Deciphering Giovanni Bianco's 1466 Lyon cipher

fofr and Gemini 4 Carbon

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Abstract

We decipher all 18 encrypted lines of Giovanni Bianco's 6 June 1466 Lyon dispatch on Paris folios 348r to 348v, recovering 1,123 phonetic letters plus 11 title signs. Francesco Tranchedino's Vienna register entry on folio 47r fixed Bianco's sign values on 31 August 1465; reading the Paris ink required 24 two-stroke merges and 132 one-to-one stroke revisions. The text exposes Savoyard reprisals against Antonio da Romagnano and Louis XI's three-marriage plan for Galeazzo Maria Sforza. Against Eulerian Markov-1 walks under a 20-letter Lombard five-gram model, the full dispatch reaches 3.14 bits per character ($z = 16.77$), and its phonetic stream reaches 2.97 ($z = 17.13$). Majority-locking shorthand and merge types without per-token splits reaches 3.76 bits per character ($z = 12.63$), above the pre-key lookup at 4.42 ($z = 9.47$). Across 45 blind decoding attempts, token shuffles reach $z = 4.72$ whereas Markov-1 controls stay at $z \leq 2.05$.

1 Introduction

We decipher two encrypted passages in Giovanni Bianco's 6 June 1466 dispatch from Lyon to Duke Galeazzo Maria Sforza [6, 8]. Both passages stand undeciphered in Bibliothèque nationale de France manuscript Italien 1591, folios 348r to 348v, with no surviving decipherment across the digitized Paris Sforza volumes [8]. Bianco wrote three months after Duke Francesco Sforza died on 8 March 1466, where Mandrot and Samaran's Paris edition ends [3].

Automated solvers break long 16th-century nomenclators from ciphertext alone when single-letter homophones dominate the stream [7, 11]. Quattrocento Milanese keys instead combine homophonic alphabets with closed vowel-consonant syllable grids, function words, framing nulls, and title codewords [2, 10]. Compressing common syllables and titles into single signs shortens dispatches toward Shannon's unicity regime [12], where independent token shuffles reward spurious vowel alignments.

Tranchedino's rubricated index on folio IIIr of Vienna Codex 2398 points directly to Bianco's 31 August 1465 register entry on folio 47r [2, 5, 10]. Using folio 47r's fixed sign values alongside paleographic ablation ladders, we edit the text and test it against uniform Eulerian Markov-1 trails [1, 13]. Using Gemini 4 Carbon across 45 blind decoding attempts and synthetic controls, we also show how tested keyless attacks fail once Markov-1 transitions are preserved.

2 Deciphered 1466 dispatch and translation

Below we pair the English translation of both deciphered blocks with our critical Italian edition and adjacent cleartext seams. Multi-word phrases in square brackets expand single codeword signs from folio 47r, whereas single letters in square brackets supply omitted or corrected letters.

Angle brackets enclose superfluous or miswritten cipher strokes retained in the raw stream; spacing, punctuation, capitalization, accents, and u/v distinctions are editorial.

Across both blocks, [Your Lordship], rendering [la Signoria Vostra], addresses Duke Galeazzo Maria Sforza of Milan. The title [Duke of Savoy], rendering [Duca de Savoia], identifies Amadeus IX of Savoy. Both [King of France] and [His Majesty], rendering [Re de Franza] and [la Maestà soa], refer to Louis XI of France. Finally, [Lord Charolais], rendering [Monsignore de Chiarlois], identifies Charles, Count of Charolais, heir to Burgundy.

Earlier on folio 348r, Savoyard esquire Jaches Nespola reports in cleartext that Savoy's Three Estates will convene at Geneva on 15 June 1466. Midway through line 26, Bianco enters cipher to warn Galeazzo of reprisals against Antonio da Romagnano after Galeazzo's March detention at La Novalesa, written Novaresa.

English translation (348r, lines 26–37):
I suspect that something untoward may happen to Messer Antonio da Romagnano, because through a reliable channel I am informed that, immediately after [Your Lordship] was freed from detention at La Novalesa, the [Duke of Savoy] and the Duchess resolved to send men to arrest and ruin the said Messer Antonio and everyone of his household, and to put every possession of his to fire and flame; however, others of their men gave them as counsel not to do it then, but to bide their time, saying that up to that day neither the [King of France] nor [Your Lordship] could firmly believe that the said Duke and My Lady of Savoy had not ordered your detention, and that by making such a hostile display Their Lordships would be unable afterward to cover it up or excuse themselves; and for this reason they revoked the said resolution, and said they would wait for a suitable time to act: so it is to be feared that at this parliament they may pin some other pretext upon him, and by this means avenge themselves for the affront they claim to have suffered from those of Romagnano through your rescue.

Preceding cleartext (348r, line 26):
In questi tre stati dice gli venirano così quelli del piemonte como li altrj de qua: et ad questa parte

Critical Italian edition (348r, lines 26–37):
io dubito che non intervenga qualche cosa sinistra ad Miser Antonio da Romagnano, perché per bona via sono avisato che, immediate che [la Signoria Vostra] fo liberata dela detentione dela Novaresa, el [Duca de Savoia] et la Ducessa deliberarono de mandare ad prendere et desfare dicto Miser Antonio et tuti de casa sua, et metere ad foco et fiamma ogni sua cosa; ma altri di soi gli dedero per consiglio ad non farlo alhora, ma expectare tempo, dicendo che fin quello dì né el [Re de Franza] né [la Signoria Vostra] potevano credere firmamente che essi Duca et Madama de Savoia non havessero ordinata la vostra detentione, et che facendo questa demostratione loro Signorie non se ne poriano poi coprire né excusare; et per questo revocarono dicta deliberatione, et dixero che expectariano tempo ad farlo: siché è da dubitare che ad questo parlamento non gli trovino qualch'altra rogna adosso, et che per questa via non se vindicano dela iniuria che tengono havere riceuta da essi da Romagnano per la vostra liberatione.

On folio 348v, quoting Nespola on Bona of Savoy's Milanese match, Bianco writes in cleartext that Louis XI seeks three dynastic marriages. Switching into cipher, he describes matches whose titles identify Louis XI's young daughter Anne of France, Charles of Charolais, his daughter Mary of Burgundy, and Galeazzo. In June 1466 the Prince of Piedmont was Amadeus IX's eldest surviving son, Charles of Savoy (1456 to 1471), rather than his infant brother Philibert.

English translation (348v, lines 3–8):
namely, to give the daughter of [His Majesty] to [Lord Charolais], and that daughter of Lord Charolais to the Prince of Piedmont, and the aforesaid Lady Bona to [Your Lordship]; and that [His Majesty] would gladly conclude all three of these marriages at one stroke, to unite and bind together at one stroke these three powers with [His Majesty]; and he says that he recognizes only one difficulty in it, namely the young age of the daughter of the [King of France], who is not past six years old, so that perhaps [Lord Charolais] would not wish to wait so long to consummate his marriage.

Preceding cleartext (348v, lines 1–3):
Esso Scudero, dicendome como le vostro Servitore, et rasonandome del parentado dela Illustre Madona Bona, me dixe che el Re era molto disposto ad fare questo et doy altrj parentadi

Critical Italian edition (348v, lines 3–8):
ci⟨g⟩oè dare la figlia de [la Maestà soa] ad [Monsignore de Chiarlois], et quella de Monsignor de Chiarlois al Principe de ⟨d⟩[P]iemonte, et dicta Madona Bona ad [la Signoria Vostra]; et che [la Maestà soa] faria volun[t]eri ad uno tracto tutti questi tre parentadi, per unire et ligare ad uno tracto queste tre potentie insieme con [la Maestà soa]; et dice che sola una dificultà el gli cognosce, cioè la pocola età dela figlia del [Re de Franza], quale non passa sex anni, siché forsi [Monsignore de Chiarlois] non voria stare tanto tempo ad conseguire l'efecto del suo matrimonio.

Closing cleartext (348v, lines 8–11):
Le quale tutte cose, per far mio debito, le ho voluto scrivere ad vostra excellentia, alla quale humelmente me recomando. Ex lugduno die vj Junij 1466.

3 The 1465 Vienna key and paleographic alignment

Table 1 summarizes the six structural bands on folio 47r of Vienna Codex Vindobonensis Palatinus 2398, dated at Milan on 31 August 1465. Across 24 upper columns unifying u and v, five vowels carry three homophones each, and 17 consonants (including k and x) plus con and rum carry two. Twenty-one of those signs sit on base m across 10 columns, separated by hairline bars and dots. Below the alphabet sit framing nulls, 12 closed-loop geminates from bb to tt plus pertanto, and base-p function words and titles. A central 5×15 grid assigns closed vowel-consonant syllables from ab to ux across five vowels and 15 codas, above four diplomatic nomenclator columns.

Before consulting folio 47r, single-reader segmentation of the greyscale Paris microfilm scans recorded 726 marks, comprising 11 hairline virgules and 715 sign marks. Comparing the Paris ink against folio 47r merges 24 split two-stroke signs into single entries, absorbing nine virgules into es and two into 'Rex Francie'. Checking individual pen strokes against folio 47r revised the initial shorthand assignment on 132 of the 678 unmerged tokens, separating faint dots and bars across neighboring cells. On token 149 in 'foco', a small subdot beneath single-macron r matches no folio 47r cell, unlike two-dotted ou in tokens 86 and 396. Folio 47r also contains two graphic collisions across 15 dispatch tokens. Right-dotted m encodes row-1 u (seven tokens) or row-2 z (none), while crossed short t encodes d (six tokens) or ub (two tokens), settling 8 short-t tokens by context.

Folio 348r carries 477 verified tokens across lines 26 to 37, and folio 348v carries 225 tokens

Table 1: Structure of the 1465 Vienna register key on folio 47r and attested usage across Bianco's 18 encrypted lines.

Key band	Key signs	Dispatch tokens	Distinct signs
Homophonic alphabet	53	283	31
Framing nulls	14	4	2
Geminates and pertanto	13	2	1
Base-p words and titles	14	25	8
Closed VC syllables	75	383	56
Diplomatic nomenclator	68	5	3
Total	237	702	101

across lines 3 to 8. All four attested null tokens stand at block boundaries at positions 1, 478, and the two block ends, with zero mid-line nulls. Eleven tokens encode chancery titles: 'La Sria v' and 'La Mta soa' three times each, 'Rex Francie' and 'D. Chiarlois' twice each, and 'Dvx Sabbaudie' once. Six title tokens sit in the base-p band and five in the lower nomenclator columns, leaving 687 phonetic and function-word tokens. Across the verified dispatch, 418 tokens (59.5%) emit two or more letters.

Figure 1 traces a hand-checkable witness on folio 348v, line 3, right after cleartext 'questo et doy altrj parentadi'. Tokens 478 to 498 emit '[NULL]-c-i-g-o-ed-ar-el-af-ig-l-i-ad-e-[La Mta soa]-ad-[D. Chiarlois]-et-que-ll-ad'. That sequence reads 'ci⟨g⟩oè dare la figlia de [la Maestà soa] ad [Monsignore de Chiarlois] et quella d...'. Ten tokens after codeword token 494 (six after token 498), tokens 505 to 513 spell 'd-ec-h-i-ar-l-o-i-s' ('de Chiarlois'), confirming that title sign on line 3. Beyond editorial spacing, punctuation, accents, and u/v distinction, the critical edition makes zero unmarked letter changes, finding zero scribal slips on folio 348r and 3 on folio 348v. He wrote 'ci⟨g⟩oè' (line 3, false start g), 'de ⟨d⟩[P]iemonte' (line 4, repeating ed for ep), and 'volun[t]eri' (line 4, omitting t).

4 Archival key recovery and blind solver controls

We checked all 32 digitized Paris Sforza volumes, spanning manuscripts Italien 1584 to 1615, against Mazzatinti's inventory [8] and the published French embassy editions [3, 6]. Five original 15th-century chancery cipher sheets survive across those volumes, alongside Mandrot's syllabic key reconstruction in manuscript Italien 1593, folios 1r to 1v [3]. None matches Bianco's sign set. All 16 other Bianco letters in manuscript Italien 1591 are plain prose, leaving folio 348 his sole cipher text there (Milan's State Archive remains unaudited).

To locate Sforza keys outside Paris, we examined Francesco Tranchedino's Vienna cipher register, Codex 2398, compiled circa 1475 to 1496 [2, 5, 10]. Text queries in version two of the DECODE catalog miss Bianco because record 2456 (like records 2400 to 2667) leaves correspondent fields blank despite imaging folio 47r [4, 9]. Tranchedino's rubricated index on folio IIIr (canvas c010, viewer image 11, line 11) records 'Cum Johanne Blancho, in fo 47'. Folio 47r (canvas c108, viewer image 109) preserves the register copy of Bianco's key.

We also tested whether blind ciphertext-only solvers recover the dispatch without folio 47r [7, 11, 12]. Dropping the four boundary nulls, absorbing the virgules into es and o-slash, and

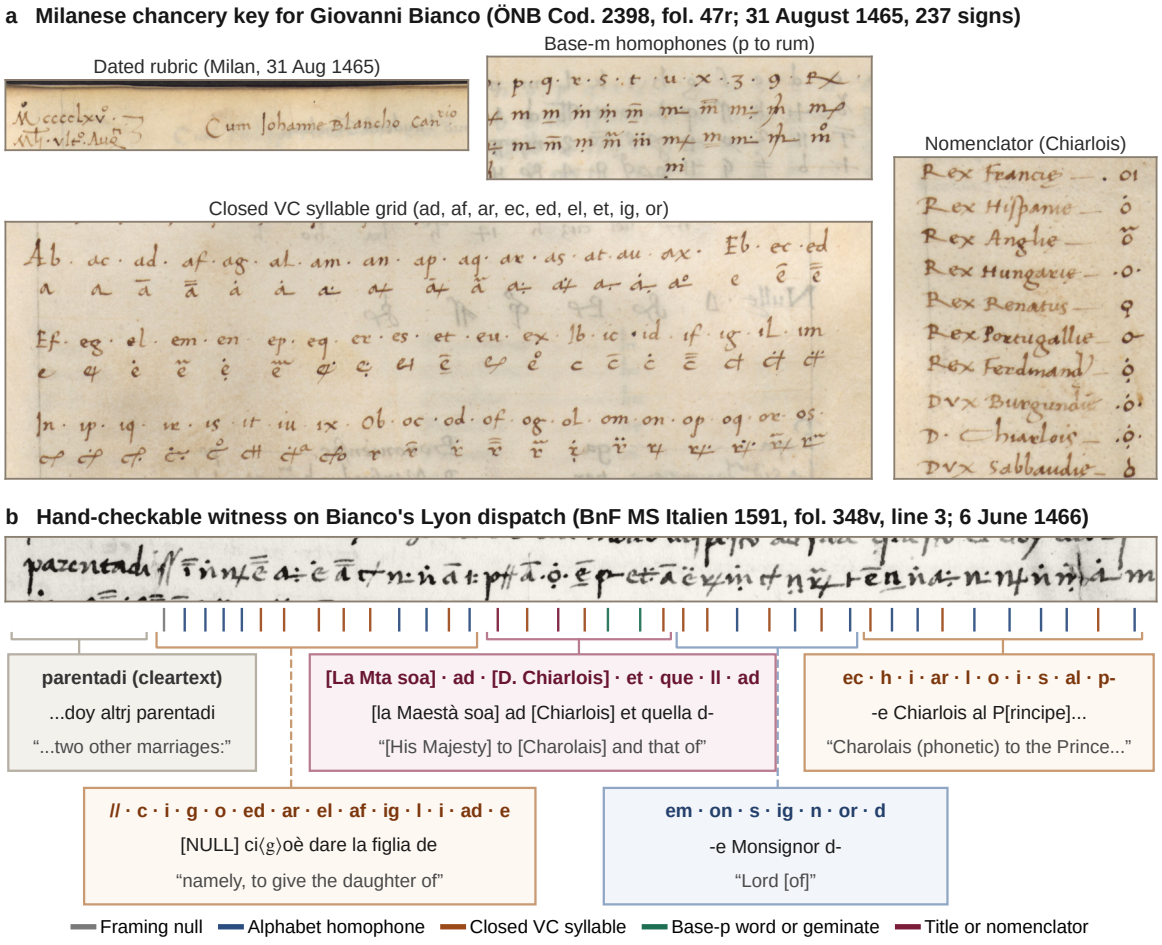


Figure 1: Vienna register key (a) and folio 348v line 3 witness (b; greyscale microfilm crop contrast-normalized and warm-toned). Source gallica.bnf.fr / Bibliothèque nationale de France; ÖNB Digital / Austrian National Library.

joining two split crossed-4 tails yields 709 non-framing pre-key tokens (filtered hypotheses test 102 to 698 tokens). In an initial single-letter sweep scored against token shuffles alone, gibberish alignments reached $z = 6.01$. Gemini 4 Carbon then evaluated 45 decoding attempts across five cipher families (including three post-hoc closed-syllable models sized from folio 47r's grid) under minimum description length scoring. Each solver re-ran across 200 independent token shuffles and 200 Eulerian Markov-1 walks against a $z \geq 6$ recovery threshold, producing zero recoveries in Table 2.

Single-seed synthetic experiments on matched-length Italian texts clarify this solver gap without claiming an information-theoretic impossibility proof (Figure 2a). With 32 unified u/v homophones and rare codewords, a blind 20-letter solver recovers plaintexts up to 54.9% masking ($z = 25.62$), despite single-seed dips at 14.9% and 45.0%. At 65.0% masked share, both the blind solver ($z = 1.05$) and the oracle-mask solver ($z = 0.81$) fail. A mismatched 21-letter split-u/v solver stays below $z = 3.8$ under Markov-1 across 0% to 75% masking, yet reaches false token-shuffle peaks up to $z = 14.65$. Synthetic dispatches from a 234-cell preliminary

Table 2: Blind decoding attempts evaluated on the pre-key segmentation across five cipher families.

Cipher family	Attempts	Shuffle max z	Markov-1 max z
Homophonic and nomenclator	15	2.91	1.72
Closed-syllable hybrid	3	0.82	0.80
Graphic and diacritic filter	7	1.85	0.51
Steganographic and high-null	10	4.72	2.05
Transposition and dinome	10	3.85	1.90

reading of folio 47r instead mix frequent closed syllables with function words and titles. With 39% to 42% multi-letter tokens across 161 to 174 active signs, those replicas stay at $z = -0.69$ (at dispatch length), $z = 1.63$ (1,400 tokens), and $z = 0.57$ (2,400 tokens).

5 Statistical verification

We score plaintexts under a 20-letter Italian five-gram table built from 491,443 characters of *Archivio Storico Lombardo* editions and Lombard chancery texts. Each four-gram row is normalized to unit sum, and consonantal v is marginalized into vocalic u across the stationary five-gram distribution after 80 power iterations. Sliding 18-character checks confirm zero phrase overlap with folios 348r to 348v. Input normalization maps j and y to i, k to c, v and w to u, and x to s. Consider a normalized 20-letter passage of length L ($L \geq 5$) with character x_t and four-letter history h_t at index t ($5 \leq t \leq L$). Given five-gram probabilities $P(x_t \mid h_t)$ ($P(x_t \mid h_t) \in (0, 1]$), passage cross-entropy H_5 in bits per character (BPC) is

$$H_5 = -\frac{1}{L-4} \sum_{t=5}^{L} \log_2 P(x_t \mid h_t). \tag{1}$$

When a stream spans both encrypted blocks, we sum five-gram log-probabilities within each block separately and divide by the combined intra-block transition count, avoiding cross-folio five-grams. Against $R = 1000$ null replicates with mean μ_0 and population standard deviation σ_0 (dividing variance by R), standardized separation z is

$$z = \frac{\mu_0 - H_5}{\sigma_0}. \tag{2}$$

Each evaluated stream is tested against $R = 1000$ per-block uniform Eulerian Markov-1 trails [1, 13], $R = 1000$ per-block token shuffles, and $R = 1000$ category-stratified and unstratified key permutations. Every Eulerian trail preserves exact token unigrams, directed token bigrams, and endpoints within each block. Stratified key permutations resample non-null values without replacement from folio 47r within six categories, whereas unstratified permutations resample across all 223 non-null cells.

Table 3 and Figure 2b report the ablation ladder from pre-key shorthand labels to the stroke-verified edition. Using zero post-key parameters, the pre-key lookup reaches unstratified $z = 3.09$, whereas the alternative right-dotted m and n lookup drops to $z = 2.27$ (beaten by four of 1,000 random keys). The two type-locked ablations fit majority cells against the verified

Table 3: Five-gram cross-entropy (BPC) and standardized null separation (z) across the paleographic ablation ladder and verified subsets.

Evaluated stream	BPC	Eulerian z	Stratified key-perm z
Cleartext header on 348r	3.28	—	—
Pre-key lookup (shorthand)	4.42	9.47	7.26
Alt. pre-key lookup	4.65	7.55	6.84
Type-locked shorthand	3.93	12.11	9.06
Merges only, type-locked	3.76	12.63	9.77
Recto cipher block on 348r	3.00	15.05	12.86
Verso cipher block on 348v	3.43	9.08	9.34
Stroke-verified full dispatch	3.14	16.77	13.53
Phonetic and function subset	2.97	17.13	13.01

alignment across 82 shorthand types and seven merge pairs without per-token splits, reaching unstratified $z = 5.23$. Null ensembles hold each stream fixed, so the gain on the stroke-verified dispatch (1,220 letters with 97 title letters; unstratified $z = 8.14$) reflects per-token stroke checks. Verso cross-entropy exceeds recto because folio 348v concentrates unexpanded Latin title rubrics ('Dvx', 'Rex', 'Mta'). On the phonetic subset, random assignment of multi-word titles across 223 cells expands unstratified trial length 2.7-fold, lowering its null mean to 5.33 BPC ($z = 9.08$; token-shuffle $z = 29.95$). Bianco's 1,818-letter cleartext header on folio 348r retains unexpanded chancery abbreviations. Corrupting 10% or 50% of active key signs raises full-stream cross-entropy to 4.29 BPC ($z = 14.02$ below its null trails' mean) and 6.47 BPC ($z = 1.23$).

Public scans of Bianco's dispatch appear on Gallica (https://gallica.bnf.fr/ark:/12148/btv1b100373919/f358.item, views f358 and f359). Vienna scans appear at the Austrian National Library (https://data.onb.ac.at/rep/117E434F, canvases c010 and c108, images 11 and 109). Appendices A and B reproduce the complete folio 47r key plate, all 237 key entries, both folio 348 cipher plates, the pre-key shorthand legend, and the complete line-by-line token alignment. The ancillary directory also bundles machine-readable key and token tables, empirical null BPC samples across all eight evaluated streams, and a standalone Python script. That script verifies deterministic key-to-edition alignment, appendix parity, and summary statistics, while raw five-gram scoring uses the external Lombard corpus table.

6 Conclusion

Tranchedino's register entry on Vienna folio 47r deciphers Bianco's Lyon dispatch, revealing Savoyard reprisals against Antonio da Romagnano and Louis XI's triple-marriage diplomacy. Across the ablation ladder, folio 47r clears Eulerian and key-permutation controls from pre-key shorthand labels alone and yields coherent Northern Italian once strokes and diacritics are verified against the ink. Our blind solver and synthetic experiments show why transition-preserving Markov-1 controls are essential whenever hybrid syllabic nomenclators are attacked without an archival key.

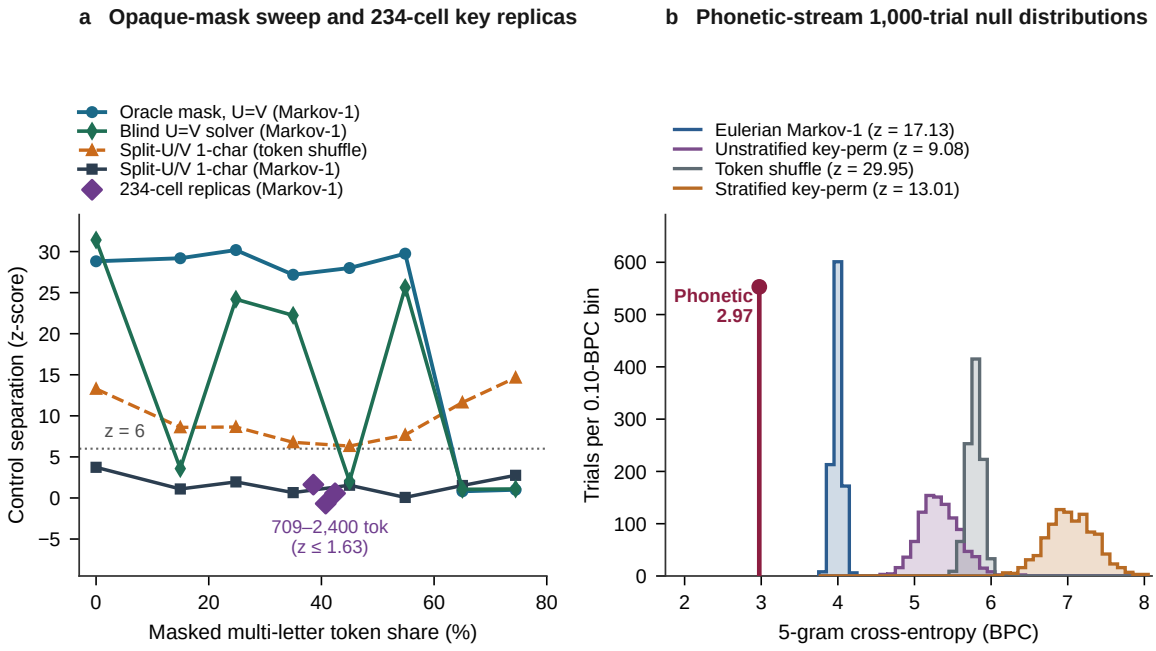


Figure 2: Opaque-mask solver sweep and 234-cell synthetic replicas (a), alongside empirical 1,000-trial null histograms for the phonetic and function stream (b).

Appendix A. Vienna folio 47r key and sign inventory

Figure 3 reproduces Francesco Tranchedino's complete Milanese register page for Giovanni Bianco on folio 47r of Vienna Codex 2398, labeled across its rubric and six structural bands. The inventory below records every cell in manuscript order as key index, band position and diplomatic rubric, glyph identifier and emission, dispatch frequency, and stroke description. Silent framing signs emit [NULL], bracketed phrases expand single title or nomenclator signs, and the two graphic homograph pairs follow Band 6.

Dated rubric (fol. 47r top): Mcccclxv. Mli .vlt.o Augti | Cum Johanne Blancho Can^rio

Band 1 — Homophonic alphabet and abbreviations (k001–k053; 24 columns A to rum, rows top-to-bottom)
k001 | Col 01 (A) r1 | l_plain=a | x15 | Short vertical minim without dot or bar
k002 | Col 01 (A) r2 | l_top_bar=a | x3 | Short vertical minim capped by flat horizontal top bar (T)
k003 | Col 01 (A) r3 | l_dot_right=a | x0 | Short vertical minim with single mid-height dot to its right
k004 | Col 02 (b) r1 | l_dot_left=b | x1 | Short vertical minim with single mid-height dot to its left
k005 | Col 02 (b) r2 | l_dot_flanked=b | x0 | Short vertical minim flanked by mid-height dots on left and right
k006 | Col 03 (c) r1 | i_mac2=c | x8 | Vertical minim surmounted by double horizontal macron
k007 | Col 03 (c) r2 | i_dot_mac=c | x4 | Vertical minim surmounted by horizontal macron with overdot above it
k008 | Col 04 (d) r1 | t_cross=d | x6 | Short vertical stem crossed near top by horizontal stroke (+ / t; cursive near-homograph of Vb = ub k155)
k009 | Col 04 (d) r2 | l_right_bar=d | x5 | Vertical minim with horizontal bar extending rightward from mid-stem
k010 | Col 05 (e) r1 | l_subdot=e | x8 | Vertical minim with single subdot directly below stem
k011 | Col 05 (e) r2 | i_dot1=e | x0 | Vertical minim with single overdot directly above stem (i)

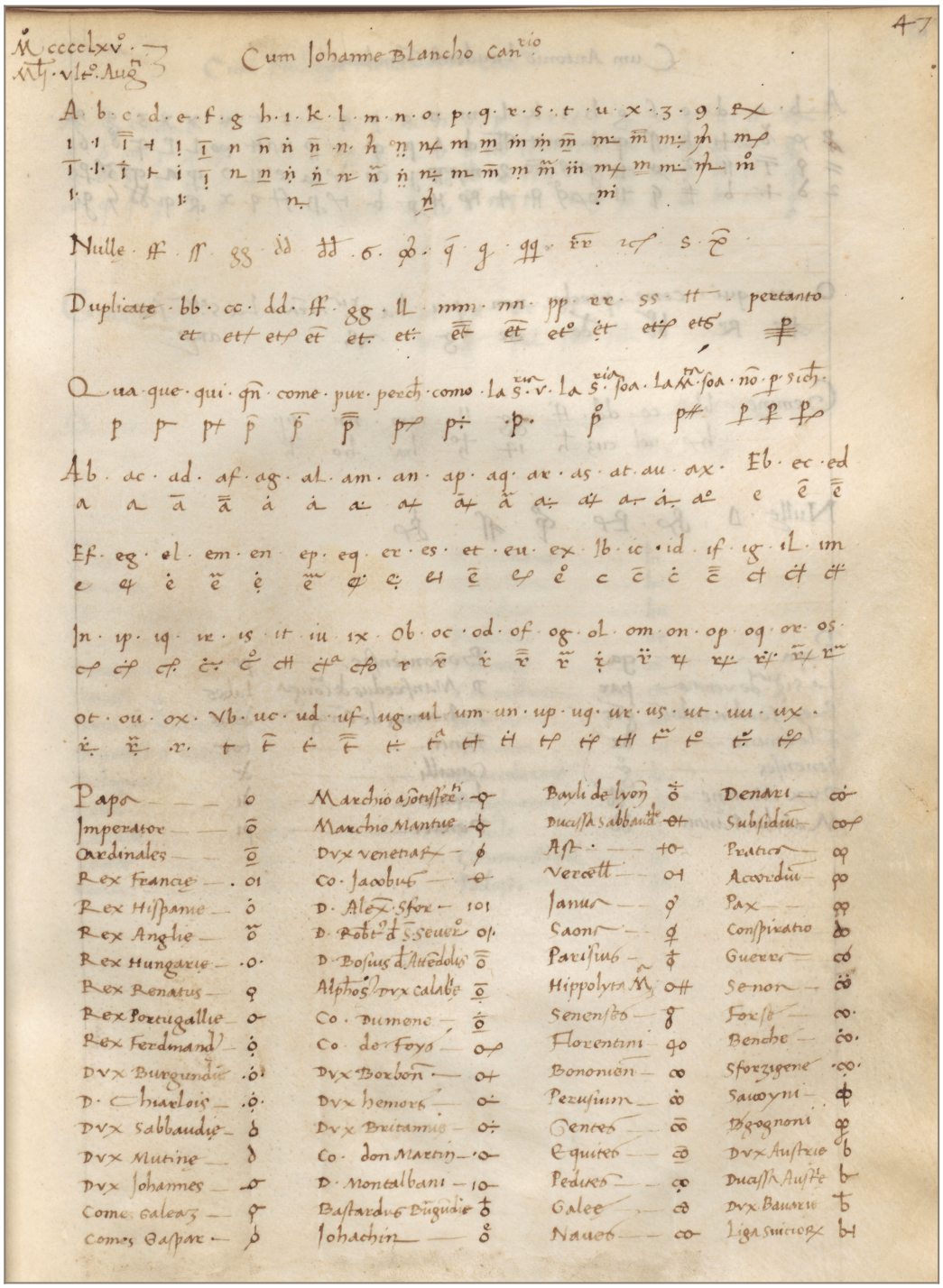


Figure 3: Complete Milanese chancery cipher key for Giovanni Bianco dated 31 August 1465, labeled across Bands 1 to 6 (ÖNB Digital / Austrian National Library, Cod. 2398, fol. 47r).

k012 | Col 05 (e) r3 | l_colon_right=e | x17 | Vertical minim with two vertically stacked dots to its right
k013 | Col 06 (f) r1 | i_mac_bar=f | x8 | Vertical minim between horizontal macron above and underbar below
k014 | Col 06 (f) r2 | i_mac_subdot=f | x0 | Vertical minim with horizontal macron above and single subdot below
k015 | Col 07 (g) r1 | n_plain=g | x5 | Plain two-minim minuscule n without diacritics (n)
k016 | Col 07 (g) r2 | n_right_tail=g | x0 | Two-minim minuscule n with horizontal baseline tail extending right (n_)
k017 | Col 08 (h) r1 | n_mac=h | x4 | Two-minim minuscule n with arched macron above
k018 | Col 08 (h) r2 | n_bar=h | x14 | Two-minim minuscule n with horizontal underbar below baseline
k019 | Col 09 (i) r1 | n_dot1=i | x34 | Two-minim minuscule n with single overdot above
k020 | Col 09 (i) r2 | n_dot_both=i | x2 | Two-minim minuscule n with single overdot above and single subdot below
k021 | Col 09 (i) r3 | n_tail_subdot=i | x0 | Two-minim minuscule n with right baseline tail and single subdot below
k022 | Col 10 (k) r1 | n_mac_bar=k | x0 | Two-minim minuscule n with macron above and underbar below
k023 | Col 10 (k) r2 | n_dot1_bar=k | x0 | Two-minim minuscule n with single overdot above and underbar below
k024 | Col 11 (l) r1 | n_dot_flanked=l | x1 | Two-minim minuscule n flanked by mid-height dots on left and right
k025 | Col 11 (l) r2 | n_right_dot_top=l | x16 | Two-minim minuscule n with right baseline tail and single dot above tail
k026 | Col 12 (m) r1 | h_arch=m | x8 | Minuscule h with tall looped/arched left ascender (h)
k027 | Col 12 (m) r2 | n_tilde=m | x0 | Two-minim minuscule n surmounted by wavy tilde flourish
k028 | Col 13 (n) r1 | n_subdot2=n | x8 | Two-minim minuscule n (with small left curl) and two subdots below minims
k029 | Col 13 (n) r2 | n_dot1_subdot2=n | x1 | Two-minim minuscule n with single overdot above and two subdots below
k030 | Col 14 (o) r1 | n4_slash=o | x19 | Minuscule n ligatured into crossed-4 right descender (n4)
k031 | Col 14 (o) r2 | n_div=o | x4 | Minuscule n with horizontal right bar, one dot above bar, and one dot below
k032 | Col 14 (o) r3 | h_slash_bar=o | x0 | Minuscule h with diagonal slash through ascender and horizontal underbar
k033 | Col 15 (p) r1 | m_plain=p | x9 | Plain three-minim minuscule m without diacritics (m)
k034 | Col 15 (p) r2 | m_right_tail=p | x0 | Three-minim minuscule m with horizontal right baseline tail (m_)
k035 | Col 16 (q) r1 | m_bar=q | x1 | Three-minim minuscule m with horizontal underbar below
k036 | Col 16 (q) r2 | m_mac=q | x0 | Three-minim minuscule m with horizontal macron above
k037 | Col 17 (r) r1 | m_dot1=r | x16 | Three-minim minuscule m with single overdot above middle minim
k038 | Col 17 (r) r2 | m_subdot=r | x0 | Three-minim minuscule m with single subdot below middle minim
k039 | Col 18 (s) r1 | m_dot_both=s | x18 | Three-minim minuscule m with single overdot above and single subdot below
k040 | Col 18 (s) r2 | m_tilde=s | x2 | Three-minim minuscule m surmounted by wavy tilde
k041 | Col 19 (t) r1 | m_mac_bar=t | x21 | Three-minim minuscule m with macron above and underbar below
k042 | Col 19 (t) r2 | m_dot2=t | x15 | Three-minim minuscule m with two overdots / diaeresis above
k043 | Col 20 (u) r1 | m_right_dot_top=u | x7 | Three-minim minuscule m with horizontal right tail and single dot above tail (graphic twin of 3 [z] Row 2 k049)
k044 | Col 20 (u) r2 | m4_slash=u | x0 | Three-minim minuscule m ligatured into crossed-4 right descender (m4)
k045 | Col 20 (u) r3 | m_dot_right_subdot_left=u | x0 | Three-minim minuscule m with overdot over third minim and subdot under first minim (sits directly beneath u Row 2; all five vowels A, e, i, o, u carry three homophones each and every consonant two)
k046 | Col 21 (x) r1 | m_mac2=x | x0 | Three-minim minuscule m with double horizontal macron above
k047 | Col 21 (x) r2 | m_bar2=x | x0 | Three-minim minuscule m with double horizontal underbar below

k048 | Col 22 (3 [z]) r1 | m_div=z | x0 | Three-minim minuscule m with right bar, dot above bar, and dot below bar
k049 | Col 22 (3 [z]) r2 | m_right_dot_top_z=z | x0 | Three-minim minuscule m with long right baseline tail and dot above tail (graphic twin of u Row 1 k043)
k050 | Col 23 (9 [con]) r1 | mh_loop_slash=con | x3 | Minuscule m whose third leg rises into an upper loop and slashes diagonally down-left
k051 | Col 23 (9 [con]) r2 | mh_loop_slash_tail=con | x0 | Minuscule m with upper loop slashing down-left plus horizontal right baseline tail
k052 | Col 24 (4x [rum]) r1 | mp_loop_slash=rum | x0 | Minuscule m whose third leg extends right into a loop and slashes down-left
k053 | Col 24 (4x [rum]) r2 | m_ring=rum | x0 | Three-minim minuscule m with small circle/ring above third minim

Band 2 — Framing nulls (k054–k067; Nulle row, slots 01 to 14 left-to-right)
k054 | Slot 01 (Nulle [1]) | null_ff=[NULL] | x0 | Crossed double long-f ligature (ff)
k055 | Slot 02 (Nulle [2]) | null_ss=[NULL] | x2 | Double long-s ligature (ss / //), used by Bianco at Block 1 end and Block 2 start
k056 | Slot 03 (Nulle [3]) | null_gg=[NULL] | x0 | Double minuscule g ligature (gg)
k057 | Slot 04 (Nulle [4]) | null_dd=[NULL] | x0 | Double uncial d ligature (dd)
k058 | Slot 05 (Nulle [5]) | null_dd_bar=[NULL] | x0 | Double d ligature crossed by horizontal bar through ascenders
k059 | Slot 06 (Nulle [6]) | null_sigma=[NULL] | x0 | Open-topped numeral-6 / sigma loop (6)
k060 | Slot 07 (Nulle [7]) | null_phi=[NULL] | x2 | Looped phi / qo flourish with tall vertical loop, used by Bianco at Block 1 start and Block 2 end
k061 | Slot 08 (Nulle [8]) | null_q_mac=[NULL] | x0 | Minuscule q with horizontal macron above
k062 | Slot 09 (Nulle [9]) | null_g=[NULL] | x0 | Single minuscule g with open descender loop (g)
k063 | Slot 10 (Nulle [10]) | null_qq_bar=[NULL] | x0 | Double minuscule q with horizontal bar crossing both descenders (qq)
k064 | Slot 11 (Nulle [11]) | null_rr_mac=[NULL] | x0 | Double minuscule r surmounted by long macron
k065 | Slot 12 (Nulle [12]) | null_u_slash=[NULL] | x0 | Minuscule u/v sweeping right into a small upper-right loop and diagonal down-left slash
k066 | Slot 13 (Nulle [13]) | null_s=[NULL] | x0 | Small round minuscule s
k067 | Slot 14 (Nulle [14]) | null_e_arch=[NULL] | x0 | Minuscule e surmounted by wide overarching curve

Band 3 — Geminates and pertanto (k068–k080; Duplicate row, slots 01 to 13 left-to-right)
k068 | Slot 01 (Duplicate: bb) | et_plain=bb | x0 | Plain closed-loop et ligature (et)
k069 | Slot 02 (Duplicate: cc) | ett_plain=cc | x0 | Closed-loop et ligature with doubled t stem (ett)
k070 | Slot 03 (Duplicate: dd) | etp_loop=dd | x0 | Closed-loop et ligature whose crossbar loops down-left across stem (etp)
k071 | Slot 04 (Duplicate: ff) | et_mac=ff | x0 | Closed-loop et ligature with arched macron above
k072 | Slot 05 (Duplicate: gg) | et_dot_right=gg | x0 | Closed-loop et ligature with single dot under right end of crossbar (et.)
k073 | Slot 06 (Duplicate: ll) | et_colon_right=ll | x2 | Closed-loop et ligature with dot above and dot below right end of crossbar (et:)
k074 | Slot 07 (Duplicate: mm) | et_mac2=mm | x0 | Closed-loop et ligature with double macron above
k075 | Slot 08 (Duplicate: nn) | et_mac_bar=nn | x0 | Closed-loop et ligature with arched macron above and underbar below
k076 | Slot 09 (Duplicate: pp) | et_ring=pp | x0 | Closed-loop et ligature with small ring above right of stem
k077 | Slot 10 (Duplicate: rr) | et_dot_both=rr | x0 | Closed-loop et ligature with single overdot and single subdot
k078 | Slot 11 (Duplicate: ss) | etp_dot=ss | x0 | Closed-loop et ligature with overdot and looped crossbar slashing stem
k079 | Slot 12 (Duplicate: tt) | ets_hook=tt | x0 | Closed-loop et ligature ending in small s-hook flourish on right (ets)
k080 | Slot 13 (pertanto) | p_bar3=pertanto | x0 | Minuscule p crossed by three parallel horizontal bars across descender

Band 4 — Base-p function words and chancery titles (k081–k094; slots 01 to 14 left-to-right)
k081 | Slot 01 (Qua) | p_plain=qua | x3 | Plain minuscule p without bars or dots (p)
k082 | Slot 02 (que) | p_right_bar=que | x7 | Minuscule p with horizontal bar extending right from top of bowl (p-)
k083 | Slot 03 (qui) | p_right_cross=qui | x0 | Minuscule p with crossed horizontal bar (+ stroke) to right of bowl (p+)
k084 | Slot 04 (qn [quando]) | p_mac=quando | x0 | Minuscule p with arched macron above bowl
k085 | Slot 05 (come) | p_dot_mac=come | x0 | Minuscule p with overdot beneath arched macron above bowl
k086 | Slot 06 (pur) | p_mac2=pur | x0 | Minuscule p with double horizontal macron above bowl
k087 | Slot 07 (perch [perche]) | p_bowl_loop=perche | x1 | Minuscule p with right loop from bowl slashing diagonally down-left
k088 | Slot 08 (como) | p_div=como | x0 | Minuscule p with division sign (bar with dot above and dot below) to right of bowl
k089 | Slot 09 (La .S^ria. v.) | p_dot_flanked=[La Sria v] | x3 | Minuscule p flanked by mid-height dots on left and right
k090 | Slot 10 (La .S^ria. soa.) | p_ring=[La Sria soa] | x0 | Minuscule p surmounted by small circle/ring above bowl
k091 | Slot 11 (La .M^ta. soa.) | p_double_cross=[La Mta soa] | x3 | Minuscule p with right bar crossed by two slanted vertical/diagonal strokes (p#)
k092 | Slot 12 (no [non]) | p_bar1=non | x3 | Minuscule p with single horizontal stroke crossing lower descender
k093 | Slot 13 (p[er] [per]) | p_bar2=per | x3 | Minuscule p with two horizontal strokes crossing descender
k094 | Slot 14 (sich [siche]) | p_desc_loop=siche | x2 | Minuscule p with horizontal bar across descender looping right and back

Band 5 — Closed VC syllable grid (k095–k169; 5 vowel series x 15 codas b..x across Ab–ed, Ef–im, In–os, ot–ux)
k095 | A-series s01 (Ab) | a_plain=ab | x1 | Plain minuscule a with short terminal
k096 | A-series s02 (ac) | a_hook=ac | x5 | Minuscule a with elongated horizontal right baseline tail
k097 | A-series s03 (ad) | a_mac=ad | x30 | Minuscule a with single horizontal macron above
k098 | A-series s04 (af) | a_mac2=af | x2 | Minuscule a with double horizontal macron above
k099 | A-series s05 (ag) | a_dot1=ag | x2 | Minuscule a with single overdot above bowl
k100 | A-series s06 (al) | a_dot1_hook=al | x6 | Minuscule a with single overdot above and elongated horizontal right tail
k101 | A-series s07 (am) | a_right_dot_top=am | x5 | Minuscule a with horizontal right tail and single dot above tail
k102 | A-series s08 (an) | a4_slash=an | x13 | Minuscule a ligatured into crossed-4 right descender (a4)
k103 | A-series s09 (ap) | a_mac_4_slash=ap | x1 | Minuscule a with macron above ligatured into crossed-4 descender
k104 | A-series s10 (aq) | a_tilde=aq | x0 | Minuscule a with wavy tilde / double-tick above
k105 | A-series s11 (ar) | a_div=ar | x21 | Minuscule a with horizontal right bar, one dot above bar, and one dot below bar
k106 | A-series s12 (as) | a_dot_4_slash=as | x7 | Minuscule a with single overdot ligatured into crossed-4 descender
k107 | A-series s13 (at) | a_right_subdot=at | x8 | Minuscule a with horizontal right bar and single dot below bar
k108 | A-series s14 (au) | a_dot_bar_subdot=au | x9 | Minuscule a with overdot above bowl, horizontal right bar, and single dot below bar
k109 | A-series s15 (ax) | a_ring=ax | x0 | Minuscule a with horizontal right tail and small circle/ring above tail
k110 | E-series s01 (Eb) | e_plain=eb | x0 | Compact plain minuscule e
k111 | E-series s02 (ec) | e_mac=ec | x9 | Minuscule e with single arched/horizontal macron above
k112 | E-series s03 (ed) | e_mac2=ed | x9 | Minuscule e with double horizontal macron above
k113 | E-series s04 (Ef) | e_hook=ef | x4 | Minuscule e with long horizontal right baseline stroke (e_)
k114 | E-series s05 (eg) | e4_slash=eg | x1 | Minuscule e ligatured into crossed-4 descender (e4)
k115 | E-series s06 (el) | e_dot1=el | x14 | Minuscule e with single overdot above
k116 | E-series s07 (em) | e_tilde=em | x8 | Minuscule e with 2-arch wavy tilde above (written as two

overdots above e in Bianco's cursive)
k117 | E-series s08 (en) | e_dot_both=en | x16 | Minuscule e with single overdot above and single subdot below
k118 | E-series s09 (ep) | e_m_flourish=ep | x4 | Minuscule e with wide 3-arch m-shaped flourish above
k119 | E-series s10 (eq) | e_slash_dot=eq | x0 | Minuscule e pierced by diagonal slash with dot at upper right
k120 | E-series s11 (er) | e_div=er | x19 | Minuscule e with horizontal right bar, dot above bar, and dot below bar
k121 | E-series s12 (es) | e_virg=es | x9 | Minuscule e followed by short vertical/diagonal hairline stroke (e/)
k122 | E-series s13 (et) | e_mac_bar=et | x23 | Minuscule e with horizontal macron above and horizontal underbar below
k123 | E-series s14 (eu) | eu_ribbon=eu | x4 | Wide left e-curve sweeping into upper-right figure-8 ribbon loop slashing down-left
k124 | E-series s15 (ex) | e_ring=ex | x4 | Minuscule e surmounted by small circle/ring above
k125 | I-series s01 (Ib) | c_plain=ib | x4 | Plain open minuscule c
k126 | I-series s02 (ic) | c_mac=ic | x10 | Open minuscule c with single macron above
k127 | I-series s03 (id) | c_dot1=id | x5 | Open minuscule c with single overdot above
k128 | I-series s04 (if) | c_mac2=if | x1 | Open minuscule c with double horizontal macron above
k129 | I-series s05 (ig) | ct_plain=ig | x7 | Open-c plus tall-t ligature (ct)
k130 | I-series s06 (il) | ct_dot1=il | x0 | Open-c plus tall-t ligature with single overdot over c
k131 | I-series s07 (im) | ct_dot2=im | x2 | Open-c plus tall-t ligature with two dots above crossbar
k132 | I-series s08 (In) | ctp_loop=in | x10 | Open-c crossbar sweeping into upper-right loop slashing down-left (ctp)
k133 | I-series s09 (ip) | ctp_dot1=ip | x1 | Open-c with single overdot plus right-looped slash
k134 | I-series s10 (iq) | ctp_dot_right=iq | x0 | Open-c with single overdot above crossbar plus right-looped slash and single dot to lower right, parallel to oq (k149)
k135 | I-series s11 (ir) | c_dot_div=ir | x4 | Open minuscule c with overdot, horizontal right bar, and subdot below bar
k136 | I-series s12 (is) | c_ring=is | x6 | Open minuscule c surmounted by small circle/ring above
k137 | I-series s13 (it) | ctt_plain=it | x4 | Open-c ligatured to doubled t stems (ctt)
k138 | I-series s14 (iu) | ct_sup_a=iu | x0 | Open-c with overdot ligatured to t with superscript open-a hook at upper right
k139 | I-series s15 (ix) | cto_loop=ix | x1 | Open-c right-looped slash followed by small round o at lower right (cto)
k140 | O-series s01 (Ob) | r_plain=ob | x0 | Plain forked/shouldered minuscule r
k141 | O-series s02 (oc) | r_mac=oc | x7 | Minuscule r with single macron above
k142 | O-series s03 (od) | r_dot1=od | x8 | Minuscule r with single overdot above
k143 | O-series s04 (of) | r_mac2=of | x0 | Minuscule r with double horizontal macron above
k144 | O-series s05 (og) | r_tilde=og | x3 | Minuscule r without right tail surmounted by short wavy tilde
k145 | O-series s06 (ol) | r_dot_both=ol | x4 | Compact minuscule r with single overdot above and single subdot below
k146 | O-series s07 (om) | r_dot2=om | x4 | Minuscule r surmounted by two overdots / diaeresis
k147 | O-series s08 (on) | 4_slash=on | x23 | Standalone crossed-4 tachygraphic sign (4)
k148 | O-series s09 (op) | 4_slash_dot1=op | x5 | Crossed-4 sign with single dot at upper right
k149 | O-series s10 (oq) | 4_slash_dot2_lr=oq | x0 | Crossed-4 sign with one dot over left stem and one dot at upper right
k150 | O-series s11 (or) | 4_slash_tilde=or | x9 | Crossed-4 sign surmounted by wavy tilde (written as two ticks above 4 in Bianco's fast cursive)
k151 | O-series s12 (os) | r_tilde_bar=os | x8 | Minuscule r with extended horizontal right bar surmounted by wavy tilde
k152 | O-series s13 (ot) | r_dot_bar_subdot=ot | x7 | Minuscule r with overdot, extended horizontal right bar, and subdot below bar
k153 | O-series s14 (ou) | r_tilde_subdot=ou | x2 | Minuscule r with wavy tilde above and single subdot below (written with two overdots and subdot in Bianco's cursive)
k154 | O-series s15 (ox) | r_dot_flanked=ox | x0 | Minuscule r flanked by dots on left and right
k155 | U-series s01 (Vb) | t_plain=ub | x2 | Plain minuscule t with crossbar (cursive near-homograph of Col

d Row 1 = d k008)
k156 | U-series s02 (uc) | t_mac=uc | x2 | Minuscule t surmounted by arched macron above
k157 | U-series s03 (ud) | t_dot1=ud | x0 | Minuscule t with single overdot above stem
k158 | U-series s04 (uf) | t_mac2=uf | x0 | Minuscule t with double horizontal macron above
k159 | U-series s05 (ug) | t_div=ug | x0 | Minuscule t with horizontal right bar, dot above bar, and dot below bar
k160 | U-series s06 (ul) | t_sup_a=ul | x1 | Minuscule t surmounted by pointed superscript a / caret loop (t^a)
k161 | U-series s07 (um) | tt_plain=um | x0 | Doubled minuscule t ligature without overdot (tt)
k162 | U-series s08 (un) | tt_dot1=un | x5 | Doubled minuscule t ligature with single overdot above
k163 | U-series s09 (up) | tp_loop=up | x0 | Minuscule t whose crossbar loops right and slashes down across second stem (tp)
k164 | U-series s10 (uq) | tp_dot1=uq | x0 | Looped tp ligature with single overdot above
k165 | U-series s11 (ur) | ttt_plain=ur | x1 | Triple vertical stems crossed by horizontal t-bar (ttt)
k166 | U-series s12 (us) | t_tilde=us | x1 | Minuscule t surmounted by wavy tilde above
k167 | U-series s13 (ut) | t_ring=ut | x2 | Minuscule t surmounted by small circle/ring above right of stem
k168 | U-series s14 (uu) | t_hook_subdot=uu | x0 | Minuscule t with small semi-lunar hook above and subdot below
k169 | U-series s15 (ux) | tp_ring=ux | x0 | Looped tp ligature surmounted by small circle/ring above

Band 6 — Diplomatic nomenclator (k170–k237; 4 columns x 17 rows top-to-bottom)
k170 | Col 1 r01 (Papa) | nom_o_plain=[Papa] | x0 | Plain circle / minuscule o
k171 | Col 1 r02 (Imperator) | nom_o_mac=[Imperator] | x0 | Minuscule o with single macron above
k172 | Col 1 r03 (Cardinales) | nom_o_mac_bar=[Cardinales] | x0 | Minuscule o with macron above and underbar below
k173 | Col 1 r04 (Rex Francie) | nom_o_virg=[Rex Francie] | x2 | Minuscule o followed by short vertical/slanted stroke (o1 / .o1)
k174 | Col 1 r05 (Rex Hispanie) | nom_o_dot1=[Rex Hispanie] | x0 | Minuscule o with single overdot above
k175 | Col 1 r06 (Rex Anglie) | nom_o_tilde=[Rex Anglie] | x0 | Minuscule o surmounted by wavy tilde
k176 | Col 1 r07 (Rex Hungarie) | nom_o_dot_flanked=[Rex Hungarie] | x0 | Minuscule o flanked by mid-height dots on left and right
k177 | Col 1 r08 (Rex Renatus) | nom_o_desc=[Rex Renatus] | x0 | Circle o with short vertical descender dropping from bottom center (q-like)
k178 | Col 1 r09 (Rex Portugallie) | nom_o_right_bar=[Rex Portugallie] | x0 | Minuscule o with horizontal bar extending right (o-)
k179 | Col 1 r10 (Rex Ferdinand[us]) | nom_o_dot_both=[Rex Ferdinandus] | x0 | Minuscule o with single overdot above and single subdot below
k180 | Col 1 r11 (Dvx Burgundie) | nom_o_dot1_flanked=[Dvx Burgundie] | x0 | Overdotted o flanked by mid-height dots on left and right
k181 | Col 1 r12 (D. Chiarlois) | nom_o_dot_both_flanked=[D. Chiarlois] | x2 | Top-and-bottom-dotted o flanked by left and right dots
k182 | Col 1 r13 (Dvx Sabbaudie) | nom_b_short=[Dvx Sabbaudie] | x1 | Round-bellied minuscule b with short upright stem (b)
k183 | Col 1 r14 (Dvx Mutine) | nom_d_uncial=[Dvx Mutine] | x0 | Uncial minuscule d with left-curving ascender
k184 | Col 1 r15 (Dvx Johannes) | nom_o_left_right_bar=[Dvx Johannes] | x0 | Minuscule o with low left baseline tick and upper right horizontal bar (_o-)
k185 | Col 1 r16 (Comes Galeaz) | nom_q_right_bar=[Comes Galeaz] | x0 | Descender-o/q with horizontal bar extending right from top of bowl (q-)
k186 | Col 1 r17 (Comes Gaspar) | nom_b_desc_slash=[Comes Gaspar] | x0 | Round b/o with both short upper stem and diagonal lower-left tail
k187 | Col 2 r01 (Marchio Montisferr[a]ti) | nom_o_horiz_desc=[Marchio Montisferrati] | x0 | Circle o with left-and-right horizontal bars and short bottom vertical stem (-q-)
k188 | Col 2 r02 (Marchio Mantue) | nom_o_4way_cross=[Marchio Mantue] | x0 | Circle o with four-way cardinal crossbars protruding top, bottom, left, and right
k189 | Col 2 r03 (Dvx Venetiar[um]) | nom_o_diag_slash=[Dvx Venetiarum] | x0 | Circle o pierced by

diagonal slash from upper-right to lower-left

k190 | Col 2 r04 (Co. Jacobus) | nom_o_thru_hbar=[Co. Jacobus] | x0 | Circle o bisected horizontally by long bar extending left and right

k191 | Col 2 r05 (D. Alex. Sfor.) | nom_101=[D. Alex. Sfor.] | x0 | Circle o flanked on both left and right by short vertical strokes (1o1)

k192 | Col 2 r06 (D. Rob[er]t[us] d[e] S. Seuer[in]o) | nom_o_virg_dot=[D. Robertus de S. Seuerino] | x0 | Circle o followed by vertical slash and right dot (o|.)

k193 | Col 2 r07 (D. Bosius d[e] Atte[n]dolis) | nom_o_mac2=[D. Bosius de Attendolis] | x0 | Circle o surmounted by double horizontal macron

k194 | Col 2 r08 (Alpho[n]s[us] dvx Calab[ri]e) | nom_o_mac_bar_subdot=[Alphonsus dvx Calabrie] | x0 | Circle o with macron above, underbar below, and subdot beneath underbar

k195 | Col 2 r09 (Co. Dumene) | nom_o_dot_mac_bar=[Co. Dumene] | x0 | Circle o with overdot above macron and horizontal underbar below

k196 | Col 2 r10 (Co. de Foys) | nom_o_right_loop=[Co. de Foys] | x0 | Circle o with horizontal right bar looping upward and slashing down-left (op-loop)

k197 | Col 2 r11 (Dvx Borbon[i]) | nom_o_right_cross=[Dvx Borboni] | x0 | Circle o with crossed horizontal right stem (o+)

k198 | Col 2 r12 (Dvx hemors) | nom_o_right_dot_top=[Dvx hemors] | x0 | Circle o with horizontal right bar and single dot above bar; diplomatic ink writes tall looped minuscule h in 'Dvx hemors' for Jacques d'Armagnac, Duke of Nemours

k199 | Col 2 r13 (Dvx Britannie) | nom_o_div=[Dvx Britannie] | x0 | Circle o with horizontal right bar, dot above bar, and dot below bar

k200 | Col 2 r14 (Co. don Martin) | nom_tick_o_bar=[Co. don Martin] | x0 | Short upper-left tick before o with horizontal right bar ('o-); diplomatic ink writes closed round o in 'Co. don Martin' for Antoine de Chabannes, Count of Dammartin

k201 | Col 2 r15 (D. Montalbani) | nom_1o_bar=[D. Montalbani] | x0 | Vertical stroke before o with horizontal right bar (1o-)

k202 | Col 2 r16 (Bastardus Bu[r]gu[n]die) | nom_o_top_cross=[Bastardus Burgundie] | x0 | Circle o surmounted by vertical stem crossed by horizontal bar (orb)

k203 | Col 2 r17 (Johachin) | nom_o_sup_e=[Johachin] | x0 | Circle o surmounted by small superscript loop/c-curl above

k204 | Col 3 r01 (Bayli de lyon) | nom_o_dot_mac=[Bayli de lyon] | x0 | Circle o with macron above and single overdot above macron

k205 | Col 3 r02 (Ducissa Sabbaudie) | nom_o_bar_cross=[Ducissa Sabbaudie] | x0 | Horizontally barred o followed by vertical cross-stroke on right

k206 | Col 3 r03 (Ast) | nom_cross_o=[Ast] | x0 | Left horizontal cross (+o) joined to circle o with short right tick

k207 | Col 3 r04 (Vercell[i]) | nom_o_tack_right=[Vercelli] | x0 | Circle o with horizontal right bar ending in vertical T-bar (o-|)

k208 | Col 3 r05 (Janua) | nom_o_slash_curl=[Janua] | x0 | Circle o with diagonal down-left stem and small upper-right hook

k209 | Col 3 r06 (Saona) | nom_o_bottom_cross=[Saona] | x0 | Circle o with vertical/diagonal descender crossed below by horizontal bar

k210 | Col 3 r07 (Parisius) | nom_o_vslash_top_cross=[Parisius] | x0 | Circle o pierced vertically by stem with crossbar above

k211 | Col 3 r08 (Hippolyta M[ari]a) | nom_o_double_vbar=[Hippolyta Maria] | x0 | Circle o with horizontal right bar crossed by two vertical strokes (o++)

k212 | Col 3 r09 (Senenses) | nom_8_top_bar=[Senenses] | x0 | Vertical figure-8 loop capped by flat horizontal top bar

k213 | Col 3 r10 (Florentini) | nom_4o=[Florentini] | x0 | Crossed-4 sign followed immediately by circle o (4o)

k214 | Col 3 r11 (Bononien[ses]) | nom_oo_plain=[Bononienses] | x0 | Conjoined horizontal double-o / infinity ligature (oo)

k215 | Col 3 r12 (Perusium) | nom_oo_dot1=[Perusium] | x0 | Conjoined double-o ligature with single overdot above

k216 | Col 3 r13 (Gentes) | nom_oo_mac=[Gentes] | x0 | Conjoined double-o ligature with horizontal macron above
k217 | Col 3 r14 (Equites) | nom_oo_mac_bar=[Equites] | x0 | Conjoined double-o ligature with macron above and underbar below
k218 | Col 3 r15 (Pedites) | nom_oo_subdot=[Pedites] | x0 | Conjoined double-o ligature with single subdot below
k219 | Col 3 r16 (Galee) | nom_oo_top_loop=[Galee] | x0 | Conjoined double-o ligature with small third loop/ring atop right lobe
k220 | Col 3 r17 (Naues) | nom_oo_right_bar=[Naues] | x0 | Conjoined double-o ligature with horizontal bar extending right (oo-)
k221 | Col 4 r01 (Denari) | nom_oo_bar_dot=[Denari] | x0 | Conjoined double-o ligature with right horizontal bar and acute tick/dot above right lobe
k222 | Col 4 r02 (Subsidiu[m]) | nom_oo_right_loop=[Subsidium] | x0 | Conjoined double-o ligature with right loop slashing down-left
k223 | Col 4 r03 (Pratica) | nom_oq_desc=[Pratica] | x0 | Conjoined double-o with vertical descender dropping from right lobe (oq)
k224 | Col 4 r04 (Accordiu[m]) | nom_po_desc=[Accordium] | x0 | Conjoined double-o with vertical descender dropping from left lobe (po)
k225 | Col 4 r05 (Pax) | nom_qq_desc=[Pax] | x0 | Conjoined double-o with vertical descenders dropping from both lobes (qq)
k226 | Col 4 r06 (Conspiratio) | nom_bo_asc=[Conspiratio] | x0 | Conjoined double-o with short ascender rising from left lobe (bo)
k227 | Col 4 r07 (Guerra) | nom_od_asc=[Guerra] | x0 | Conjoined double-o with diagonal ascender rising from right lobe (od)
k228 | Col 4 r08 (Se non) | nom_oo_dot2=[Se non] | x0 | Conjoined double-o ligature with two overdots / diaeresis above
k229 | Col 4 r09 (Forse) | nom_oo_dot_right=[Forse] | x0 | Conjoined double-o ligature with single dot to its right (oo.)
k230 | Col 4 r10 (Benche) | nom_oo_dot_top_right=[Benche] | x0 | Conjoined double-o ligature with one overdot above left lobe and one dot to its right
k231 | Col 4 r11 (Sforzigene) | nom_oo_flanked_subdot=[Sforzigene] | x0 | Conjoined double-o flanked by left/right dots with single subdot below
k232 | Col 4 r12 (Sawoyni) | nom_oo_vbar=[Sawoyni] | x0 | Conjoined double-o pierced centrally by vertical stem (phi-like double lobe)
k233 | Col 4 r13 (B[er]gognoni) | nom_oo_loop_desc=[Bergognoni] | x0 | Conjoined double-o with central descender looping left and crossed horizontally
k234 | Col 4 r14 (Dvx Austrie) | nom_b_tall=[Dvx Austrie] | x0 | Minuscule b with tall straight vertical ascender (b)
k235 | Col 4 r15 (Ducissa Aust[ri]e) | nom_b_right_bar=[Ducissa Austrie] | x0 | Tall minuscule b with horizontal bar extending right from bowl (b-)
k236 | Col 4 r16 (Dvx Bauarie) | nom_b_cross_asc=[Dvx Bauarie] | x0 | Tall minuscule b with horizontal crossbar through ascender
k237 | Col 4 r17 (Liga suicior[um]) | nom_b_tack_right=[Liga suiciorum] | x0 | Tall minuscule b with horizontal right bar ending in vertical tick (b-|)

Intrinsic graphic homographies on folio 47r

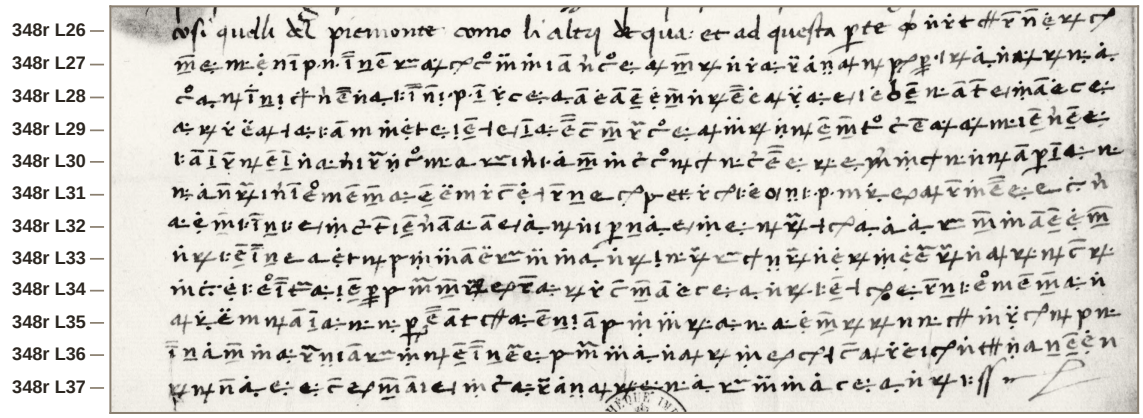
Homograph pair 1 (m_right_dot_top = u/z): k043 m_right_dot_top=u (Col 20 r1, x7) and k049 m_right_dot_top_z=z (Col 22 r2, x0) both draw three-minim m with a right baseline tail and single dot above the tail; all seven tokens in Bianco's dispatch (t013, t140, t160, t590, t668, t685, t694) encode u.

Homograph pair 2 (t_cross / t_plain = d/ub): k008 t_cross=d (Col 04 r1, x6) and k155 t_plain=ub (U-series s01 Vb, x2) both draw a short vertical stem crossed by a horizontal bar; lexical context disambiguates the eight occurrences across t004 and t374 (ub in dubito, dubitare) versus t107, t114, t208, t264, t285, and t429 (d in mandare, prendere, dicendo, ordinata, facendo, vindicano).

Appendix B. Paris folio 348 plates and token alignment

Figure 4 reproduces both complete encrypted passages in Bianco's Lyon dispatch on folios 348r and 348v together with their adjacent cleartext seams and manuscript line labels. Below, a pre-key legend defines all 24 two-stroke merges +(...) and the 82-label shorthand lookup bridge. Every verified sign from t001 to t702 then aligns left-to-right by manuscript line against its Vienna glyph identifier and diplomatic emission. An asterisk * marks the 8 context-disambiguated short-t homograph tokens.

a **BnF MS Italien 1591, fol. 348r, lines 26–37 (cosi cleartext seam and tokens t001–t477)**



b **BnF MS Italien 1591, fol. 348v, lines 1–9 (parentadi seam, tokens t478–t702, and Le quale seam)**

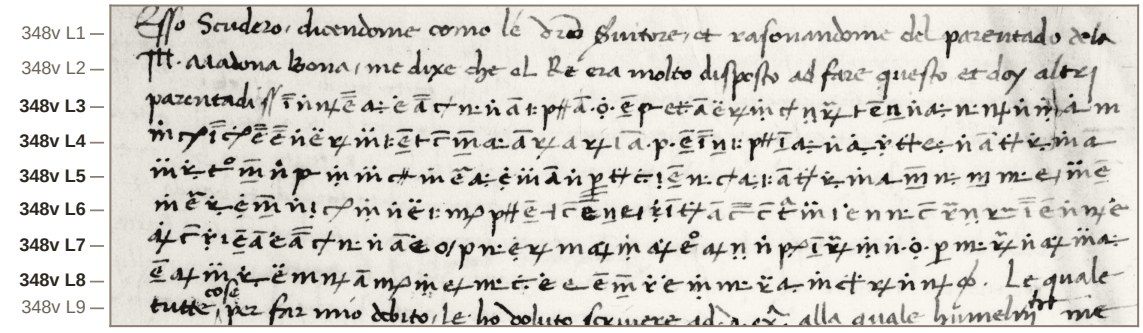


Figure 4: Complete encrypted passages on folio 348r, lines 26 to 37 (a), and folio 348v, lines 1 to 9 (b), with cleartext seams and line labels. Source gallica.bnf.fr / Bibliothèque nationale de France, MS Italien 1591, fols. 348r–348v.

Pre-key two-stroke merge legend +(mark1+mark2) across 24 tokens (726 preliminary marks -> 715 non-virgules -> 702 tokens):
+(e+virg)->e_virg=es (x9: t058,t096,t119,t241,t259,t278,t322,t357,t372); +(o+virg)->nom_o_virg=[Rex Francie] (x2: t219,t648);
+(e+x_loop)->eu_ribbon=eu (x3: t225,t427,t451) or ctp_loop=in (x2: t428,t435; pair-locked to eu_ribbon in Table 3 Rung 4);
+(e+p_loop)->eu_ribbon=eu (x1: t614); +(e+t_div)->et_colon_right=ll (x2: t214,t497);
+(p+tt)->p_double_cross=[La Mta soa] (x3: t492,t543,t607); +(m+p_loop)->mh_loop_slash=con (x2: t605,t683); virg=hairline slash.
Pre-key shorthand lookup bridge (82 unmerged shorthand labels -> 76 fol. 47r glyph IDs; alt. lookup maps n_div->n_div, m_div->m_div):
phi->null_phi s_double->null_ss l->l_plain i->l_plain i_dot1->i_dot1 l_dot_bot->l_subdot

i_dot_bot->l_subdot l_div->l_colon_right i_mac->l_top_bar i_mac2->i_mac2
i_mac_bar->i_mac_bar n->n_plain n_mac->n_mac n_bar->n_bar n_dot1->n_dot1
n_dot_both->n_dot_both n_framed_dot1->n_dot_flanked h->h_arch n_dot2_bot->n_subdot2
n4_slash->n4_slash n_div->n_right_dot_top m->m_plain m_bar->m_bar m_dot1->m_dot1
m_dot_both->m_dot_both m_tilde->m_tilde m_mac_bar->m_mac_bar m_dot2->m_dot2
m_div->m_right_dot_top p->p_plain p_loop->p_bowl_loop p_framed->p_dot_flanked
p_slash->p_bar1 p_bar2->p_bar2 a->a_plain a_mac->a_mac a_mac2->a_mac2 a_dot1->a_dot1
a4_slash->a4_slash a_div->a_div a_dot_bot->a_right_subdot a_dot_both->a_dot_bar_subdot
e->e_plain e_mac->e_mac e_mac2->e_mac2 e_mac2_bar->e_mac2 e_dot1->e_dot1 e_tilde->e_tilde
e_dot2->e_tilde e_dot_both->e_dot_both e_div->e_div e_mac_bar->e_mac_bar e_ring->e_ring
c->c_plain c_mac->c_mac c_dot1->c_dot1 c_mac2->c_mac2 ct->ct_plain x_loop->ctp_loop
c_ring->c_ring r->r_plain r_mac->r_mac r_dot1->r_dot1 r_tilde->r_tilde
r_dot_both->r_dot_both r_dot2->r_dot2 4_slash->4_slash 4_slash_dot1->4_slash_dot1
4_slash_dot2->4_slash_tilde 4_slash_tilde->4_slash_tilde r_tilde_dot_bot->r_tilde_subdot
r_dot2_top_bot->r_tilde_subdot t->t_cross t_mac->t_mac t_div->t_div t_caret->t_sup_a
tt->tt_plain t_tilde->t_tilde t_ring->t_ring o->nom_o_plain
o_framed_dot_both->nom_o_dot_both_flanked b->nom_b_short

=== Block 1: Paris BnF MS Italien 1591, folio 348r, lines 26–37 (t001–t477) ===

348r L26 (cipher line 01, t001–t010; cleartext prefix: ...cosi quelli del piemonte como li altrj de qua: et ad questa p[ar]te)
t001:null_phi=[NULL] t002:n_dot1=i t003:r_dot1=od t004∗:t_plain=ub t005:ctt_plain=it
t006:r_mac=oc t007:n_mac=h t008:e_dot_both=en t009:4_slash=on t010:ctp_loop=in
Diplomatic: [NULL] io dubito che non in-

348r L27 (cipher line 02, t011–t053)
t011:m_mac_bar=t t012:e_div=er t013:m_right_dot_top=u t014:e_dot_both=en t015:n_plain=g
t016:l_top_bar=a t017:p_plain=qua t018:n_dot_flanked=l t019:i_mac2=c t020:n_bar=h
t021:e_mac=ec t022:r_tilde_bar=os t023:a_dot_4_slash=as t024:ctp_loop=in t025:c_ring=is
t026:m_dot2=t t027:m_dot1=r t028:l_plain=a t029:a_mac=ad t030:h_arch=m t031:c_ring=is
t032:e_div=er t033:a4_slash=an t034:m_mac_bar=t t035:4_slash=on t036:n_dot1=i
t037:r_dot1=od t038:a_div=ar t039:r_dot2=om t040:a_dot1=ag t041:n_subdot2=n
t042:a4_slash=an t043:n4_slash=o t044:p_bowl_loop=perche t045:p_bar2=per t046:l_dot_left=b
t047:4_slash=on t048:a_dot_bar_subdot=au t049:n_dot1=i t050:a_dot_4_slash=as
t051:4_slash=on t052:n_div=o t053:a_dot_bar_subdot=au
Diplomatic: teruenga qualche cosa sinistra ad miser antonio da romagnano perche per bona uia sono au-

348r L28 (cipher line 03, t054–t101)
t054:c_ring=is t055:a_right_subdot=at t056:n4_slash=o t057:i_dot_mac=c t058:n_bar=h
t059:l_subdot=e t060:ct_dot2=im t061:h_arch=m t062:e_mac2=ed t063:n_dot1=i
t064:a_right_subdot=at t065:l_colon_right=e t066:i_mac2=c t067:n_mac=h t068:l_subdot=e
t069:p_dot_flanked=[La Sria v] t070:i_mac_bar=f t071:r_dot_both=ol t072:c_plain=ib
t073:e_div=er t074:a_right_subdot=at t075:a_mac=ad t076:e_dot1=el t077:a_mac=ad
t078:e_mac_bar=et t079:e_dot_both=en t080:m_mac_bar=t t081:n_dot1=i t082:4_slash=on
t083:e_mac2=ed t084:e_dot1=el t085:a4_slash=an t086:r_tilde_subdot=ou t087:a_div=ar
t088+(e+virg):e_virg=es t089:l_plain=a t090:e_dot1=el t091:nom_b_short=[Dvx Sabbaudie]
t092:e_mac_bar=et t093:n_right_dot_top=l t094:a_mac=ad t095:t_mac=uc
t096+(e+virg):e_virg=es t097:m_dot_both=s t098:a_mac=ad t099:e_dot1=el t100:c_plain=ib
t101:e_div=er
Diplomatic: isato che immediate che [La Sria v] fo liberata dela detentione dela nouaresa el [Dvx Sabbaudie] et la ducessa deliber-

348r L29 (cipher line 04, t102–t145)
t102:a_div=ar t103:4_slash=on t104:r_dot1=od t105:e_tilde=em t106:a4_slash=an
t107∗:t_cross=d t108:a_div=ar t109:l_colon_right=e t110:a_mac=ad t111:m_plain=p
t112:m_dot1=r t113:e_dot_both=en t114∗:t_cross=d t115:e_div=er t116:l_subdot=e
t117:e_mac_bar=et t118:l_right_bar=d t119+(e+virg):e_virg=es t120:i_mac_bar=f
t121:a_div=ar t122:e_mac2=ed t123:c_mac=ic t124:m_mac_bar=t t125:r_dot2=om t126:c_ring=is
t127:e_div=er t128:a4_slash=an t129:m_dot2=t t130:4_slash=on t131:n_dot_both=i
t132:n4_slash=o t133:e_mac_bar=et t134:m_mac_bar=t t135:t_ring=ut t136:c_dot1=id
t137:e_mac=ec t138:a_dot_4_slash=as t139:a_dot_4_slash=as t140:m_right_dot_top=u
t141:l_plain=a t142:e_mac_bar=et t143:h_arch=m t144:e_mac_bar=et t145:e_div=er
Diplomatic: arono de mandare ad prendere et desfare dicto miser antonio et tuti de casa sua et meter-

348r L30 (cipher line 05, t146–t189)
t146:l_colon_right=e t147:a_mac=ad t148:i_mac_bar=f t149:r_mac=oc t150:n4_slash=o
t151:e_mac_bar=et t152:i_mac_bar=f t153:n_dot1=i t154:a_right_dot_top=am t155:h_arch=m
t156:l_plain=a t157:r_tilde=og t158:n_dot1_subdot2=n t159:c_ring=is t160:m_right_dot_top=u
t161:a_hook=ac t162:r_tilde_bar=os t163:l_plain=a t164:h_arch=m t165:l_plain=a
t166:a_dot1_hook=al t167:m_mac_bar=t t168:m_dot1=r t169:c_dot1=id t170:c_ring=is
t171:n4_slash=o t172:ct_plain=ig t173:n_right_dot_top=l t174:c_dot1=id t175:e_mac2=ed
t176:e_div=er t177:4_slash_dot1=op t178:e_div=er t179:mh_loop_slash=con t180:m_dot_both=s
t181:ct_plain=ig t182:n_right_dot_top=l t183:n_dot1=i t184:n4_slash=o t185:a_mac=ad
t186:p_bar1=non t187:i_mac_bar=f t188:a_div=ar t189:n_right_dot_top=l
Diplomatic: e ad foco et fiamma ogni sua cosa ma altri di soi gli dedero per consiglio ad non farl-

348r L31 (cipher line 06, t190–t233)
t190:n_div=o t191:a_dot1_hook=al t192:n_mac=h t193:4_slash_tilde=or t194:l_plain=a
t195:h_arch=m t196:l_top_bar=a t197:e_ring=ex t198:m_plain=p t199:e_mac=ec
t200:m_mac_bar=t t201:a_div=ar t202:e_mac_bar=et t203:e_tilde=em t204:m_plain=p
t205:r_dot1=od t206:c_mac=ic t207:e_dot_both=en t208∗:t_cross=d t209:r_mac=oc t210:n_bar=h
t211:e_hook=ef t212:ctp_loop=in t213:p_right_bar=que t214+(e+t_div):et_colon_right=ll
t215:r_dot1=od t216:ctp_loop=in t217:l_colon_right=e t218:e_dot1=el
t219+(o+virg):nom_o_virg=[Rex Francie] t220:n_subdot2=n t221:l_colon_right=e
t222:p_dot_flanked=[La Sria v] t223:m_plain=p t224:r_dot_bar_subdot=ot
t225+(e+x_loop):eu_ribbon=eu t226:a4_slash=an t227:r_mac=oc t228:m_dot1=r t229:e_mac2=ed
t230:e_div=er t231:e_hook=ef t232:c_dot_div=ir t233:h_arch=m
Diplomatic: o alhora ma expectare tempo dicendo che fin quello di ne el [Rex Francie] ne [La Sria v] poteuano credere firm-

348r L32 (cipher line 07, t234–t275)
t234:a_right_dot_top=am t235:e_dot_both=en t236:m_mac_bar=t t237:l_colon_right=e
t238:i_dot_mac=c t239:n_bar=h t240:l_colon_right=e t241+(e+virg):e_virg=es
t242:m_dot_both=s t243:c_dot1=id t244:t_mac=uc t245:l_plain=a t246:e_mac_bar=et
t247:h_arch=m t248:a_mac=ad t249:a_right_dot_top=am t250:a_mac=ad t251+(e+virg):e_virg=es
t252:a_dot_bar_subdot=au t253:n4_slash=o t254:n_dot1=i t255:l_plain=a t256:p_bar1=non
t257:n_bar=h t258:a_dot_bar_subdot=au t259+(e+virg):e_virg=es t260:m_dot_both=s
t261:e_div=er t262:n4_slash=o t263:4_slash_tilde=or t264∗:t_cross=d t265:ctp_loop=in
t266:a_right_subdot=at t267:a_dot1_hook=al t268:a_dot_bar_subdot=au t269:r_tilde_bar=os
t270:m_mac_bar=t t271:m_dot1=r t272:a_mac=ad t273:e_mac_bar=et t274:e_dot_both=en
t275:m_mac_bar=t
Diplomatic: amente che essi duca et madama de sauoia non hauessero ordinata la uostra detent-

348r L33 (cipher line 08, t276–t317)
t276:n_dot1=i t277:4_slash=on t278:l_colon_right=e t279:e_mac_bar=et t280:i_dot_mac=c
t281:n_bar=h t282:e_hook=ef t283:a_hook=ac t284:e_dot_both=en t285∗:t_cross=d
t286:n4_slash=o t287:p_right_bar=que t288:m_dot_both=s t289:m_dot2=t t290:a_mac=ad
t291:e_tilde=em t292:r_tilde_bar=os t293:m_dot2=t t294:m_dot1=r t295:a_right_subdot=at
t296:n_dot1=i t297:4_slash=on t298:l_subdot=e t299:n_right_dot_top=l t300:4_slash_tilde=or
t301:r_tilde_bar=os t302:ct_plain=ig t303:n_subdot2=n t304:4_slash_tilde=or t305:n_dot1=i
t306:e_dot_both=en t307:4_slash=on t308:m_dot_both=s t309:e_dot_both=en
t310:e_m_flourish=ep t311:4_slash_tilde=or t312:n_dot1=i t313:a4_slash=an
t314:4_slash_dot1=op t315:n4_slash=o t316:c_mac=ic t317:4_slash_dot1=op
Diplomatic: ione et che facendo questa demostratione loro signorie non se ne poriano poi cop-

348r L34 (cipher line 09, t318–t360)
t318:m_dot1=r t319:c_dot_div=ir t320:e_dot_both=en t321:l_colon_right=e t322:e_ring=ex
t323:i_dot_mac=c t324:t_tilde=us t325:a_div=ar t326:l_subdot=e t327:e_mac_bar=et
t328:p_bar2=per t329:p_right_bar=que t330:m_tilde=s t331:m_mac_bar=t t332:4_slash_tilde=or
t333+(e+p_loop):eu_ribbon=eu t334:r_mac=oc t335:a_div=ar t336:4_slash=on t337:r_dot1=od
t338:c_mac=ic t339:m_mac_bar=t t340:a_mac=ad t341:e_dot1=el t342:c_plain=ib t343:e_div=er
t344:a_right_subdot=at t345:n_dot1=i t346:4_slash=on t347:l_colon_right=e
t348:e_mac_bar=et t349:l_right_bar=d t350:cto_loop=ix t351:e_div=er t352:r_mac=oc
t353:n_bar=h t354:l_colon_right=e t355:e_ring=ex t356:m_plain=p t357:e_mac=ec
t358:m_mac_bar=t t359:a_div=ar t360:n_dot1=i
Diplomatic: rire ne excusare et per questo reuocarono dicta deliberatione et dixero che expectari-

348r L35 (cipher line 10, t361–t400)
t361:a4_slash=an t362:r_dot_bar_subdot=ot t363:e_tilde=em t364:m_plain=p t365:n4_slash=o
t366:a_mac=ad t367:i_mac_bar=f t368:a_div=ar t369:n_right_dot_top=l t370:n_div=o
t371:p_desc_loop=siche t372:e_mac2=ed t373:a_mac=ad t374∗:t_plain=ub t375:ctt_plain=it
t376:a_div=ar t377:e_mac=ec t378:n_bar=h t379:l_subdot=e t380:a_mac=ad
t381:p_right_bar=que t382:m_dot_both=s t383:m_dot2=t t384:4_slash_dot1=op t385:a_div=ar
t386:n_right_dot_top=l t387:a_right_dot_top=am t388:e_dot_both=en t389:m_mac_bar=t
t390:4_slash=on t391:4_slash=on t392:n_plain=g t393:n_right_dot_top=l t394:ctt_plain=it
t395:m_dot1=r t396:r_tilde_subdot=ou t397:ctp_loop=in t398:n4_slash=o t399:p_plain=qua
t400:n_right_dot_top=l
Diplomatic: ano tempo ad farlo siche e da dubitare che ad questo parlamento non gli trouino qual-

348r L36 (cipher line 11, t401–t443)
t401:i_mac2=c t402:n_bar=h t403:a_dot1_hook=al t404:m_mac_bar=t t405:m_dot1=r
t406:a_div=ar t407:r_tilde=og t408:n_subdot2=n t409:l_plain=a t410:a_mac=ad
t411:r_tilde_bar=os t412:m_dot_both=s t413:n4_slash=o t414:e_mac_bar=et t415:i_mac2=c
t416:n_bar=h t417:e_m_flourish=ep t418:e_div=er t419:p_right_bar=que t420:m_tilde=s
t421:m_dot2=t t422:a_dot_bar_subdot=au t423:n_dot1=i t424:a4_slash=an t425:4_slash=on
t426:m_dot_both=s t427+(e+x_loop):eu_ribbon=eu t428+(e+x_loop):ctp_loop=in t429∗:t_cross=d
t430:c_mac=ic t431:a4_slash=an t432:r_dot1=od t433:e_dot1=el t434:l_plain=a
t435+(e+x_loop):ctp_loop=in t436:n_dot1=i t437:ttt_plain=ur t438:n_dot_both=i
t439:a_hook=ac t440:n_bar=h t441:e_mac_bar=et t442:e_dot_both=en t443:n_plain=g
Diplomatic: chaltra rogna adosso et che per questa uia non se uindicano dela iniuria che teng-

348r L37 (cipher line 12, t444–t477)
t444:4_slash=on t445:n4_slash=o t446:n_mac=h t447:a_dot_bar_subdot=au t448:e_div=er
t449:e_div=er t450:c_mac=ic t451+(e+x_loop):eu_ribbon=eu t452:m_mac_bar=t t453:a_mac=ad
t454:l_plain=a t455+(e+virg):e_virg=es t456:m_dot_both=s t457:c_dot1=id t458:a_div=ar
t459:r_dot2=om t460:a_dot1=ag t461:n_subdot2=n t462:a4_slash=an t463:4_slash_dot1=op
t464:e_div=er t465:n_right_dot_top=l t466:a_dot_bar_subdot=au t467:r_tilde_bar=os
t468:m_dot2=t t469:m_dot1=r t470:a_dot1_hook=al t471:c_plain=ib t472:e_div=er
t473:a_right_subdot=at t474:n_dot1=i t475:4_slash=on t476:l_colon_right=e
t477:null_ss=[NULL]
Diplomatic: ono hauere riceuta da essi da romagnano per la uostra liberatione [NULL]

=== Block 2: Paris BnF MS Italien 1591, folio 348v, lines 3–8 (t478–t702) ===

348v L3 (cipher line 13, t478–t515; cleartext prefix: ...questo et doy altrj parentadi)
t478:null_ss=[NULL] t479:i_mac2=c t480:n_dot1=i t481:n_plain=g t482:n4_slash=o
t483:e_mac2=ed t484:a_div=ar t485:e_dot1=el t486:a_mac2=af t487:ct_plain=ig
t488:n_right_dot_top=l t489:n_dot1=i t490:a_mac=ad t491:l_colon_right=e
t492+(p+tt):p_double_cross=[La Mta soa] t493:a_mac=ad
t494:nom_o_dot_both_flanked=[D. Chiarlois] t495:e_mac_bar=et t496:p_right_bar=que
t497+(e+t_div):et_colon_right=ll t498:a_mac=ad t499:e_tilde=em t500:4_slash=on
t501:m_dot_both=s t502:ct_plain=ig t503:n_subdot2=n t504:4_slash_tilde=or
t505:l_right_bar=d t506:e_mac=ec t507:n_bar=h t508:n_dot1=i t509:a_div=ar
t510:n_right_dot_top=l t511:n4_slash=o t512:n_dot1=i t513:m_dot_both=s t514:a_dot1_hook=al
t515:m_plain=p
Diplomatic: [NULL] cigoe dare la figlia de [La Mta soa] ad [D. Chiarlois] et quella de
monsignor de chiarlois al p-

348v L4 (cipher line 14, t516–t556)
t516:m_dot1=r t517:ctp_loop=in t518:i_mac2=c t519:ctp_dot1=ip t520:e_mac2=ed
t521:e_mac2=ed t522:n_dot1=i t523:e_tilde=em t524:4_slash=on t525:m_dot2=t
t526:l_colon_right=e t527:e_mac_bar=et t528:l_right_bar=d t529:c_mac=ic t530:m_mac_bar=t
t531:a_right_dot_top=am t532:a_mac=ad t533:4_slash=on t534:a_plain=ab t535:4_slash=on
t536:l_plain=a t537:a_mac=ad t538:p_dot_flanked=[La Sria v] t539:e_mac_bar=et
t540:i_mac2=c t541:n_bar=h t542:l_colon_right=e t543+(p+tt):p_double_cross=[La Mta soa]
t544:i_mac_bar=f t545:a_div=ar t546:n_dot1=i t547:a_dot_bar_subdot=au t548:r_dot_both=ol
t549:tt_dot1=un t550:e_div=er t551:n_dot1=i t552:a_mac=ad t553:tt_dot1=un
t554:r_dot_bar_subdot=ot t555:m_dot1=r t556:a_hook=ac
Diplomatic: rincipe de diemonte et dicta madona bona ad [La Sria v] et che [La Mta soa]
faria uoluneri ad uno trac-

348v L5 (cipher line 15, t557–t593)
t557:m_dot2=t t558:r_dot_bar_subdot=ot t559:t_ring=ut t560:m_mac_bar=t t561:n_dot1=i
t562:p_right_bar=que t563:m_dot_both=s t564:m_dot2=t t565:ctt_plain=it t566:m_dot1=r
t567:e_m_flourish=ep t568:a_div=ar t569:e_dot_both=en t570:m_dot2=t t571:a_mac=ad
t572:n_dot1=i t573:p_bar2=per t574:tt_dot1=un t575:c_dot_div=ir t576:l_subdot=e
t577:e_mac_bar=et t578:n_right_dot_top=l t579:ct_plain=ig t580:a_div=ar
t581:l_colon_right=e t582:a_mac=ad t583:tt_dot1=un t584:r_dot_bar_subdot=ot t585:m_dot1=r
t586:a_hook=ac t587:m_mac_bar=t t588:n_div=o t589:m_bar=q t590:m_right_dot_top=u
t591+(e+virg):e_virg=es t592:m_dot2=t t593:e_mac_bar=et
Diplomatic: to tutti questi tre parentadi per unire et ligare ad uno tracto queste t-

348v L6 (cipher line 16, t594–t634)
t594:m_dot1=r t595:e_m_flourish=ep t596:r_dot_bar_subdot=ot t597:e_dot_both=en
t598:m_mac_bar=t t599:n_dot1=i t600:l_subdot=e t601:ctp_loop=in t602:m_dot_both=s
t603:n_dot1=i t604:e_tilde=em t605:l_colon_right=e t606+(m+p_loop):mh_loop_slash=con
t607+(p+tt):p_double_cross=[La Mta soa] t608:e_mac_bar=et t609:l_right_bar=d t610:c_mac=ic
t611:e_mac=ec t612:n_bar=h t613+(e+virg):e_virg=es t614:r_dot_both=ol t615:l_top_bar=a
t616:tt_dot1=un t617:a_mac=ad t618:c_mac2=if t619:c_mac=ic t620:t_sup_a=ul t621:m_dot2=t
t622:l_plain=a t623:e_dot1=el t624:n_plain=g t625:n_right_dot_top=l t626:c_mac=ic
t627:r_tilde=og t628:n_subdot2=n t629:r_tilde_bar=os t630:i_mac2=c t631:e_mac=ec
t632:n_dot1=i t633:n4_slash=o t634:e_dot1=el
Diplomatic: re potentie insieme con [La Mta soa] et dice che sola una dificulta el gli cognosce cioe l-

348v L7 (cipher line 17, t635–t673)
t635:a_mac_4_slash=ap t636:r_mac=oc t637:r_dot_both=ol t638:l_plain=a t639:e_mac_bar=et
t640:a_mac=ad t641:e_dot1=el t642:a_mac2=af t643:ct_plain=ig t644:n_right_dot_top=l
t645:n_dot1=i t646:a_mac=ad t647:e_dot1=el t648+(o+virg):nom_o_virg=[Rex Francie]
t649:p_plain=qua t650:n_right_dot_top=l t651:e_dot_both=en t652:4_slash=on t653:m_plain=p
t654:a_dot_4_slash=as t655:m_dot_both=s t656:a_dot_4_slash=as t657:e_ring=ex
t658:a4_slash=an t659:n_subdot2=n t660:n_dot1=i t661:p_desc_loop=siche t662:i_mac_bar=f
t663:4_slash_tilde=or t664:m_dot_both=s t665:n_dot1=i
t666:nom_o_dot_both_flanked=[D. Chiarlois] t667:p_bar1=non t668:m_right_dot_top=u
t669:4_slash_tilde=or t670:n_dot1=i t671:a_dot_4_slash=as t672:m_dot2=t t673:a_div=ar
Diplomatic: a pocola eta dela figlia del [Rex Francie] quale non passa sex anni siche forsi [D. Chiarlois] non uoria star-

348v L8 (cipher line 18, t674–t702; cleartext suffix: Le quale)
t674:e_mac_bar=et t675:a4_slash=an t676:m_dot2=t t677:r_dot_bar_subdot=ot t678:e_tilde=em
t679:m_plain=p t680:n4_slash=o t681:a_mac=ad t682+(m+p_loop):mh_loop_slash=con
t683:m_dot_both=s t684:e4_slash=eg t685:m_right_dot_top=u t686:c_dot_div=ir t687:e_dot1=el
t688:e_hook=ef t689:e_mac=ec t690:m_mac_bar=t t691:r_dot1=od t692:e_dot1=el
t693:m_dot_both=s t694:m_right_dot_top=u t695:r_dot2=om t696:a_right_subdot=at
t697:m_dot1=r t698:ct_dot2=im t699:4_slash=on t700:n_dot1=i t701:n4_slash=o
t702:null_phi=[NULL]
Diplomatic: e tanto tempo ad conseguire lefecto del suo matrimonio [NULL]

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