

The Perfect Copy

Photolithography, Photostats, and the Copying of Colonial History

Hannah Alpert-Abrams
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Slides available at: halperta.com/illinois

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



Gloria dñi pnta te fecit prole parentem.
qui genuit moriens, quos pater alme soues,
Confixus viuis, langues: cum mente revolus,
vulnera, cum speceras, sanguinata carne geris.

Aquí comienza vn vocabula-
rio en la lengua Castellana y Mexicana. Compuesto
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* tuū franciscum sig



* nis

redemptionis nostre.

Indomini nimia te fecit prole parentem.
qui geruit moriens, quos pater alme soues.
Confixus viuis, langues: cum mente revolus,
vulnera, cum speceras, sanguinata carne geris.

Tallado por el Audiencia Real en dos pesos y vn nombrado

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



* nis

redemptionis nostre.

Significat dominus seruum

dorum pñnta te fecit prole parentem.
qui genuit moriens, quos pater alme soues,
Confixus viuis, iangues: cum mente revolus,
vulnera, cum speceras, si g mata carne geris.

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.

Indomini nimia te fecit prole parentem.
qui geruit moriens, quos pater alme soues.
Confixus viuis, iangues: cum mente revolus,
vulnera, cum speceras, si g mata carne geris.

Tallado por el Audiencia Real en dos pesos y vn nombrón

John Carter Brown Library (copy I)

Benson Latin American Collection

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rio en la lengua Castellana y Mexicana. Compuesto
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* tuū Franciscum sig



* nis

redemptionis nostre:;

Significat dominus seruum



dorum p̄nta te fecit prole parentem.
qui genuit moriens, quos pater alme soues,
Confixus 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



Indomini nimia te fecit prole parentem.
qui genuit moriens, quos pater alme soues.
Confixus 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

John Carter Brown Library (copy I)

06585

Aquí comienza un vocabula-
rio en la lengua Castellana y Mexicana, Compuesto
por el muy reverendo 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, flagmata carne geris.

Benson Latin American Collection

This copy of Molina's *Vocabulario* 1535 is exceedingly rare, so much so that the authoring in his work on American aboriginal languages doubtless its existence.

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 will photograph, 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 catalog was mutilated, the central

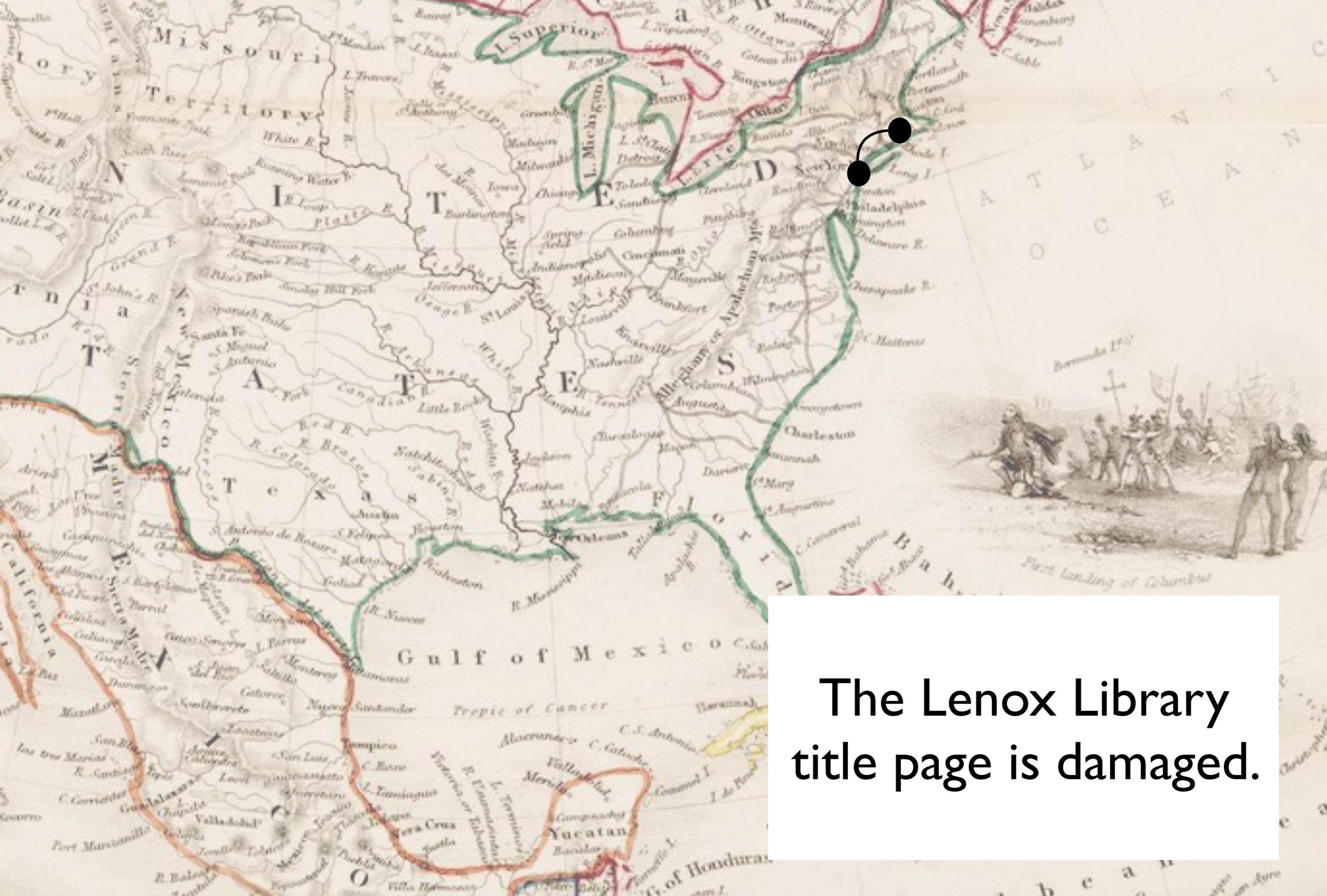
John Carter Brown Library



Copy arrives at JCBL
with pages missing.



John Russell Bartlett
writes to the Lenox
Library.



The Lenox Library
title page is damaged.



Aquí comienza un vocabula-
no en la lengua Castellana y Mexicana, Compuesto
por el muy reuerendo padre fray Alonso de
Mol na: Guardia del couero de Sant Antonio de
Tetzcuco dla ordé delos frayles Menores.



A substitute woodcut
is located

Benson Latin American Collection

Arte de la lengua Nōderi
canay Castellana, compuesta por el muy Re-
uerendo padre fray Alonso de Mo-
lina dela 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.

* Significatio nominis servitum

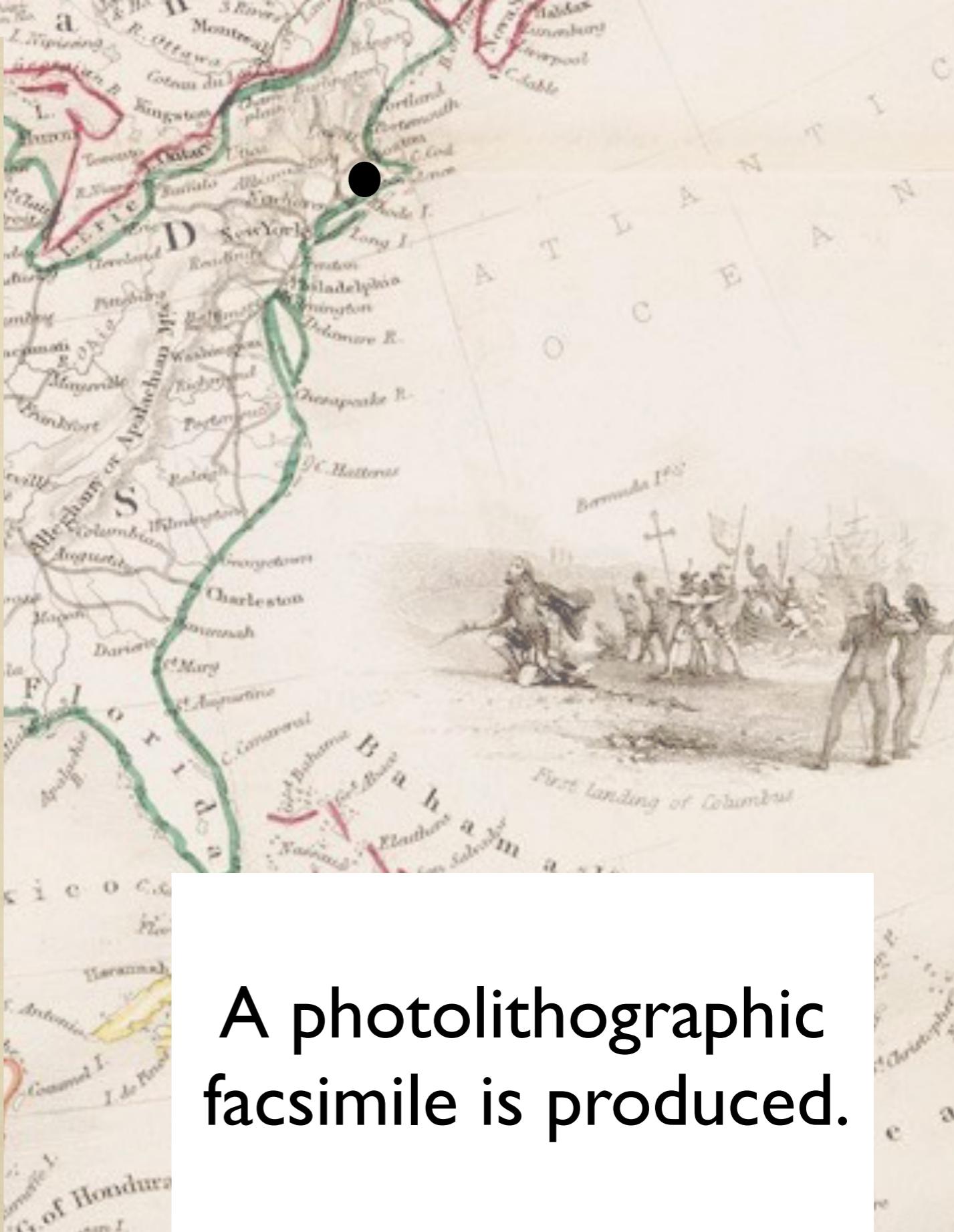
tuū franciscum sig



* filis redēptionis nostre:

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

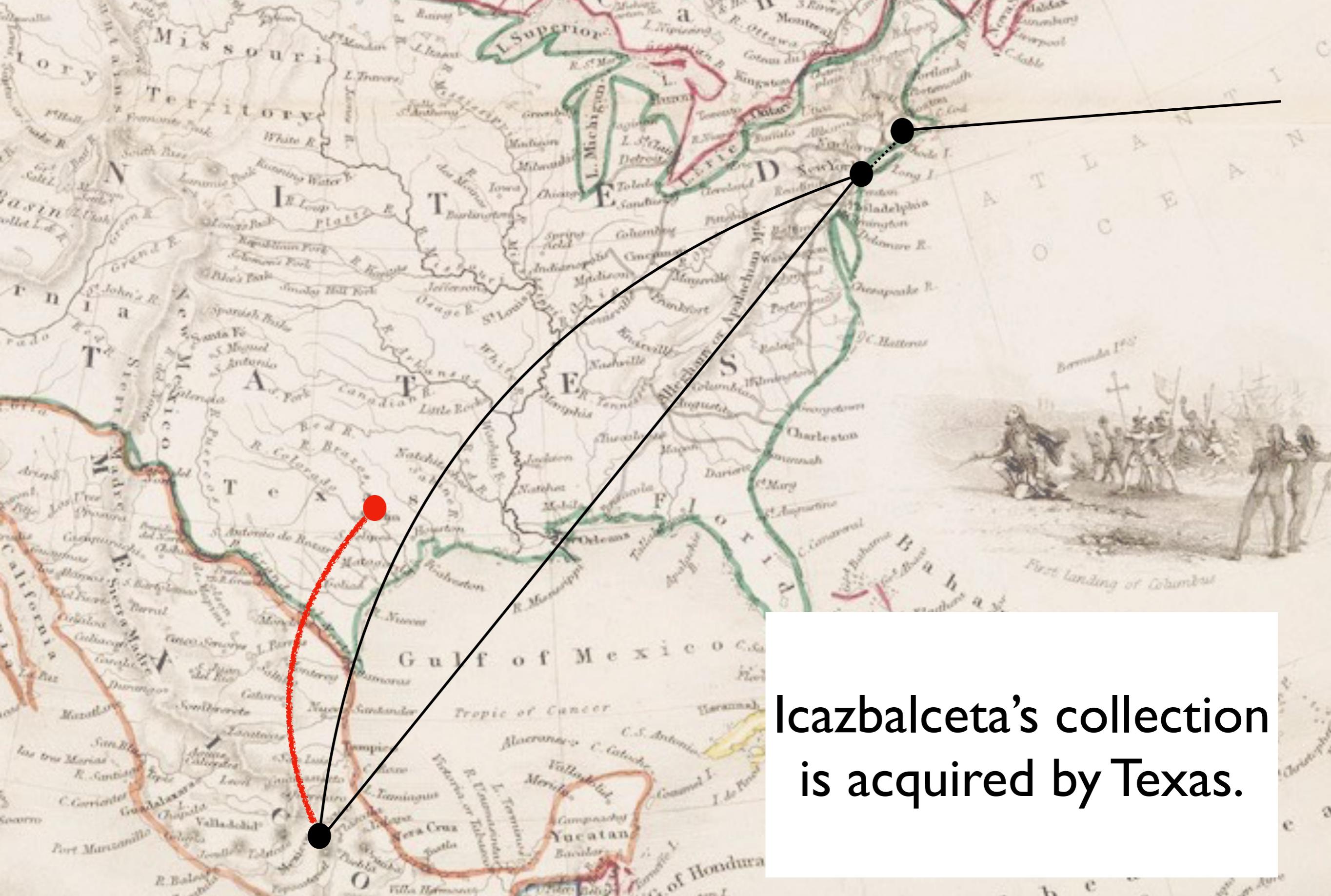
Benson Latin American Collection



A photolithographic
facsimile is produced.

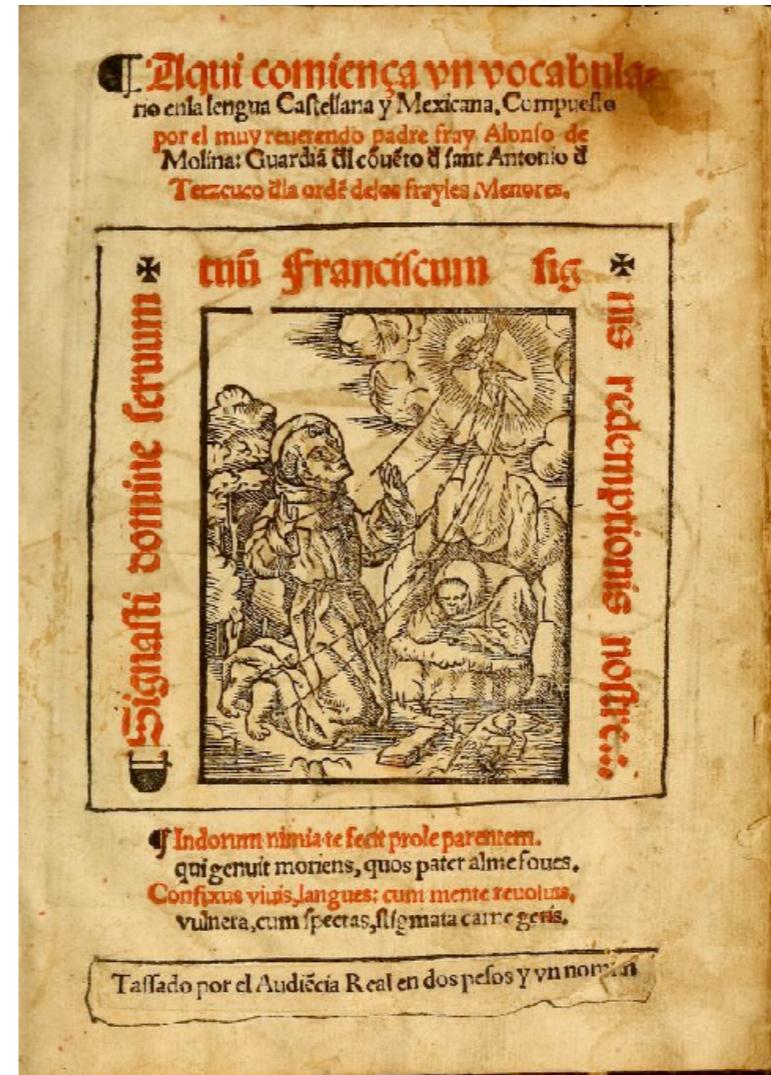


The facsimile is sent
to Icazbalceta.



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 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, yestuieren. Plega
adios, que con la primaz se acuer-
dan deste beneficio, y con el se
consoelen, quando hisieren al
guna cosa, que no concieren:
Señor nuestro, y reynuestro,
señores senadores, y suzes,
peruentera ya osdoy 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-
mazim, luchizim in mil-
tian. inamis timotlatzina
y mitlatoti, inopitzcam.
lolti intotecayo, in hogite,
aque Auh caiz manotli
tepetl in mizspachitl
tsitzcatia. tlacotihacab-
coe. caoquiss, caoletli
equlacate inhatconz,
mamatanz, ihacotti, in-
tie inanemuhqui, inga-
lia in quijquilitoque in-
in tepehl. A nesse axcan
cauhqui inameiolatazim.
yusnijtautique matlaco
a chapolon, zonxhalina
nacotl, intalotl: dei oih
maguixtique in ab. in-
auh caoam metotangie q
panzinho in hogite, na-
manoco ic onspittemi
in tepehd, inocaman, ina-



matlazmattinemij, maco-
nijmij huemij injeremij, inj-
quicatani, auh injucetl a
ohimale valchocas, mac-
oalmellaquaoas iniquac
ita ipar dioloto, in nomo
luchi, innomotecujij. A
motzonterotzin anel dei
quijuitzin niqueoa. tla-
quijmoma ditia, ma amedi
motlamatca halili in d. auh
maximotlacotilican, maxi-
motequijtilican, maximo-
nanamijqujlican in hogim
naoq que, in ioalli in checatl.

C Capitulo desigiete,
del razonamiento, lleno
de muy buena doctrina
enlomoral, que el señor
hazia 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
quijtl, intlatocatequijtl: auh

Culiba aparecieron gente de mas cuenca y
sus principales. Los unos y los otros vini-
eron á la Laguna de Mexico. Los de Cul-^{aut-}Laguna de
^{hua}Mexico
liba entraron por la parte de Oriente, y
edificaron un pueblo que se dice Tollantrino (hoy Tulancingo)
^{Tulantrino}Pueblo
^{Tulancingo}
co, diez y siete leguas de Mexico, y de allí
fueros a Tula, doce leguas de Mexico, á la
parte del Norte, y vinieron poblando hacia
Texcoco
~~Tetitla~~, que es la orilla del agua de la La-
guna de Mexico, cinco leguas de ~~Tetitla~~^{esia}
^{abajo de Texcoco}
y ocho de Cojico. Tescuco está la parte de
Oriente, y Mexico al Occidente, la laguna
en medio. Algunos quieren decir que Te-
coco se dice Culiba por respeto de estos
que allí poblaron. Despues el Señorío de
Tescuco fue tan grande como el de Mexico.
De allí de Tescuco vinieron á edificar águas:

Culhua

tollantrino hoy
tulancingo

tollan (hoy Tula)

Texcoco

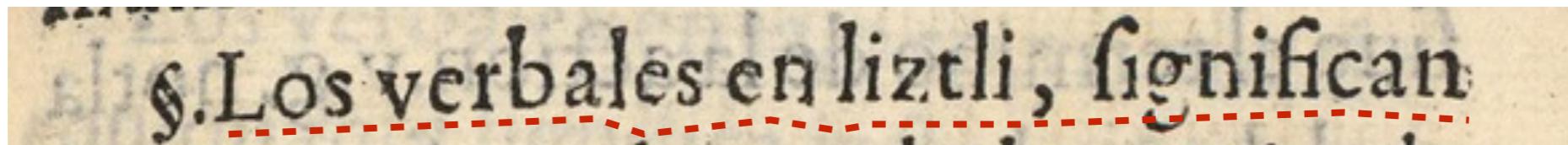
Texcoco

Texcoco

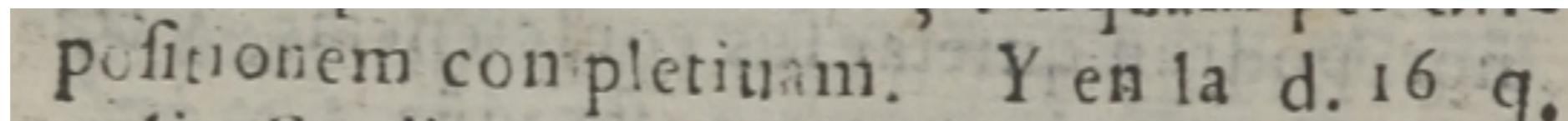
Culhua



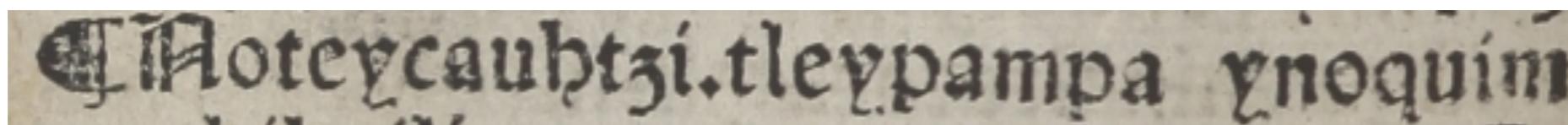
Wandering baseline



Uneven inking



Unfamiliar Typefaces



præfertim **vrgente causa**

ligature

non-standard
spelling

character
ellipsis

obsolete
character

praesertim **urgen^tte causa**

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

Multilingual Transcription

li yiollo, oquimmopanauili in cemana-

Norm: lī yiollo, oquim~~o~~panatili in cemana-
Hist: lī yiollo, oquimmopanauili in cemana-

false
substitution

oac tlaca.

Mod: oac tlaca.
Hist: oac tlaca.

In iehoatzi sant Ioseph, imaceal omu

Norm: In iehoatzi sant joseph. ymaceal om~~o~~-
Hist: In iehoatzi fant fofeph. imaceal 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.

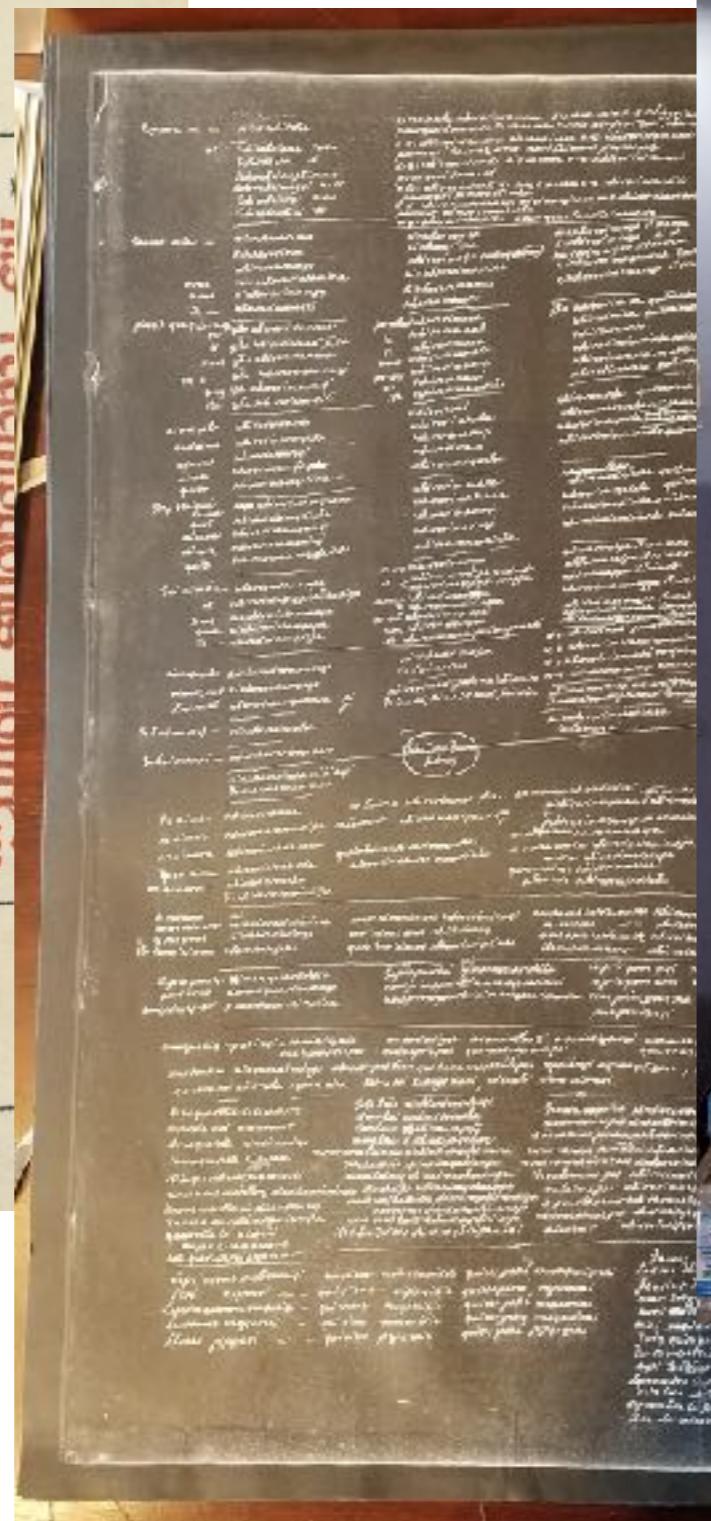
- Roland Barthes

Aquí comienza vn vocabula-
no es la lengua Castellana y Mexicana, Compuesto
por el muy reverendo padre fray Alonso de
Mol na: Guardia del couero del sant Antonio d
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

“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*

Context: "Unreadable Books"

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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)

**Grow Collections
Circulate Fragile Materials
Complete Damaged Volumes**

Circulate canonical materials.

Provide access to a universal
American corpus.

Circulate canonical materials.

Provide access to a universal
American corpus.

Diversify the historical record.

ntamane aioane cat n-q. schirerintamane	K-q. schirerimatch schirerimata schirerimau
je veux mon servir est pour qui j'aimé	pour qui j'aimé tu j'aimé enfin qui maime
si aioianki cata n-q. schirerintamandi	K-q. schirerimeeq i schirerimiaminreh schirerimai
vous nous laisons par ce que je	n-q. schirerimakintch
i aiyea cata n-q. schirerintanca	K-q. schirerimata schirerimeeqo schirerimata
iki aigkikicata n-q. schirerinta	
tsiela	
negi aigiancicata n-q. schirerin	
uscela	
si pour qui j'en laissons il	
nintchererimeeqo il	
kitchirerimeeqo	
schirerimeeqo il	
nintchererimeeqonina il nou	Kitchirerimeeqo devou.
Kitchirerimeeqonqo il vous	Kitchirerimeeqo no
glo schirerimata quilmaint	
schirerimica quilmaint	
schirerimata	
schirerimiaminta qulnou	
schirerimeracyi m et v	
schirerimeracyi quilvous	
schirerimitche quilmaine	
schirerimeratche quiltaine	
schirerimegonche multaine	
schirerimiamintche qulnous	
schirerimikitche quilmaine	
schirerimirkitcha quiltaine	
schirerimakitcha quillaine	
schirerimiamintche qulnous	
schirerimiq il mainoit	
schirerimekipa il tainoit	
schirerimappa il lamoit	
schirerimiamintppa il nou	
schirerimeracpa il vous	
schirerimeracpanati il sonatine	
schirerimeracpanati il sonata	
K-q. schirerimeti pour ta meil	
K-q. schirerimeracyi vous aimet	
K-q. schirerimiamintch vous aimet	
K-q. schirerimeracyi vous etn	
schirerimeracyi q miranadi	
il nou ta me est pourquoi il nou do	
nintchererimeeqo cata	
te lamerai	
peki scherikiq nestuchi	
schirerimeracgok i. devou	
aimer avec que vous avez le coeur	
aimer cela en moi	
aimer cela en toi	

The Miami-French Dictionary

John Carter Brown
Library

The Miami-French Dictionary

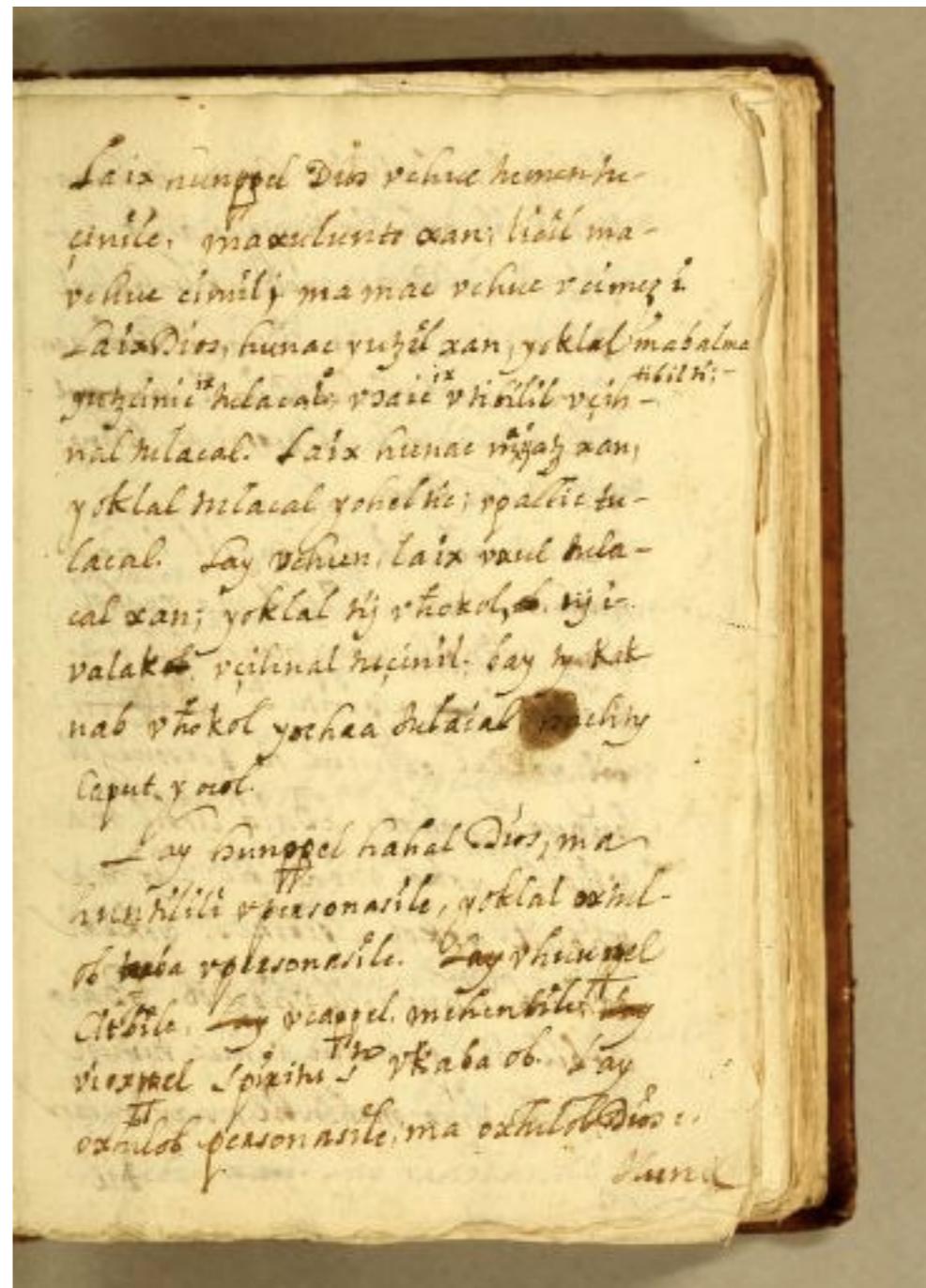
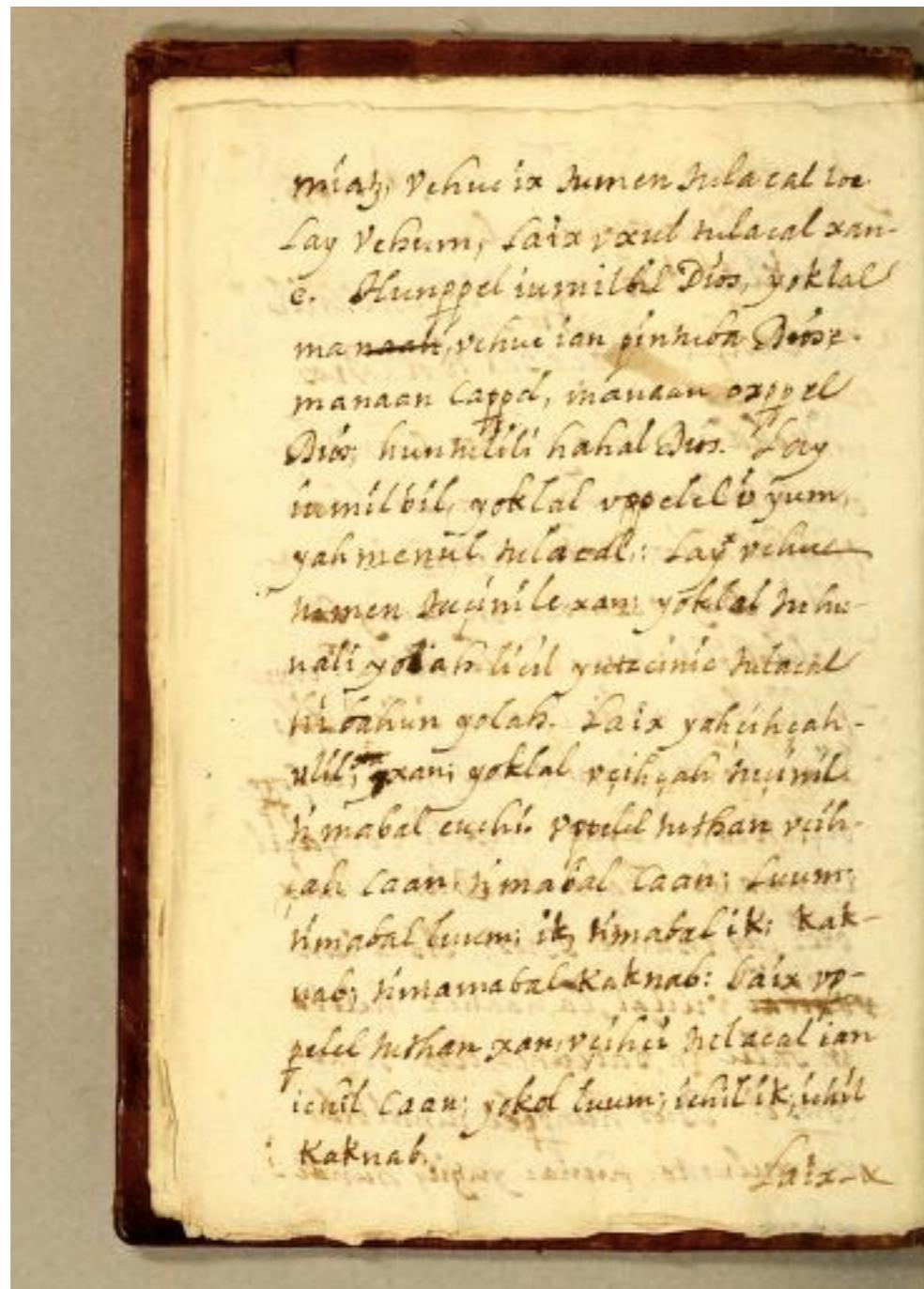
The image shows a single page from a handwritten manuscript. The title "The Miami-Fr" is written in a large, bold, black font at the top center. Below the title, there are several columns of text in a cursive script. The text appears to be in a Native American language, possibly Miami or a related Algonquian language. The handwriting is fluid and varies in size across the page. There are some corrections and additions made throughout the text. The paper has a light beige or cream color.

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, Matlakilanga. 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 León'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 León 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*

Context: "Unreadable Books"

Case Study: Mayan Photostats at the JCB

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?