lollarry otorog llasorg sag
     Soco dos locas etto ollaro loco loco sas allo
     To Tox Toll Tollo Tollo
```

#### Folio 1, Verso

[P1, 1]

Mcco crabarro or orthogo crao ctar ab

[P1, 2]

office, crao or occ, beco shobs oblobar crobs

[P1, 3]

bo ether ether ether des blichers ether hotheroby bas

[P1, 4]

box crolles bar? bab corres crollobs

[P2, 5]
Tollog chox dan? Actions dar choq offoann chochg

[P2, 6]
chollog chox after the chox offax doxered chods for the chock chox offax doxered chods for the chock chox offax doxered chock dox offox dox street offax doxed for the chock chock for the chock offax chock offax chock offax chock offax chock offax chock dox for the chock offax chock offax

#### Folio 2, Recto

[L1, 8] offoa\qc\* [L2, 9] \*\*\*av

# Folio 2, Verso

[P2, 5]

Moror do sanno cettrog 2 dog sor cog sanno
[P2, 6]

Sor cog cor cog llog cog cetto sanno
[P2, 7]

Sanno cettrog tottocog collood cecco cer ceanno
[P2, 8]

collonde cor cog cog sogoso

#### Folio 3, Recto

[P2, 11]

\*\*Teccos & os Zosz & cos & cos
[P2, 12]

ollabarro folleco? follobo folleco coso
[P2, 13]

folleco foll & cos follobo folleco coso
[P2, 14]

coo? fosar? olleco folleco

[P3, 15]

The coaron took of or or opering the offered offered

[P4, 18]

Taccogoog acoda ( ) totaco? totog otacog totog otlogog
[P4, 19]

otlaco? og acco? toco? da ( ) totlog tola ( ) aco? atog
[P4, 20]

gacco? acog oda ( ) acog 2 a ( ) otlogo? ag

#### Folio 3, Verso

[P2, 7]

Theor offeray cror etern 2

[P2, 8]

offero fleor cror eethor offa

[P2, 9]

offercar offer ethosoary cror ethop

offercar offer ethosoary cror offa

[P2, 10]

ocror sann tolletor sann cror offa

from the cross offer theory cross offa

(P2, 11)

cto choeffer etho fleor cross offa

(P2, 12)

oct cross offer fleor fleor fleas

(P2, 13)

ctar chiann tollers offs ethas cells

[P2, 14]

sand chean offers

#### Folio 4, Recto

```
[P1, 1]

Nosasce cotas chos chos of coco toto solve cor othos

[P1, 2]

Secor cos cos cos cotave cos cos

[P1, 3]

others cos cos cos cos cos

[P1, 4]

tothers cos cos of save othos

[P1, 4]
```

#### Folio 4, Verso

[P2, 7]

Thoras accor and animal properties [P2, 8]

ogaci and and after an office and according for a few parts and according and according for a few parts and according for a few parts

# Folio 5, Recto

[P1, 1]

Notice of the open open of the op

# Folio 5, Verso

[P1, 1]

Notice of the of the

#### Folio 6, Recto

```
[P1, 1]

Toar of chox cross core core collection offices of offices of offices offices
```

#### Folio 6, Verso

```
[P1, 1]

Noa? 9 2a? accila? toa? co? at tag 2 acca? at office
[P1, 2]

occ2 aco? acoffice tocilare? acca? osanni Nacces aco? acon
[P1, 3]

toan? after acos ooccoaftes accilates after ollos ?gaco?
[P1, 4]

9 chaftes offices 2o2 9 sass say say offoss offoss
[P1, 5]

san? cha acosas say offor offs sossos
```

[P2, 6] 1 cost coeffice coeffice 9cto2 9ctog 8a112 cttog 80g 9000 000 01000 tolog occo 809 cto7 cto8 S 10 (cc. 20)

tollarod gazar lasg

[P2, 11]

gor arr offar after 89

[P2, 12] officeo2 ctg tollar cfftg 908a110 cttg 2 cto7 occ2 o7 tollof cros effeos floragoso coeffeg S oS crg Savo o? oceg cttar cttar cttar cttag 9 ccarro ctrag ctrosas 39 office officer and affect 000000 flaod cro 807 gocco? coo? octtag

#### Folio 7, Recto

[P1, 1]
Toodarry the deg tool deeg caroog
[P1, 2]
Souce flood door door door flood deeg caroog
[P1, 3]
occeed accodarry deeg flood to tage
[P1, 4]
toffee ac gover darry gary flood odarry
[P1, 5]
oarry offerry

[P2, 6]

Mctogoctco toffocco collogog officer acoally

Betog affice acog officer day took acoffee

officer decede acoff toffae took flee acoff day

toffee ogacoll acog affee acomp fleed

[P2, 9]

toffee ogacoll acog affee acomp fleed

Catall acof dayl acoffee

#### Folio 7, Verso

[P1, 1]
Toggico cico fictoso totas officos so sann fictososo
[P1, 2]
crocro ctro sann tollo cretico sann ctros ctro ctros
[P1, 3]
tollos sollos critico licto lo so creco os crecos so
[P1, 4]
croffeced occar crocro sand cho licto chos secce sos
[P1, 5]
secosann tolloso creco ficeo

#### Folio 8, Recto

```
[P1, 1]
Those crop offices croff offices cross to offices crops
                         Ticillo de l'accase de oblace de dans as
   حده کوم کوم کوم کوم کرم گومالی کرمالحدم حدم کوم الاحد الاحد
     10160 000 000 2000 8000 2000 001 001 808
                           Office of the only office of the constant of t
                           Took offerers flog 89 of toolfg occoss Pog
crotto Mcroad croos 8a17
                           8000 8a118
                         Theort to their party ofters steers tox-sarry too?
                           8ann cocolto posto posto po cococotto posto post
 coop a coosann sann so offices a cost offices offices offices offices offices offices of the cost of 
 olollcross
                           etto etter dos cotos dos coros líces soso cosas
 Screg effect crop etc. flower crop effect crop effect
     . .
gozeg PoroPorg ceSeg Porg Screavid cttavora? ctteg 8a?
[P3, 16]
 coop being to that erg and excal efforcial example. [P3, 17]
                           olla? Acarra con Poor Ca rain carrage
                           Zar? cocard officer sar took larry took larry sarlag
 \overset{\circ}{\text{(T3, 20)}} croffc2c9 &co offax crax
                           Scrop Sars
```

#### Folio 8, Verso

```
[P1, 1]

cffcos Soocthe Sox Lox offox crox officianny offosanny Sanny

[P1, 2]

Letter Sar cror Leanny Lor cropilers offanny offo

[P1, 3]

to so creax So crors crear Lox cranny Lanny sogar

[P1, 4]

8 Lox Lox Lox sax crear cffcar Leans sar

[P1, 5]

crox crox sar officiar cffanny cffcox sar

[P1, 6]

8 anny cffcar officiar croffany sanny

Lox leans sar Lox cffcar croffany ro

crox leans sar Lox crox crox cffcany

sanny

College lite crox crox crox cffcany

Lox or crox crox crox cffcany

Lox or crox crox crox cffcany

Lox or crox crox cffcany

Corarcy occoss lices fcq cffcaros

Sorany

Sorany
```

[P2, 12]

Therefore the content of t

#### Folio 9, Recto

[P1, 1]

Tookso cross officer orcing 2 deg obann 2arg dor office officer conficer cross officer officers officer officers officers officers officers officers officers officers officers read the conficers officers officers

[P2, 6]
Theoand offician official forces of the series of

#### Folio 9, Verso

```
[P1, 1]
Tocco? otology off cool sand totogton totog coop cticg sand
[P1, 2]
Scro? toand celland ethol coop cro? cticg sy off tolland sy
plicy cro? gland sand ethog offand olf occol sand
[P1, 4]
glicy licy land ethol offog off flogs
```

[P2, 5]

Took offeely totok offee oxeteory the at cetty salling

[P2, 6]

obox coop theeory coops dand offee effects offo

[P2, 7]

tocox coops effect offeely salling

[P2, 8]

Coll dand totok coops offeely sally

[P2, 9]

sall coops coops offeely sally offeely

[P2, 10]

offoely

offoely

coops coops coops offoely

[P2, 11]

occor coeps offoely

[P2, 12]

celland effeely

celland coops

coo

#### Folio 10, Recto

[P1, 1]
The coefficient of the c

[P2, 6]
gcc20? cffcq cco? cffca\\dagger\dagg

# Folio 10, Verso

[P1, 1]

Tand dand coo foces follo dand officer offodo cand
[P1, 2]

dand dand officer ocottoor ocond follo ocodand officer dand
[P1, 3]

does office foces officer ocos do

[P2, 4]

totagtage con sand totage cottes of of sand

[P2, 5]

co office sand totage totage con sand totage

con office sand totage

con office sand totage

con office con con totage

# Folio 11, Recto

[P1, 1]

1 thicog 2 croag ctog ctog ctog ctog through choosing

[P1, 2]

2 octhoosy toso? 9 thicy sann offers offerolly through sann

[P1, 3]

totag crog ctog so? 9 thorog crotag sann crann sann ses

serog crog through so sann

[P2, 5]

There are took of the sale of the

# Folio 11, Verso

[P1, 1]
Topdecody cictes colds tothe cox cited dad g
[P1, 2]
clos dy cictes cictes daths dad glices dad decg
[P1, 3]
officed dy lices they dad tolled only cros dy dy

tolled correspond croping decy tolly effect thereof thad
[P1, 4]
tolled correspond cooper colls decy tolly effect thereof thad
[P1, 5]
Cogdy tolled toll crof dy ddy effect chy ard
[P1, 6]
general lices do? effect corres

# Folio 12

Folio 12 is missing from the manuscript.

#### Folio 13, Recto

[P2, 5]

choroso de fleto l'acox staro totaro ottaro de cheox so l'acoroso de cheox so l'acoroso de con tara ottaro ottaro de cheox so l'acoroso de con totaro de contrato de contra

# Folio 13, Verso

[P1, 1]
| Noar? cettorry offices office offices
| P1, 2]
| office to fore cettory offices offices offices cettory
| offices to food cess offices offices
| P1, 4]
| oge cess offices oarry offices to offices
| P1, 4]
| oge cess offices oarry offices to offices
| P1, 5]
| tollo darry

[P2, 6]
Togdann ogcto cog do otlo cor totlod dand de [P2, 7]
Band otlag cog totlocoro deco totlo dand cod otlog dand choro otlagd do otlagd do otlagd do otlagd do otlagd do otlagd do tocto otlagd otlagd do tocto otlagd otlagd otlagd do tocto otlagd ot

#### Folio 14, Recto

# Folio 14, Verso

[P1, 1]

Toganon No offodan offodo of offano? Sann log offano?

oliano? Sang that only and attention offano?

oliano? Sang that only and attention offano?

open of offano offano offano?

offano offano offano?

offano offano?

offano offano offano offano offano

(P1, 6)

totto attention offano offano offano offano

(P1, 6)

optano offano offano offano offano offano

(P1, 7)

optano offano offano offano offano offano

optano offano offano offano offano

(P1, 8)

collano offano offano offano offano

sano offano

optano offano

sano off

#### Folio 15, Recto

[P1, 1]

The cor decy therapy etg entrope decy sand

[P1, 2]

offeror tolleror ogg offor etg thogo

tolland tollero those sand erose etteg

[P1, 4]

Cercand erosand eros ogg etteand eag

[P1, 5]

tollero ? etor etteg sand etteg sg

seeg tolland etteg etg etgens

sand etteg etgens

etgens

[P1, 6]

sand etteg etgens

etgens

[P1, 8]

etgens

etgens

[P1, 9]

oetteand tolland eros osand etteg

[P1, 9]

oetteand eretteg offetg eand etgens

[P1, 10]

gerand eretteg offetg eand etgens

[P1, 11]

offetg etgens

follor etgens

#### Folio 15, Verso

[P1, 1]
To Por orchy connot offer or so [P1, 2]
\*\*cor or oro or annothing than offer or so [P1, 3]
cftor sand tollor offer offer offand
[P1, 4]
sond collo con tollo tollor offer or offer or cor offer or cftor offer or cftor offer or cftor offer or cor offer or cftor offer or cor offer or cftor or offer or cor or offer or or or or offer or or or or offer or or or or offer or sand
[P1, 8]
offer or cor or or only off cor sand
[P1, 9]
offer or cor cor cor cor cor offand
[P1, 10]
Cor cor cftond cftor tolland
[P1, 11]
Corond cftor cor cor sand find
[P1, 12]
sand cftor cor cor cor

#### Folio 16, Recto

[P2, 5]

There of the continuous force of the figure of th

[P3, 10]

To Po Po Sagger of the force of the following o

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