Beinecke MS 408

A Transcription Based on a Revised Version of Takeshi Takahashi's Transliteration

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1 Introduction

In Section 2, mainly to promote easier readability and comparability, a transcription of *Beinecke MS 408* is currently being developed, based on a transliteration by Takahashi (1999). To achieve this, 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).[1] 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. In total, I made changes in 337 places of Takahashi's transliteration. Changes to Takahashi's reading are highlighted in orange:

- Glyphs that I interpret in another way than Takahashi or that I add to the corpus are printed in orange, showing my interpretation.
- When a glyph has been deleted by me without replacement, this is indicated by $\cancel{x}$.
- Removed spaces are marked with ⌢ and added spaces are indicated by ⌣.
- Added paragraphs are represented by ¶.

Especially the recognition of spaces in running text is, as Takahashi has already noted, sometimes very difficult. Therefore, my adjustments in this—just as in any other—regard should be taken with a certain amount of caution. Note that places where the writing is interrupted by illustrations are marked by em dashes (—).

Each line of the transcription is preceded by a locator in square brackets, informing 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.

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[1] Schwerdtfeger (2004) builds on an online archive of Voynich transcriptions maintained by Jorge Stolfi (1998). For a general overview of transcription efforts, see Zandbergen (2023).

Additionally, in Section 3, some basic analyses are presented. First, in Section 3.1, glyph frequencies are counted. In Section 3.2, then, entropy is calculated.

2 Transcription

Folio 1, Recto

[P1, 1]
fachys ykal ar ataiin shol shory cthres y kor sholdy
[P1, 2]
sory ckhar or y kair chtaiin shar are cthar cthar dan
[P1, 3]
syaiir sheky or ykaiin shod cthoary cthes daraiin sy
[P1, 4]
dooiin oteey oteos roloty cthiar daiin otaiin or okan
[P1, 5]
dair⌒y chear cthaiin cphar cfhaiin
[T1, 6]
ydaraishy

[P2, 7]
ɣ odar s⌒y shol cphoy oydar sh*⌒s cfhoaiin shodary
[P2, 8]
yshey shody okchoy otchol chocthy oschy dain chor kos
[P2, 9]
daiin shos cfhol shody
[T2, 10]
dain os teody

[P3, 11]
ɣ ydain cphesaiin ol⌒s cphey ytain shoshy cphodales
[P3, 12]
oksho kshoy otairin oteol okan shodain sckhey daiin
[P3, 13]
shoy ckhey kodaiin cphy cphodaiils cthey she oldain d
[P3, 14]
dain oiin chol odaiin chodain chdy otain dan cthy kod
[P3, 15]
daiin shckhey ckeor chor shey kol chol chol kor chal
[P3, 16]
sho chol shodan kshy kchy dor chodaiin sho kchom
[P3, 17]
ycho tchey chekain sheo pshol dydyd cthy daicthy
[P3, 18]
yto shol she kodshey cphealy dasain dain ckhyds
[P3, 19]
dchar shcthaiin okaiir⌒chey rchy potol cthols dlocta
[P3, 20]
shok chor chey dain ckhey
[T3, 21]
otol daiiin

[P4, 22]
cpho shaiin shokcheey chol tshodeesy shey pydeey chy ro dar
[P4, 23]
*doin chol dain cthal dar shear kaiin dar shey cthar
[P4, 24]
cho*o kaiin shoaiin okol daiin far cthol daiin ctholdar
[P4, 25]
ycheey okay oky daiin okchey kokaiin otchol kadchy dal
[P4, 26]
dcheo shody koshey cthy okchey keey keey dal chtor
[P4, 27]
cho chol chok choty chotey
[T4, 28]
dchaiin

Folio 1, Verso

[P1, 1]
kchsy chadaiin ol — oltchey char cfhar am
[P1, 2]
yteey char or ochy — dcho lkody okodar chody
[P1, 3]
do ckhy ckho ckhy shy — dksheey cthy kotchody dal
[P1, 4]
dol chokeo dair dam — sochey chokody

[P2, 5]
potoy shol dair cphoal — dar chey tody otoaiin shoshy
[P2, 6]
choky chol cthol shol okal — dolchey chodo lol chy cthy
[P2, 7]
qo ol choees cheol dol cthey — ykol dol dolo ykol do lchody
[P2, 8]
okol⁀shol kol kechy chol ky — chol cthol chody chol daiin
[P2, 9]
shor okol chol dol ky dar — shol dchor okcho dar shody
[P2, 10]
taor chotchey dal chody — schody pol chodar

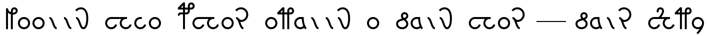
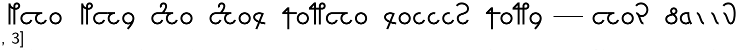
Folio 2, Recto

[P1, 1]
kydainy ypchol daiin otchal — ypchaiin ckholsy
[P1, 2]
dorchory — chkar s — shor cthy cth
[P1, 3]
qotaiin — cthey y — chor chy ydy — chaiin
[P1, 4]
chaindy — chtod dy — cphy dals — chokaiin d
[P1, 5]
otochor al — shodaiin — chol dan — ytchaiin dan
[P1, 6]
saiin daind — dkol sor — ytoldy — dchol dchy cthy
[P1, 7]
shor ckhy daiiny — chol dan

[L1, 8]
ytoaile*
[L2, 9]
***an

[P2, 10]
kydain shaiin qoy s shol fodan — yksh olsheey daiildy
[P2, 11]
dlssho kol sheey qokey ykody so — chol yky dain daiirol
[P2, 12]
qoky cholaiin shol sheky daiin — cthey keol saiin saiin
[P2, 13]
ychain dal chy dalor shan dan — olsaiin sheey ckhor
[P2, 14]
okol chy chor cthor yor an chan — saiin chety chyky sal
[P2, 15]
sho ykeey chey daiin chcthy

Folio 2, Verso

[P1, 1]

[P1, 2]

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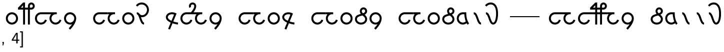
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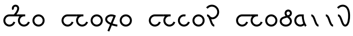

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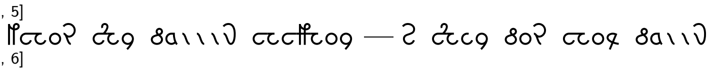
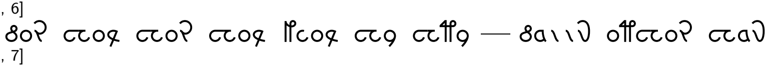
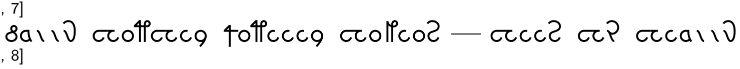

[P2, 6]

[P2, 7]

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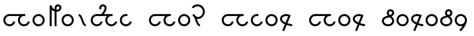


Folio 3, Recto

[P1, 1]
tsheos qopal chol cthol daimm
[P1, 2]
ycheor chor dam qotcham cham
[P1, 3]
ochor qocheor chol daiin cthy
[P1, 4]
schey chor chal cham cham cho
[P1, 5]
qokol chololy s cham cthol
[P1, 6]
ychtaiin chor cthom otal,dam
[P1, 7]
otchol qodaiin chom shom damo
[P1, 8]
ysheor chor chol oky damo
[P1, 9]
sho *or sheoldam otchody ol
[P1, 10]
ydas chol cthom

[P2, 11]
pcheol shol sols sheol shey
[P2, 12]
okadaiin qokchor qoschodam octhy
[P2, 13]
qokeey qot shey qokody qokshey cheody
[P2, 14]
chor qodair okeey qokeey

[P3, 15]
tsheoarom shor or chor olchsy chom otchom — oporar
[P3, 16]
oteol chol s cheol ckshy qokeom qokol daiin — soleed
[P3, 17]
soeom okeom yteody qokeeo,dal sam

[P4, 18]
pcheoldom shodaiin qopchor qopol opchol qoty — otolom
[P4, 19]
otchor ol cheor qoeor dair qoteol qosaiin — chor cthy
[P4, 20]
ycheor chol odaiin chol s aiin okolor am

Folio 3, Verso

[P1, 1]
koaiin cphor qotoy sha ckhol ykoaiin s oly
[P1, 2]
daiidy qotchol okchor okor olytol dol dar
[P1, 3]
okom chol shol seees chom cheeykam okai
[P1, 4]
qodar chs chy kcheol okal do⁀r chear een
[P1, 5]
ychear otchal chor char ckhy
[P1, 6]
or cheor kor chodaly chom

[P2, 7]
tchor otcham chor cfham s
[P2, 8]
ykchy kchom chor chckhol oka
[P2, 9]
ytcheear okeol cthodoaly chor cthy
[P2, 10]
ochor daiin qokshol daiim chol okary
[P2, 11]
sho shockho ckhy tchor chodaiin chom
[P2, 12]
osh chodair ytchy tchor kcham s
[P2, 13]
shar shkaiin qokchy yty cthal chky
[P2, 14]
dain sheam yteam

Folio 4, Recto

[P1, 1]
todalchy chpady sheol ol sheey qofey — doiin chor yfoy
[P1, 2]
dchor chol shol cfhol shkchy chaiin *s — choraiin chom
[P1, 3]
okchol chol chy chaiin qofaiin — daiin shain
[P1, 4]
qofchol chy yfy daiin otaiin cfhy

[P2, 5]
pydaiin qofchy dy fydy
[P2, 6]
chor shyfchy dy fcheey
[P2, 7]
qofaiin cfhol daiin cfhom
[P2, 8]
shor shol shol cfhy cpholdy
[P2, 9]
daiin ckhochy fchy toraiin
[P2, 10]
odal shor shyshol cphaiin
[P2, 11]
qofchoiin sheyr qofy
[P2, 12]
soiin chaiin chaiin
[P2, 13]
daiin cfhey

Folio 4, Verso

[P1, 1]
pchooiin ksheo kchoy chopchy dolds — dlod
[P1, 2]
ol chey chy cthy shkchor sheo cheory — choldy
[P1, 3]
sho sho chaiin shaiin daiin qodaiin — o ar am
[P1, 4]
qokshy qocthy choteol daiin cthey — choaiin
[P1, 5]
shor sheey cto otoiin shey qotchoiin — chodain
[P1, 6]
ytchoy shokchy cphody

[P2, 7]
torchy sheeor chor shokchy cphydy
[P2, 8]
olaen chor cthol sho otor cthory
[P2, 9]
qooko iiincheom chcthy shoky daiin
[P2, 10]
otaiin sheo okeody chol chokeody
[P2, 11]
sho kcheor shody shtaiin qotol daiin
[P2, 12]
qokoy sho okeol s keey shar char ody
[P2, 13]
shody s cheor chokody shodaiin qoty
[P2, 14]
ochody chykey chtody

Folio 5, Recto

[P1, 1]
kshody fchoy chkoy oaiin oar olsy chody dkshy dy
[P1, 2]
ochey okey qokaiin sho ckhoy cthey chey oka*or otol
[P1, 3]
qoaiin otan chy daiin oteeen cho cthy otchy qotcho dy
[P1, 4]
otain sheody chan s cheor chocthy

[P2, 5]
tshy shody qoaiin cholols sho qotcheo daiin shodaiin
[P2, 6]
sho cheor chey qoeeey qoykeeey qoeor cthy shotshy dy
[P2, 7]
qotoeey keey cheo kchy shody

Folio 5, Verso

[P1, 1]
kocheor chor ytchey pshod chols chodaiin ytoiiin daiin
[P1, 2]
dchol sy chol otaiin dain cthor chots ychopordg
[P1, 3]
qotcho ytor daiin daiin otchor daiin qo darchor do
[P1, 4]
qotor sheees otol ykoiin shol daiin cthor okchy taiin
[P1, 5]
shokeeol chor cheotol otchol daiin dal chol chotaiin
[P1, 6]
otol chol dairodg

Folio 6, Recto

[P1, 1]
poar y shol cholor cthol chor chckh — chopchol otcham
[P1, 2]
daiin chckhy chor chor kar cthy — cthor chotols
[P1, 3]
poeear kshor choky os cheoeees — ykeor ytaiin dar
[P1, 4]
dar cho s sheor chocthy otcham — yaiir chy
[P1, 5]
tar okoiin shees ytaly cthaiin — odam
[P1, 6]
or al daiin ckham okom cthaiin — ydaiin
[P1, 7]
daiin fodaiin cho s chol okaiin s
[P1, 8]
ychol cthor pchar sheo cthaiin
[P1, 9]
dar sheol skaiiodar otaiin chory
[P1, 10]
tchor ctheod chy shor odshe od
[P1, 11]
ychar olchad ol chokaiin
[P1, 12]
or shol cthom chor cthy
[P1, 13]
focthol yodaiin cthy
[P1, 14]
ysho taiin y kaiim

Folio 6, Verso

[P1, 1]
koar y sar cheekar qoar shor chapchy s chear char otchy
[P1, 2]
oees chor chckhy qockhhar cheas odaiiin kchey chor chaiin
[P1, 3]
qoair ckhy chol oochockhy chckhhoy ckhy okol rychos
[P1, 4]
y shcthy ytchoy sos y⌒dady dchy dey okody — ytody
[P1, 5]
dair sha chodam dam okor oty doldom

[P2, 6]
tchody shocthol chocthey s
[P2, 7]
ychos ychol daiin cthol dol
[P2, 8]
ychor chor okchey qokom
[P2, 9]
oeeo dal chor cthom s
[P2, 10]
qokchod ychear kchdy
[P2, 11]
lor char otam cthom dy
[P2, 12]
ytchos shy qokam cthy
[P2, 13]
yodaiin cthy s chor oees or
[P2, 14]
qokor chol cthol tchalody
[P2, 15]
chockhy s os chy sain or
[P2, 16]
ochy cthar cthar cthy
[P2, 17]
y chaiir ckhal cthodam dy
[P2, 18]
ytcho⌒cthol ches cthor
[P2, 19]
ocholy kchos chy dor
[P2, 20]
dchor choldar okol daiin
[P2, 21]
ycheor chor octham

Folio 7, Recto

[P1, 1]
fchodaiin shopchey qko — shey qoos sheey charochy
[P1, 2]
dcheey keor shor dold — dchey kchey otchy cheody
[P1, 3]
oeeees cheodaiin sheey — ytcheey qotchy chald
[P1, 4]
qokcho cho lochey daiin — ychey kchos — odaiin
[P1, 5]
oaiir — otaiin

[P2, 6]
ksholoshey qotoees chkoldy — otchor choaiin
[P2, 7]
dshoy cthol chol otchol dain — shody shol chotchy
[P2, 8]
okchey deeeese choty qokchy — shol keey choty dain
[P2, 9]
qokechy olchoiin chol cphey — shckhy chochy kchod
[P2, 10]
schain chor daiin chckhy

Folio 7, Verso

[P1, 1]
polyshy shey tchody qopchy otshol dy⁀daiin tshodody
[P1, 2]
chochy cthy daiin qoky chcphey daiin cthol cthy cthd
[P1, 3]
qokchy dykchy chkeey kshy ky ty dor cheey ol⁀cheol⁀dy
[P1, 4]
choteeen oeear choschy dain sho⁀kshy shol deees⁀dol
[P1, 5]
dchodaiin qotchy cheey tcheey

[P2, 6]
kchor sheod sheodaiin shodaiin oksho⁀lshol dair qos
[P2, 7]
oksho⁀deeen chor⁀cheor odaiin shotch* — dol dol dor aiin
[P2, 8]
qoteeeo rcho⁀cheeody qotchey tey — okchor daiin
[P2, 9]
sho keeo dair chokchy dor deol dy — dol daiin

Folio 8, Recto

[P1, 1]
pshol chor otshal chopy — cphol chody shy cphodar shor
[P1, 2]
tchty sh kcheals sho — okche do dchy dain al
[P1, 3]
chodar shy ry — chodaiin shokchy chor dy
[P1, 4]
qotor chor chor sheey — dchol shesed chofchy dam
[P1, 5]
okchey do r cheeey dy ky — scho chky ekooaiin cho taiin
[P1, 6]
tosh ekcheeey koltoldy — shy choety cheeody sol
[P1, 7]
choto kchoan choor dain
[T1, 8]
dcho daiin

[P2, 9]
tchoep sho pcheey pchey — ofchey dsheey shol daiin shor
[P2, 10]
daiin cheey teeodan dy — cheocthey oksheo dol dairm
[P2, 11]
shol cheodaiin daiin do — ytchody chot choty otariin
[P2, 12]
qochodaiin shotokody — chotol
[T2, 13]
okokchodm

[P3, 14]
ctho cthey shol chofydy — sho chey kshey lody cholal
[P3, 15]
dchey cthol chol chey kchs — chy ctodaiin dol daiiirchy cthy
[P3, 16]
ychey kchokchy chsey kchy — scheaiin cthaichar cthey dar
[P3, 17]
chol dchy qokar chl — aiin chean cty char chaiin
[P3, 18]
okar cphaiin chaiin el — daiin chor cha rchealcham
[P3, 19]
sair cheain cphol dar — shol kaiin shol kaiin daikam
[P3, 20]
or chokesey shey okal — chal
[T3, 21]
schol sair

Folio 8, Verso

[P1, 1]
cthod soocth — sol shol otol chol opcheaiin opydaiin saiin

[P1, 2]
shcthal sar — chor sheaiin shor chykchy otaiin cty

[P1, 3]
fody cheal sy — chory — chear shol chaiin shaiin dolar

[P1, 4]
dshol shol dal chean cthar shealy daiin chary

[P1, 5]
chol chol dar — otchar ctaiin cthol dar

[P1, 6]
daiin cthan — ytchy chey kaiin dain ar

[P1, 7]
sho kchol — dar shey cthar chotain ry

[P1, 8]
okchol ksh — chol chol chol cthaiin dain

[P1, 9]
shol orchl — chokchy chol cthor chaiin

[P1, 10]
scharchy — oeesody kchey pchy ctharom

[P1, 11]
sorain

[P2, 12]
pchar cho rol dal — shear chchotaiin chal daiin

[P2, 13]
kchor otchar oky — chokain keoky otorchy satar

[P2, 14]
shor okol lokaiin — shol kol char cthey tchy ckham

[P2, 15]
or chol cheen cheky — chor cheain char cheeky chor ry

[P2, 16]
chor chear chear — oteey dchor chodey cho raiin

[P2, 17]
dain chear daiin

Folio 9, Recto

[P1, 1]
tydlo choly cthor orchey s shy odaiin sary — shor cthy
[P1, 2]
oykeey chol ytaiin okchody toeoky okoiin dy — or chaiin
[P1, 3]
toiin cphy qotod otaiin cthy okor chey — cthod ram
[P1, 4]
yshy chokcho chcthod shor shaiin otar dor — ytol dayty
[P1, 5]
daiin chor sor cthy chokoiin shol dsholdy — otchol ot dy

[P2, 6]
pshoain cthyaiin okaiir cfhodoral shar — sy — shydal chdy
[P2, 7]
or chol chytchy tchol ytor qotol chyky — chodar aiin
[P2, 8]
qotcho qokchy ctheey koraiin okain⁀d — dal — s — olsho cthy
[P2, 9]
ocho cthy choetoy chodykchy saiin dchy — daiin
[T1, 10]
ykchas oraiin chkor

Folio 9, Verso

[P1, 1]
fochor oporody opy shor daiin qopchypcho qopol shol cphol daiin
[P1, 2]
dchor qoaiin chkaiin cthor chol chor cphol dy — oty qokaiin dy
[P1, 3]
ykey chor ykaiin daiin cthy otaiin oky — oeees daiin
[P1, 4]
ytey tchy kaiin cthor otol oty toldy

[P2, 5]
pchor ypcheey qotor ypchy olcpholy te — ar — chty daiiin
[P2, 6]
odol choy ksheody chody — dain — otchy — cthod — yko
[P2, 7]
qochol chol ctchy daiin — otal — dor — daim
[P2, 8]
soiin daiin qokcho rokyd — daly
[P2, 9]
daiin chy tor chyty dary — ytoldy
[P2, 10]
oty kchol chol chy kyty
[P2, 11]
ychor chshoty oky kaiin
[P2, 12]
chkaiin ckhy chor

Folio 10, Recto

[P1, 1]
pchocthy shor octhody chorchy pchodol chopchal ypch kom
[P1, 2]
dchey cthoor char chty os chair otytchol oky daiin ctyd
[P1, 3]
qotor otchy daiin chocthy qotchy chol or yty dy dy
[P1, 4]
sor chaiin chcthy ctho ckhy or aiin chtchor doiir ody
[P1, 5]
qokchy qotchol chol cthy

[P2, 6]
ychsor cthy chor cthaiin qoctholy dy — chy taiin shy
[P2, 7]
dchy qokchol ykchaiin yty daiin cth — dain dair am
[P2, 8]
qotchor chor otol chol cholor — chol daiin dar
[P2, 9]
oykchor shor chor chy kaiiin dy — chodaiin
[P2, 10]
oqotor otor cfhy cthor osain — ytoiin
[P2, 11]
rotcho shor qoty qotor cthy d — otar
[P2, 12]
rodaiin daiin qotchy qotor

Folio 10, Verso

[P1, 1]
paiin daiin sheo pcheey qoty daiin cthor otydy sain
[P1, 2]
dain daiin cthy chcthor choiin qot chodaiin cthy daiin
[P1, 3]
dsho ytey kchol olty chol dy

[P2, 4]
qotchytor shoiin daiin qotchey shcthey ytor dain
[P2, 5]
sho ykeey daiin qotchy qotor chol daiin qokchyky
[P2, 6]
shoiin chor shcthy qoty qotoiin qokol choraiin
[P2, 7]
qokol chyky chol cheky daiin dain chcthan

Folio 11, Recto

[P1, 1]
tshol schoal cfhy shfydaiin cthy shey tchody shoyty
[P1, 2]
socthody podor y kshy daiin ytchy ytchoky kchol daiin
[P1, 3]
poty chol cthy dor ykychy choty dain chaiin daiin ded
[P1, 4]
dchol chy kchy dy daiin

[P2, 5]
tchol shor shor dky scthy daiin cthy dy chodl daiin
[P2, 6]
odl ds y otol chaiin ykchor dair chody cthy s daiin
[P2, 7]
potchy okchol cthy dy

Folio 11, Verso

[P1, 1]
poldchody shcphy shordy qoty — shol cphar dan y
[P1, 2]
shol dy chckhy shckhy daiin dam — ykchy dain dchy
[P1, 3]
otchor dy kchy tchy dar qokchd — oky chol dy dy
[P1, 4]
qokchor chololer chyky dchy qoky — cpho tchey tan
[P1, 5]
soydy qoteey qot‿chor dy ddy — cphor shy arm
[P1, 6]
ycheor ksho dor cphey schold

Folio 12

Folio 12 is missing from the manuscript.

Folio 13, Recto

[P1, 1]
torshor opchy shol dy qopchy shol opchor dypchy dchg
[P1, 2]
dchol chol dol shkchy ydal shy ykchy qot‿ey daiin s y
[P1, 3]
s y dchor shaiin oeees ykor chor ytshy ykchy kchy dar
[P1, 4]
qodchy ytchy otchor

[P2, 5]
shorodo shy tshy kchol dpchy qopchy otchol cphol dy
[P2, 6]
tchor dor daiin qotchol okchy okchor oiin checkhy d
[P2, 7]
dchy qoky chol dy qokey d oldy — okchor doaiin
[P2, 8]
shochy qokchy torchy keety — s okchey daiin
[P2, 9]
oldy shey chol doiin ykoly — okchal daldy
[P2, 10]
sotchy kchy okorory

Folio 13, Verso

[P1, 1]
koair chtoiin otchy kchod otol otchy octhos
[P1, 2]
oko qokol chodal otchol cthol choty
[P1, 3]
qokchy qokod chy otchy cthody
[P1, 4]
ols chey okos oaiin okshy qocthy
[P1, 5]
qoky daiin

[P2, 6]
poldaiin olcthy shol dy — oty shor qotyd — dairo d
[P2, 7]
dain okal chy qokchory — dchy koky daiin — shon
[P2, 8]
otchy daiin y dain ykol — okchy okald — d ytaiin
[P2, 9]
tchtod otal cthor ytal — y cho tol — sho qocthy
[P2, 10]
y ol chy kchey kchor dal

Folio 14, Recto

[P1, 1]
pchodaiin chopol shoiin daiin dain
[P1, 2]
o ykeey soiiin chok qokchy da okol
[P1, 3]
ydaiin olchy kchor daiin olol
[P1, 4]
ochkchor kol shy daiin dorody
[P1, 5]
qokchol dar dalo qotolo
[P1, 6]
ychol oir okor choor ockhy
[P1, 7]
otcho dain chckhy

[P2, 8]
soshy fchol shor cheor ykaiin s
[P2, 9]
sody chody otchody qotchy koiin sy — shoty dy
[P2, 10]
qotchor chod shoty chody dol dy dy — okchy dy
[P2, 11]
dchokchy schol dy shey dar qoty — ykeey ky
[P2, 12]
oeeen chey keor chey tchy ky — chodalg
[P2, 13]
sodaiin chy kchy kchy ykeody

Folio 14, Verso

[P1, 1]
pdychoiin yfodain okyshy dy ypchor daiin kol ydain
[P1, 2]
okchor dchy tshy oky chy cthy otchy ty chol daiin
[P1, 3]
ychy dy daiin chcthy ykykaiin dytchy ykchy ky dy
[P1, 4]
yty‿chy ksho ykshy shokshor yty darody dyotyds
[P1, 5]
okshy daiin okchor chky qotchy daiin cthor oty
[P1, 6]
qoty choky cthy chokchy dydydy chcthy dchyd n
[P1, 7]
oykshy choty dydy odyd otchy okchy dshy dardy
[P1, 8]
chokshor daiin okshody daiin — dol dair dam
[P1, 9]
dykchy ctholds — dchcthy

Folio 15, Recto

[P1, 1]
tshor shey tchaly — shy chtols shey daiin

[P1, 2]
otchor qokchor oly — okor shy koly

[P1, 3]
qokaiin qotchy tydy — daiin chol cthy

[P1, 4]
scheaiin chodaiin chl — sol ckhaiin sal

[P1, 5]
qotchy r shor cthy — daiin cthy dy

[P1, 6]
dchy kokaiin chdy — saiin okear

[P1, 7]
daiin shkaiin cthy — sho keocthy

[P1, 8]
shocthy tol kaiin s — dain ctholy

[P1, 9]
octhain qokaiin chos — odaiin cthl s y

[P1, 10]
ychain chckhey okshy — saiiin dolchds

[P1, 11]
okaiin otaiin chl sy — chor choross

[P1, 12]
qotor shor tcheor chy — cthaiin — shan

[P1, 13]
ykshol dor sheey cthy dain — sky — shor shoty

[P1, 14]
otcho kchy chol daiin cthar — ytol dor dom

[P1, 15]
qotchor chaiin chy kol‿daky

Folio 15, Verso

[P1, 1]
poror orshy choiin dtchan opchor dy
[P1, 2]
*chor or oro r aiin cthy tain dar
[P1, 3]
cthor daiin qokor okeor okaiin
[P1, 4]
doiin choky shol qoky qotchod
[P1, 5]
otchor chor chor ytchor cthy s
[P1, 6]
qotchey choty kaiin otchy r aiin
[P1, 7]
eoy choiin sho s chy s chy tor ols
[P1, 8]
ytchor chor ol oiin oty shol daiin
[P1, 9]
otcholocthol chol chol chody kan
[P1, 10]
sor chor cthoiin cthy qokaiin
[P1, 11]
soloiin cheor chol daiin cthy
[P1, 12]
daiin cthor chol chor

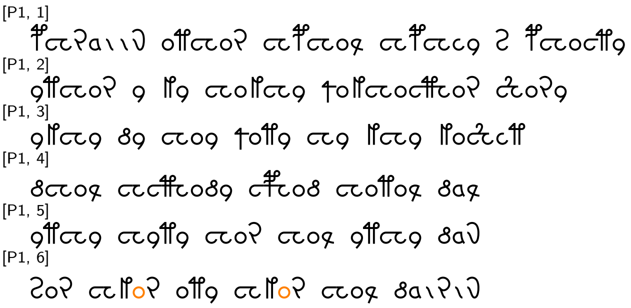
Folio 16, Recto

[P1, 1]
pocheody qopchey sykaiin opchy dor ychy daiin dy — chor orog
[P1, 2]
ychykchy okly kol shor ody okody qoy — oeesordy
[P1, 3]
ydor sheal okchy qoy koiin choky ykair
[T1, 4]
dainod ychealod

[P2, 5]
tchor chor ches ykch shocthy opchy ty ky
[P2, 6]
oshaiin dyky oeees deeeod aiin dtoaiin
[P2, 7]
daiin dalchy dyky schy saiin doal qoky
[P2, 8]
shotchy ydain yky shody otol daiin
[P2, 9]
saiin ytaiin

[P3, 10]
toror dalydal opchy fchol ypchocfhy okal
[P3, 11]
sokchy qokol choty‿okchy cthy chy kchy
[P3, 12]
dychokchy shcthy shtshy sho tchokyd
[P3, 13]
qokchor dl dy shey

Folio 16, Verso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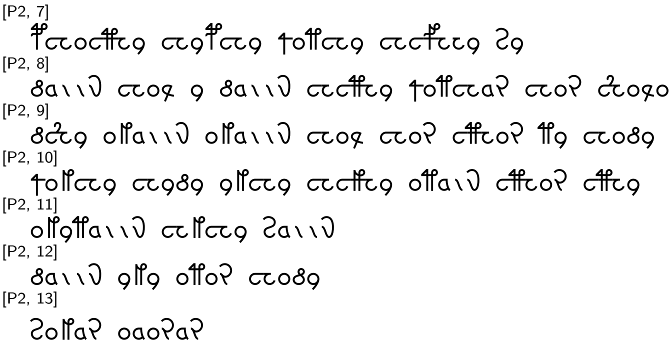
[P1, 3]
[P1, 4]
[P1, 5]
[P1, 6]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[P2, 8]
[P2, 9]
[P2, 10]
[P2, 11]
[P2, 12]
[P2, 13]

Folio 17, Recto

[P1, 1]
fshody daram ydarchom opydy ypod chop otchy dody oldckhy
[P1, 2]
ydair choky okshy qodar ckhody dor otchol qodcthy ods
[P1, 3]
chol or chy qodam okor chor okchom

[P2, 4]
tchom shol qokol qor olaiin opydm — som ypchy ypaim
[P2, 5]
ychekchy cthy chor shor cphor cphaldy — dair cthey qody
[P2, 6]
tsho qofcho qokcheor chekey

[P3, 7]
ksheo qokchy choldshy xepchy — dshe — opchordy
[P3, 8]
dchchy dychear schar ykchy
[P3, 9]
soy chctho o dar chypcham
[P3, 10]
dar chear dsheor dain y mol
[P3, 11]
otchol cthar okaiin chol daiiin
[P3, 12]
ychody chotom

Folio 17, Verso

[P1, 1]
pchodol chor fchy opydaiin odaldy
[P1, 2]
ycheey keeor cthodal okol odaiin okal
[P1, 3]
oldaim odaiin okal oldaiin chockhol olol
[P1, 4]
kchor fchol cphol olcheol okeeey
[P1, 5]
ychol chol dolcheey tchol dar ckhy
[P1, 6]
oekor or okaiin or otaiin d
[P1, 7]
sor chkeey poiis cheor os s aiin
[P1, 8]
qokeey kchar ol dy choldaiin sy
[P1, 9]
ycheol shol kchol choltaiin ol
[P1, 10]
oytor okeor okar okol doiiram
[P1, 11]
qokcheo qokoiir ctheol chol
[P1, 12]
oy choy koaiin chckhey ol chor
[P1, 13]
ykeor chol chol cthol chkor sheol
[P1, 14]
olo r okeeol chodaiin okeol tchory
[P1, 15]
ychor cthy cheeky cheo otor oteol
[P1, 16]
okcheol chol okeol cthol otcheolom
[P1, 17]
qoain sar she dol qopchaiin cthor
[P1, 18]
otor cheeor ol chol dor chr or eees
[P1, 19]
dain chey qoaiin cthor chol chom
[P1, 20]
ykeey okeey cheor chol sho ydaiin
[P1, 21]
oal sheor sholor or sheckhy cpheor daiin
[P1, 22]
qokeee dar chey keeor cheeol ctheey cthy
[P1, 23]
chkeey okeor shar okeom

Folio 18, Recto

[P1, 1]
pdrairdy darodcf yoar ykchol dar o g chcthy — octhor dal
[P1, 2]
otshol qokchol chykchy okchal daiin dy — chol diiin
[P1, 3]
qokchor chor chcthy orchey qokchol dy — ytchar m
[P1, 4]
chor cthor okeor ykchol okain

[P2, 5]
tchor shor cthaiin cthol chlol chog
[P2, 6]
ychey kchor dair ytol chcthy dar dar dal
[P2, 7]
oshor shaiin cthy sholdy doldy — doldaiin
[P2, 8]
qokchor cthol olody okaldy — dary
[P2, 9]
chol chcthal okshal chykald
[P2, 10]
dar shor qokchol ol ydaiin
[P2, 11]
sokchaiin chokchy chcthol chor m
[P2, 12]
ychair cthol daiin qokchy cthy
[P2, 13]
or shaiin cthar cthal okal dar
[T1, 14]
ychekchy kchaiin

Folio 18, Verso

[P1, 1]
told shor ytshy otchdal dchal dchy ytdm

[P1, 2]
qoeees or oaiin shy* okshy qokchy qokchy s g

[P1, 3]
or shy qoky qoky chkchy qokshy qokam

[P1, 4]
qotchy qokay qokchy ykcho ydl dar

[P1, 5]
ychoeees ykchy qol kchy qotchol daiir om

[P1, 6]
qotor chor otchy qokeees chy s ar ykar

[P1, 7]
ychol dor chod qokol daiin qokol dar dy

[P1, 8]
tolol sh cthoy daror ddy ytor ykam

[P1, 9]
okchor qotchy qokchy ytol doky dy

[P1, 10]
yko dshy dair ykol dom

Folio 19, Recto

[P1, 1]
pchor qodchy qotshy dy tchy qotchy qoky daiin dchydy
[P1, 2]
dshy chor y tchy chol dytchy chordy daiin dyty s choy
[P1, 3]
oscheor shy tdaiin chol dor yky
[P1, 4]
qokorar daiin chcthy shy kchor
[P1, 5]
otchy tchy qoky daiin r
[P1, 6]
y shor shy daiin otytchy daiin
[P1, 7]
qokcho ky cthar dor chan dar
[P1, 8]
or chor daky dal chor dorl shy
[P1, 9]
qotchor dy dor y tchykchy shdaiin
[P1, 10]
daiin cthor chol ykchor chordy
[P1, 11]
qotchy qolody choldy cthyd
[P1, 12]
ykchor chor daiin daiinol
[P1, 13]
osocthor ytchor

Folio 19, Verso

[P1, 1]
pochaiin cthor chpcheos opchey py kchy
[P1, 2]
qokchy kchol sor qokchor ykchy darom
[P1, 3]
otchy chol daiin qotol ytol daiiin
[P1, 4]
ytch chcthy qotol daiin daiin
[P1, 5]
qokchy qoteey daiin doty qot
[P1, 6]
ychoy kchor cthol chocthy s
[P1, 7]
ycho r chaiin cthor

[P2, 8]
toy tcheey qo dchol qokchs dom
[P2, 9]
ychor oky chor ytol chol oky ddor
[P2, 10]
daiin chor daiin yokor y okchan
[P2, 11]
qotol dor okchor daiin cthor otam
[P2, 12]
otch okchodshy daiin or otaiin dair
[P2, 13]
yees ykchol oty ytor ytar ytchor ytaiin
[T1, 14]
otcholcheaiin cthol

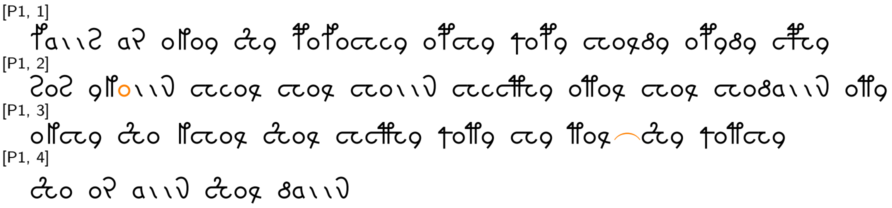
Folio 20, Recto

[P1, 1]
tdchody chofy cheey qokchol qokoeey dchor choiin
[P1, 2]
chodey cfhey chokol odaiir qokchy cfhody chodchy
[P1, 3]
qokeey cho chodaiin sho qochy chey kcheodal daral
[P1, 4]
ochol ol⁀keey okolchey

[P2, 5]
fchocfhy chotoaiin cfy cheeen ofchey shosaiin r
[P2, 6]
choees otchor qokol cheey daiin chy choiin daiin
[P2, 7]
ocholshod daiin chokeol chol dol shol okaiin
[P2, 8]
schodain cheo r cheody

[P3, 9]
pchodees shody qokchey qotchey qocfhy chotoldy
[P3, 10]
ochoaiin chor sody fchodaiin chekody choty dchy koy
[P3, 11]
dchod qokeeody ykchy qokshey dchaiin cholody
[P3, 12]
shoiin cheody okchey okchy kchy qokeey daiin dar
[P3, 13]
ochaiin chor chor cheey kchey

Folio 20, Verso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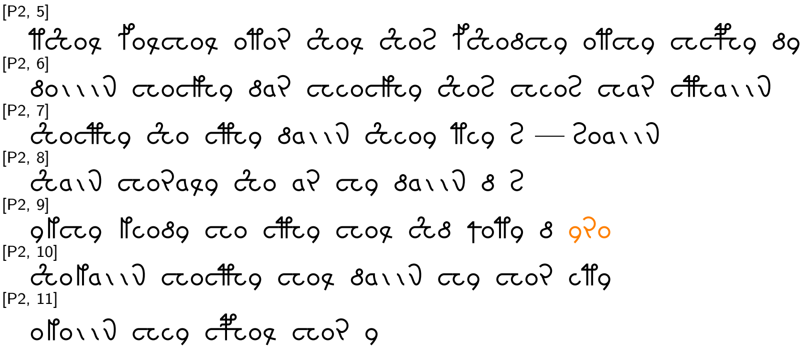
[P1, 2]
[P1, 3]
[P1, 4]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[P2, 6]
[P2, 7]
[P2, 8]
[P2, 9]
[P2, 10]
[P2, 11]

Folio 21, Recto

[P1, 1]
pchor oeeockhy otychey ypchey qopcheody ofaiin chan
[P1, 2]
saiin chcfhy oky sheaiin qofchol ofeos sheey cfhy daiin
[P1, 3]
qofol shy ol cheor chy qokchey chey keey dy

[P2, 4]
pchotychy daiin cfhain ofolosheey qocfhey folchory
[P2, 5]
ykeey daiin chosy qokoiin ofol chol qofcheol okeoaiin
[P2, 6]
dchor y kolyky chol kol qokeol cholol qofeeol dody
[P2, 7]
shosor cheor chokeody cho cfheor shy

[P3, 8]
tchokshy ofor sheol ocphal opsheos cfhodaiin ofy
[P3, 9]
okaiin sho fshaiin chkaiin shcfhey cfhody cfhy s
[P3, 10]
fofchy keor chy ky qofaiin qofchol fy cfheey ofaiin
[P3, 11]
shol chol shol fchol chcfhy ofyky shey yfeol shody
[P3, 12]
ykeey chor sheey ysheol chor chol daiin chkaiin

Folio 21, Verso

[P1, 1]
toldshy chofchy qofshey shckhol odaiin shey ckholy
[P1, 2]
oeeesoy qokchy chody qotchy qokchy choty tchol daiin
[P1, 3]
qotol keeees chotchy tcho choty chor qotol daiin dal
[P1, 4]
sho chodaiin choty chol daiin daiin chty chtol
[P1, 5]
osho deey ctho l sho cthy daiin dait oky
[P1, 6]
sho tsho chotshol chol todaiin daiin
[P1, 7]
ykcho lchol cholchaiin otchy s sheaiin
[P1, 8]
cho l kchochaiin

Folio 22, Recto

[P1, 1]
pol olshy tcholy shol dpchy ofy okoly daiin opchy s ocphy
[P1, 2]
ol oiin shol o kor qokchol daiin ofaiin cfhor dain ckhydom
[P1, 3]
qokol dykaiin okchy daiin cfhol cfholo dar shain

[P2, 4]
pchaiin otchy daiin cthy doroiin ypchol sy — schor daiin
[P2, 5]
ol daiin qokchy dar daiin chor oldor oky — y choldchy
[P2, 6]
y chokshchy cfheen

[P3, 7]
kchol shol dsheor sko chdoly yfaiin ol — ofchy cphal
[P3, 8]
dchor ofy daiin cfholy qoky chofaiin chocfhy — doiiin dchor
[P3, 9]
odaiin dain cfhy cfheor oraiino

[P4, 10]
kchol chor daiin cfhoiin dchor cheey qokol dy — opchol oldam
[P4, 11]
doiin ycfhody qokchy oky ofoldy yfy dol or — dchchy daiin
[P4, 12]
odchaiin cfhy okchy kchy dchol daiin — ydaiin
[P4, 13]
dchor dydain qocfhy ykolokain

Folio 22, Verso

[P1, 1]
pysaiinor ofchar oky tchy otdy — sor shy qod
[P1, 2]
daiin ykaiin qotchy kchy ytchyd — dshor ychy
[P1, 3]
qoky kchorl otchy cthy otchyky — ytchol otam
[P1, 4]
otchaiin shoty qoky — saiin — odaiin ytaiin
[P1, 5]
dor ykcheor daiin

[P2, 6]
fshor shy tchor otaiin
[P2, 7]
ychor chor qokchol chory
[P2, 8]
qotchy cthy qokol daiin dam
[P2, 9]
okshor shody chol tchol otaiin daiin
[P2, 10]
qokchy daiin s — or ytal
[P2, 11]
sokaiin oty dy
[P2, 12]
ychky daiin cthy
[P2, 13]
okchain chkoldy shotoly
[P2, 14]
qotchy olshly shol daiin
[P2, 15]
sho cthy chocthy qokchy dory
[T1, 16]
saiinchy daldalol

Folio 23, Recto

[P1, 1]
pydchdom chy fcholdy oty otchol cthy opyoiin y yfchy daiin ololdy dal
[P1, 2]
to ar chor daiin chkdain otchy lolchor daiin dam okchol daing
[P1, 3]
dchar ykor ykaiin daiin cpho g

[P2, 4]
qokoldy okair ykail g qokeey ofchol dain yfchor olfchor otchald
[P2, 5]
ychor qokchol ytom chol dair chol ar ol ol dol dain

[P3, 6]
tcthol ykor qokaiin yky dar okol dcheey daiidal dam ytcho ldals
[P3, 7]
okar olchar cthaiin qokchol dar qokchol dairo r ol daiin ald
[P3, 8]
qokcthy char daiir qokaiin olol qoaiin ykchy s — diil okchy
[P3, 9]
okol ok cthy qokol dy — dol dcthe qokeees y oly — daiin dal
[P3, 10]
qok okaiin chkchy s — yteair odal chal dy — dar ykain
[P3, 11]
ykyko dalory

Folio 23, Verso

[P1, 1]
podairol odaiiily shoaldy opchol otol ol chcphy qotchar s
[P1, 2]
qoteotor chy okchaldy qokchey dol — otchol chal otchg
[P1, 3]
ycho okaiin okeol eees oldaiin okeeor — daiin qotcholg
[P1, 4]
okchey dair sholol oldal — otchor dar
[P1, 5]
dor chear shor dol oaldary

[P2, 6]
tshol shor shkshy okol daiin — otshor olsar
[P2, 7]
otor oiin sho shol qokol daiin — sol daiin ylg
[P2, 8]
qokaiin dain qokor okal g dam — chor olol dam
[P2, 9]
otshy dal dar oldar ar or — qoto l chees g
[P2, 10]
dor chy kshol chol cthol — otol oloiir
[P2, 11]
y okaiin doroiin olols oiin — ol cheen ols
[P2, 12]
olaiior oloro eeeoly

Folio 24, Recto

[P1, 1]
porory chor opchar she cheol daiin or
[P1, 2]
qotaiin char odain okaicthal oky
[P1, 3]
y cthar cthal okol qotar cthy
[P1, 4]
or chckhaly cthar eeor chees da
[P1, 5]
qdar cho r chey cthy cthe‿keom
[P1, 6]
oeeeos ctheor otal qocthol qoky
[P1, 7]
q*kar chtar s cheor cthol qodol
[P1, 8]
ychor s om qoear daiin qokeol
[P1, 9]
odaiin ckham qodaicthy dol dal
[P1, 10]
q*or cfhar chor s am chotaiin dy
[P1, 11]
sar cheoiees okeer cheor qokain
[P1, 12]
qokchy qotchy tol tod ckhy
[P1, 13]
oees ol s chey chcth sar
[P1, 14]
qor cheey qod char cthal
[P1, 15]
ockhoees oeees ol dal s
[P1, 16]
sham okeal dal dam dal
[P1, 17]
sshey otam sham cthom oky
[P1, 18]
y cheol chol daiin chol s
[P1, 19]
yol kol chol shom otacphy
[T1, 20]
samchorly

Folio 24, Verso

[P1, 1]
tchodar chocfhey opom shod chcphy opshody ocphoraiin okokom
[P1, 2]
ydals ckhor shy cho dchor otol otaiir otchos okchom okcho
[P1, 3]
octhol odchees oesearees okam chcth
[P1, 4]
ydal sh okol okaiin odaiin dlos
[P1, 5]
oeor oroiin tchar oro

[P2, 6]
tochol chor cfarasr
[P2, 7]
ycheol daid dar olom
[P2, 8]
kochky chcthy shol sain
[P2, 9]
ychol chol or chorom
[P2, 10]
okoeor ckheod choy keol
[P2, 11]
ydaiin cheor †odom okodaiin
[P2, 12]
ksho foar cto sho †okch ok‿okchal
[P2, 13]
oeeey cheol chol odor sho do otolodal
[P2, 14]
doiir cheeodam sho sho dy
[P2, 15]
dchey kchod dchol ochdy
[P2, 16]
otchol odaiim

Folio 25, Recto

[P1, 1]
fcholdy soshy daiin cky shody daiin ocholdy ctholdy sy
[P1, 2]
otor chor chrky chotchy shair qod sho chy kchy chkain
[P1, 3]
qotchy qotshy cheesees sheear s chain daiin chain dein
[P1, 4]
dchckhy shocthy ytchey cthor s chan chaiin qotchain
[P1, 5]
qotcheaiin dchain cthain daiin daiin cthain qotaiin
[P1, 6]
okal chotaiin
[T1, 7]
dair otaiir otosy

Folio 25, Verso

[P1, 1]
poeeaiin qoky shy daiin qopchey ofchey qotchor sos

[P1, 2]
dchor cfhor chor daiin s okeeaiin daiin cfhey daiin

[P1, 3]
orcho kchor chol daiin shcphor daiin dshey daiify

[P1, 4]
qokoiin qokcho shol daiin cfhear cfhol daiin chkear

[P1, 5]
dar chokeey dshor dshey qochol dol cho daiin daiin

[P1, 6]
qokcho r ochy qofchy qokoral — cho* chain deeaiir s

[P1, 7]
oćo chkey daiiol daiin shcfh — orchaiin

Folio 26, Recto

[P1, 1]
psheoky odaiir qoy — ofshod chypchey ypchedy ain — chofochepedy
[P1, 2]
dchey daiin adeeody — ykecthey chedy ytedy dy — chcthedy lr
[P1, 3]
oaiin shcthy cthedy oloy — ykeedy olchedy dal — y sheey saiin s
[P1, 4]
qokedy cheos ytedy qokedy — ytedy chekedy — daiin odam s aldy
[P1, 5]
*aiin shedy chdy chdy schy — daiin cthedy — qokeedy qokedy cthey
[P1, 6]
rchedy qokedy

[P2, 7]
pcho qokedy dar sheo ypchseds s — aiin — shapchedyfchy dalchedy sar
[P2, 8]
daiin shedy qokeedy qoteedar s — ok — ol — ytedy qokchdy qokedy
[P2, 9]
tcheo⌒shy dchdy okedy chcthy s — dy — dy — ykeechy okeedy chky
[P2, 10]
shese aiin sheos cheody — otal

Folio 26, Verso

[P1, 1]
pchedar qodary d*iiin pchecthy sair shedy ypchedy ypchdy qopy shdy

[P1, 2]
sarair chckhedy qokedy otedy sar y cthedy qokedy or ashe alys chedy

[P1, 3]
pchdar opar dar cheeeol ofchdy otedy cthdy odar chedy ytedy okchdy g

[P1, 4]
yctheody qokedy deey saldy okedor or cheos oraiin okeo chckhaiin

[P1, 5]
deeol cheody qoteedy qokody qotedy qotedy opchedy ofchy chs ar

[P1, 6]
toeedy keody shedy dar chedy sches or checkhy dar chey chckhy ytchdy

[P1, 7]
pchedy dar cheocth chy sair chees odaiiin chkeeey ykey sheey

[P1, 8]
kchedy okeeos cheeeos ysaiin okcheey keody saiin cheeeos qokes ory

[P1, 9]
ysheeey okeshy shodypshey todydy

Folio 27, Recto

[P1, 1]
ksor shey shoteo chforaiin shy — shod chary
[P1, 2]
dy eoain shol dain dar shokyd — dchol cthey ds
[P1, 3]
chol shy keol chol chy shol chy — daiin chey dam
[P1, 4]
qokey chor char chy dchy keey — chos cthody
[P1, 5]
dor chees ctho shy cphary — daiin dair
[P1, 6]
chy tchols chor chol chaiin — shy kchaldy

[P2, 7]
kchey chey kcheol pchy schey ly — chals cham
[P2, 8]
ytchy chy tchol dy tchey dain — chol dal
[P2, 9]
dchey keeod sho⁀tchey chol oty — chy tolg
[P2, 10]
qotchey shes s y chy tchey dy
[P2, 11]
chol daiiin chees chos cthy dan
[P2, 12]
dain cheokeey chey cthey otal
[T1, 13]
okchodeey

Folio 27, Verso

[P1, 1]
fochof chof cho sho soly shol ytchor ofchory kchorchor
[P1, 2]
dchy chkar otchy shy shy dchy dshy kchy cheo daidy dchy
[P1, 3]
kchey kchy dchokchy dsho dear chodchy ctheody shld
[P1, 4]
okcho chy kcheed chl chol kod — o oksho docheesg
[P1, 5]
polky shkeeo schodar shkol — chotchy cthodol
[P1, 6]
dsho kchrrr okeedy — dchschy — sotchdy
[P1, 7]
sho sho ykcho shdy — dchd — chschsy — otchdy
[P1, 8]
okshes okcho kshy

Folio 28, Recto

[P1, 1]

[P1, 2]

[P1, 3]

[P1, 4]

[P1, 5]

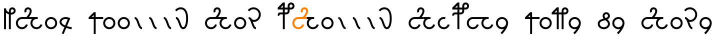
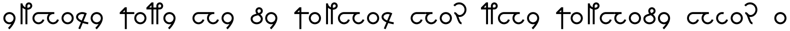
[P1, 6]

[P1, 7]

[P1, 8]

[P1, 9]

Folio 28, Verso

[P1, 1]

[P1, 2]

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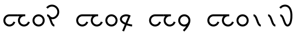

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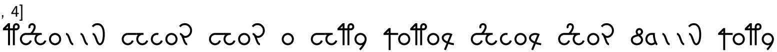
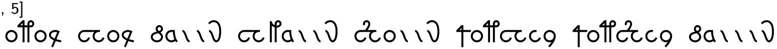
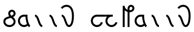

[P2, 5]

[T1, 6]


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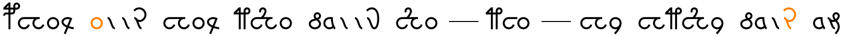
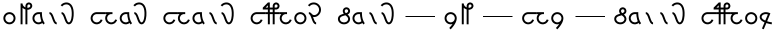

[P3, 8]

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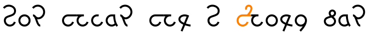

Folio 29, Recto

[P1, 1]
posaiin she aiin chep oty chy qotchy qoty cheecthy
[P1, 2]
dshe ykchy choty oky chol chchoty choky chy ty dy
[P1, 3]
qokchy qoty kchaiin shear cthor — dchor choly
[P1, 4]
chocthy qoos chos

[P2, 5]
kcheol cheor sheos sheey teey doe — shos oety
[P2, 6]
chokshy shocthy shor shor daiin — qokaiiin
[P2, 7]
qokchy chol shokchy qokaiin choeky — choty kaiin
[P2, 8]
shor chor sho sheky shy qoty kody — daiin cthy
[P2, 9]
qokshe qor chey kor cheod ychom

Folio 29, Verso

[P1, 1]
kooiin shor chetchy olals shytchy cth y shy — cho shy daiin
[P1, 2]
potcheaiin schol chol cthy chey cthold — ytchor dary
[P1, 3]
chol chol kor shey odaiin potchy taiin — d she otey sy
[P1, 4]
ysho otshy okaiin cthy oltchy cthos — shot sho okaiin

[P2, 5]
tochon chain shan shoty — chshy — shy
[P2, 6]
dchor chol chaiin shaiin cthod — dar — chs — shody
[P2, 7]
potcho kchor daiin ykaiin dy — shdy — cho cthy sheky
[P2, 8]
otol sho⁀tchos cholody dain — checth — chy cthody dol
[P2, 9]
sho chokor chor chy ydaiin cho — ykeen — oaiin

[P3, 10]
pokoiin okaiin cho — cth — chyd — chykar
[P3, 11]
daiin chteor octhy — dar — chyt — otody
[P3, 12]
pekeochor otchey d y

Folio 30, Recto

[P1, 1]
okchesy chey sholchey tcheody shey pchy chel d o shey
[P1, 2]
ychody chey chkeey ksho keeol cheol shey she keeodor sy
[P1, 3]
chodaiin choly chey doiin sa~~x~~in cholain cheey keeg
[P1, 4]
qokechy qoko qopchal soin chan qopchaiin
[P1, 5]
choko qokochy deeey dkeeol cheordain choly
[P1, 6]
dcholor sho chol cho lo laiin dol chseeol dy
[P1, 7]
qol chain cpholchy

[P2, 8]
ofchor or chesey scheo lchey okear — dcheo lchey
[P2, 9]
dchey qochal chor keeaiin chcphey — chol cheky
[P2, 10]
chokchaiin dchol chkchean qopchy — chcpho lchody
[P2, 11]
qopchol cheol chey cheol chey soeen — ydey — sol daiin
[P2, 12]
dcheey cphey cphey daiin chkeaiin dal — chol — ychdain
[P2, 13]
chodaiin chpchey cheal shy keey

Folio 30, Verso

[P1, 1]
cthscthain shosaiin chocthey sho chetchy shor sheaiin
[P1, 2]
qotchor chy she kchor chory keor ol chy daiin ctholdy
[P1, 3]
chotchol daiin cthol doiin daiin chokeor dal chtocthy
[P1, 4]
otchey daiin chor checkhy qotchod daiin
[P1, 5]
dain shoty chkol ytor cheoldy
[P1, 6]
qokeeor chokol chokeody dairy
[P1, 7]
chokchy sho kcho tcho ctho sos
[P1, 8]
oyshy cheotol cthoaiin cthey
[P1, 9]
qotchor chor sheey cheol sos
[P1, 10]
sho sheoldy otcheor daiin
[P1, 11]
sol chokcheey daiin kchody

Folio 31, Recto

[P1, 1]
keedey qopchedy shees aiin qokeepey chefakeo
[P1, 2]
dcheey daiin okeedy qokees s aiin shekeey qep
[P1, 3]
qokeey chey daiin qokeey rair chekey saiin dey
[P1, 4]
qotar chy dar lo⁀r ar cheey keeol chedy qokey
[P1, 5]
daiin sheoody qokeor

[P2, 6]
tshokeody qokedy qotedy chefar chedy r aiin dal
[P2, 7]
ykeedar saiin checkhey sheol qokedy ykeedy chedy ldy
[P2, 8]
shedy qokedy cheol cheod qokeody cheol checthy
[P2, 9]
daiir sheeo shcthey okeol

[P3, 10]
tol shso okedy okedy qokedy qokeedy dar shedshey
[P3, 11]
olsheol qokchy dal chey deey kchy keey otaiiin ykeey
[P3, 12]
qoaiin yches okedy sheey chedaiin dar
[P3, 13]
olsheor qoekedy okedy ykedy dals
[P3, 14]
saiis or chedy daiin okeedy
[P3, 15]
yshedair sheol⁀cheky okedam
[T1, 16]
oteor aiicthy

Folio 31, Verso

[P1, 1]
podair sheedy otedy oteedy qotolcheo s arar oteey dkarar als
[P1, 2]
ytchos ockhey okeeos cheody okeey keeody daiin cheody keedy
[P1, 3]
ykeeo daiin shedol okedy okey keody okchey sair okchs o lkedy
[P1, 4]
dair cthedy qokedy okeody chedar oked al octhedy okeedy otad
[P1, 5]
ykeos cheeoy ar aiin

[P2, 6]
pcheody qop chedal chcthy chcfhol or chep alaiin opal sheo otar
[P2, 7]
olkeedam ches chol keeol chcthy okeol okal oky cheokar okor ary
[P2, 8]
yk aiin chee⌒ksheey ychek⌒eeor cheor or chcthy okcheoked lchey okam
[P2, 9]
ytcheol sheocky okeos aiin acthedy chkaiin chekchey ctheey okear
[P2, 10]
dar choar al kar oeeeos cheos aiin o cthey okeo kor okeol ain
[P2, 11]
saiin ar ctheos chedy okeey qoear oraiin cheom

Folio 32, Recto

[P1, 1]
pchoiin shykeody daiiody dain — sho tchy oty qofy
[P1, 2]
okor okchor sheor cthy dal — dshodar qotchol
[P1, 3]
qokchor chor cthol chol dol — dcheodain daiin
[P1, 4]
schor dshor ytsho dain — daiin choddal
[P1, 5]
qotchy qokchy daiin

[P2, 6]
pcho tchey chedy
[P2, 7]
otol dol ol dair
[P2, 8]
qoar daiin dam
[P2, 9]
dytchor dary
[P2, 10]
dchor ctho daiin
[P2, 11]
shos chcthol n
[P2, 12]
shodaiin ctol
[P2, 13]
otcho⌒r⌒ol dain daiin cthy
[P2, 14]
scheey qot shey daiin cths
[P2, 15]
qokchy qotol doiir ol
[P2, 16]
otchol chey soty
[P2, 17]
chokeol dchoty
[P2, 18]
doiin sho shy
[P2, 19]
dol dchol dan

Folio 32, Verso

[P1, 1]
kcheodaiin chor kechy qotaiin daiioam — o chopchody
[P1, 2]
daiin odal chy daiin chey tcho rdy — dain teol
[P1, 3]
shol daiin chcthy dsho dain daiin s — shokey ka
[P1, 4]
ol chl chol dol chaiin qotcho l chy — dcho daiin
[P1, 5]
chokchy daiin shy chol qo kaiin dain — dchor dolm
[P1, 6]
okchan chor⌒shar dchcthy

[P2, 7]
ksho cfhol she sheaiin otshchol daii — shecthy s odan
[P2, 8]
otchor daiin daiin ctho daiin qotaiin — otchy d shal
[P2, 9]
qotchy cphy skey chocthy daiin cthaiin — daiin
[P2, 10]
sho keor chol chor daiin cfhor cthor da — al
[P2, 11]
or sho chy

Folio 33, Recto

[P1, 1]
tshdar shdor shecphdy cphody yfoldy qofockhdy otchedy lfchdy daiin
[P1, 1]
ytchedy qokar cheky okaldy qokaldy otor oldor qotar otar otardam
[P1, 1]
loiin y cheky qokedy shedy chdal chechdaiin qokchy ody chekeedy ykam
[P1, 1]
taiin chekey or alaiiin saiin okaiin dar cheedy chkeey far aiin s
[P1, 1]
pair or aiin otaiin ol kor aiin okal otal chdal shekal qokar otag
[P1, 1]
yteey shody kchedydy chekar okaiin okaiin daiin okal
[P1, 1]
dar chos aiin or aiin cheekaiin okain ar okeeey

Folio 33, Verso

[P1, 1]
tar ar daiin — ydain ctheey dols — sheky ar aiin es
[P1, 2]
kchdy dam dy — oky — otal dain chdy — ytam otam cham
[P1, 3]
dar chcthey dy — dyky — cthedy oky dam — okardy komdy
[P1, 4]
tokar shdy dal — pokar shd — otody chedy — ykedy dodl dain
[P1, 5]
tchdy chody okaiin — chcthey dor arl — cthy dy ty dy — ykar cheky dy
[P1, 6]
ycheo dor olaiin okar chdy chdy oldy — okar chdy

[P2, 7]
tshdy shefchdy shcthdy oltedy daiin oky — cheol orain — chdyshdy porar
[P2, 8]
darar sheey keedy okchy okar okedy chy — daiin dy dy — dar aiin okary
[P2, 9]
sar or aiin chor or shkair shol or chcthey — ar aiin — okain dal dy
[P2, 10]
lchoar or chey lodaiin oor okeedy okaly
[P2, 11]
tar al keey oram

Folio 34, Recto

[P1, 1]
pcheocphey olar yl — ypody okedody shod ololdy dar ytey
[P1, 2]
ytar sheody olam — octhedy otedy chdain oltey kchy ty
[P1, 3]
fotedy chyty chdaly — dar chd otedy fotol okedy dody ody kam
[P1, 4]
ytedy daiin chey aiin — shy chckhy ¶

[P2, 5]
foteedy shedy shedy ol — okes ar — oltchedy otedy dam chcthy
[P2, 6]
otedl chckhy chcthy oll — chesy — ykeedl chedy otey okaiin
[P2, 7]
fokedy dal chdy — olchy — ykch~~x~~g — daiin chcky pas air amg
[P2, 8]
shotchy foky — olk — checkhy — ykedy fokchdy s ar oldam
[P2, 9]
ykchdy fod — ar — chct — ackhy — ysair air chodar tam
[T1, 10]
orlchey todaly okaiin dardy

[P3, 11]
tcheo olchckhy oly — otchdy chcpalas
[P3, 12]
fokeey sh kaldaiin — chcky ckhdaly otchedy chty saiin
[P3, 13]
char aiin okor ar tol — fokar chckhy chdal ked fokar ar daiin dam
[P3, 14]
ykeo lor ochey oly — okaly kechdy fokchdy chor ar aiiin daly
[P3, 15]
or ar y kar ol al oky — chody fokal chedy chcthedy chcky daram
[P3, 16]
sair chckar chcky shck — cholchedy fokedy yk cheolchckhy

Folio 34, Verso

[P1, 1]
kschdy chdy chefchy shdy qopchdy shdydy chdalchdy ypchdy chcthdy spaiin
[P1, 2]
tol qokchy dychedy okchy chckhdy chdaiin ckhy loees ykar aiin oldam
[P1, 3]
ytal shor chdal olchdy char or ol kedaiiin chcthy okchdy chckhy daram
[P1, 4]
tchdaiin chekal shedy qokedar chdaiin oldar qoldar chedy daiin otam
[P1, 5]
lshaiir orair shedy chechey dykey kair chedy qokar chekaly cholky

[P2, 6]
pchedar shear qokchdy qokees cheol ypchdaiin chedy lr ar chedain
[P2, 7]
olchdaiin chedy chey keedy chy kedy dy qokedy okey sair chkain otain
[P2, 8]
ysheos otar or choraiin cheky olchdaiin or oldar chdar okam
[P2, 9]
lsheody cthy qokeey keedy kchdy chedy qokedy chdy kal shs oldaiin
[P2, 10]
daiin chdy tedy kchdy okeedy checkhy chdy kain cheor or okedy okam
[P2, 11]
yshos ody s aiin okoy okal shedy

Folio 35, Recto

[P1, 1]
cthoo r choly cthy choty char dy
[P1, 2]
qokeeaiin chokaiin qotchy daiin
[P1, 3]
dchaiin cthey qotchey taiin cthory
[P1, 4]
qotchy shcthy cthol cheey daiin dainl
[P1, 5]
otchor sho tcheey scheey daiin dainor
[P1, 6]
schaiin char chan daiin
[P1, 7]
shosaiin tchor choky
[P1, 8]
qokeey ky kaiin daiin

[P2, 9]
taiin chear aiin chear shor⁀chaiin ~~x~~ ~~x~~
[P2, 10]
o aiin chaiin cthy r chl s chochy daiin
[P2, 11]
shcheaiin chol cthaiin lchaiin lchal dal — dair aldy n
[P2, 12]
olor chy chaiin chy taiin kchey koldy — chcthaiin
[P2, 13]
qokoiin chaiin qokchaiin lshy lodaly — oteey taiin
[P2, 14]
cthol chol aiin qotchy otchor daiin — shol qotaiin
[P2, 15]
ochor s chiin daiin ytain

Folio 35, Verso

[P1, 1]
tar chor chocthy roaiin ar
[P1, 2]
qotchy otchey kchor yty
[P1, 3]
dchor choty chyty daiin
[P1, 4]
ytchy qotchy dchy cthy
[P1, 5]
dchokchy chocthy chckhor
[P1, 6]
shol tcheey chkcheeen chcthaiin
[P1, 7]
tchotchor shol sho eo kol daiin
[P1, 8]
oaiin tchor cho chotchy dchol d
[P1, 9]
qokchaiin cho ksho l choiin
[P1, 10]
okcheey chosar shory
[P1, 11]
qotcheeaiin chodaiin
[P1, 12]
dchaiin daiin daiin dal s
[P1, 13]
ol char od ar chear
[P1, 14]
tcheain shy tar dain
[P1, 15]
ykol cheol okchy tch
[P1, 16]
ydaiin okeey daiin
[P1, 17]
daiin dain chkaly choly
[P1, 18]
daiin qokeeen chokeeo r
[P1, 19]
schokey ykeol chol daiin
[P1, 20]
sodaiin shy dchy cthy dan
[P1, 21]
doiin chor chor

Folio 36, Recto

[P1, 1]
pchafdan qorain chcfhal soiin cthor shaiin cthy dair
[P1, 2]
oral shor ytaiin qotaiin qooldy chty chol dy tor
[P1, 3]
qotchy tchy daiin daiin dolsain

[P2, 4]
podaiir cphy qoypchol som — sy chy dchy fchom dar
[P2, 5]
daiin qor chol ctholy s — o — r — chy sy — chytaroiin
[P2, 6]
okaiin cthor ykaiiin s — dain an — dan
[P2, 7]
qotol cthol okol dy okchy — ytorory — sold
[P2, 8]
ytchor cthol chaiin yd
[P2, 9]
ytodaly daiin otaro

Folio 36, Verso

[P1, 1]
pcharasy qoforom shoaiin tchey chckhey otaiin cphar daiin
[P1, 2]
qotar chol daiin otaiin qotor ytar ochor chety cthor dom
[P1, 3]
dchytchy ytor s — otaiin qopchor otar otchaiin s
[P1, 4]
qotchor yky ty dy — daiin cthor

[P2, 5]
tchor ckhoiin daiin cphchar
[P2, 6]
daiin cthor daiin dal dys
[P2, 7]
qoky keol okchor os cho shan
[P2, 8]
ykshy ytchy dol ytody yky
[P2, 9]
okaiin ykcholqod chory
[P2, 10]
ykchotchy daiin daiild
[P2, 11]
oty chcthy ytoryd
[P2, 12]
ytol kchy oty chd
[P2, 13]
oky she cthol oty
[P2, 14]
soiin chtain

Folio 37, Recto

[P1, 1]
tocphol shaiin qotor ofchor oty chosy daiin otod or
[P1, 2]
ykoiin cthor okaiin qotchy ytody qokaiin sho ytaiin
[P1, 3]
qoshy qokaiin cthol dy ckhor oky dy

[P2, 4]
pchotchy daiin cfhol dar chol daiin — yd
[P2, 5]
yky qokchy qotchor chkol otoly
[P2, 6]
shor shol qokchy qotoxody — dchol daiin
[P2, 7]
sor chey kor qokor daiin

[P3, 8]
koiin chosody qokaiin shosy otal — shor sheor dar
[P3, 9]
ykchody qotchy ykaiin chy qotor⁀dy — otcho lol daiin
[P3, 10]
qoto okchochor dchor chy shy daiin — ychey kol daiir
[P3, 11]
okchor daiin ckhy dain daiin

Folio 37, Verso

[P1, 1]
kshody qocthy qotoldy chopdain sol
[P1, 2]
dar chol cthor orcho chor daiin
[P1, 3]
qokchon shy chon daiin dy
[P1, 4]
dshor dytory dshor daiin
[P1, 5]
dchor qotol ykchon dain
[P1, 6]
yokor ytchor saiin oty
[P1, 7]
qotchor daiin

[P2, 8]
qotor choiin chetchy daiin
[P2, 9]
dar chor sho daiiin daiin
[P2, 10]
soiin shey okoiin chey tog
[P2, 11]
qotoiin choror cthol daiin
[P2, 12]
chor sholy sheaiin dotody
[P2, 13]
sotoiiin

[P3, 14]
todain cthaiin cthorods
[P3, 15]
soiiin cheoky daiin dain
[P3, 16]
qotor daiin chotaiin
[P3, 17]
sokchor qokoiiin ykeeols
[P3, 18]
oyteey daiin daiin ody
[P3, 19]
daiin qkoiin qotal daiin
[P3, 20]
ychoetahy ykol daiin s
[P3, 21]
oshctho do daiin cthols
[P3, 22]
qotol ytoiin chocthhy
[P3, 23]
yto chol daiin

Folio 38, Recto

[P1, 1]
tolor chockhy — oky choiin okshol oly oky
[P1, 2]
okshey chodys — ytoiin otaiin otaiin cthar
[P1, 3]
qokor okaiin — otaiin qokchol chokokor
[P1, 4]
ychok chey chckh — chy chko r odaiin daiin sy
[P1, 5]
okor chey kain — chor ctho dain ctholdy
[P1, 6]
ysho sho kos — daiin okoy chochor daiin

Folio 38, Verso

[P1, 1]
okchop chol cthotol oteol okeey s — chor d aiin d
[P1, 2]
choiin cthey keo ctho oiin s chol ldy — okeaiin okom
[P1, 3]
qokeey keor daiin okey keey daiin — dair daiin s
[P1, 4]
okeey d‿aiin qokeey chotoy tody — oky aiiin d
[P1, 5]
qoty daiin chol oteeol dody — cheod chody
[P1, 6]
ctho keeey key tey daiin daiiin — dain dain
[P1, 7]
daiin qol chy dain * or daiin — dain daldy
[P1, 8]
o aiin char chcthol chokaiin

Folio 39, Recto

[P1, 1]
tedo chshd ctheofy chdain shey fshy dy orain cheepaiin ofy shey koly dy
[P1, 2]
olchey cheky qokedy shekshey qolain chekshy chdy dair shckhey dold
[P1, 3]
qokalchdy chekaiin checkhy dar shed qokeedar chedy dar or cheey dy ckhy
[P1, 4]
tohedy chdy olaiin chedy shckhdchy chol or ordy chees aly okalcheg
[P1, 5]
dchdy chdy ykaiin

[P2, 6]
pchdaiin she dam qofchedy shedy kchdy dydy opchekaiin shockh~~x~~ey shdalo ry
[P2, 7]
dchdar chedy cholal qokedar chdy chckhdy dar ar al ydy eeesaiiin
[P2, 8]
lchedy shedy qokaiin chkeey pchedy okam chcphey saiin chckhy dairog
[P2, 9]
tchedy shol odal qokaiin shdaiin

[P3, 10]
pchdar shedy ar aiir okair ykeols shedy qockhdy laiin syky
[P3, 11]
dshdy ar aiin y yker chdy ykal olkaiin qokaldar cheol dar aiin
[P3, 12]
tolchdaiin chckhy saiin olor chls aiin oky ches aiin dal
[P3, 13]
ytor chdar shey qokaiin chor kar sheolkedy otedy tedy saiin
[P3, 14]
daiin shckhy chekl ol daiin chedy ykeey daiin otal chdam qokam
[P3, 15]
qolkain olcheol daiin dar ol dld or ador aiin opcheepar
[T1, 16]
oteol cholkal qokal dar ykdy

Folio 39, Verso

[P1, 1]
pdair chdy fdykaiin or air sheykaiiin ofchy kar or aiin dol ky oshdy
[P1, 2]
sor shy kor chol qoty kchdy olky dor chdy ykar olkedaiin ody dy
[P1, 3]
daiin chor okain okaiifchody saiin or aiin qokaiin ytodaiin okom
[P1, 4]
y okeey chody cheor aiin okody chodal ykedy qokedy dal or aiin shky
[P1, 5]
ytedykor or sheky kain otar or aiin okaiin ckhol ol kor otor opchy
[P1, 6]
lkedy okchey shor‿qoy⁀kam cho ckhcfhey or aly shody

[P2, 7]
pardy shedy qokar sheedy oraly — olaiir okar ar
[P2, 8]
oekar aiin olkaiin olky dar ald — shek chek qokchy dar ain
[P2, 9]
tar aiin dal ar ain cheor ydam — shody okal shdy kshy or
[P2, 10]
dar ar ykar or yky chdy fchor — qokain ar sheedy olchef
[P2, 11]
sarol chedy shekam qokar chl — ykeedy chckhy dalor dy
[P2, 12]
paiin alaiin otal chd okar am — okar cheodal ockhy
[P2, 13]
dain octhedy otedy — okedy lchdy okaiin daiiny
[P2, 14]
tar aiin okaiin cholody

Folio 40, Recto

[P1, 1]
fchey keodar aldydy — qoky okal shdy olkedy ofches ar ordaiin
[P1, 2]
qokar okar okedy dar — ykchey kaiin okos chedy okar aralos
[P1, 3]
shy qokal chdy chckhd — otor aiis oky okolchy qokar okam
[P1, 4]
or aiin chekody das — qokol okaiin okar oky okoldy ol
[P1, 5]
lokar qokar okar — okol ol chedy qokchd ar ar or dam
[P1, 6]
tor or ar shokor om — olshedy qokam chdy kar oraiin
[P1, 7]
yaiin chekaiin oky — ycheey

[P2, 8]
ksheo kchey dar aim — kcheo cphedy orain chepal daiin dm
[P2, 9]
taiin ol olaiin or — dain okaiin okaiin okaiin daram
[P2, 10]
saiin olcheey chdy — ychey karar oky ykedy okair ody
[P2, 11]
toar ykaiin ory dal

Folio 40, Verso

[P1, 1]
pchedain chefaiin oldy
[P1, 2]
todar qokaiin ol aram
[P1, 3]
s air ain okaiin okam
[P1, 4]
tarain okaiin chck~~x~~y
[P1, 5]
solaiin okar oly chckhy
[P1, 6]
qoeed aiin ol chedy daiin
[P1, 7]
shody qokol chedy s ar
[P1, 8]
chodaiin chkal ykedy okal
[P1, 9]
tchy pchody pchdy kar ol
[P1, 10]
tchkaiin tchedy qokaiin oraiin
[P1, 11]
schedy qokol chedy dalor acthy
[P1, 12]
ycheekeey daiin okaiin

[P2, 13]
toees chedy kedy olpchedy qokedy — daiin chefain
[P2, 14]
saiin o lchey kchedy okar qokchdy dy — qokees am chdy
[P2, 15]
qokchey qody or aiiin okaiin o ckhy — sheod faidy
[P2, 16]
shol kedy lor ar okar qoky kedy r — yteey qoka~~x~~m
[P2, 17]
tochey qokeedy qokaiin okeor qokar — okees ar oky
[P2, 18]
saiin otain chckhy okal okair arol — qokey okary
[T1, 19]
pchedy chetar opair arody

Folio 41, Recto

[P1, 1]
pshey kedaleey oked shekechy — opshes ypchd qotche*dy shekakeedy
[P1, 2]
ykeeo alshey okedy keshdy dy — dor yechoky qokeed chpy qokedy dy
[P1, 3]
qok ray yokedy ychdy⌒kchdy — qokedy qokedy shekchy cheky daly
[P1, 4]
chdchy ytcheeky ypchedy schdy — ytedy cthey chees oteey otal dam
[P1, 5]
qotchy sal yteedy kchdy — dchedy kchdy dchedy dalain

[P2, 6]
shedey polchedy qokeey chekedy ytey — chkchod ypchedpy shepy shedy
[P2, 7]
parchdy kchey yteedy qokeody — ykedy chkedy qokedy chedy qokedy
[P2, 8]
dair chedy chcthy qokey lchdy — qokedy qokal chekedy qodor am
[P2, 9]
qokeedy okedy chekedy chedy — chctheody chekal daiin cheo al okedy
[P2, 10]
s⌒shok shedy qokchdy dchdaldy — ykedy qokeedy qokedy qoked
[P2, 11]
ykeod ykeedy chekeedy cheked

Folio 41, Verso

[T1, 1]
keesodal
[P1, 2]
pcheody qofcheepy ofchdy cfhekchdy — ypchedy chepchefy shdchdy qotal dar
[P1, 3]
dshedy tchey s⁀aiin shekey okedy okaly — daiin okedy ykeeody choy tcoy dam
[P1, 4]
qokeody okhy qokeody oleeol lkedy — lkeeody qokeedy okeey qokol sheols
[P1, 5]
ycheos olchey daiin or chol⁀ol⁀aiin — oteedy qoteol oteodar orain
[P1, 6]
todaiin ol cheos yteedy okal old — oteol qokal or oteody
[P1, 7]
ykeey okey ykeeol ckhdy chdal — ykeo⁀aiin okeody oly
[P1, 8]
daiin olkeeo lkol⁀chedy okeey

Folio 42, Recto

[P1, 1]
sho ofaiin ckhachcthy otcheey pchear
[P1, 2]
sol⁀kaiin char cheky otshaiin daiiry
[P1, 3]
toshy chtshar chotar chain dal
[P1, 4]
shor chetar chotais dar cthaiin
[P1, 5]
qokar chockhy chotor chy kary
[T1, 6]
dorain char

[P2, 7]
pcho chy kshaiin shotaiin cham shan
[P2, 8]
yshol chees cthol shor shol cty chary
[P2, 9]
qotchor otchol ctho kchodan chkchory
[P2, 10]
choty dol ksheo cthor otol cthol chol — shol dain
[P2, 11]
qotor cho chody daiin shol ctheey dar — chy daiidy
[P2, 12]
dcheey chol shol chokaiin choeky deky — dain dal
[P2, 13]
qopor shol shot shol shol daiin dain s — cheam
[P2, 14]
sho kshey choty chdain chodaiin daiin — dam
[T2, 15]
pchody otshey dodaiin

[P3, 16]
pydaiin sheor shaiin tsh olchy sholy
[P3, 17]
shotol shol chety daiin chokchy chkaiin
[P3, 18]
qody cthochy otaiin shy kshes chor ain
[P3, 19]
otchoty daiin chot sho cth~~x~~y cty⁀s os
[P3, 20]
shol chol shoky okol sho chol shol chal
[P3, 21]
shol chol chol shol cthoiin shos odan
[P3, 22]
kchaiin chos cthaiin choro* chaiin
[T3, 23]
okchol⁀shol kolschees

Folio 42, Verso

[P1, 1]
tcho eto sheey qocho taiin shols — chol chor dain
[P1, 2]
dshey tchey y kchey chtchy cthy dan — dain otol daiin
[P1, 3]
sho chotody chotol oky chol chol — dl chcthy otoy
[P1, 4]
qotchy chkchy sar dy — odaiil — ykchy okol⁀dg
[P1, 5]
chokeeor chey chetan — s ary — okol chetaiin
[P1, 6]
okeokear cheotchar — sy — saiin cthar dam
[P1, 7]
chok sheokey keeey d — chekeesshy
[P1, 8]
sodal saiin

[P2, 9]
posheor sho char chekchey qokod — sho ctheo rchy
[P2, 10]
schor okchey chy shol olor cheaiin — ekchy tcheen d
[P2, 11]
qo aiin qokeey kchol cheal oteol⁀d — shey teaiin d
[P2, 12]
chotcheey chol ol chaiin oteeaiin — chkchy taiin y
[P2, 13]
sho chey teor shey checthy daiin — chokeey daiin
[P2, 14]
qoteey chy kchy cthy ctsees choly — sarar ar⁀al
[P2, 15]
chokey chol okey
[T1, 16]
okor odeey

Folio 43, Recto

[P1, 1]
karodaiin ykedy chody opchkar chcfhedy yfar shol polor aiin ckhey dar
[P1, 2]
ykeody okeol ykedy ar cheky dar aiir otaldy daral okchdy daiin dalr
[P1, 3]
yky yky oky she ody shy olor ykchdy taiin chty qokydy dar aiin ytam
[P1, 4]
dasar ykey kedy tar or ar shetalchdy cholty qokaly chedy oky okam
[P1, 5]
ytor ch*dy shetody qokody qokar otedy dar chockhey dam okain ykam
[P1, 6]
tchedy chedy daly cheody cheoltecfhey

[P2, 7]
fshesy okey tshdy ofchdy tedar otedy chdy shocfhey dykydy fchdy tedy dam
[P2, 8]
ykchedy chedy cheody shy qoiiin sheeety chedy dain shy ytolor okaiin old
[P2, 9]
dshedy qokedy dor cheey odain

[P3, 10]
fshdar shed ody qokedy ypchdy qocthedy ofchdy daiin qotedy dydydy qokar
[P3, 11]
ykchedy ky shol koldy shody okchdy shdy okolol shd olty ykol okary chety dy
[P3, 12]
dor shol qotol shedy qokedy qoteedy qotody otchdy okedy shedy oky yky dy saiin
[P3, 13]
kshed qoshecthey odeedy qeotchy qokedy daiin shodody shochol chcthy ytedy dy
[P3, 14]
yteody checthy chokchy odain chctheey chotor aiin

Folio 43, Verso

[P1, 1]
pdsairy dalteoshy da,ly sheet or arodl lkeo r,araiin otedy,o,poldy
[P1, 2]
shedy octhy otedy chedy dar chesxkhy okeody oky okaldy kchdy okar
[P1, 3]
tody texdy qot chocthy chky oky chdy okedy ykaiin chey ody dary
[P1, 4]
dshey ykeedy chees aiin shy qocthedy chey qokar checkhy okam
[P1, 5]
qokchedy or,alody otedol chcthdy chtey

[P2, 6]
tolkchdy okedy qokedol shedy okedal shedy pchdol otey dalorain
[P2, 7]
ytshedy ykeody oykeedy chedy tedy chcthy otam ot ytaiin otas
[P2, 8]
shetcheodchs ochedy oteody chedy chody daiin sheody ykar chep
[P2, 9]
ytchdy olos aiin octhy

[P3, 10]
tar,chor ar aldar chdy daldar chepy yteedy sypchey pchedy ypor
[P3, 11]
y sheey or,air yteey cheody ar sheo qody chcthy chdy choty shecthy
[P3, 12]
y shee kedy dar,chey qotedy ckaiin chedy cthey oteol or aiin odain
[P3, 13]
dshedy tedy cthedy chekcheey dy keody otedy cheetam okedar amam
[P3, 14]
dykeedain chedy okeedy chedal olkey cheky choal chedy oteorom
[P3, 15]
oteod qolkeey,kaldy chy darody qokeey kol,dary,taros
[P3, 16]
ol eees aiin oloaiin oteos qoky chey

Folio 44, Recto

[P1, 1]
tshodpy oracphy koees ypsholy shy otol!oaiin
[P1, 2]
ydsh dyeees yty oky okchey qykchey dchy dy
[P1, 3]
oair ekokeey kshotol otol daiin otota y!kal
[P1, 4]
ychor ykchey ykchy chody dam

[P2, 5]
toy shy!sho qoteey chor cheeky sheey ytey daiin
[P2, 6]
dshor ytchol shy o ocheeek!!y qotchy otchy dar
[P2, 7]
qotsh oyd shol qotshy oyty chom

[P3, 8]
pshy opchey qopchy ofchey r!oiry shol o!s ykchy
[P3, 9]
otchol ol dchckhy qoky qotchy qokchy qoky d
[P3, 10]
qokchor okchy qoto ykol choky choky chol dam
[P3, 11]
ytsho qockhy okchody

3 Analysis

3.1 Glyph Frequencies

Based on a transliteration by Takahashi (see Section 1), a first basic analysis of frequencies can be performed, by simply counting each Latin letter of the transliteration. This results in Table 1, listing all letters that are used.

Letter	Glyph	Count	
		Takahashi	Takahashi/Bauer
o	o	25,468	
e	e	20,070	
h	h	17,856	
y	y	17,655	
a	a	14,281	
c	c	13,314	
d	d	12,973	
i	i	11,660	
l	l	10,518	
k	k	9,996	
r	r	7,456	
n	n	6,141	
t	t	5,968	
q	q	5,423	
S	S	4,501	
s	s	2,886	
p	p	1,406	
m	m	1,116	
T	T	976	
K	K	938	
f	f	425	
P	P	224	
g	g	96	
F	F	80	
I	I	72	
x	x	35	
v	v	9	
z	z	2	

Table 1: Letter frequencies in Takahashi's transliteration.

Determining what counts as *one* glyph, though, is in some cases an interpretative act. It seems straightforward to assume that c and h are one glyph (i.e., ch). Likewise, S and h could be interpreted as another glyph (i.e., Sh). Additionally, one *might* interpret instances of cth, ckh, cph, or cfh as representing ch (or Sh), on the one hand, and t, k, p, or f, on the other. Concerning those "gallows" characters, as they have come to be called, it is not clear whether t and k or p and f are variations of the same glyphs, only diverging in one small loop (as Tiltman 1967 seems to have interpreted them). In the following, the four gallows will be treated as distinct glyphs, as has become customary. Accordingly, Table 2 gives frequencies for several c combinations, taking into account four forms of "pedestalled gallows". The table also includes three instances that bear some resemblance to Latin abbreviations (also see D'Imperio 1978, p. 95).

Furthermore, while there are instances of a single i, it is not clear whether instances like ii and iii or combinations with n like in or iin represent separate glyphs. Table 3

Letter(s)	Glyph	Count	
		Takahashi	Takahashi/Bauer
`ch`	cꞇ	11,008	
`Sh`	c̓ꞇ	4,501	
`cTh`	cᵼᵼꞇ	950	
`cKh`	cɪᵼꞇ	906	
`cPh`	cƚᵼꞇ	216	
`cFh`	cƚᵼꞇ	74	
`c`	c	143	
`co`	co	9	
`cy`	c9	7	

Table 2: Glyph frequencies in Takahashi's transliteration for several c combinations.

gives frequencies for several of those ı combinations. Assuming there are three glyphs ı, ıɿ, and ııɿ, it is of course difficult to determine when there actually is a ıɿ or a ııɿ.

Letter(s)	Glyph	Count	
		Takahashi	Takahashi/Bauer
`i`	ı	590	
`ii`	ıı	195	
`iii`	ııı	10	
`n`	ɿ	148	
`in`	ıɿ	1,752	
`iin`	ııɿ	4,076	
`iiin`	ıııɿ	154	
`iiiin`	ııııɿ	2	

Table 3: Glyph frequencies in Takahashi's transliteration for several ı combinations.

This being said, I tentatively stipulate a set of 22 glyphs. Table 4 gives frequencies for those glyphs. They are counted according to the following rules:

- The glyphs ɑ, 8, c, ȿ, ⊤, ɕ, ϑ, o, †, ʔ, ƨ, ʌ, ⊼, and 9 are simply counted as before. Hence, frequencies are identical with Table 1.
- The glyph c̓ꞇ is counted every time c̓ and ꞇ appear consecutively.
- The glyph cꞇ is counted every time c and ꞇ appear consecutively, as well as in cases where there is ǂǂ, ǂǂ, ǂᵼ, or ǂᵼ between them.
- The glyph ᵼᵼ is counted every time ᵼᵼ or ǂǂ appears.
- The glyph ɪᵼ is counted every time ɪᵼ, ǂǂ, or ıᵼ appears.
- The glyph ƚᵼ is counted every time ƚᵼ or ǂᵼ appears.
- The glyph ƚᵼ is counted every time ƚᵼ or ǂᵼ appears.
- The glyph ıɿ is counted every time ı and ɿ appear consecutively without there being a preceding second ı.
- The glyph ııɿ is counted every time ı, ı, and ɿ appear consecutively.
- The glyph ı is counted every time it is not part of ıɿ or ııɿ as well as in instances of ⊤.

Letter(s)	Glyph	Count (Percent)		
		Takahashi		Takahashi/Bauer
o	o	25,468	(15.636)	
e	e	20,070	(12.322)	
y	y	17,655	(10.839)	
a	a	14,281	(8.768)	
ch	ch	13,154	(8.076)	
d	d	12,973	(7.965)	
k	k	10,934	(6.713)	
l	l	10,518	(6.458)	
r	r	7,456	(4.578)	
t	t	6,944	(4.263)	
q	q	5,423	(3.329)	
Sh	Sh	4,501	(2.763)	
iin	iin	4,232	(2.598)	
s	s	2,886	(1.772)	
in	in	1,752	(1.076)	
p	p	1,630	(1.001)	
i	i	1,240	(0.761)	
m	m	1,116	(0.685)	
f	f	505	(0.310)	
g	g	96	(0.059)	
x	x	35	(0.021)	
v	v	9	(<0.001)	
		162,878		

Table 4: Glyph frequencies in Takahashi's transliteration

3.2 Entropy

Next, let's take a look at the manuscript's entropy. To this end, I utilize the conceptualization of information entropy by Shannon (1948), basically measuring the variability of glyphs in the manuscript. Entropy H can be defined as shown in (1), where p_z denotes the probability of z, with z being an element of the alphabet Z.

$$H = -\sum_{z \in Z} p_z \log_2 p_z \tag{1}$$

To calculate the entropy, I suppose the above stipulated glyphs to form alphabet Z (see Table 4). Accordingly, changes to the corpus are made so that each stipulated glyph has a single corresponding character in the transliteration. Changes are made according to the following rules:

- The glyph Sh is represented by `Sh` in EVA. For calculating the entropy, every time `S` and `h` appear consecutively, they are replaced by `1`
- The glyph ch is represented by `ch` in EVA. Every time `c` and `h` appear consecutively, they are replaced by `2`. Following the above stated rules for glyph counting, ch is also believed to be present when c and h are separated by T, K, P, or F, represented by `T`, `K`, `P`, or `F` in EVA. In those cases, it is believed that t, k, p, or f are also present. They are represented by `t`,`k`, `p`, or `f` in EVA. Hence, they are replaced by `2t`, `2k`, `2p`, or `2f`.
- The glyph z, represented by `z` in EVA, is counted as k, represented by `k` in EVA. Hence, every `z` is replaced by `k`.

- The glyph is represented by `iin` in EVA. Every time `i`, `i`, and `n` appear consecutively, they are replaced by `3`.

- The glyph is represented by `in` in EVA. Every time `i` and `n` appear consecutively, they are replaced by `4`.

- Lastly, the glyph , represented by `I` in EVA, is counted as , represented by `i` in EVA. Hence, every `I` is replaced by `i`.

Calculating the entropy for this converted corpus results in $H = 3.866$. As comparisons, Table 5 also offers the entropy values for the unconverted transliteration as well as for a randomly generated text consisting of 22 different characters and being 234,956 characters long (just as the converted transliteration).

Corpus	H
Takahashi	4.021
Takahashi (converted)	3.866
Takahashi/Bauer	
Takahashi/Bauer (converted)	
Random text	4.459

Table 5: Entropy (H) for different transliterations.

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