

# The Perfect Copy

Photolithography, Photostats, and the Copying of  
Colonial History

Hannah Alpert-Abrams  
[halperta.com/illinois.html](http://halperta.com/illinois.html)  
@hralperta

**Aquí comienza vn vocabula-**  
rio en la lengua Castellana y Mexicana. Compuesto  
por el muy reverendo padre fray Alonso de  
Molina: Guardián del couerto del sant Antonio de  
Tetzcuco dla ordé de los frayles Menores.

\* tuū franciscum sig



\* nis

redemptionis nostre.

Significat dominus seruum

**G**loria dñi pnta te fecit prole parentem.  
qui genuit moriens, quos pater alme soues,  
**C**onfixus viuis, langues: cum mente revolus,  
vulnera, cum speceras, sanguinata carne geris.

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rio en la lengua Castellana y Mexicana. Compuesto  
por el muy reverendo padre fray Alonso de  
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\* tuū franciscum sig



\* nis

redemptionis nostre.

**S**ed in domum nimirum te fecit prole parentem.  
qui geruit moriens, quos pater alme soues.  
**C**onfixus viuis, langues: cum mente revolus,  
vulnera, cum speceras, sanguinata carne geris.

Tallado por el Audiencia Real en dos pesos y vn nombrón

Benson Latin American Collection

John Carter Brown Library (copy I)

Gutenberg  
Bible

Bay Psalm  
Bible

Molina's  
Vocabulario

Conquest of  
Tenochtitlan

1450s

1521

1555

1640

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\* tuū franciscum sig



\* tuū franciscum sig  
nis redēptionis nostrī.

**G**loria dñi nostri Iesu Christi  
ad orationem fratrum suorum  
et misericordiam eorum.  
Gloria dñi nostri Iesu Christi  
ad orationem fratrum suorum  
et misericordiam eorum.  
Gloria dñi nostri Iesu Christi  
ad orationem fratrum suorum  
et misericordiam eorum.  
Gloria dñi nostri Iesu Christi  
ad orationem fratrum suorum  
et misericordiam eorum.

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\* tuū franciscum sig



\* tuū franciscum sig  
nis redēptionis nostrī.

**I**ndomini nimia te fecit prole parentem.  
qui geruit moriens, quos pater alme soues.  
**C**onfixus viuis, langues: cum mente revolus,  
vulnera, cum speceras, sanguinata carne geris.

Tallado por el Audiencia Real en dos pesos y vn nombro.

Benson Latin American Collection

John Carter Brown Library (copy I)

**Aquí comienza vn vocabula-**  
rio en la lengua Castellana y Mexicana. Compuesto  
por el muy reverendo padre fray Alonso de  
Molina: Guardia del couerto de Sant Antonio de  
Tetzcuco dla ordē de los frayles Menores.

\* tuū Franciscum sig



\* nis

redemptionis nostre:;

Significat dominus seruum



dorum p̄nta te fecit prole parentem.  
qui genuit moriens, quos pater alme soues,  
**C**onfixus viuis, langes: cum mente revolus,  
vulnera, cum specias, stigmata carne geris.

**Aquí comienza vn vocabula-**  
rio en la lengua Castellana y Mexicana. Compuesto  
por el muy reverendo padre fray Alonso de  
Molina: Guardia del couerto de Sant Antonio de  
Tetzcuco dla ordē de los frayles Menores.

\* tuū Franciscum sig



\* nis

redemptionis nostre:;

Significat dominus seruum



**I**ndomini nimia te fecit prole parentem.  
qui genuit moriens, quos pater alme soues.  
**C**onfixus viuis, langes: cum mente revolus,  
vulnera, cum specias, stigmata carne geris.

Tallado por el Audiēcia Real en dos pesos y vn nombr

Benson Latin American Collection

Hannah Alpert Abrams

John Carter Brown Library (copy I)

06585

Aquí comienza un vocabula-  
rio en la lengua Castellana y Mexicana, Compuesto  
por el muy reuerendo padre fray Alonso de  
Molina: Guardia del couero del Sant Antonio de  
Tetzcuco dla ordé de los frailes Menores.



¶ dorum pinta te fecit prole parentem.  
qui genuit moriens, quos pater alme fous,  
**Confixus viuis, iangues: cum mente revolus,**  
vulnera, cum specas, flagrata carne geris.

Benson Latin American Collection

This copy of Molina's *Vocabulario* 1553 is exceedingly rare, so much so that the authoring in his work on American aboriginal languages doubtless exists.

The present copy was purchased of Asten H. Berlin, upon whose whole catalogue it appeared as perfect. Upon its receipt, however, I discovered that a considerable portion of the end was wanting. The title page and some folios in the middle was also deficient. It soon occurred to me Leino. If you like, I will offer a copy, which he kindly loaned me that we might have a copy made of the portions which were deficient. Photographic copies were therefore made accordingly.

But unfortunately the title of Mr. Leino's copy was mutilated, the central

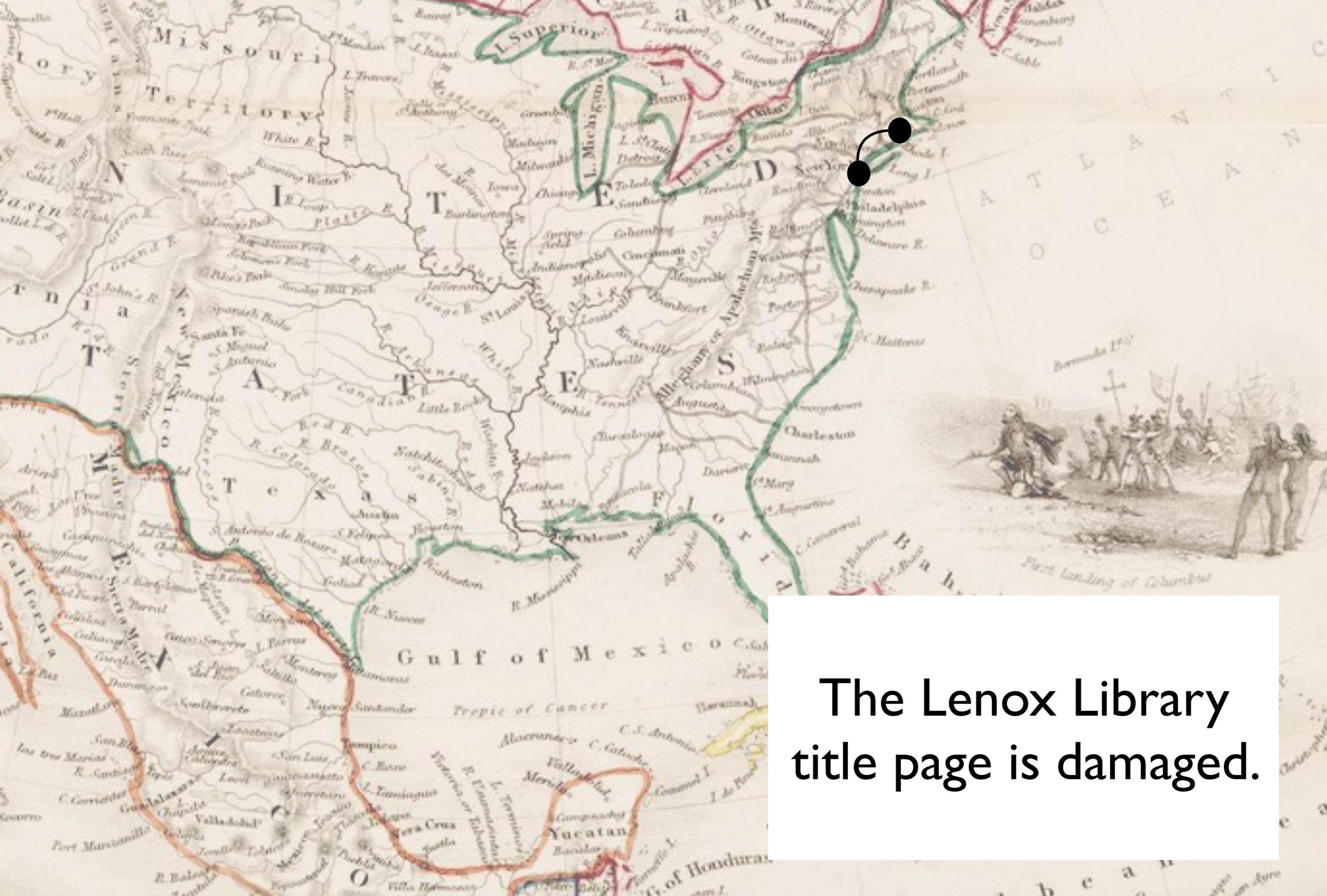
John Carter Brown Library



Copy arrives at JCBL  
with pages missing.



John Russell Bartlett  
writes to the Lenox  
Library.





**Aquí comienza un vocabula-**  
no en la lengua Castellana y Mexicana. Compuesto  
por el muy reverendo padre fray Alonso de  
Molna: Guardia del couero del sant Antonio de  
Tetzcuco dla ordé delos frayles Menores.



A substitute woodcut  
is located

Benson Latin American Collection

**Arte de la lengua Nōxri**  
canay Castellana, compuesta por el muy Re-  
verendo padre fray Alonso de Mol-  
na de la orden de Señor  
sant Francisco.

JOHN CARTER BROWN



En Mexico en casa de Pedro Ocharte, 1571

John Carter Brown Library

Aquí comienza un vocabula-  
rio en la lengua Castellana y Mexicana, Compuesto  
por el muy reverendo padre fray Alonso de  
Molna: Guardia del couero del sant Antonio de  
Tetzcuco dla ordé delos frayles Menores.

\* tuū franciscum sig

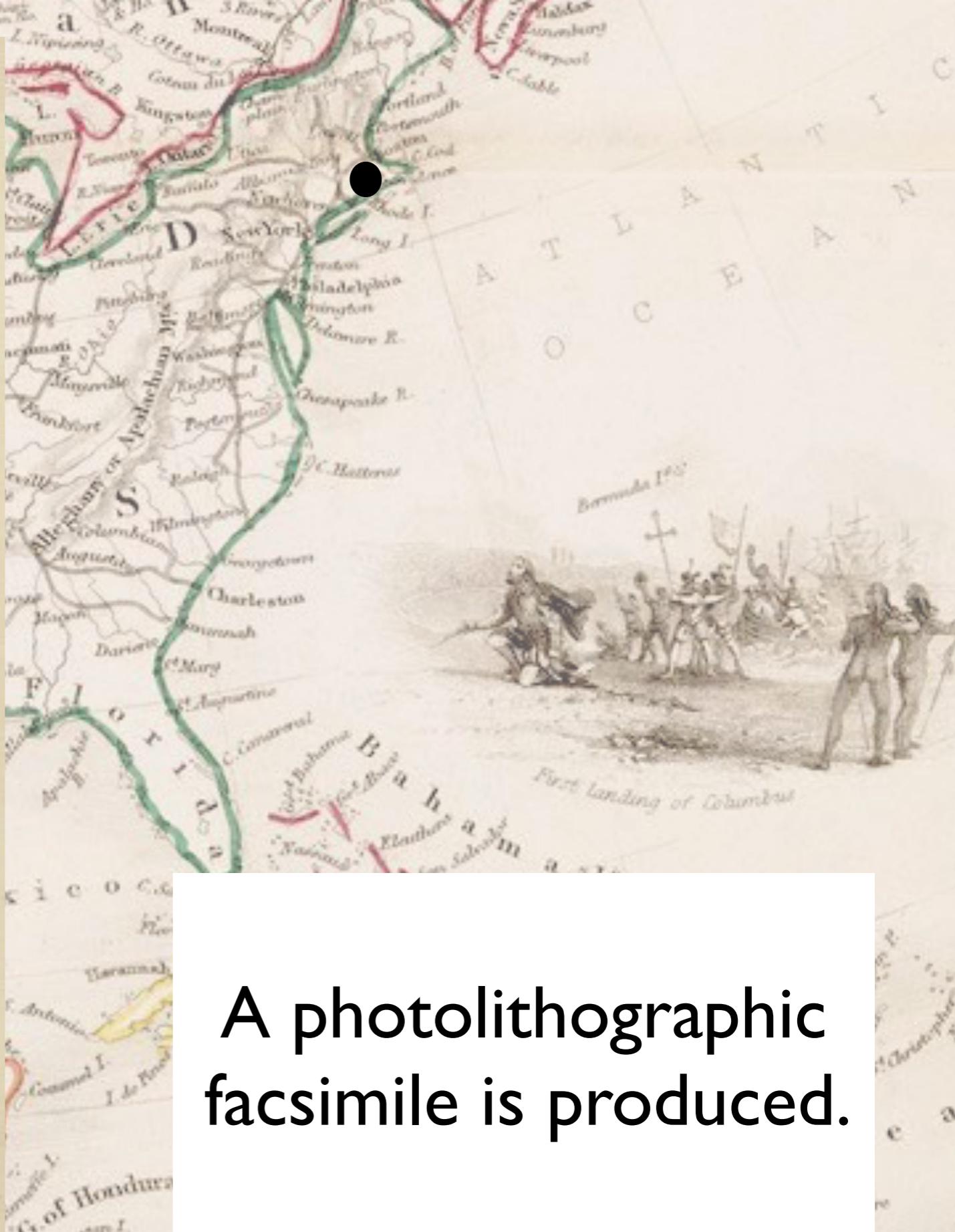


\* filis redēptionis nostrī:

Signatūlū dōmīnū servitū

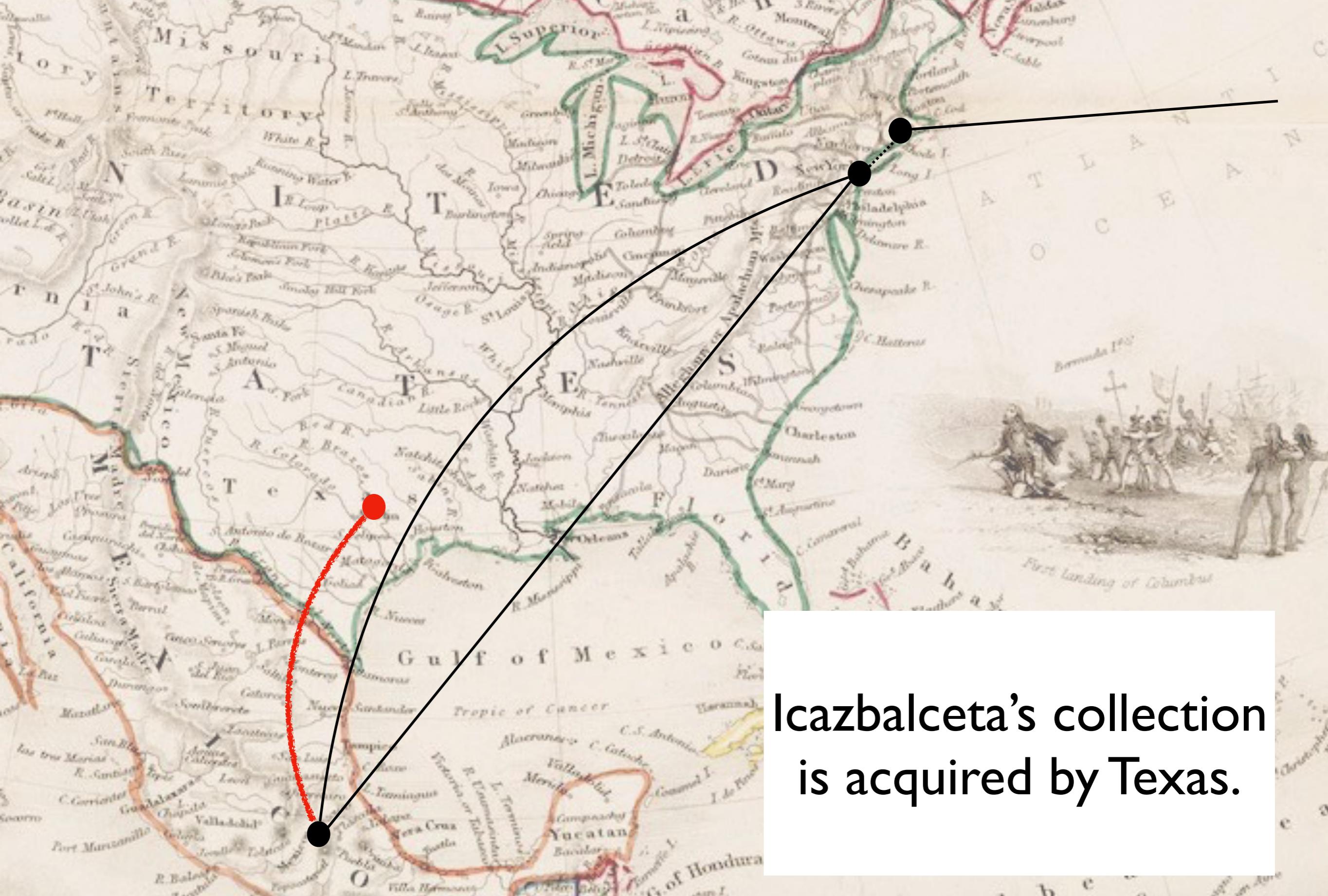
¶ dorūm pīnta te fōcē prole parentēm.  
qui gēnūt moriens, quos pater alme fōues,  
**Confixus viuis, lāngues: cum mente rēvolvus.**  
vulnera, cum specas, fīgūmata carne geris.

Benson Latin American Collection



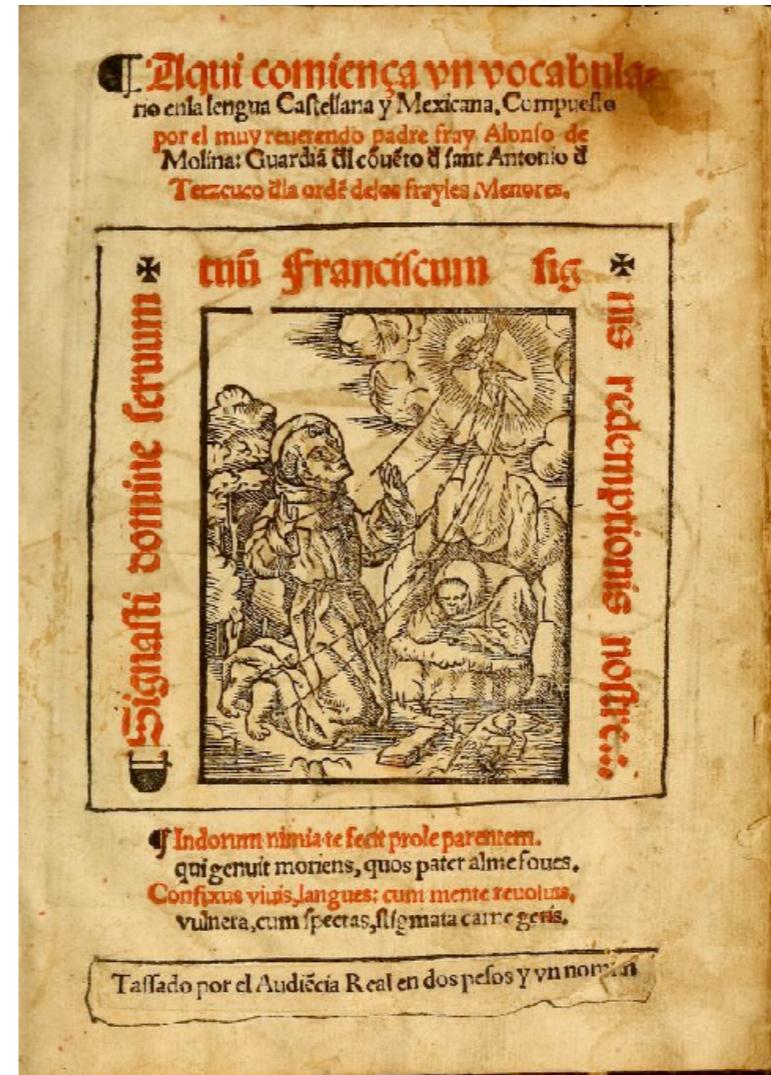
A photolithographic  
facsimile is produced.





Icazbalceta's collection  
is acquired by Texas.

# Digital facsimile



# Digital facsimile

# Photolithographic facsimile



# Digital facsimile

## Photolithographic facsimile

### “Photoshopped” image



# Digital facsimile

## Photolithographic facsimile

### “Photoshopped” image

### Circulating woodcut



Books move across borders.

Copies circulate information.

Copying is creative.



# The Perfect Copy

Introduction: Molina's *Vocabulario*

Context: Unreadable Books

Case Study: Mayan Photostats at the JCB

Conclusion: Cultural Heritage Informatics

**Indigenous-language texts have been  
*unreadable* and *unread*.**

- Mary Louise Pratt, *Imperial Eyes*

**Transcription:**

**The sequential replication of texts across media.**

**Transcription:**

**This strange and banal exercise.**

**- Arlette Farge**

## Transcription:

It is through this action that meaning is discovered.

- Arlette Farge

Yrarios que los tenjades guarda  
dos grandes mercedes, y grandes  
beneficios, aueys hecho a este pue-  
blo, ya es ta gente quelos aueys  
hablado, como y padres asus  
hijos, aueys hecho el deuer para tain.  
con vuestro pueblo, y los aueys  
declarados, y manifestado los  
secretos de vnas corazonas,  
yelloz anoydo, y cesibidor.  
yo anuestro señor, que los sien-  
tan, yentient dan cylopon  
gan por obra, adonde quiera  
que fueren, y estuieren. Plega  
adios, que con la primaz se acuer-  
dan deste beneficio, y con el se  
consoelen, quando hisieren al  
guna cosa, que no conozcieren:  
Señor nuestro, y reynuestro,  
señores senadores, y suzes,  
peruentera ya osdos pena  
con la prolixidad de mis pala-  
bras, seors muy bien aventu-  
rados, deos nuestro señor dios  
muchapaz, y asosiego, y viuays  
por muchos años, regiendo, y  
govermando, y gaudando  
a nuestro señor, con vuestros  
oficios. el qual es invisible, y  
impalpable.



Mopialti auh caoquimond  
a ihacotti, inanemuhqui  
noquis, insectentim, inca-  
matis, luchitza in mili-  
tia. inamis timotlatzina  
y mitlatoti, inopitzcam.  
lolti intotecayo, in hogite,  
aque. Auh caiz manotli  
tepetl in myzopachitl  
tsitzcatia. tlacotihacab-  
coe. caoquiss, caoletli  
equlacate inhatconz,  
mamatanz, ihacotti, in-  
tie inanemuhqui, inga-  
lia in quijquilitoque in-  
in tepehl. A nesse axcan  
cauhqui inameiolataz, in-  
yusnijauitique matl, in-  
a chapolon, aonxhalina  
nacotl, intalotl: dei oih  
maguixtique in ab, in-  
auh caoam metotangie q  
panzinho in hogite, na-  
manoco ic onspittemi  
in tepehd, inocaman, ina-



matl, mattinemj, maco-  
nha in jucuernj injernia, inj  
quicatani, auh injucetli a  
ohimale valchocas, mac-  
oalmellaquaoas iniquac  
ita ipar dioloto, in nomo  
luchi, in nomotequij. A  
motzonterotzin anel dei  
quijutzin niqueoa. tla  
quijmoma ditia, ma amedi  
motlamata halili in d. auh  
maximotlacotilican, maxi  
motequijtilican, maximo  
nanamijqujlican in hogin  
naoq que, in ioalli in checatl.

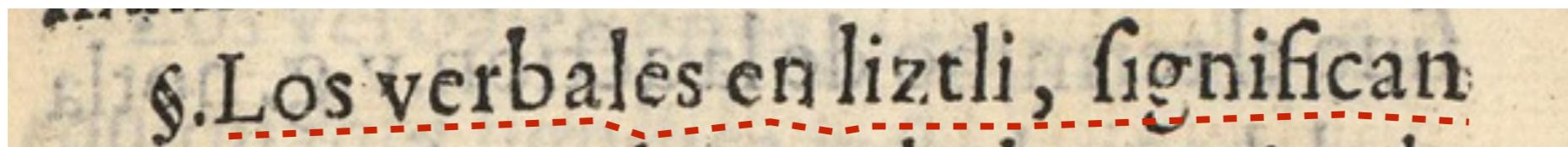
C Capitulo desigiete,  
del razonamiento, lleno  
de muy buena doctrina  
enlomoral, que el señor  
hacia asus hijos, quando  
ya auja llegado alos a  
nos dedis deicion: exor-  
tandolos ahuyr, losvi-  
cios, yaque se diesen,  
alos exercicios denoble-  
za, y de virtud.

T Iccax tolli emome ca-  
pitulo, vncan motereoa,  
cenhamati cerca qualli, le  
nonotsaliztlatelli, neremy  
listilonj: inj quij nonotsa-  
ja, i pilhoan tlatoanj: inj  
quacie ixtlamati, ietlaca  
quij, quijtlaguauh mo-  
raia, inj quijtlacahujs  
que, injquich in aqualli,  
innaiectli. Auh inseqijtl  
quauhtzitzgujzque, in pilte  
quijli, intlatocatequijtl: auh

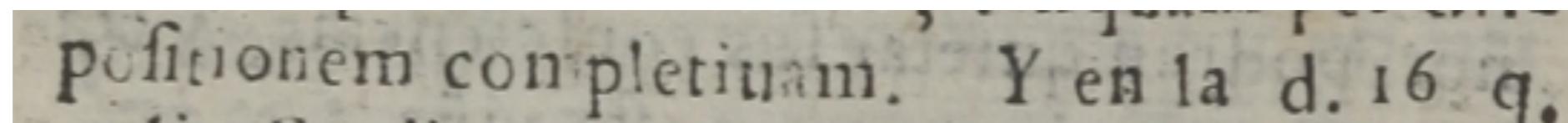
Culiba aparecieron gente de mas cuenca y  
ss. principales. Los unos y los otros vini-  
eron á la Laguna de Mexico. Los de Cu- <sup>Laguna de</sup>  
<sup>liba</sup> <sup>hun</sup> entraron por la parte de Oriente, y <sup>Mexico</sup>  
edificaron un pueblo que se dice <sup>Tolancua</sup> <sup>en el oriente</sup> <sup>Tolancua</sup> <sup>Pueblo</sup>  
<sup>Tolancungs</sup> <sup>Tolancungs</sup>  
~~Y diez y siete leguas de Mexico, y de allí~~  
~~Tolcan (hoy Tula)~~  
fueron a Tula, doce leguas de Mexico, á la  
parte del Norte, y vinieron poblando hacia  
~~Texcoco~~ <sup>Texcoco</sup> Texcoco <sup>Texcoco</sup>  
Tetzcotzingo, que es la villa del agua de la La-  
guna de Mexico, cinco leguas de <sup>esq;</sup> ~~Texcoco~~  
y ocho de Bojcos. Texcoco está la parte de  
Oriente, y Mexico al Occidente, la laguna  
en medio. Algunos quieren decir que <sup>de</sup>  
~~Texcoco~~ <sup>Culhuas</sup> Culhuas  
se dice Culhuas por respeto de estos  
que allí poblaron. Después el Señorío de  
<sup>Texcoco</sup> <sup>Texcoco</sup> Texcoco  
Texcoco fue tan grande como el de Mexico.  
De allí de Texcoco vinieron á edificar águas:



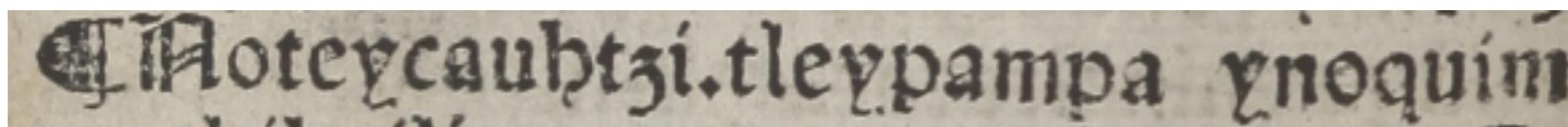
# Wandering baseline



# Uneven inking



# Unfamiliar Typefaces



**præfertim**      **vrgente causa**

ligature

non-standard  
spelling

character  
ellipsis

obsolete  
character

**praesertim**      **urgen<sup>t</sup>te causa**

**¶** Quid dicendum de Ocnamacaque. s. de  
las pulqueras, o taberneros, qui vendunt vi-<sup>27</sup>  
num Indorum, Indis, quod dicitur Octli :&  
etiam de ijs qui eis vendunt vinum verum His.

## Multilingual Transcription

"¶ Quid dicendum de Ocnamacaque. f. de  
las pulqueras, o taberneros, qui vendunt vi-  
num indorum, indis, quod dicitur Octli .&  
etiam de iis qui eis venduntur non verum His

**¶** Quid dicendum de Ocnamacaque. f. de  
las pulqueras, o taberneros, qui vendunt vi-<sup>27</sup>  
num Indorum, Indis, quod dicitur Octli :&  
etiam de iis qui eis venduntur non verum His

## Multilingual Transcription

over -  
correction

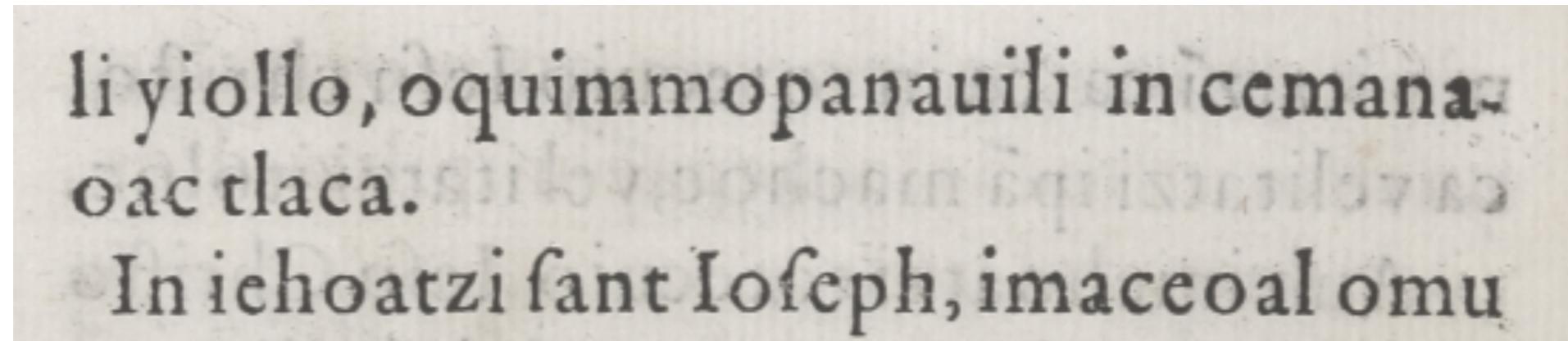
Norm: l̄i yiollo, oquimopanatili in cemana-  
Hist: l̄i yiollo, oquimmopanauili in cemana-

false  
substitution

Mod: oac tlaca.  
Hist: oac tlaca.

Norm: In iehoatzi sant joseph. ymaceoal omo-  
Hist: In iehoatzi fant fofeph. imaceoal omu

correct  
substitution!



## Historical Orthography & Normalization

**Many tools for digitization are designed for modern,  
Anglophone texts.**

**Anglophone machines render other languages  
unreadable, and unread.**

# Photographic Reproductions:

The authenticity of the necessarily real referent.

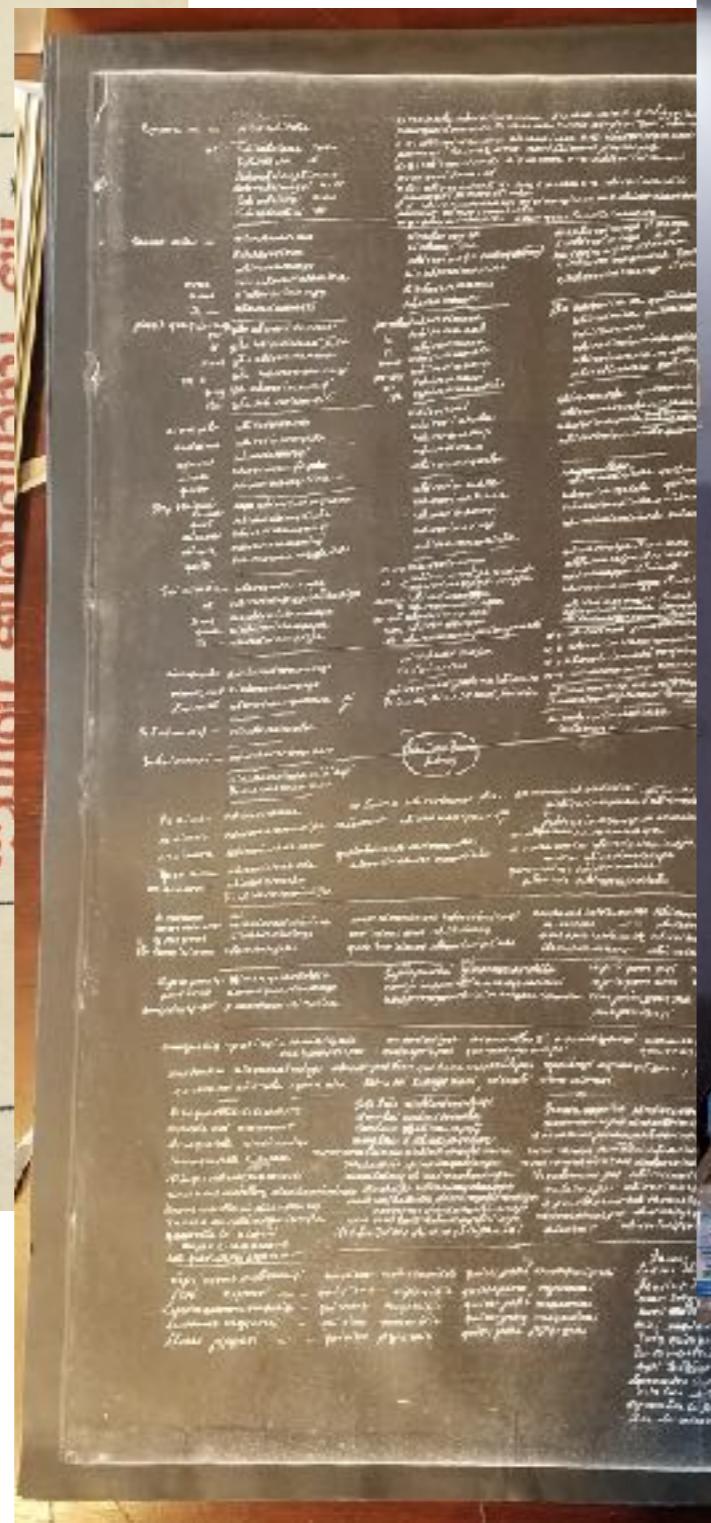
- Roland Barthes

**Aquí comienza un vocabula-**  
no es la lengua Castellana y Mexicana, Compuesto  
por el muy reverendo padre fray Alonso de  
Molna: Guardián del couerto del sant Antonio de  
Tetzcuco dia ordé delos frayles Menores.

\* tuū Franciscum sig



*q donum nimis te fecit prole parentem.  
qui genuit moriens, quos pater alme fous,  
Confixus viuis, langes: cum mente revolus,  
vulnera, cum specias, stigmata carne geris.*



# Photostat



Wooden Model No.1 PHOTOSTAT  
1910

Joseph McCoid

# Photostats are cheap

11.5 x 11"	negative 0.20	positive 0.10
11.6 x 16"	negative 0.25	positive 0.15
11.5 x 22"	negative 0.30	positive 0.20
18 x 16"	negative 0.55	positive 0.45
18 x 22"	negative 0.60	positive 0.50

# Photostats are accurate

The photostat print is usually accepted as evidence whereas the photograph is not, for the simple reason that the photostat print cannot be changed while it is an easy matter to rearrange a photograph.

- John S. Greene, Photostat Corporation, 1922

# Photostat

“The photostat has worked a complete revolution in bibliographical and research work by furnishing a comparatively inexpensive means of comparison between different copies of the same book.”

- George Watson Cole (1922)

# The Perfect Copy

Introduction: Molina's *Vocabulario*

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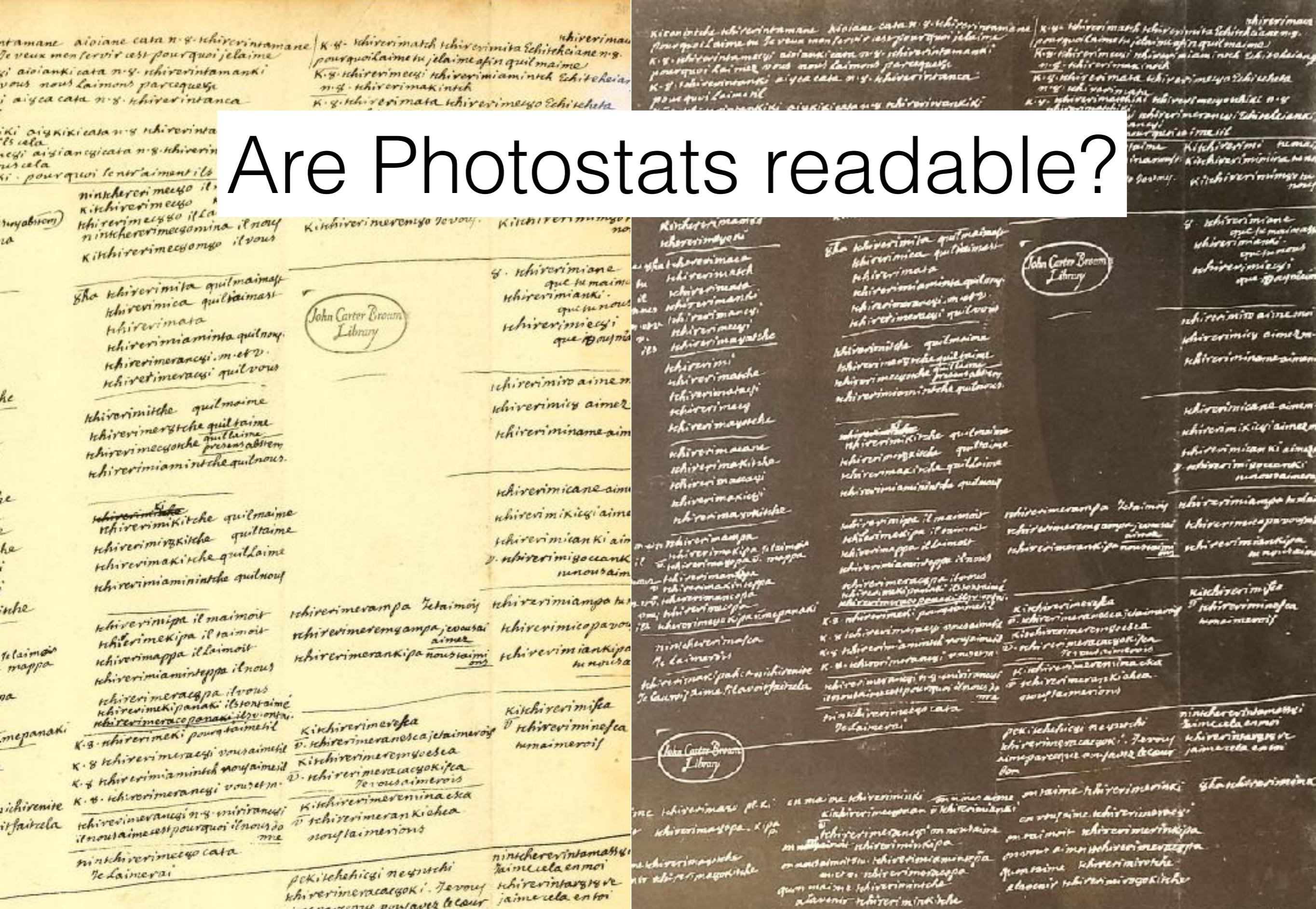
# The John Carter Brown Library



A purchase which has had an unexpected influence upon the development of the Library is that of a mechanical photographing machine

- George Parker Winship (1913)

# Are Photostats readable?

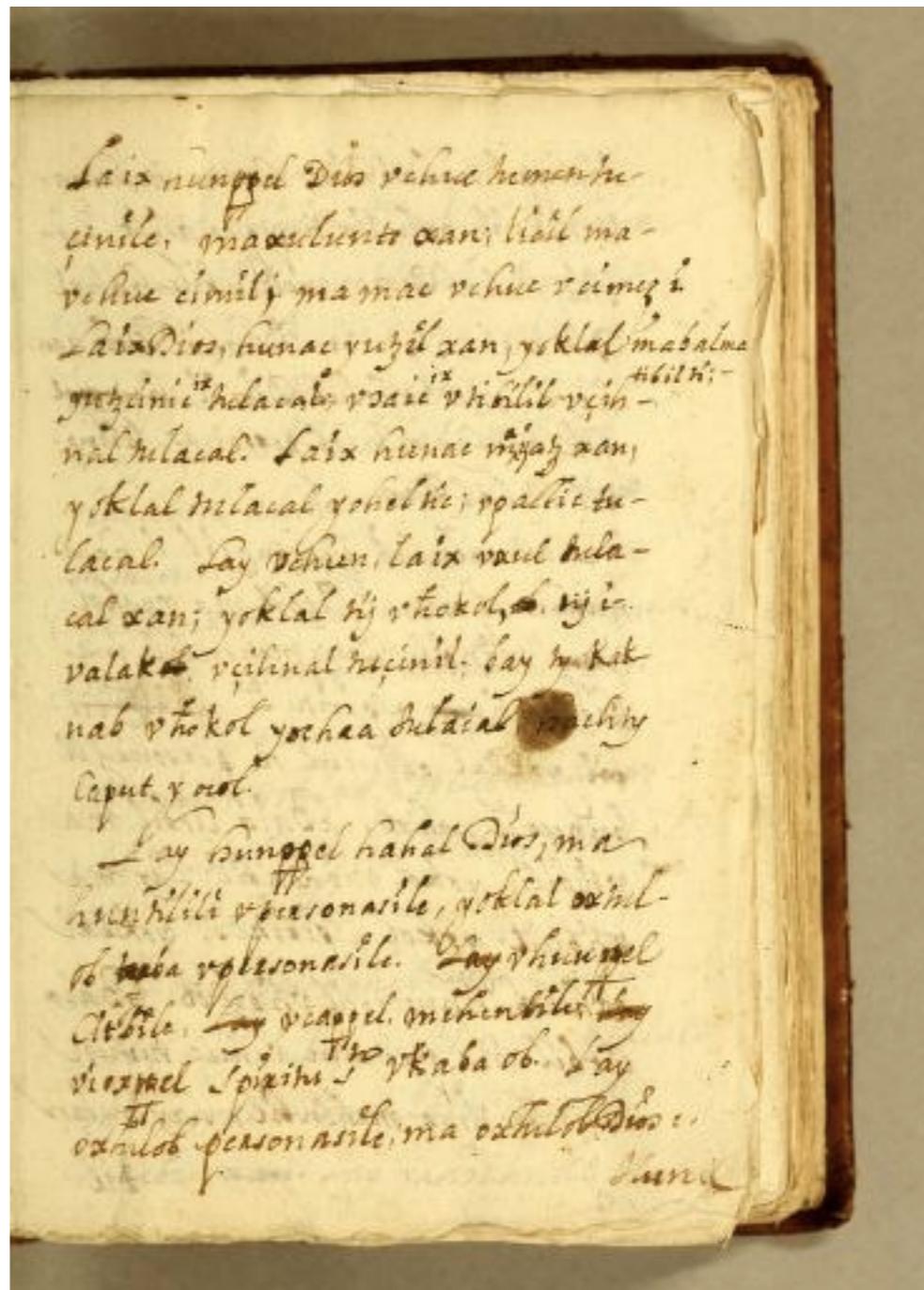
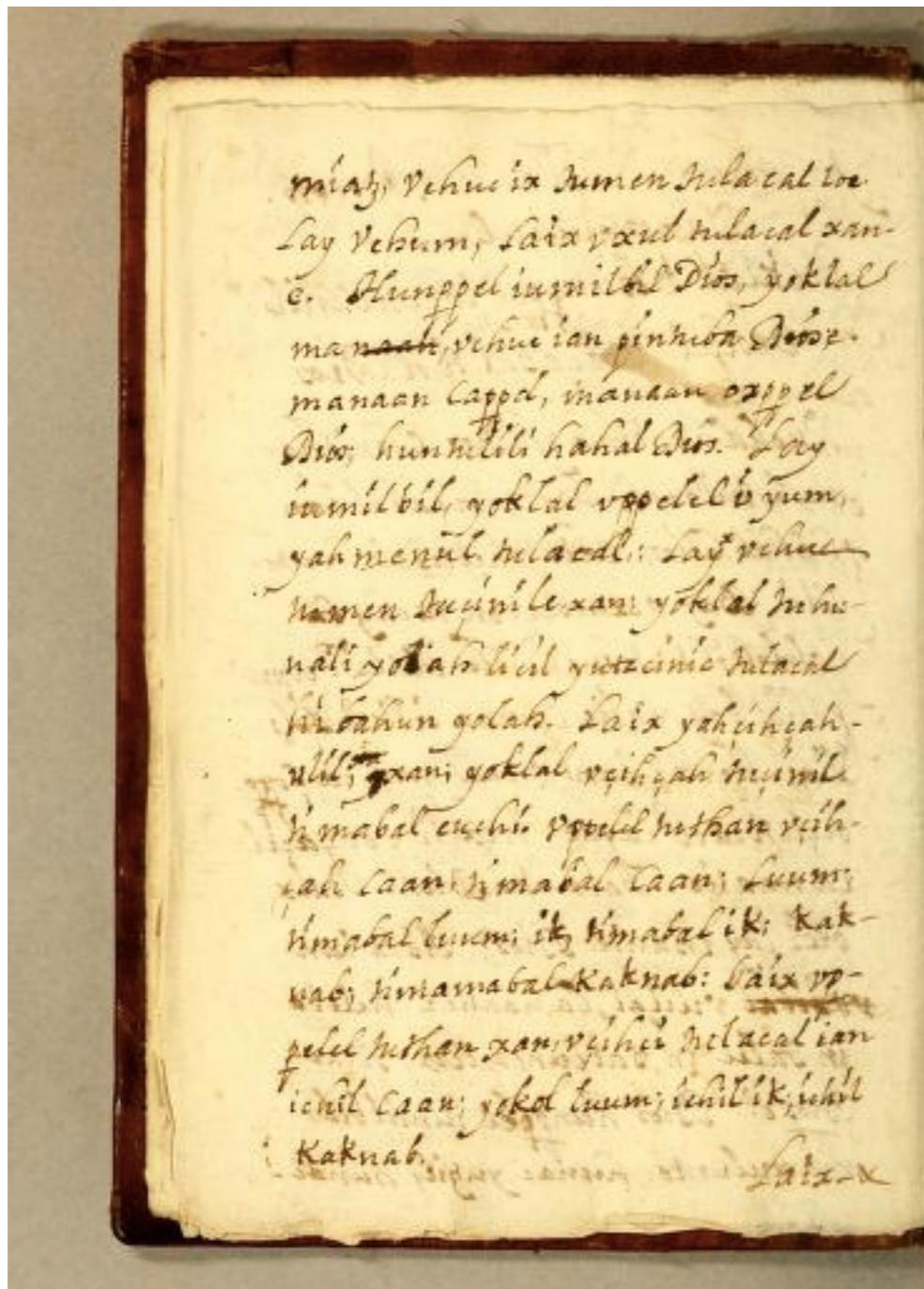


# Are Photostats readable?

It was decided that sections M-Z of the dictionary should be photostated as the first project. But a photostat will produce only whatever is actually black. Some of the strokes of the quill pen with which the text was written did not reproduce. So the services of Madam Chinard, the wife of a French professor at Brown, were procured to help me make all speed. By dint of numbering the pages and lines of the photostats, it was possible to check the original and supply the weak spots in a typewritten transcript. In this dot-and-dash fashion the task was completed by the end of another year.

- Margaret Bingham Stillwell

# The Motul Maya photostat



William E. Gates  
POINT LOMA, CALIFORNIA

then on Apr. 21st, \$135, for the Guzman, Copioso, Miracle Play and San Buenaventura of 1684; then May 20th, \$65, for the large modern copy of the Cakchiquel dict., and Urbano.

The price on the first vol. Motul was about 20 cents, but that was a specially hard piece as you said, and it was your first days. For the others I see you figured about 12-1/2 cts., which would make the second Motul, 202 prints, and apparently ordinarily easy work, somewhat over \$25.00. Then the Zoque dict., 171 prints, you never sent a charge for, but that must be more as there were words that had to be touched in, in the fold. Anyhow, on these two vols. I have no statements from you.

For the rest of the work I have your statements aggregating \$295, on which I sent you a check once for \$150, and enclose another for same amount herein - leaving something like \$50. still due you. Please let me know, as I want to get all things of the kind cleared up before the first of the year.

So much for the past; now the next thing.

You have a few imprints which I want, to fit in with some of my Phil-

lipps mss.:

- 130 — Gaona, Colloquios, 1582; I have a ms. of this in Matatlan.
- 145 — Majera Yanguas, Matamua, 1637.
- 164 — Roldan, Chuchona, 1580; I have a Chocho ms., which I take is same dialect.
- 165 — Feria, Zapotec Doctrina, 1567.
- 166 — Barreda, Chinantes, 1730.
- 22 — Levante, Zapotec, 1776.

Then there are the following mss.: (the nos. from León's little catal.)

- 101 — 11. Arte Zapoteca, 4to, about 100 leaves.
- 114 — 16. Basalenque, Matlakinsa. The description is not clear, but there seem to be about 500 leaves: one short and one long ARTE, and Vocab. M-C and C-M.
- 207 — 168. Botello Moyaian, Catecismo: 16mo, about 50 leaves.
- 53 — 21. Devocionario en Tarasca, 4to, 39 leaves.
- 41 — 61. Gilberti, Textos: 8vo, 129 leaves.
- 222 — 76. " Diccion.; folio, 148 leaves.
- 77 — 78. " Sermones, 4to, 198 leaves.
- 242 — 78. Sahagún, Fragments: 16mo.
- 126 — 156. Serra, Fragi. Diccion.
- 130 — 169. Serra, Fragi. Diccion.

You may do for me any of the above, in such order as suits the convenience of your machine. I would like also to say that, quite apart from the saving of prints in your copying, smaller, and reduced sizes are easier for me to handle and work from. I have my re-copying now thoroughly systematized, and wherever a page can be brought within not over 6 inches tall net, on the negative, that is quite an added convenience to me. Of course where you can copy two books at once, so much the better; but in any case, a negative that I can trim down to 4x6 inches per single page is a mechanical advantage, the way I have things fixed.

I hope the year has been a successful and happy one with you; I do not have to wish it has been a busy one; that goes without saying.

By the way, Wilkinson is going to have an auction clearance next year early. I am going to bid, but very cautiously; I got stuck on some things I bought from him, and he is only "cleaning out."

With my best regards to Mrs. Winship and yourself,

*Yours very sincerely*  
*William E. Gates*

# William E. Gates

## California

1912

"Of course you know the circumstances under which Dr. León was compelled to sell off his material ... It was a straight question of bread and butter for his family ... I formed the intention of asking you, as soon as the copying became practical, to let me copy a number of the pieces you got from him, and then surprise him by presenting him back with working copies of his own mss. etc.

William Gates, June 7 1912

# The Motul Maya transcription

“I greatly doubt if the Mexican people can print the  
Maya ms. in a manner that will please either you or  
Mr. Brown”

Albert Gatschel, 15 June. 1898

# The Motul Maya photostat

You say León writes that the Mexican Museum, he expects, may publish it in enlarged facsimile. Now I am in pretty close touch with things there, and I know León would like to do this, as well as a whole lot of other things. But there are a hundred things in the way.

William Gates, 6 Mar 1913

# The Motul Maya photostat

I know you will understand me when I say it is a delicate matter. I particularly do not wish to wound Leon's feelings, and very particularly not to discourage any efforts in linguistics he has made. But Government publications are notoriously inadequate,

William Gates, 14 April 1913

# The Motul Maya photostat

Still I did not wish to suggest to Leon that he drop the work and let me go on with it, for that hardly seemed the thing to do. . . . But as he understands from Wilkinson that I have a facsimile edition within early and satisfactory reach, that will save him the laborious and costly effort, and therefore that only in case I resolve not to carry it out, will he try to do so.

William Gates, 14 April 1913

Textual reproduction has  
always been more diverse  
than we remember.

Mechanisms for textual reproduction can be used to justify and reinforce inequity.

There are no Maya in this  
history of the Photostat

# The Perfect Copy

Introduction: Molina's *Vocabulario*

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Conclusion: Cultural Heritage Informatics

**Replication is interpretive.**

**Replication shapes readability  
(access, accessibility, discoverability)**

**A more diverse corpus is not always more equitable.**



**Ethical practice was the primary concern for  
all involved...**

**- Christian Kelleher**

Archival principles such as provenance, order, custody, value, authenticity, and standardized systems of arrangement and description may fail to serve the interests of disadvantaged individuals and communities. When not critically tested, such principles have the potential to become agents of hegemony.

- Christian Kelleher

# Database management

## Interface design

## Ongoing development

**Are higher-resourced institutions  
always better suited for handling  
digitization projects?**

How can we fulfill our ethical obligations as replicating institutions in the digital age?