

Grapholinguistics in the 21st Century 2022 Conference - Paris, 8-10 June

Emblematic techniques as textual strategies in non-linear and linear scripts

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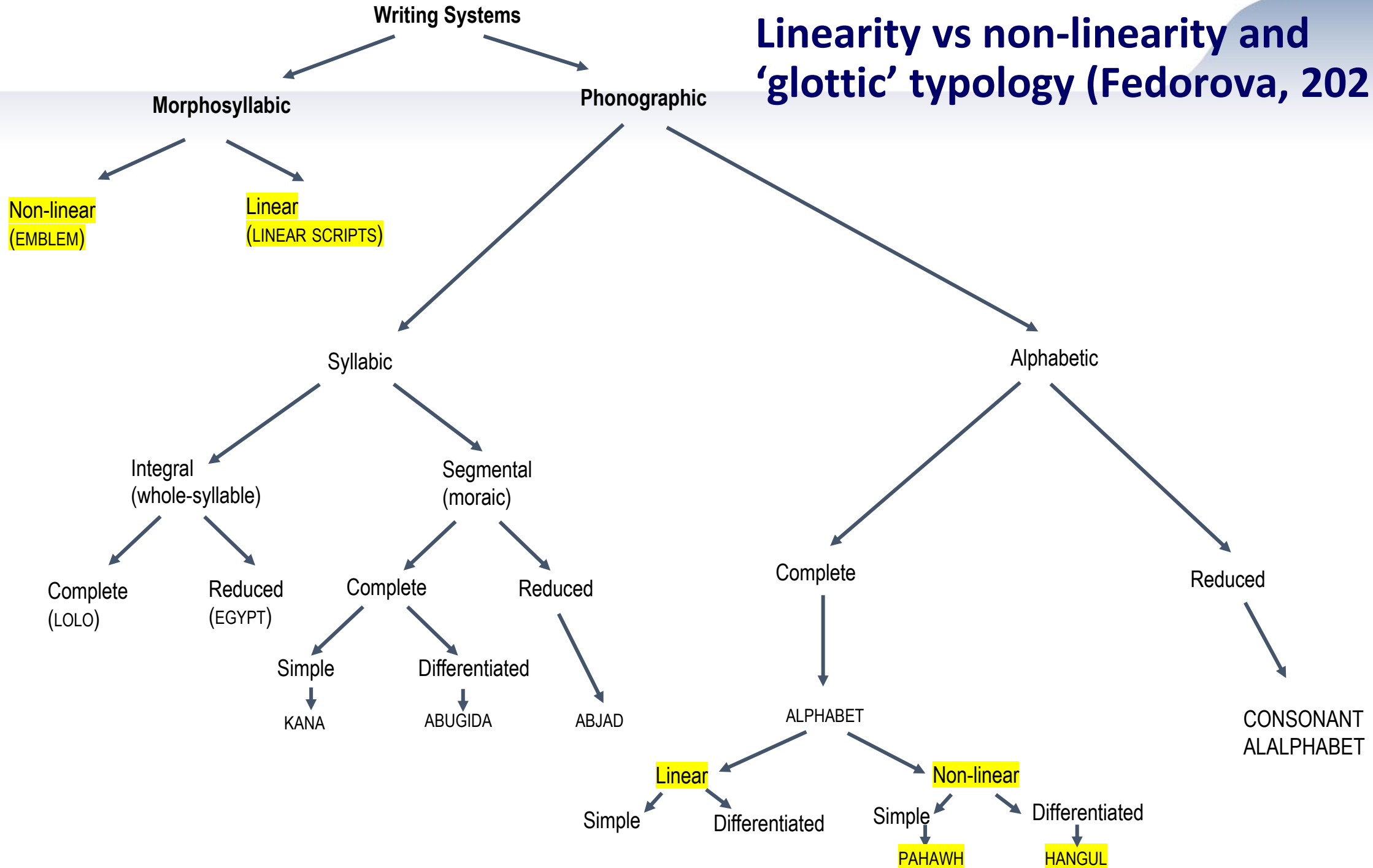
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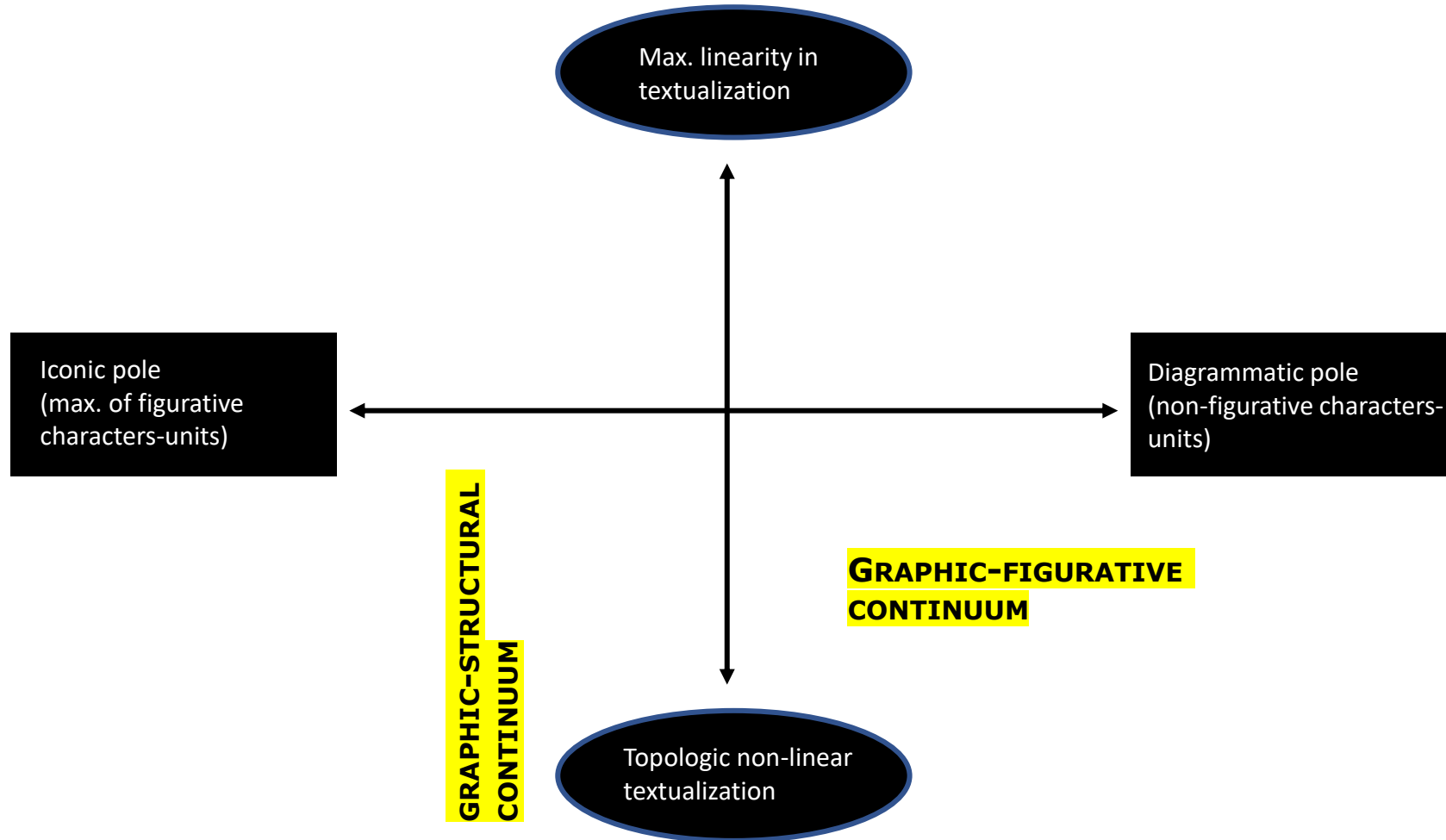
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Linearity vs non-linearity and 'glottic' typology (Fedorova, 2021)



Linearity vs non-linearity in structural (*non-glottic*) continuum



Non-linearity in writing units, *entaxis*, and Unicode's display engine

त	र	ि	म	ू	र	त	ि		
0924	094D	0930	093F	092E	0942	0930	094D	0924	093F
त		ि	म	ू		त	ि		
t		+r	+i	m	+ū	r+	t	+i	
	त्र	ि	म	ू		त	ि		
	tr	+i	m	+ū		r+	t	+i	
ि	त्र		म	ू		ि	त		
+i	tr		m	+ū		+i	t	r+	
त्रिमूर्ति									

Display engine of Unicode allowing correct visualization of the Hindi written word *trimurti* 'trinity'.

The occurrence of the diacritical 049D allows the formation of consonantal nexus such as <tr> and <rt>. The last stage *re-organizes* glyphs according to graphic rules of the cursive Devanagari writing.

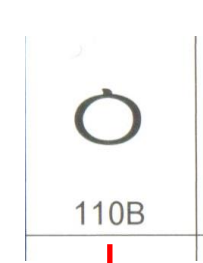
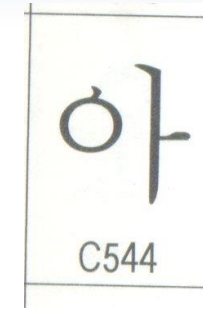
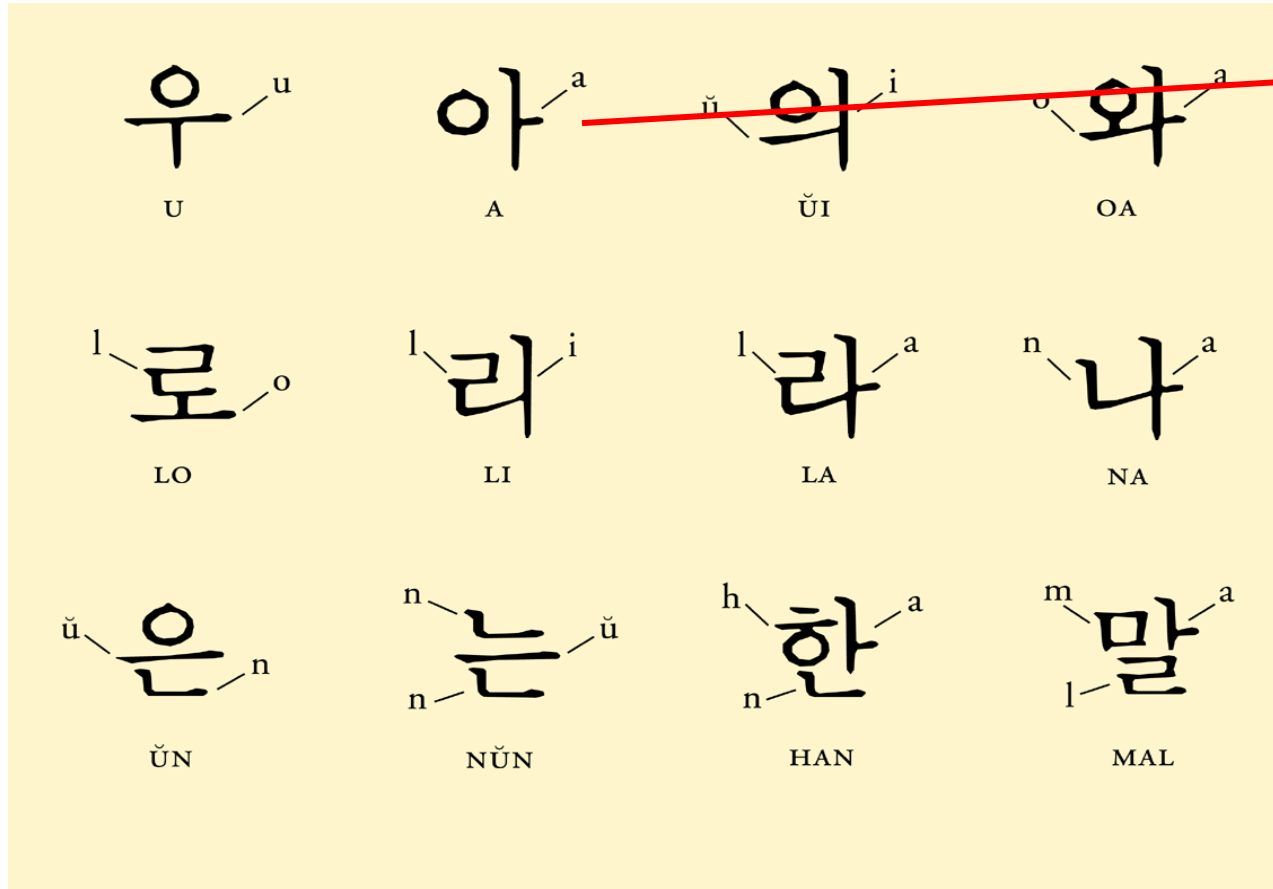
छिन्दन्ति

+i ch +n da +i +n +t

Linear assemblage of characters to write the Sanskrit verb *chindanti*, 'they can cut into pieces', as e.g. in नैनं छिन्दन्ति शस्त्राणि नैनं दहति पावक, *nainam chindanti śastrāṇi nainam dahati pāvakaḥ*, 'the Soul has the properties that weapon can not pierce it, fire can not burn it'.



Non-linearity in writing units, *entaxis* and Unicode's 'multiplication' of glyphs

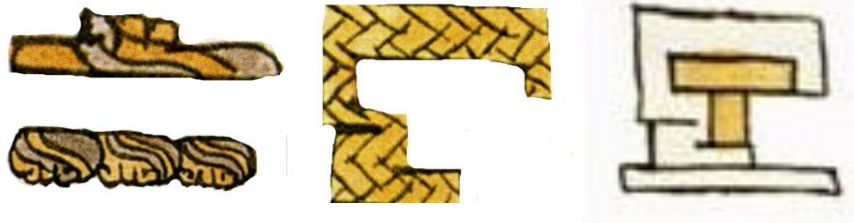
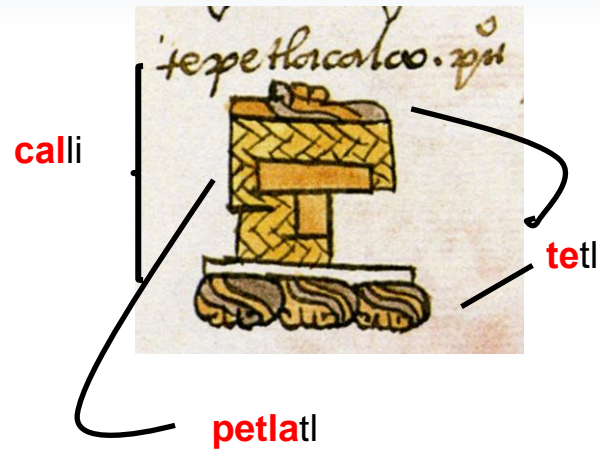


Hangul
chonseong
ieung = ø

Hangul jungseong
A = /a/



Non-linearity in writing units, and *entaxis*: emblems in Aztec writing

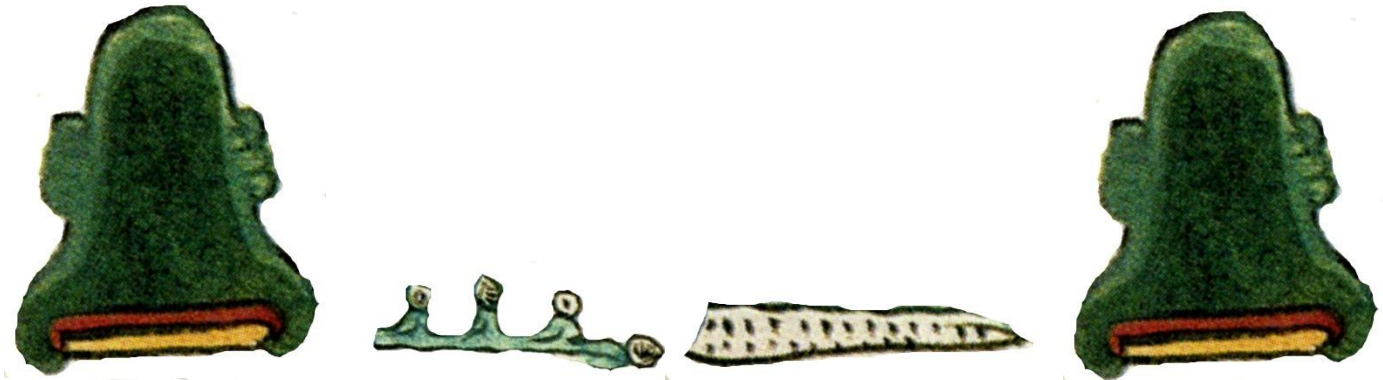
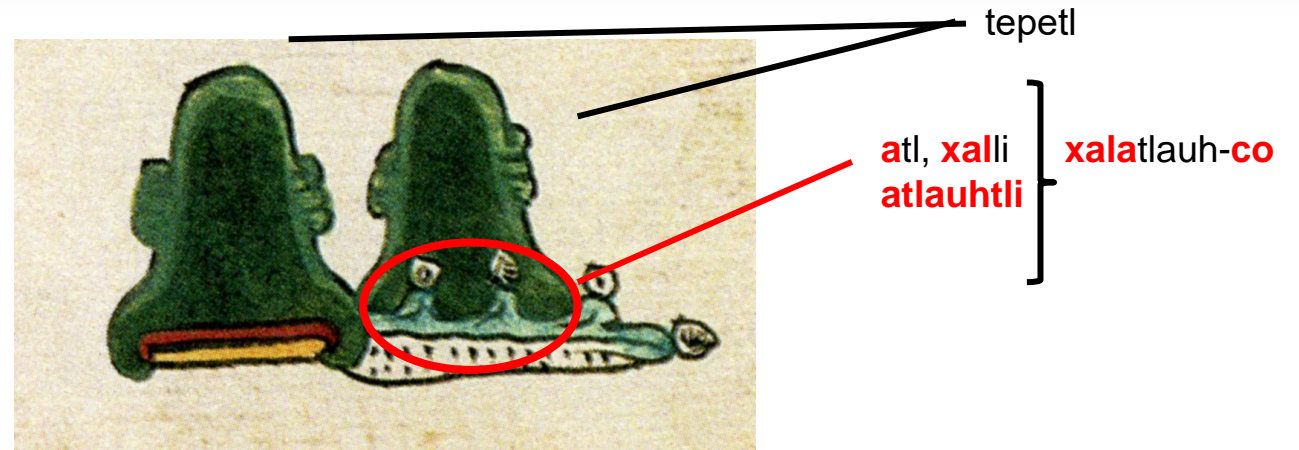


<tetl> - <petlatl> - <calli> > **te[te]-petla-cal-[co]**
(doubled)

Petlacalco 'In the stone woven wicker cage'

Morpemic structure: [te-tl + (petla-tl + cal-li)]+co

Graphic structure: graphic compound of *petlacalli* 'cage, i.e. chest' incorporated between *tetl* 'stone' (above and beneath), *petlacalli* as a syncretic image of *calli* ('house') and *petlatl* 'woven mat' and -co (locative suffix).



<tepetl> - <atl> - <xalli> - <tepetl> > **tepe-a-xal-tepe[c] ???**

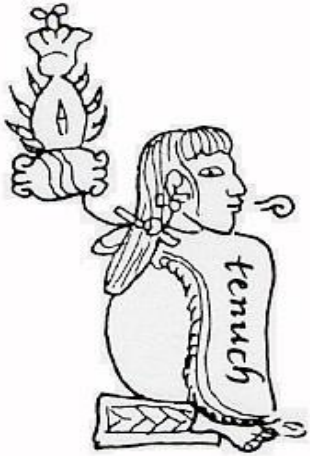
Xalatlahco - 'In the sandy canyon'

Morpemic structure: [xal-li + atlahuhtli]+co

Graphic structure: two hills (*tepetl*) represent the canyon (*atlahuhtli*) between them, *atl* 'water' gives a phonetic complement for the *a-*, *xalli* 'sand' is beneath.



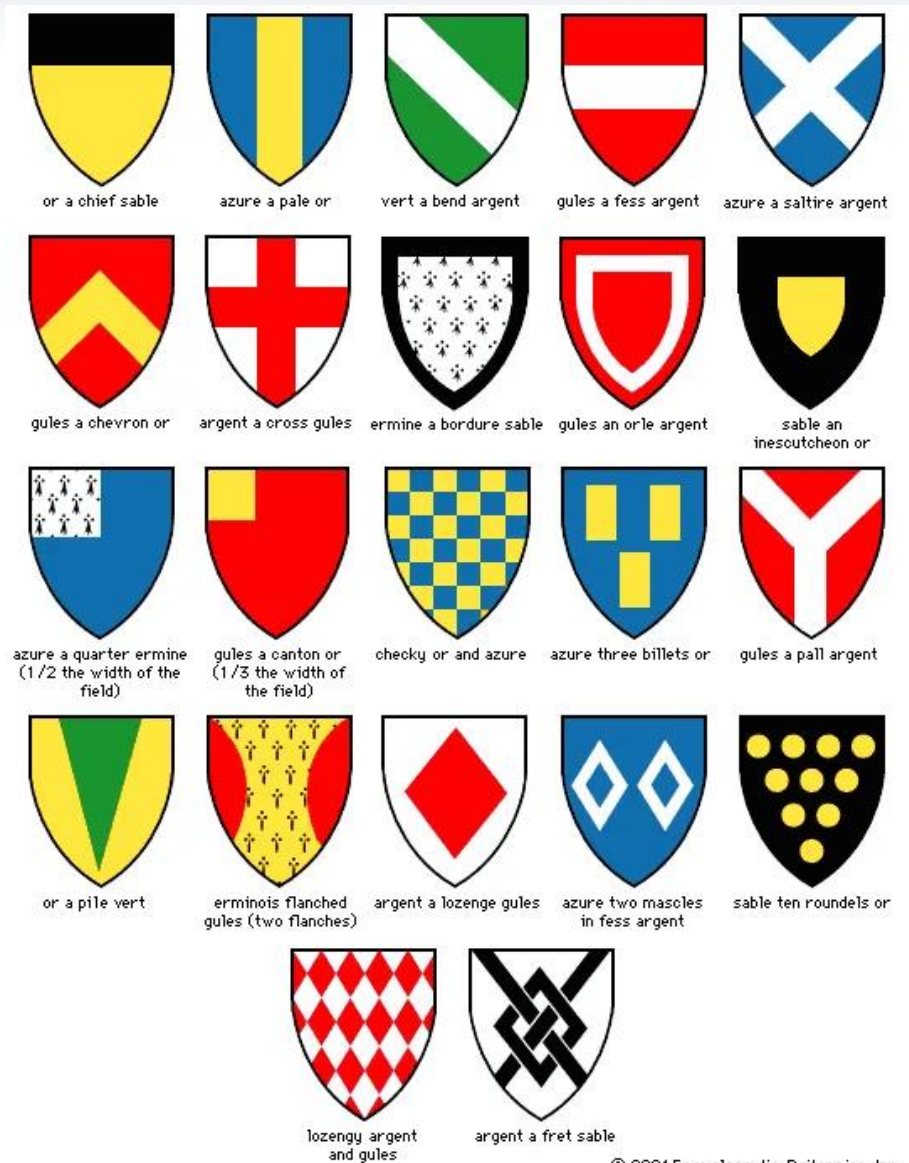
Linguistic emblems in Aztec script



- a) TENOCH – name of a leader, graphic compound of *nochtli* 'cactus' upon *tetl* 'stone'; graphic ligature to a head
- b) COYUCAC – tribe name, free juxtaposition of a head of *coyotl* 'coyote' and *cactli* 'sandal'
- c) MATATLAN (Codex Mendoza) – name of place 'Among nets', free juxtaposition of *matatl* 'net' and *tlantli* 'teeth', homonym for *-tlan* 'among' – phonetic rebus
- d) MATATLAN (Historia Tolteca Chichimeca) - a syncretic image of a hill (*tepetl*), a symbol of a city not read, in a net – *matatl*; graphic fusion
- e) YACAPITZTLAN – 'A place where there are many sharp objects' (possibly sharp stones or thorns). Graphic fusion of a hill with a 'nose' *yacatl* and a 'bag' *petzotl*; *-tlan* without graphic representation
- f) AHUACATLAN – 'Where there is a lot of avocado trees'; 'teeth' *tlantli* are incorporated into a tree (for *ahaucatl*)
- g) CUAUHUACAN - 'The place of possessors of eagles', an eagle *cuāuh-tli* with a tree *cuahu-itl* as a phonetic reduplication; possessive suffix *-huâ-* without graphic representation, and the same for *-can*; graphic ligature to the 'symbol' (linguistically expressing a metaphor) of *conquered city*.



Non-linearity in “writing” units: European heraldic emblems



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In coats of arms, units are always *discrete* and never *linear*, since they are combined into a global reading using a space which does not impose any preferential order.

Georges Mounin

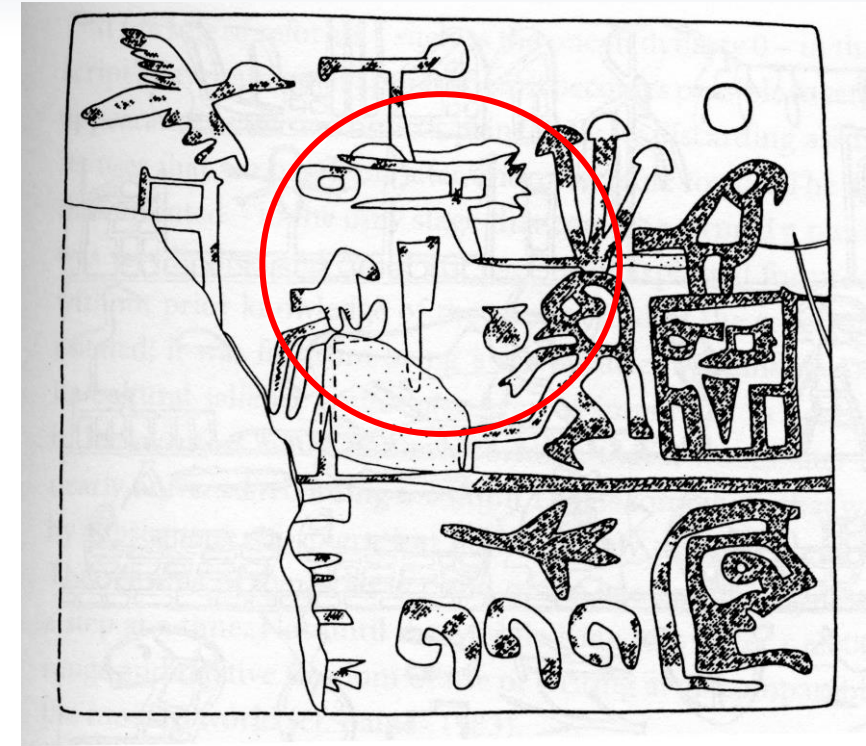
Non-linguistic graphic emblems



Linguistic content in an Italian heraldic emblem of Bracci’s family (the <arm> holding the flower is *braccio* in Italian).



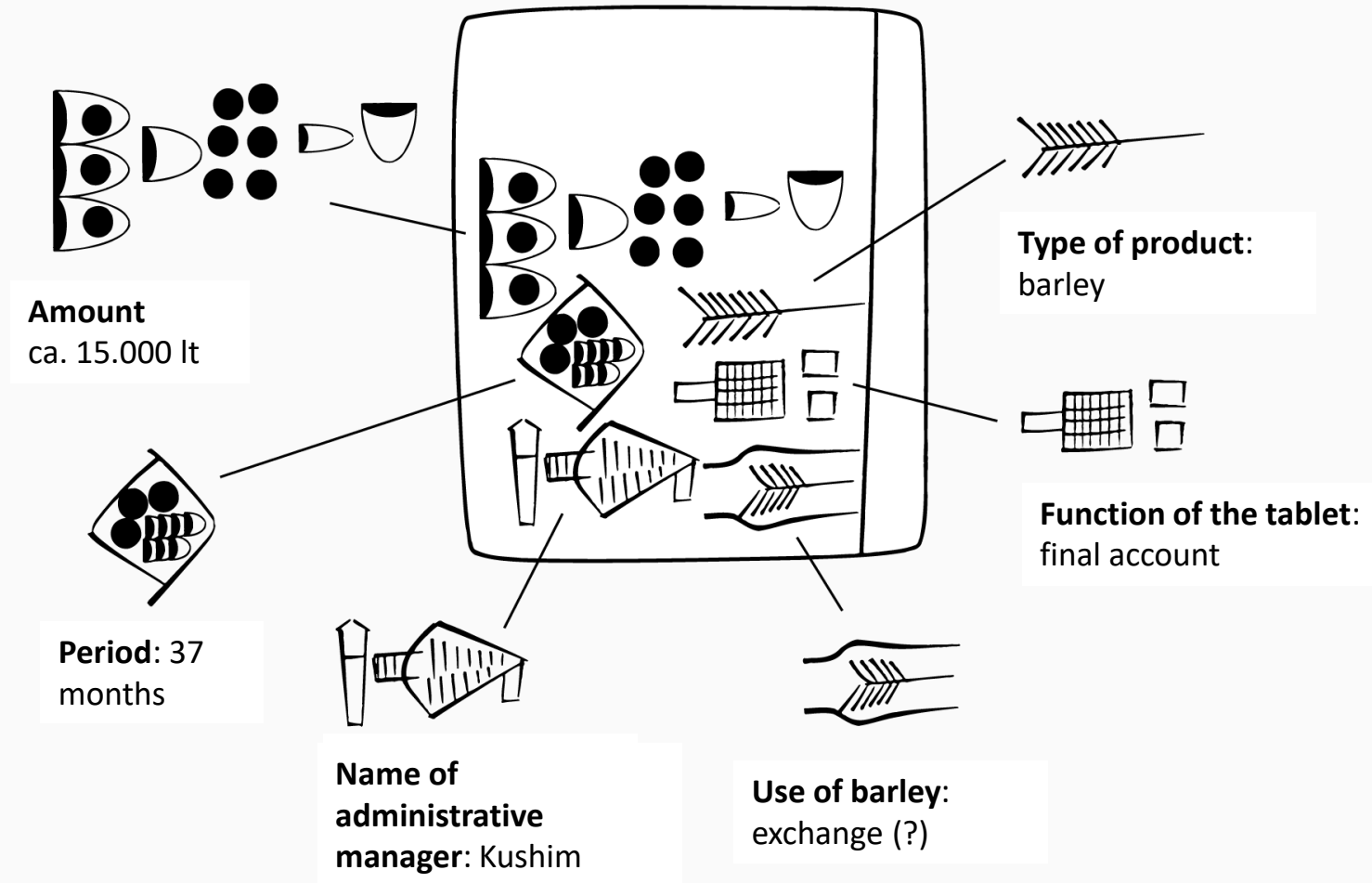
Emblematic iconic space in pre-dynastic Egyptian hieroglyphs



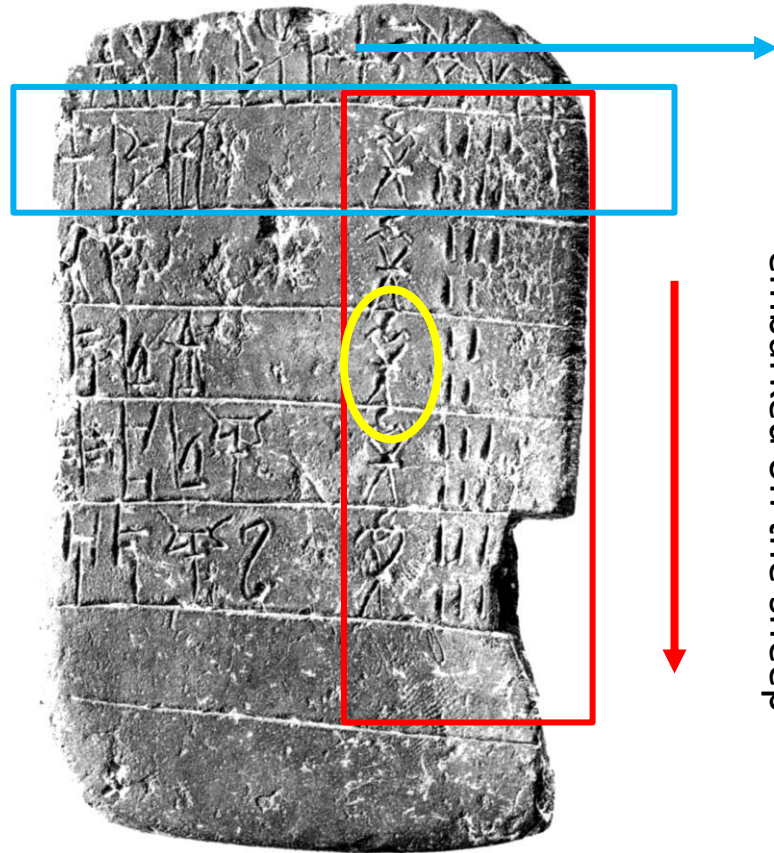
The name of Egyptian first king of unified Egypt *Nr-mr* (commonly vocalized as NAR-MER) is written in circled spaces.



Emblematic and diagrammatic (partially non-iconic) space: Uruk tablet



Emblematic and diagrammatic (partially non-iconic) space: Micenean Linear B tablet



Horizontal line, from left to right: specific qualifications of rowers, and numerical amount of single persons [logographically written] in the sheep.

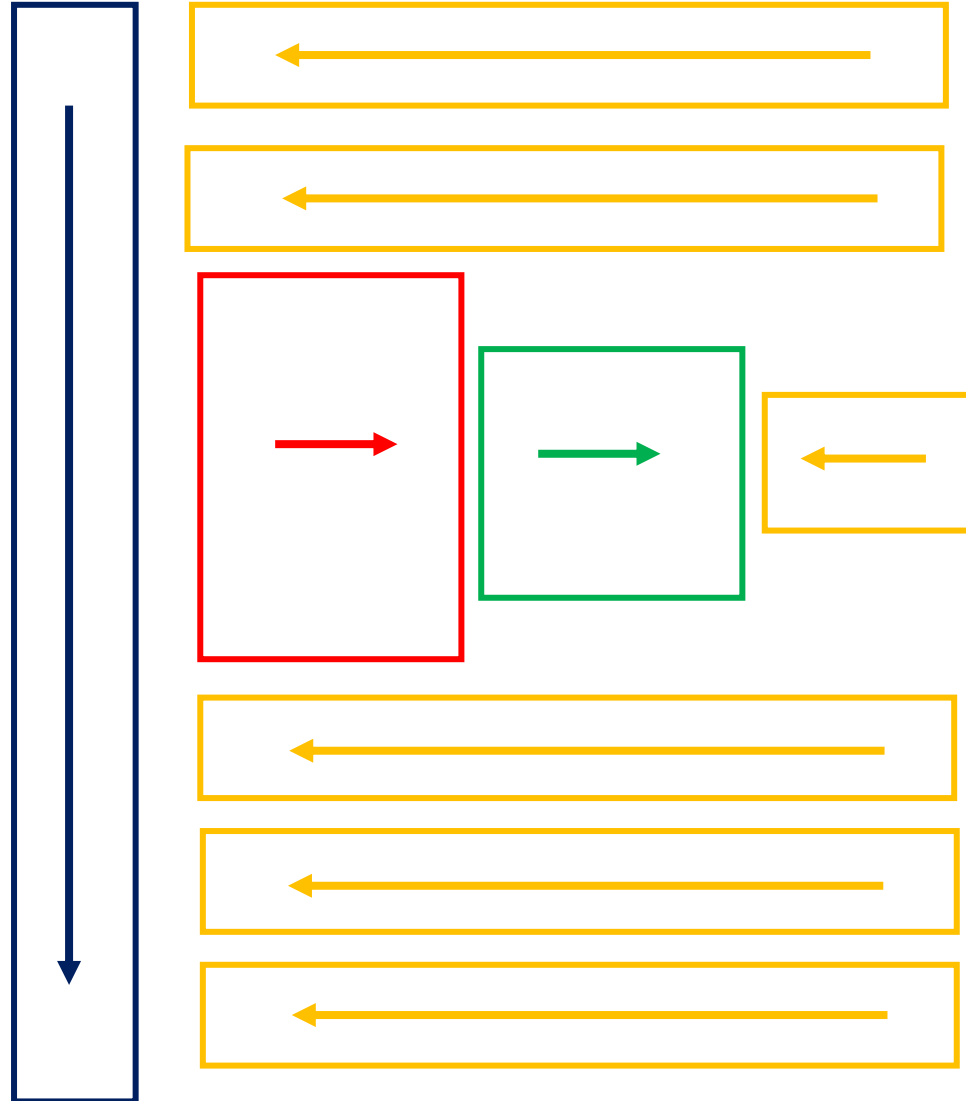
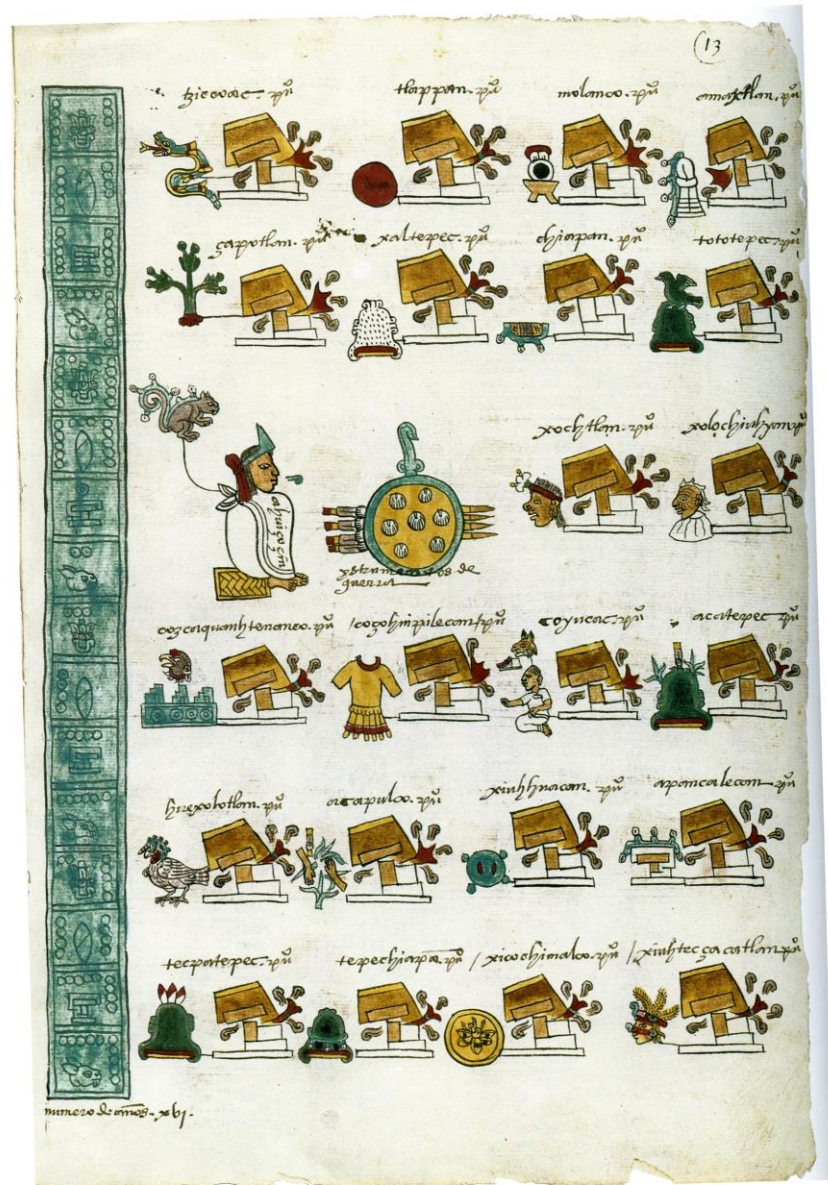
Vertical column, from top to bottom:
total amount of rowers/people embarked on the sheep

In Mycaenean writing, writing act is to be seen as a communicative process in which the choice of material surface, the diagrammatic arrangement of written signs (alignment, ordering by columns, extrapolation and highlighting of significant items, change in size of characters...) play a role even more important than accurate transcription of speech.

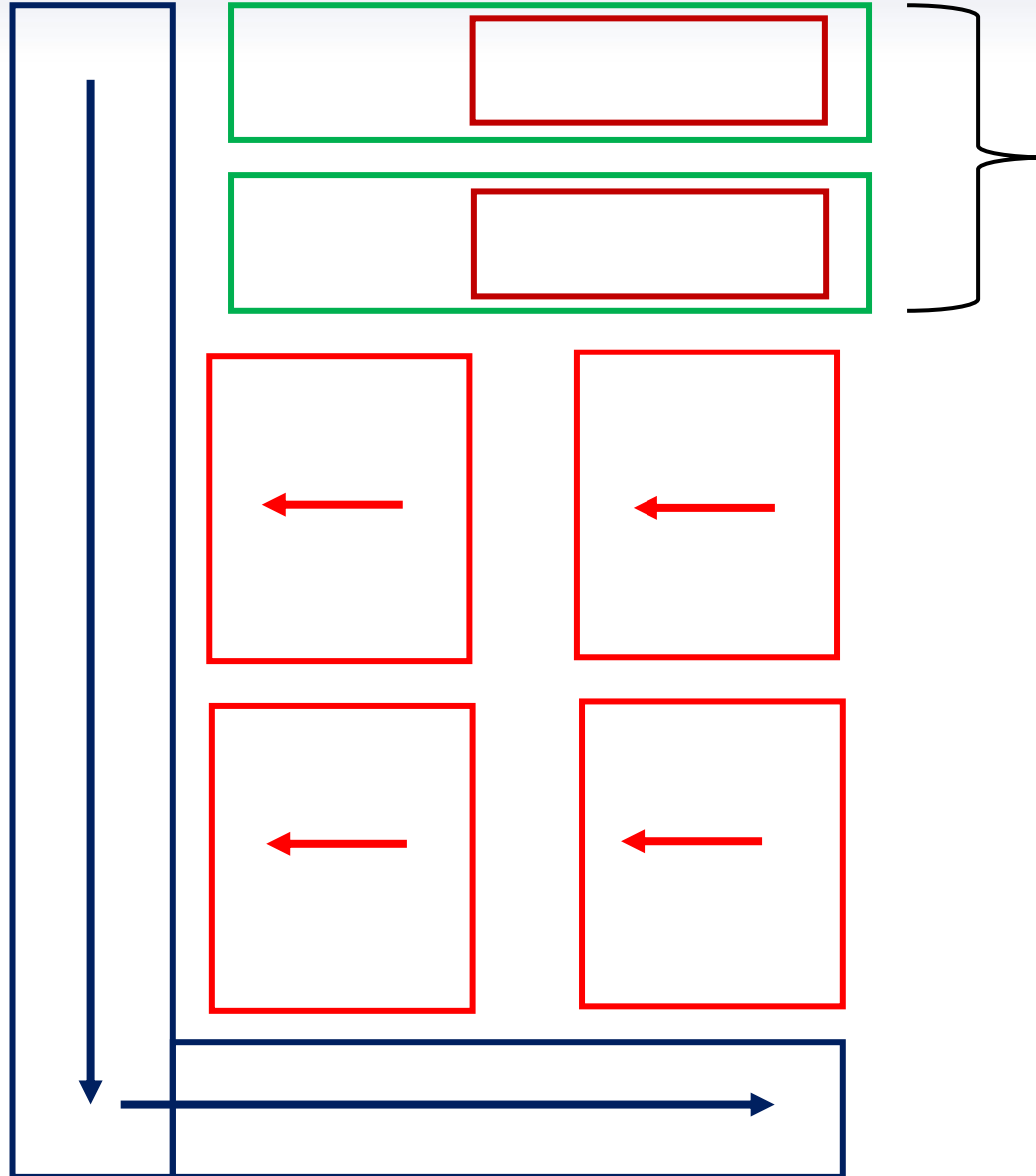
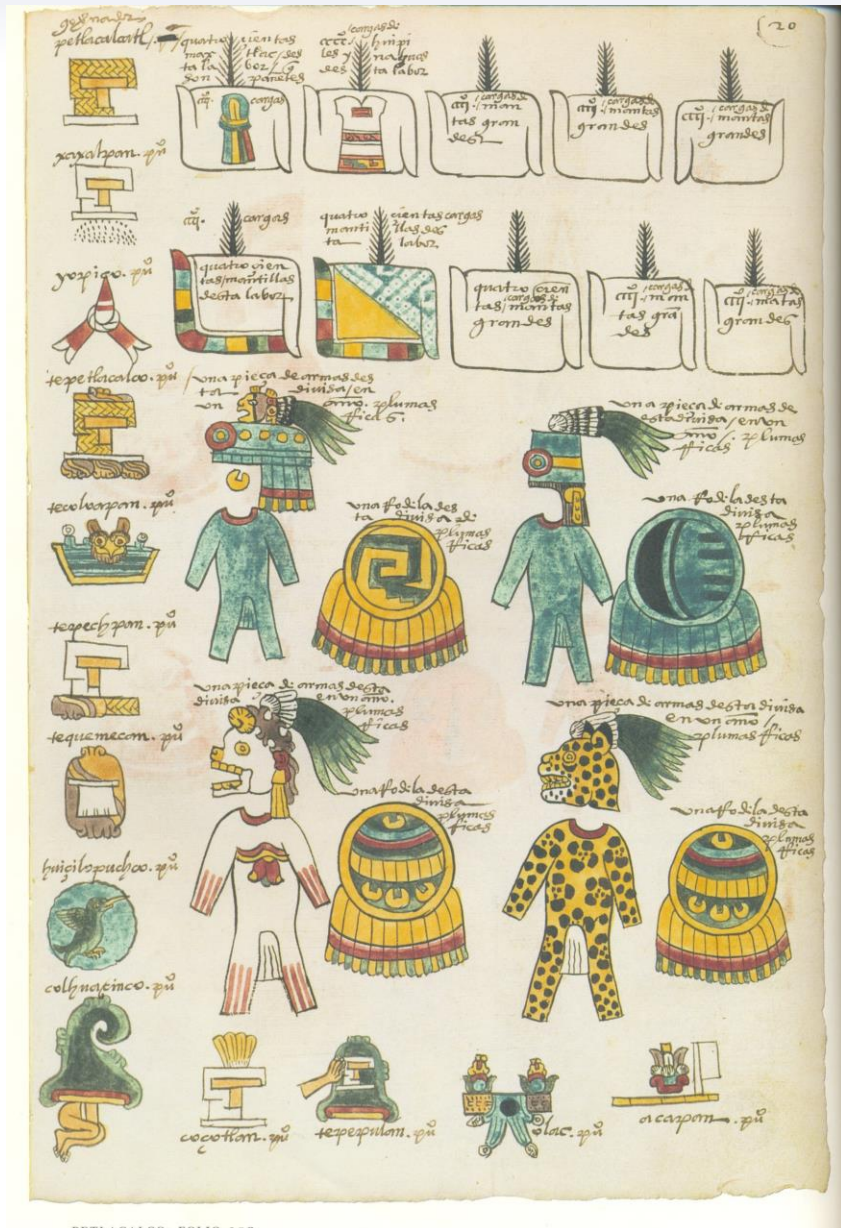
Massimiliano Marazzi



Emblematic-synsemic space in Aztec writing of *Codex Mendoza*: (half a page of) historical report
















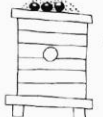

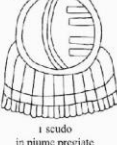

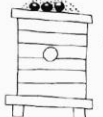







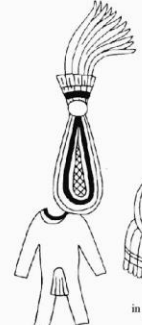


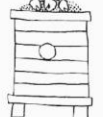
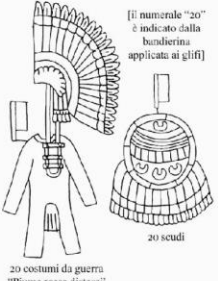


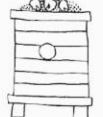









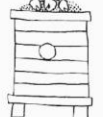










Emblematic-synsemic space in Aztec writing of *Codex Mendoza*: (half a page of) tribute account



Time lapses in a year ?



Emblematic-synsemic space in Aztec writing of *Codex Mendoza*: hypothesis of double-page's 'original' framed space

<p>pueblos soggetti al tributo</p>  <p>Peticacatl [casa di stuoia]</p>  <p>Xaxalpan [casa sulla sabbia]</p>  <p>Yopico [cappello a due punte]</p>  <p>Tepetlacalco [casa di stuoia sulla pietra]</p>  <p>Tecoapan [gufo sull'acqua]</p>  <p>Tepechpan [casa su pietra e stuoia]</p>  <p>Toquemecan [drappo bianco sulla grande roccia]</p>	<p>consegna mesi I-III</p>  <p>400 fasce di stoffa</p>  <p>400 tuniche da donna</p>  <p>400 mantelli</p> <p>mesi I-III</p> <p>[il numerale "400" è indicato dal ciuffo sopra il glifo, il quale a sua volta rappresenta un carico di tessuti]</p>  <p>1 costume da guerra "Testa di Cane", in piume pregiate</p>  <p>1 scudo in piume pregiate</p>  <p>1 costume da guerra "Diavolo", in piume pregiate</p> <p>mesi I-IX</p>  <p>3 misure di fagioli, più 3 misure di <i>chila</i> [il numerale "3" è indicato da tre fagioli, che danno anche la quantità di <i>chila</i> (i granelli sopra il silos)]</p>	<p>mesi IV-VI</p>  <p>1 costume da guerra "del prezioso primogenito", in piume pregiate</p>  <p>1 scudo in piume pregiate</p>  <p>1 costume da guerriero "Giaguaro", in piume pregiate</p> <p>mesi IV-VI</p>  <p>3 misure di fagioli, più 3 misure di <i>chila</i> [il numerale "3" è indicato da tre fagioli, che danno anche la quantità di <i>chila</i> (i granelli sopra il silos)]</p>	<p>mesi VII-IX</p>  <p>400 mantelli</p> <p>mesi VII-IX</p>  <p>400 scialli</p>  <p>400 scialli decorati</p>  <p>400 mantelli</p> <p>mesi VII-IX</p>  <p>400 scialli</p>  <p>400 scialli decorati</p>  <p>400 mantelli</p>	<p>mesi X-XII</p>  <p>1 costume da guerra "Dito del piede", con piume verdi come come quelle dell'uccello <i>quetzal</i></p>  <p>1 scudo in piume pregiate</p>  <p>20 costumi da guerra</p> <p>mesi X-XII</p>  <p>3 misure di mais, più 3 misure di <i>huauili</i> [il numerale "3" è indicato da tre chicchi di mais, che danno anche la quantità di <i>huauili</i> (i granelli sopra il silos)]</p>	<p>mesi XII-XV</p>  <p>20 costumi da guerra "Piume rosse distese"</p>  <p>20 scudi</p>  <p>20 costumi azzurri "Farfalla"</p> <p>mesi XII-XV</p>  <p>3 misure di mais, più 3 misure di <i>huauili</i> [il numerale "3" è indicato da tre chicchi di mais, che danno anche la quantità di <i>huauili</i> (i granelli sopra il silos)]</p>	<p>mesi XVI-XVIII</p>  <p>400 mantelli</p> <p>mesi XVI-XVIII</p>  <p>400 mantelli</p> <p>mesi XVI-XVIII</p>  <p>400 mantelli</p>	<p>pueblos soggetti al tributo</p>  <p>Nexitlan [centro del focolare]</p>  <p>Tlaxeximilco [casa dell'ago d'osso]</p>  <p>Tecalco [casa del giudice]</p>  <p>Toyac [casa dell'acqua che si spande]</p>  <p>Xico [lombico dal cuore della montagna]</p>  <p>Tzapotitlan [silbero di <i>apodilua</i>]</p> <p>mesi X-XVIII</p>  <p>3 misure di mais, più 3 misure di <i>huauili</i> [il numerale "3" è indicato da tre chicchi di mais, che danno anche la quantità di <i>huauili</i> (i granelli sopra il silos)]</p>	 <p>Huitzilopachco [colibrì verde]</p>  <p>Colhuatzimco [montagna piccata]</p>  <p>Cotzotlan [casa delle piume gialle]</p>  <p>Tepepulcan [montagna premuta]</p>  <p>Otac [acqua nel campo di fiori turchesi]</p>  <p>Acapan [freccia sulla carna]</p>  <p>Cuitlahuac [cinnamo concinato]</p>  <p>Tzacacoac [casa del serpente]</p>  <p>Mizquic [casa del <i>mesquite</i>]</p>  <p>Aochpanco [strada che passa il fiume]</p>
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Emblematic non-linear space of multidimensional structuring images in Europe: *Guilelmus Peraldus: Summa de virtutibus et vitiis*



Guilielmus Peraldus, *Summa vitiorum et virtutum* [half of XIII c.]
Militia est vita hominis super terram

Every *locus* of the picture is inscribed. In order to understand what we see, we must not only read inscription but draw our attention to the *place* in which has been situated; we have to slowly retrace, step after step, the compositive plot [...]

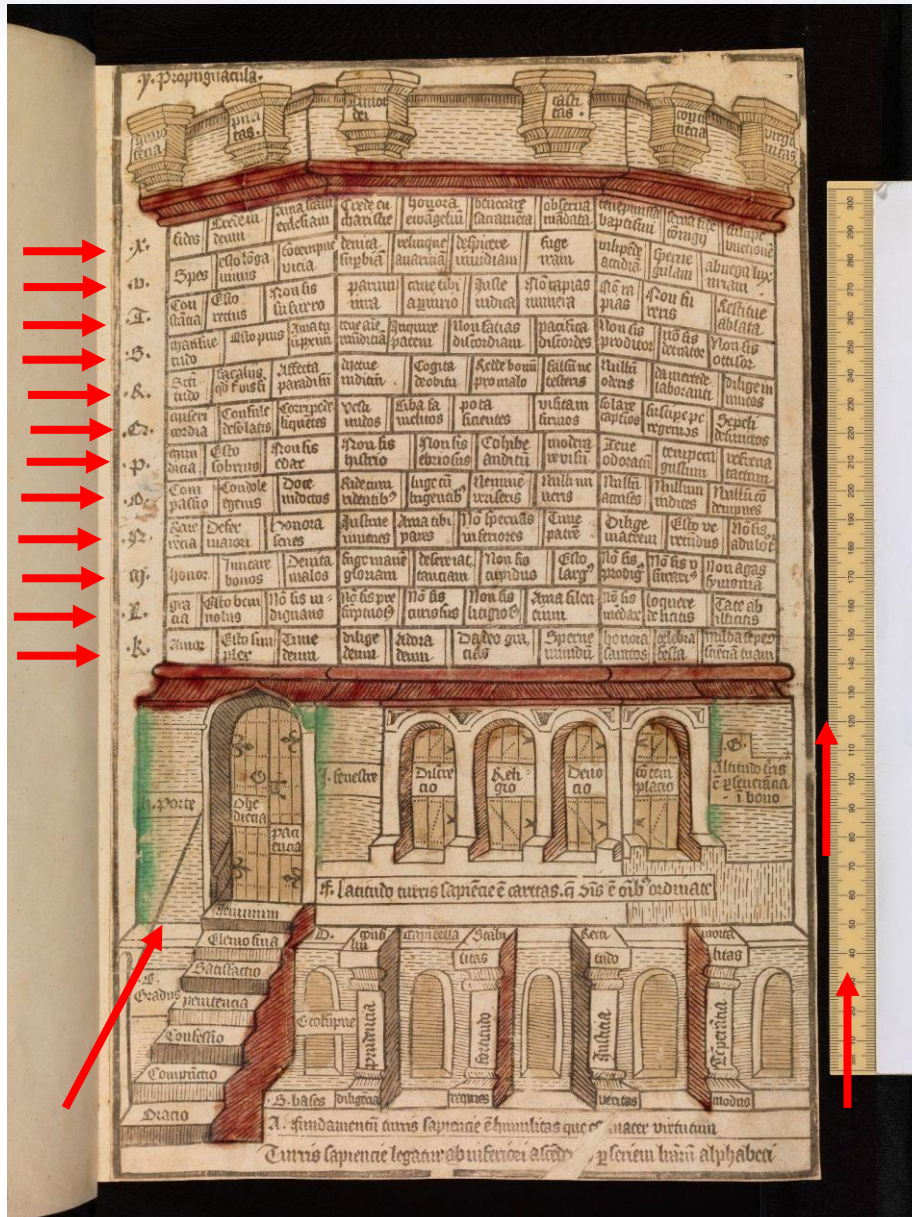
Lina Bolzoni

[Better], it is the representation of the structure, the cognitive field expressed by the text.

Francesco Antinucci



Emblematic non-linear space of multidimensional structuring images in Europe: the *Turris sapientiae*



Johannes Metensis, *Turris sapientiae*, woodcut with Latin inscriptions [Germany, c. 1475]

Turris sapientie legatur ab inferiori asce[n]de[n]do p[er] seriem l[itte]raru[m] alphabeti.

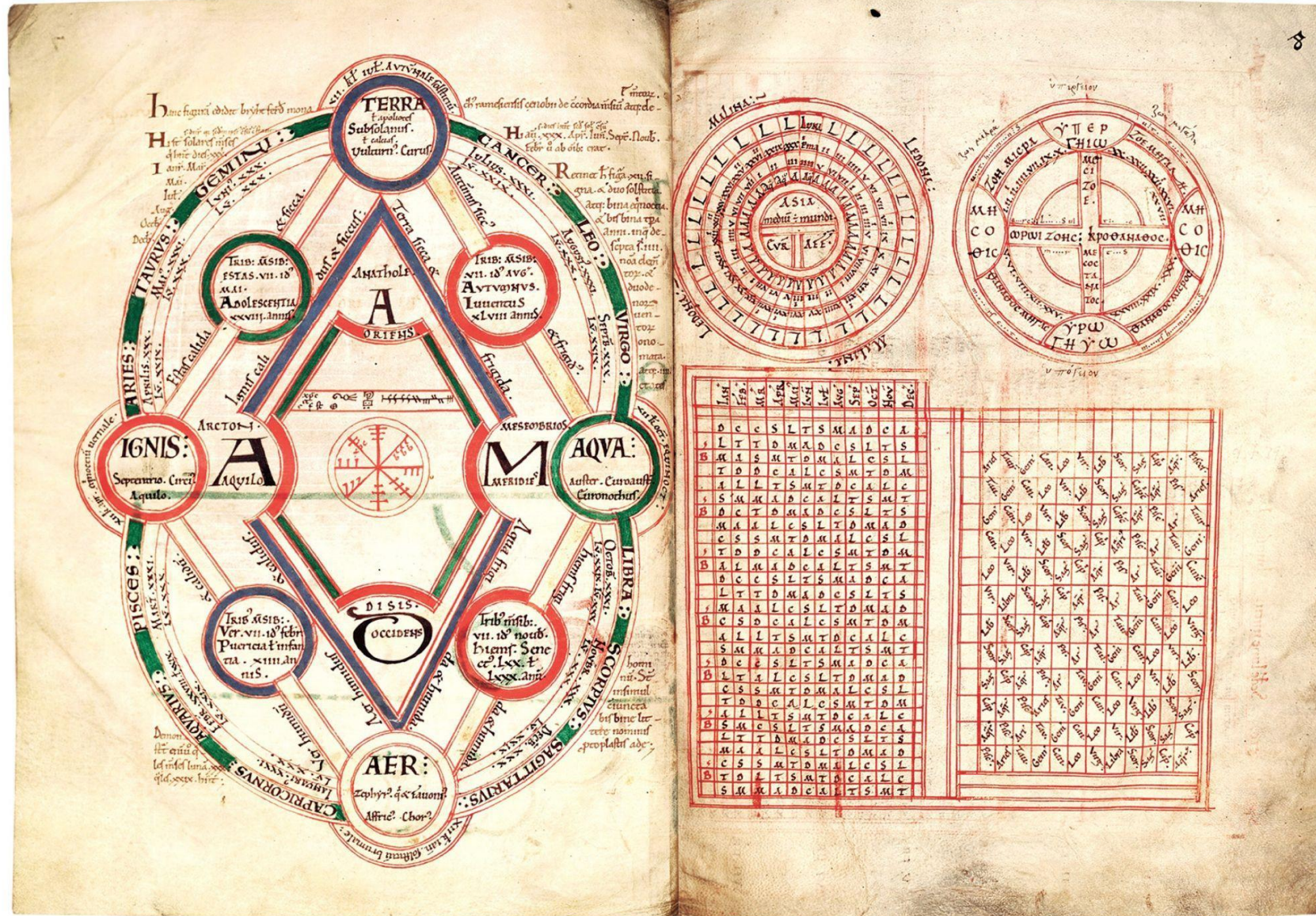
Elements of the building analogically express, through their mutual locations and relations, the relationships in the field of knowledge [*Wisdom*, i.e. the true knowledge inspired by God].

The 'physical' form of the tower as it is represented *makes we see* what is the relation between concepts linguistically [i.e. alphabetically] expressed in the text [with non linear framed space]: it is radically different from linear order, where this relation should be mentally inferred and pieced together. *Turris* is significantly named *Speculum theologiae*, i.e. 'mirror', visual representation of theology.

Francesco Antinucci



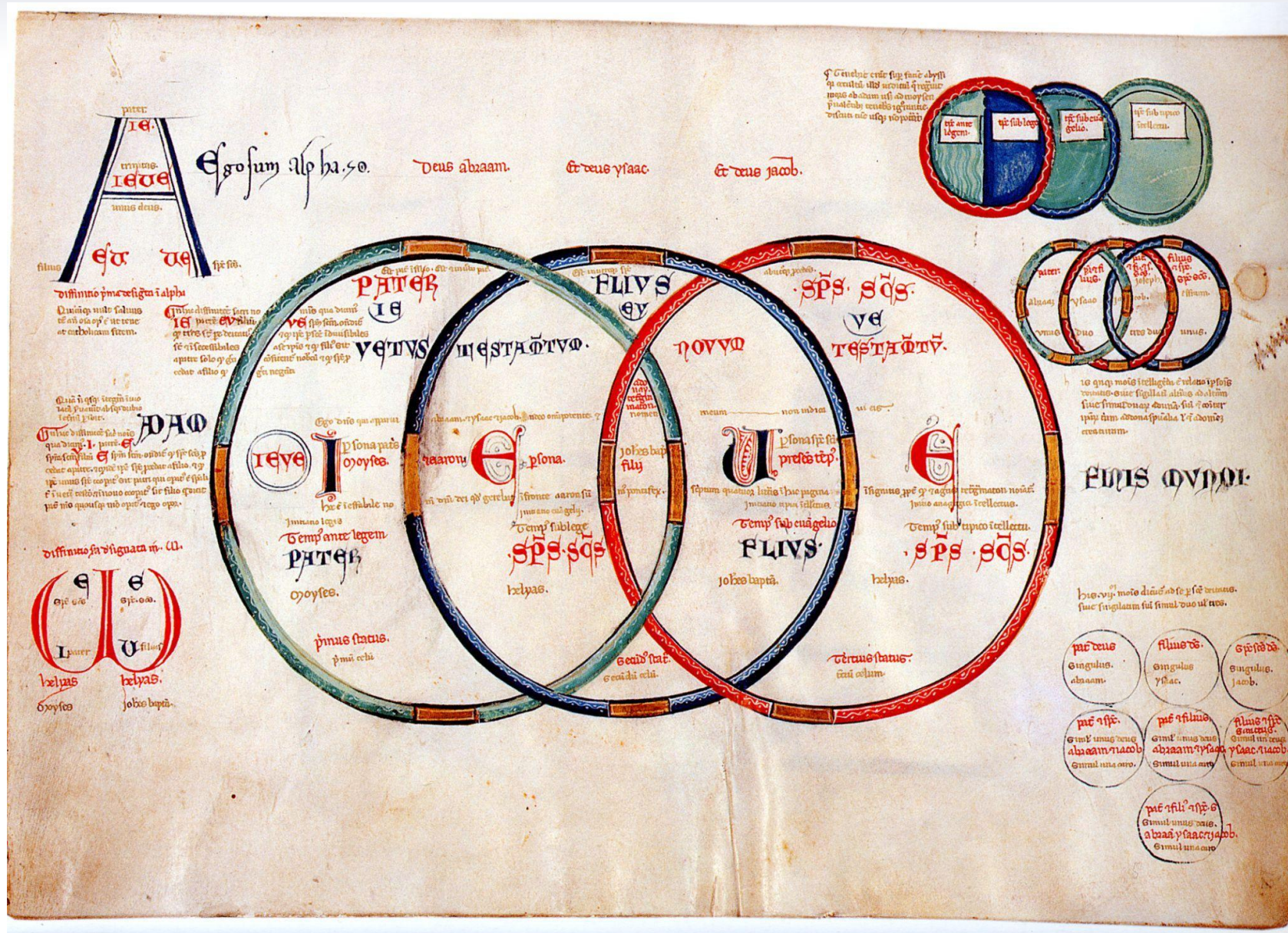
Emblematic non-linear space of multidimensional structuring images in Europe: the *Byrthferth* diagram



The diagram (drawn ca. in 1110) is a scheme representing the harmonic relations between spatial and temporal elements (climates, seasons, winds, months, zodiac etc.) [Perondi 2012]



Emblematic non-linear space of multidimensional structuring images in Europe: Gioacchino da Fiore's *Liber figurarum*



Trinitary circles (beginning XIV c.)
The analogically framed space illustrates the relationships and correspondences between the Three Persons of Trinity, and between trinitarian Persons with others elements such as Alpha-Omega tetragram, human history, biblical *figurae* [Perondi 2012]



Contemporary examples of emblematic non-linear space: visual poetry

The fermented
grape-
juice
among the reproductive
parts
of
seed-plants

O! I'm conscious
of
my state
of
being isolated
from
others!

Ah! Body attendant revolving keeping & shining
on about 238,840 miles by
the (mean) reflecting the light
Earth aloof radiated
by
the
sun

into
my
mouth
I take
& while expressing the hope for thy success.
swallow
the
liquid

Stephen Themerson,
English translation of a
Chinese poem by Li Bo
(VIII century A.D.), with
the use of *internal
vertical justification*
(1949).



Emblematic non-linear (and public) space: visual poetry

Loin du pigeonier

Et vous savez pourquoi

Pourquoi la chère couleuvre se love
de la mer jusqu'a l'espoir attendrissant
de l'Est

Malourène 75 Canteraine

Hexa èdres bar belés
mais un secret
collines bleu en sentinelle

dans la Forêt ou nous chantons
O gerbes des 305 en dérouté

Guillaume Apollinaire



Photo by Anoesjka Minnaard.

Graphic means to emblematically express in writing technical musical terms

planissimo

piano

mezzo piano

mezzo forte

FORTE

FORTISSIMO

cresCENDO

DIMINuendo

SForzando

rita r d a n d o

a c c e l e r a n d o

stac · ca · to

leeegaaatooo

♥dolce♥

fermataaaaaaaaaa

CRESCENDO_BACHTRACK

O

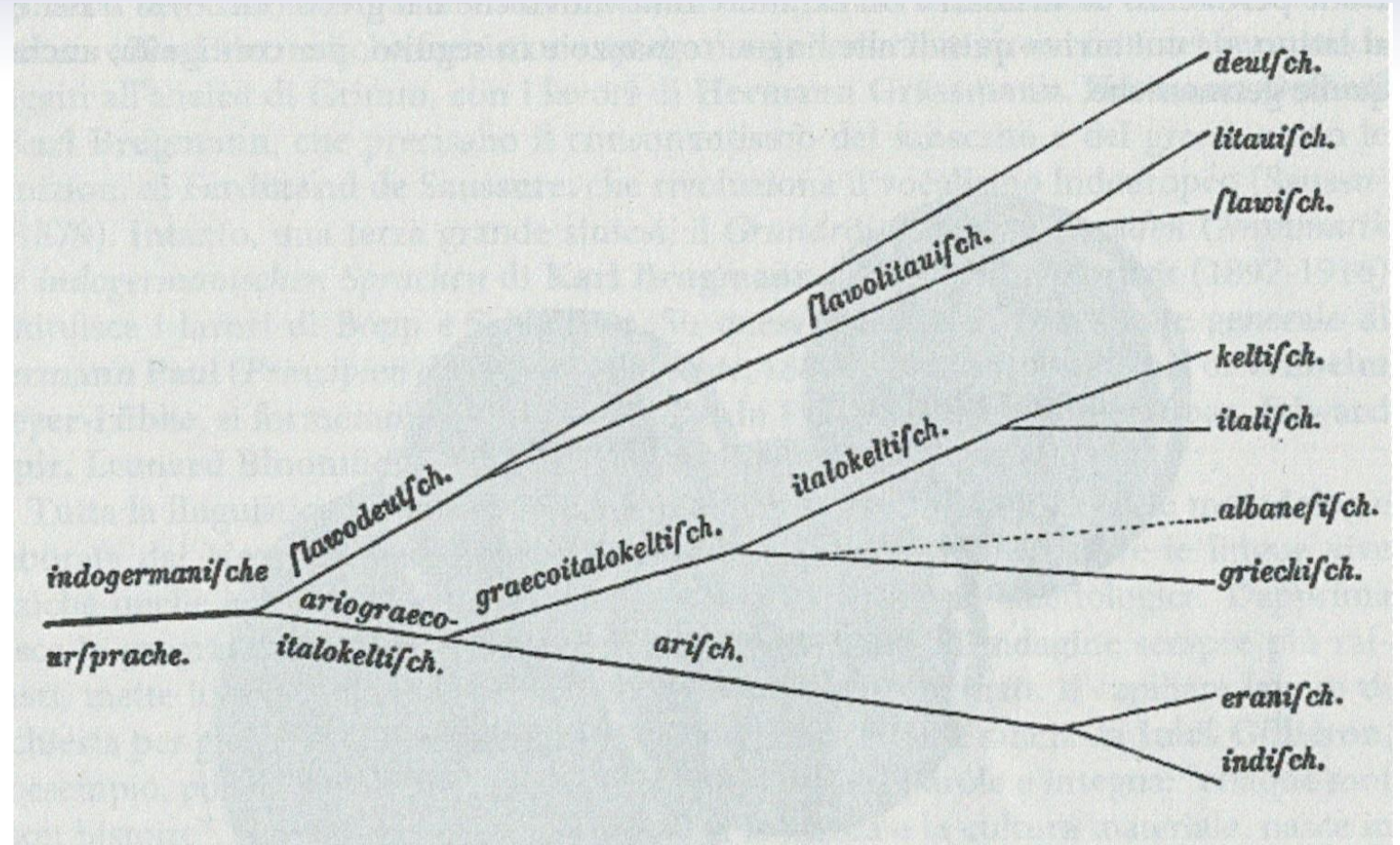
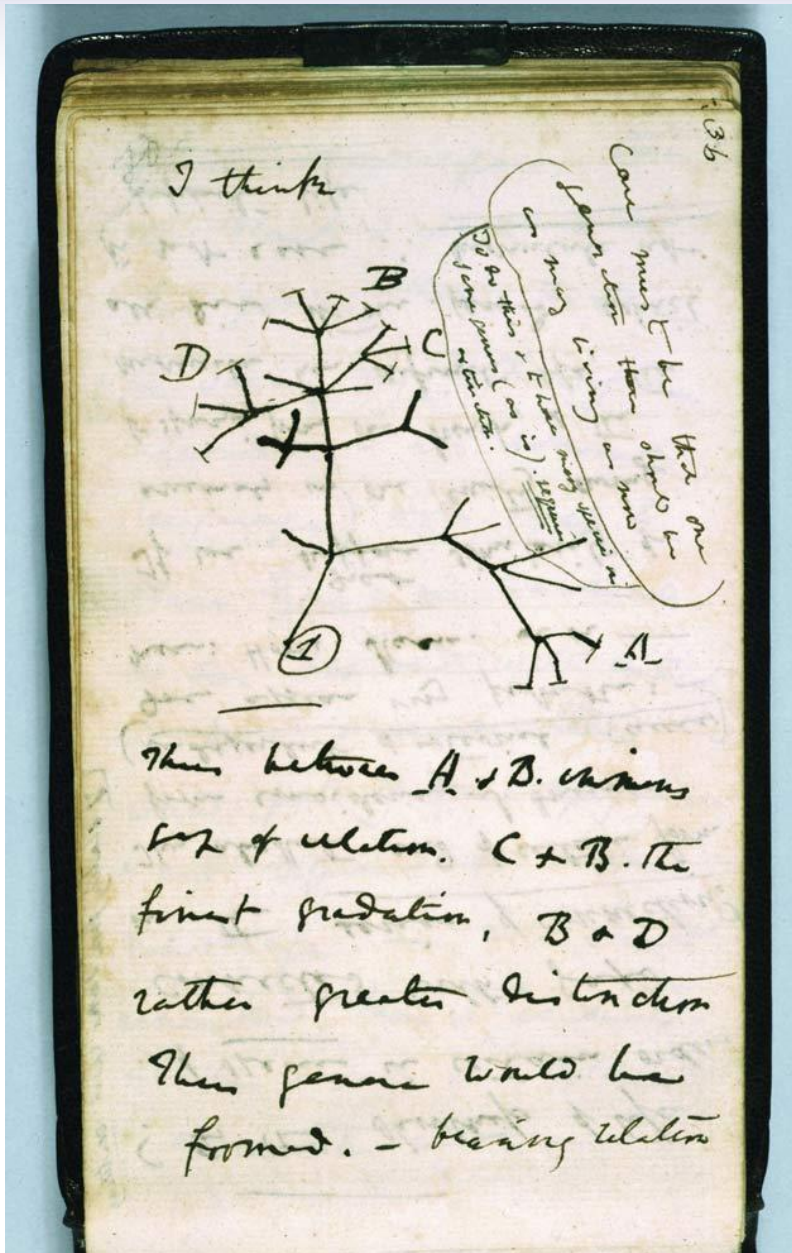
GL RIA

Ladislav Novák, *Gloria*, 1964

Exploitation of the same
iconic-emblematic strategy in
visual poetry
(*Gloria*, Ladislav Novak, 1964)



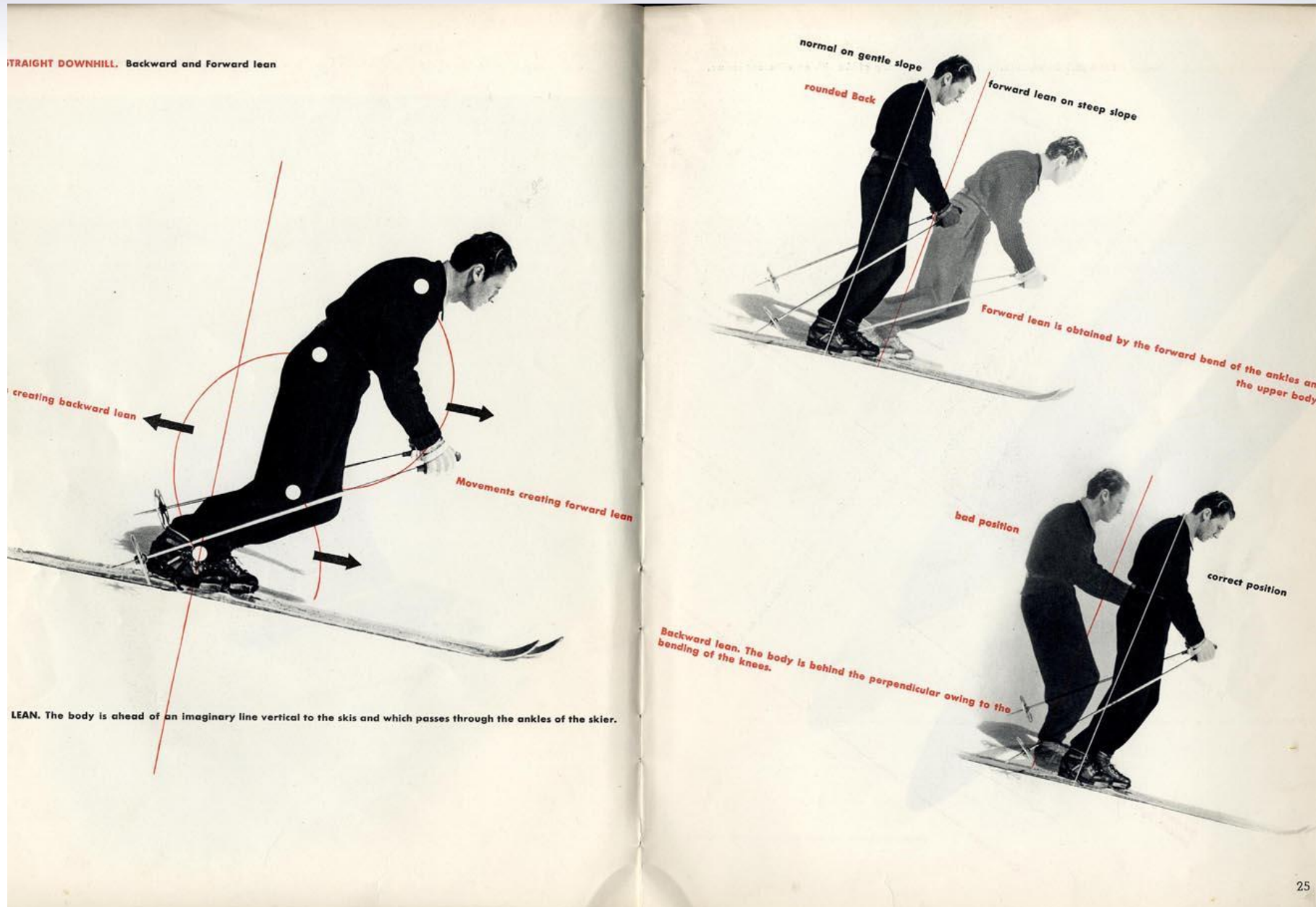
Examples of emblematic non-linear space: scientific diagrams



Darwin sketch of the *tree of life* (1837),
Schleicher's *Stammbaum* of Indo-European
languages (1861 [1853])



Contemporary examples of emblematic non-linear space: infographics



Conclusions

- Linearity, in any writing system, is a semiotic prerequisite in order to assure actual matching between visual-graphic expressions or units and (sequential, 'linear' in Saussurean terms) bits of speech;
- However, while a sequential ordering of reading is to be always assumed, many systems of graphic (and coded) scripts exploit the (at least) bidimensional visual space both *a)* to form/construe written characters or units (by joining minimal traits in non-linear paths: *entaxis*); and *b)* mostly to articulate written texts combining those units in *non-linear layouts* (significantly framing the textual space in view of a correct and complete reading: *synsemia*).
- While linear paths in writing emerge with non-figurative images and, more systematically, with (a more or less) complete glottic phoneticism, the story of writing repeatedly testifies the use of multi-linear structuring patterns.
- This is clearly explained by the semiotic nature of any *objectual space* inscribed, since "the text always functions as a sign in ways which are not exhaustively described by giving a merely 'linguistic' account of what the text say, of the linguistic [written] forms used, and of their [glottic] meanings as contrasted with other forms available in the [spoken or written] language" (Roy Harris).



References

- Antinucci, F. 2011, *Parola e immagine. Storia di due tecnologie*. Rome-Bari, Laterza.
- Berdan, F. F., 1992a, "Glyphic Conventions of the Codex Mendoza.", in Berdan, F. F., Anawalt, P. R., eds., *The Codex Mendoza*, vol. 1, Berkeley and Los Angeles, University of California Press, pp. 93–102.
- Berdan, F. F. 1992b, "The Place-Names, Personal Names, and Title Glyphs of the Codex Mendoza: Translations and Comments", in Berdan, F., Anawalt P. R., eds., *The Codex Mendoza*, cit. vol. 1, pp. 163-239.
- Berlin, H., 1958, *El glifo "emblema" en las inscripciones maya*, "Journal de la Société des Américanistes", n.s., vol. XLVII, p. 111-119.
- Bolzoni, L., 2002, *La rete delle immagini*. Turin, Einaudi.
- Boone, E. H., 1998, *Pictorial Documents and Visual Thinking in Postconquest Mexico*, in E. H. Boone, T. Cummins (eds.), *Native Traditions in Postconquest World*, Washington, Dumbarton Oaks, pp. 149-199.
- Boone, E. H., 2000, *Stories in Red and Black*, Austin, University of Texas Press.
- Elkins, J., 1999, *The Domain of Images*, Ithaca, Cornell University Press.
- Elkins, J., 2003, *Four way of measuring the distance between alchemy and contemporary art*, "HYLE – International Journal in Philosophy and Chemistry" 9 (1), pp. 105-118.
- Fedorova, L., 2009, "The Emblematic Script of the Aztec Codices as a Particular Semiotic Type of Writing System", in *Written Language & Literacy*, 12.2, pp. 258-274.
- Fedorova, L., 2012, *The development of structural characteristics of Brahmi script in derivative writing systems*, "Written Language & Literacy". 2012 Vol. 15: 1. P. 1–25.
- Fedorova, L. 2021, "On the Typology of Writing Systems", in Y. Haralambous, ed., *Grapholinguistics in the 21st Century 2020. Proceedings*. Brest, Fluxus Editions, pp. 805-824.
- Harris, R., 1986, *The Origin of Writing*. London, Duckworth (new augmented Italian edition 1998).
- Harris, R., 2000, *Rethinking Writing*. London: The Athlone Press.
- Mounin, G., 1970, *Introduction à la sémiologie*, Paris, Ed. de Minuit, pp. 109-115.
- Perondi, L, 2012, *Sinsemie. Scrittura nello spazio*. Viterbo, Stampa Alternativa & Graffiti.
- Perri, A., 2005, "Pintar sonidos. Hacia una explicación semiótica del 'fonetismo' como rasgo intrínseco de la escritura azteca-náhuatl", in *Quaderni di Thule. Rivista italiana di studi americanistica. Atti del XXV Convegno Internazionale di Americanistica*, vol. 2. Perugia, C. St. Americanistici "Circolo Amerindiano", pp. 83-94.
- Perri, A., 2014, *Why writing is not (only) transcribing? Writing codes in contact: steps towards multigraphic literacy practices*, in "Testo e Senso" on line n. 15, www.testoesenso.it
- Rogers, H., 2005, *Writing systems: A linguistic approach*. Malden, Blackwell Publishing.
- Vaillant, P., 1999, *Sémiotique des langages d'icônes*, Paris, Honoré Champion.



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