

# CROSSING ABBREVIATIONS, MONOGRAMS, AND SYMBOLS. PRELIMINARY SURVEY OF *CHI-RHO*, STAUROGRAM, AND *STAUROS* IN GREEK DOCUMENTARY PAPYRI FROM EGYPT\*

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When mentioning the symbol  $\chi\rho$  *chi-rho* one immediately associates it to early Christianity. The monogram representing the first two letters of the name  $\chi\rho\iota\sigma$  was indeed ubiquitous in ancient Christian symbolic representations, and its origins and diffusion have been investigated by Max Sulzberger in a wide study published in 1925, which concluded that “les monogrammes de Jésus sont de simples abréviations, empruntées à l’écriture païenne, qui peu à peu sont devenus des symboles assimilés à la croix” and “le monogramme  $\chi\rho$  ne paraît pas avoir existé, comme monogramme chrétien, avant Constantin. Il était fréquent dans tout le monde grec, avec toutes sortes de significations. Au début du IV<sup>e</sup> siècle, il est possible qu’il présentât un ou plusieurs sens aux yeux des païens aussi, et Constantin croyons-nous pouvait l’adopter ouvertement sans faire encore profession de christianisme”.<sup>1</sup> Sulzberger’s analysis, though deep and detailed, lacks the evidence of Greek papyri, concentrating on literary, epigraphic, and numismatic sources. My current purpose is therefore to integrate his study with a preliminary survey of the occurrences of the monogram *chi-rho* and the related symbols in Greek documentary papyri.

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<sup>1</sup> Sulzberger 1925, 448. The definition of “monogram” for this symbol complies with the traditional scholarly literature. Beside Sulzberger himself, see e.g. Blanchard 1974, 4–7; Montevicchi 1988, 290; Gonis 2009, 172–175.

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## 1. ΧΡΙΣΤΟΣ IN GREEK DOCUMENTARY POPYRI

Sulzberger's statement that "en Orient, [la croix monogrammatique †] est plus fréquente que le ✠" and that "elle est rarement usitée comme abréviation"<sup>2</sup> finds confirmation in the papyrological evidence. As a matter of fact, almost all the Byzantine documents feature either the simple cross (*stauros*, †) or the staurogram (†), which is another important early Christian symbol,<sup>3</sup> inserted as mere Christian marks at the beginning and/or at the end of the texts.<sup>4</sup>

The Christian use of ✠ in the post-Constantinian documentary papyri is very limited. Actually, a simple and quick survey conducted on the papyri.info database shows that documents from the early 4th century onward exhibit ✠ in 510 cases,<sup>5</sup> which is a rather large amount of attestations. However, almost all of these instances can be traced back to either the non-Christian abbreviations discussed below at § 4 or to editorial shortcomings, consisting in the erroneous encoding of an original staurogram as a *chi-rho*.<sup>6</sup> The only instance of Christian ✠ that I have been able to find so far is P.Cair.Masp. III 67289 (unknown provenance, 6th CE, from the Dioskoros archive), a private account containing the invocation Χρ(ις)τε βοήθ(ει) (l. 8), in which the divine name is rendered with the monogram (Fig. 73).

In other cases, Christ's name in documentary papyri is abbreviated following the rules of the *nomina sacra*,<sup>7</sup> with the letters χρ overlined and followed by the appro-

<sup>2</sup> Sulzberger 1925, 448.

<sup>3</sup> It might have been a simplification of the christogram ✠ in the shape of a cross (cf. Sulzberger 1925, 417 and 448; Black 1970) or an even earlier representation of the crucifixion of Jesus (cf. Hurtado 2006, 135–154), possibly influenced by the Egyptian hieroglyph for "life" *ankh*, the famous *crux ansata* that was a constant attribute of the gods (cf. Hurtado 2006, 143–145).

<sup>4</sup> On the use of Christian symbols in Greek documentary papyri cf. Carlig 2020 and Amory 2023.

<sup>5</sup> Due to the encoding strategies of papyri.info, the research is to be conducted by typing the string "chirho" in the search box. Query conducted on May 8, 2024.

<sup>6</sup> The Leiden+ code for *chi-rho* is \*chirho,✠\*, corresponding to XML <g type="chirho"/> and displaying the ✠ symbol in the page output; conversely, the code for staurogram is \*rho-cross\*, corresponding to XML <g type="rho-cross"/> and displaying the † symbol in the page output (cf. Reggiani 2019b, App. 17–19). Among the many possible examples, see P.Ross.Georg. III 33 (a lease of a farm from 522 CE Aphrodito), which clearly shows three consecutive staurograms at the end of l. 22 (correctly transcribed in the printed edition) that have been encoded as three ✠; or also e.g. BGU XVII 2711 (grain receipt, Aphrodito, 6th c. CE), with the typical staurogram in the middle of l. 1 (again, correctly transcribed in the printed edition), which is encoded as a ✠. The same exchange occurs also in some Latin letters like P.Ryl. IV 609 (Hermopolis, 505 CE), where the staurogram before the greetings formula *bene uale* is encoded as ✠. In the case of BGU XIX 2786 (grain account, Hermopolis, 5th c. CE) the digital encoding of ✠ instead of † at the beginning of l. 5 depends on the wrong transcription in the earlier printed edition of the papyrus as P.Bingen 127, while the BGU edition prints the staurogram correctly.

<sup>7</sup> The *nomina sacra* are the special abbreviations used in the Christian literary texts to express the divine names, rendered with few relevant letters overlined. Cf. Paap 1959; Hurtado 2006, 95–134; Overcash 2019.

prate grammatical ending,<sup>8</sup> or according to the common Byzantine abbreviating system, i.e. the letters  $\chi\rho$  with the  $\rho$  crossed by a diagonal stroke.<sup>9</sup>

## 2. CHI-RHO IN PTOLEMAIC PAPYRI

In Ptolemaic documentary papyri, the monogram  $\text{X}\rho$  is frequently used to abbreviate common words beginning with  $\chi\rho$ -. Terms connected with  $\chi\rho\upsilon\acute{\sigma}$  “gold”, especially referring to golden coins ( $\chi\rho\upsilon\acute{\sigma}\iota\omicron\nu$ ,  $\chi\rho\upsilon\sigma\iota\kappa\acute{\omicron}\varsigma$ ), are abbreviated in such a way as early as in the Zenon archive. P.Cair.Zen. I 59021, 6 (written in Alexandria and found in Philadelphia, 258 BCE) deploys the pure monogram to render  $\chi\rho(\upsilon\acute{\sigma}\iota\omicron\nu)$  (Fig. 74), while later instances add a  $\upsilon$  over the monogram.<sup>10</sup> That the use of the monogram was not a strict rule is clear from other occurrences, in which similar terms are abbreviated plainly with  $\chi\rho$  and overwritten  $\upsilon$  (Fig. 75).<sup>11</sup>

Another set of technical terms commonly abbreviated with  $\text{X}\rho$  are those expressing the skin color in official personal identifications: the first part of the word, indicating the color, is written in full, while the suffix  $-\chi\rho\omega\acute{\varsigma}$  is abbreviated (Fig. 76);<sup>12</sup> in one case an  $\omega$  is written above (Fig. 77).<sup>13</sup> Again, that the use of the monogram was not a strict rule is revealed by the fact that some other occurrences are abbreviated with the two letters  $\chi\rho$  only ( $\mu\epsilon\lambda\acute{\iota}\chi\rho(\omega\acute{\varsigma})$  in P.Tebt. III 817, 35 – Tebtynis, 182 BCE) (Fig. 78),<sup>14</sup> sometimes overlined (e.g.  $\mu\epsilon\lambda\acute{\iota}\chi\rho(\omega\acute{\varsigma})$ )

<sup>8</sup> P.Col. XI 301, 2 (unknown provenance, 4th c. CE)  $\overline{\chi\rho\acute{\varsigma}}$  =  $\chi\rho(\iota\tau\acute{\omicron}\varsigma)$ ; P.Warr. 10, 1 (unknown provenance, 591/2 CE)  $\overline{\chi\rho\acute{\varsigma}}$  =  $\chi\rho(\iota\tau\acute{\omicron}\varsigma)$ ; PSICongr.XVII 20, 2 (Antinoupolis, 4th c. CE)  $\overline{\chi\rho\acute{\varsigma}}$  =  $\chi\rho(\iota\tau\iota\alpha\nu\acute{\omicron})$ ; P.Bodl. I 37, 2 (unknown provenance, 600 CE)  $\overline{\chi\rho\upsilon}$  =  $\chi\rho(\iota\tau\omicron)\upsilon$ ; P.Bodl. I 62, 1 (unknown provenance, 6th/7th c. CE)  $\overline{\phi\iota\lambda\omicron\chi\rho\tau\omega}$  =  $\phi\iota\lambda\omicron\chi\rho(\iota\tau\omicron)\tau\omega$ ; P.Naqun II 22, 1 (unknown provenance, 623 CE)  $\overline{\chi\rho\acute{\varsigma}}$  =  $\chi\rho(\iota\tau\acute{\omicron}\varsigma)$ . Some variants: SB XXVI 16442, 1 (unknown provenance, 6th/7th c. CE)  $\chi\rho\acute{\varsigma}$  =  $\chi\rho(\iota\tau\acute{\omicron}\varsigma)$ ; P.Prag. I 48, 2 (615 CE)  $\chi\rho\upsilon$  =  $\chi\rho(\iota\tau\omicron)\upsilon$ .

<sup>9</sup> P.Oxy. LXIII 4394, 11 (written in Alexandria, found in Oxyrhynchus, 494 CE)  $\phi\iota\lambda\omicron\chi\rho(\iota\tau\omicron)\tau\omega$ ; P.Gron. 13, 1 (unknown provenance, 5th/6th c. CE)  $\chi\rho(\iota\tau\acute{\omicron}\varsigma)$ ; CPR XIX 42, 2 (Herakleopolites, 591-602 CE)  $\chi\rho(\iota\tau\omicron)\upsilon$ ; P.Gron. 14, 1 (unknown provenance, 6th/7th c. CE?)  $\chi\rho(\iota\tau\acute{\omicron}\varsigma)$ . Some variants: P.Cair.Masp. III 67289 verso (unknown provenance, 6th c. CE)  $\phi\iota\lambda\omicron\chi\rho(\iota\tau\omicron)\tau\omega$  with  $\rho$  crossed by a sinusoid; SB X 10464, 1 (unknown provenance, 7th c. CE)  $\chi\rho(\iota\tau\omicron)\upsilon$  with  $\rho$  crossed and an overwritten  $\upsilon$ . A different abbreviation is found in P.Rain.Cent. 125 (Memphis, 575 CE?)  $\chi\rho(\iota\tau\omicron)\tau\omega$  with an overwritten cross.

<sup>10</sup> P.Eleph. 14, 8 (Apollonopolis?, 223/2 BCE)  $\chi\rho\upsilon(\acute{\sigma}\iota\omicron\nu)$ ; P.Mich. III 200, 14 (unknown provenance, 181/0 BCE?)  $\chi\rho\upsilon(\sigma\omicron\upsilon)$ ; P.Heid. IX 423, 12 (Herakleopolites, 158 BCE)  $\chi\rho\upsilon(\sigma\omicron\upsilon\acute{\varsigma})$ .

<sup>11</sup> E.g. P.Tebt. I 60, vii 102 (Kerkeosiris, 117 BCE)  $\chi\rho\upsilon(\sigma\iota\kappa\acute{\omicron}\varsigma)$ ; P.Hawara 12, Greek subscription (Aueris, 100 BCE)  $\chi\rho\upsilon(\sigma\omicron\upsilon\acute{\varsigma})$ .

<sup>12</sup> CPR XVIII passim (Theogonis, 231 or 206 BCE)  $\mu\epsilon\lambda\acute{\iota}\chi\rho(\omega\acute{\varsigma})$ ,  $\mu\epsilon\lambda\acute{\alpha}\gamma\chi\rho(\omega\acute{\varsigma})$ ; P.Enteux. 17, 11 (Hiera Nesos, 218 BCE)  $\mu\epsilon\lambda\acute{\iota}\chi\rho(\omega\acute{\varsigma})$ ; P.Dryton 2, 15 (Latopolis, 150 BCE)  $\mu\epsilon\lambda\acute{\iota}\chi\rho(\omega\acute{\varsigma})$ ; P.Tebt. III 972, passim (Tebtynis, 2nd c. BCE *ex.*)  $\mu\epsilon\lambda\acute{\iota}\chi\rho(\omega\acute{\varsigma})$ ; P.Köln. IX 365, 18 (Arsinoites?, 2nd c. BCE)  $\lambda\epsilon\upsilon\kappa[\acute{\omicron}\chi\rho(\omega\acute{\varsigma})$ . On the practice of indicating skin color in official personal identifications cf. Hasebroek 1921, 108; Caldara 1924, 49-57; Yiftach 2019, passim.

<sup>13</sup> P.Mich. III 190, 34 (Philadelphia, 172 BCE)  $\lambda\epsilon\upsilon\kappa\acute{\omicron}\chi\rho(\omega\acute{\varsigma})$ .

<sup>14</sup> Perhaps also  $\mu\epsilon\lambda\acute{\iota}\chi\rho(\omega\acute{\varsigma})$  in P.Tebt. I 32, 23 (Arsinoites, 145 BCE), though the papyrus is partially damaged in the relevant point: in the space before  $\kappa\lambda\alpha\tau\acute{\omicron}\varsigma$  it seems possible to accommodate  $\mu\epsilon\lambda\acute{\iota}\chi\rho$  rather than  $\mu\epsilon\lambda\acute{\iota}\text{X}\rho$ .

in P.Grenf. II 23a, ii 3-4 – Pathyrites, 107 BCE – the overline being certainly a cursive simplification of  $\omega$ ) or with  $\omega$  written above (e.g.  $\mu\epsilon\lambda\acute{\iota}\chi\rho\omega(c)$  in P.Ad. 7, 6 – Pathyris, 104 BCE).<sup>15</sup>

A third group of words treated in the same way comprises derivatives of  $\chi\rho\eta\mu\alpha$  (*παραχρῆμα, χρηματιστής, χρηματίζω, χρηματισμός*). In this case, an overwritten cursive  $\eta$  is always added above when the monogram is deployed (Fig. 79).<sup>16</sup> Once more, other similar terms are simply rendered by means of the letters  $\chi\rho$  with  $\eta$  added above (Fig. 80).<sup>17</sup> These facts show that no standard rule was followed by the scribes, who could employ several different writing strategies according to their own habit or knowledge.

Three more monograms in Ptolemaic papyri are of uncertain interpretation.<sup>18</sup>

### 3. CHI-RHO IN ROMAN PYPYRI (31 BCE – 313 CE)

In Roman pre-Constantinian documentary papyri the trend of using the monogram  $\chi\rho$  in the cases already attested in the Ptolemaic texts seems to decrease considerably. It is attested in just two uncertain occurrences in relation to  $\chi\rho\upsilon\acute{o}\varsigma$ <sup>19</sup> (Fig. 81)

<sup>15</sup> I could not check an image of  $\mu\epsilon\lambda\acute{\iota}\lambda\acute{\alpha}\nu\chi\rho\omega(c)$  in P.Ad. 18, 4 (Pathyris, 99 BCE) but it is likely that this abbreviation corresponds to that of P.Ad. 7 due to the similar context of provenance. Another instance from the same context –  $\mu\epsilon\lambda\acute{\iota}\chi\rho\omega(c)$  in SB XVIII 13168, 23 (Pathyris, 123 BCE) – is supplied in lacuna.  $\mu\epsilon\lambda\acute{\iota}\chi[\rho\omega(c)]$  in P.Freib. III 12b, 19 (unknown provenance, 172-162 BCE) is partially damaged. Other cases that I was not able to check: P.Trophitis passim (Arsinoites, 160-158 BCE)  $\mu\epsilon\lambda\acute{\iota}\chi\rho\omega(c)$ ,  $\mu\epsilon\lambda\acute{\alpha}\gamma\chi\rho\omega(c)$ ; SB XXVIII 16852, iii 28 (Antaiopolis, 132 BCE)  $\mu\epsilon\lambda\acute{\iota}\chi\rho\omega(c)$ ; P.Stras. II 81, passim (Thebes, 115 BCE)  $\mu\epsilon\lambda\acute{\iota}\chi\rho\omega(c)$ ; PSI IX 1024, passim and 1025b, 17 (Hermonthis, 104 BCE)  $\mu\epsilon\lambda\acute{\iota}\chi\rho\omega(c)$ ; P.Stras. VIII 761v, 7 (Arsinoites, 2nd c. BCE)  $\mu\epsilon\lambda\acute{\alpha}\nu\chi\rho\omega(c)$ .

<sup>16</sup> P.Hels. I 3r, 15 (Arsinoites, early 2nd c. BCE) *παραχρῆ(μα)* (?); BGU X 1968, 11 (Upper Egypt, 184 BCE) *παραχρῆ(μα)*; P.Tarich. 8, 1 and P.Tarich. 1, 1 (Tanis, 189-184 BCE) *χρη(ματισταῖς)*; P.Dryton 2, 33 (Latopolis, 150 BCE) *κεχρη(μάτιστα)*. I was not able to check the following instances: P.Lille I 3, iv 2 (Magdola, after 216/5 BCE) *συγχρη(ματιστῆ)*; P.Stras. II 104, 19 (Techtho, 210 BCE) *χρη(ματιστῆ)*; P.Tebt. III 770, 6 (Tebtynis, 210 BCE) *χρη(ματιστῆ)*; O.Bodl. I 249, 1 and 250, 1 (Thebes, ca. 190 BCE) *χρη(ματιστῆ)*.

<sup>17</sup> E.g. P.Köln. XI 454, 3 (Herakleopolites, 157 BCE) *κεχρη(ματιστῆ)*; BGU III 996, iii 12 (Pathyris, 112 BCE) *κεχρη(μάτιστα)*; P.Tebt. I 65, 20 (Kerkeosiris, ca. 112 BCE) *χρη(ματιστῆ)*; UPZ II 190, 21 (Thebes, 98 BCE) *κεχρη(μάτιστα)*. A possible exception is represented by SB XXIV 16154v (Aueris, 99 BCE) *χρη(ματιστῆ)*, but the reading of the overwritten  $\tau$  is uncertain and it could well be a very cursive  $\eta$  connected with an ink stroke to the  $\rho$  below (see the digital picture at <<https://digitalisat.sub.uni-hamburg.de>>).

<sup>18</sup> BGU VI 1213, 15 (Arsinoites, 3rd c. BCE) *καὶ τοῦ προσδοθέντος χρ( )* [ ; P.Hels. I 3r, ii 38 (Arsinoites, early 2nd c. BCE) *πυ( ) χρ( )*; P.Köln. VIII 347, 1 (unknown provenance, 193 BCE?) *χρ( )* (only the lower part of the monogram is preserved). I could not check P.Tebt. III 832, fr. 1, i 1 (Oxyrhyncha, 2nd c. BCE) *Χρ( )*. A further instance (P.Petr.Kleon 124, 11 *καταχρη(σθεῖς)*) will be discussed below, § 5.

<sup>19</sup> P.Bingen 77, 9 (Alexandria?, 2nd c. CE) *χρη(σοῦ)* (?); T.Mom.Louvre 1020v (unknown provenance, 271/2 CE) *χρη(σόχοος)* (?).

and only once for μελίχρ(ωσ).<sup>20</sup> Two cases of χ(ει)ρ(όγραφοι)<sup>21</sup> anticipate a later fashion (see below, § 4). The monogrammatic abbreviation of χρ(ονικθέντι) in SPP XXII 11, 5 (Philadelphia, 133 CE) is most likely influenced by literary conventions.<sup>22</sup>

A sort of evolution of the monogram can be retrieved in some instances, in which it is shaped with the loop of ρ directly appended to the upward diagonal stroke of χ.<sup>23</sup> This looks like a sort of forerunner of the staurogram and/or an intermediate development towards cases where a complete ρ is directly appended to the upward diagonal stroke of χ,<sup>24</sup> which is seemingly an innovation in Roman-age scripts (or at least I could not find Ptolemaic examples of that). It must be noted that the involved terms are still belonging to the same groups as described above for the Ptolemaic documents,<sup>25</sup> and that they could be also abbreviated without the use of the monogram.<sup>26</sup>

<sup>20</sup> P.Turku. 99, i 1 (unknown provenance, 1st/3rd c. CE?).

<sup>21</sup> SPP XX 45v (Marmarika, 237 CE); P.Sakaon 64v (Theadelphia, 307 CE).

<sup>22</sup> χρόνος-related terms are rendered with the monogram ϣ in some literary and paraliterary papyri of Roman age. For example, we find them in a copy of Philodemus' *De dis* III from Herculaneum (P.Herc. 152, viii inf., 21, 1st c. BCE), in Aristotle's *Athenaion Politeia* (P.Lond.Lit. 108 passim, Hermopolis, end 1st – early 2nd c. CE), in an ethical treatise (P.Berol. 9780v passim, Hermopolis, mid 2nd – mid 3rd c. CE); in two grammatical school texts dealing with the conjugation of ποιέω (P.Ryl. III 533, 11 μ[έ]ζου μέλλοντος χρ(όνου) ἐν[ί]κα, unknown provenance, 3rd c. CE; P.Rein. II 86, 2 & 11 τῶν τοῦ ῥήμ[α]τος χρ(όνων), unknown provenance, 4th c. CE). These cases certainly point to the professional scribal habit of brachygraphy. Cf. McNamee 1981, 109 with further attestations.

<sup>23</sup> E.g. P.Oxy. I 45, 20 (Oxyrhynchus, 95 CE) χρ(όνος); SB XIV 11705, 25 (Arsinoites, 213 CE) χρ(ματίζω); P.Yale III 137, i 10 (Philadelphia, 216/7 CE) χρ(ηματίζει).

<sup>24</sup> E.g. BGU IV 1167, 55 (Alexandria, 13/12 BCE) χρ(όνος); O.Mich. I 17, 2 (Arsinoites, 4 BCE) χρ(ματίζων); SB V 8034, 38 (Oxyrhynchus, 52 CE) κεχρη(μάτιςται); P.Fay. 344r, 15 (Arsinoites, 1st/2nd c. CE) παραχρη(μα); P.Bagnall 34, 32 (Soknopaiou Nesos, 1st/2nd c. CE) κεχρη(μάτιςκα); P.Oxy. IV 714, 38 (Oxyrhynchus, 122 CE) χρ(όνος); SPP XXII 44, 4 (Arsinoites, 124 CE) χρ(ματιςμοῦ); SB XXVI 16528, viii 30 (Hermopolites, 176 or 208 CE) κεχρ(ονικμένον); P.Freib. II 10, 14 (Ptolemais Euergetis, 196 CE) κεχρη(μάτιςκα); O.Wilck. 683, 4 (Thebes, 205 CE) χρυ(σοῦ); P.Lond. III 1243, 6 (Hermopolis, 281 CE) χρ(ματίζω); P.Lips. I 5, ii 5 (Hermopolis, 292 CE) χρ(ματιζούσης); P.Oxy. XLIV 3193, 13 (Oxyrhynchus, 309 CE?) χρ(μάτων); P.Col. X 284 + P.Heid. V 343, 22 (Oxyrhynchus, 311 CE) χρ(ματίζω). In P.Oxy. 714, the upward stroke of χ is almost horizontal, giving the combination of letters the outline of a sort of rudimentary staurogram.

<sup>25</sup> With the only new addition of χρόνος (the abbreviation χρ(όνος) in P.Tebt. I 124, ii 33 from 118 BCE Tebrynys is uncertain and I could not retrieve it clearly in the digital image of the papyrus available online). Note also that χρῆμα-related terms are always abbreviated with the overwritten η (or, sometimes, followed by a sinusoid representing η) as in earlier times.

<sup>26</sup> E.g. P.Fouad 46, 2 (unknown provenance, 22 BCE) χρ( ); P.Mich. II 121r, iii, 1, 2 (Tebrynys, 42 CE) χρ̄ = χρυ(σῶν); P.Oxy.Census, 134 (Oxyrhynchus, 91/2 CE?) καρποχρ̄ = Καρποχρά(τιδος); P.Lond. II 266, viii 223 (1st/2nd c. CE) παραχρ̄ = παραχρη(μα); P.Fay. 344r, 15 (Arsinoites, 1st/2nd c. CE) χρ̄ = χρ(όνος); O.Quseir 56 (Leukos Limen, 1st/2nd c. CE) χρ( ); P.Oxy. XLIX 3491, 6-7 (Oxyrhynchus, 157/8 CE) χρ̄ = χρυ(σοῦ); P.Amh. II 90, 21 (unknown provenance, 159 CE) χρ̄ = χρ(όνος); P.Panop. Beatty 1, passim (Panopolis, 298 CE) χρ' = χρ(όνος); P.Oxy. XLIII 3120, 15 (Oxyrhynchus, 310 CE) χρ' = χρ(υσοῦ).

Beside an apparent decrease in the use of the monogram  $\chi$  for common words in the Roman documents, we must note a peculiar case involving a technical term of the Roman military sector, *centurio*, which is translated as *ἐκατοντάρχη* / *ἐκατόνταρχος* in Greek.<sup>27</sup> This word is usually abbreviated by means of a  $\rho$  – representing the numeral 100 – with a  $\chi$  – representing the root *-αρχ-* – on its top ( $\rho\chi$ ) (Fig. 82).<sup>28</sup> In some instances, however, we can find it rendered with the monogram  $\chi$  (Fig. 83).<sup>29</sup> The earliest attestations are found in the ostraca from the garrison of Didymoi, between the early 2nd and the early 3rd century CE.

#### 4. CHI-RHO IN ROMAN PAPYRI AFTER 313 CE

The decrease in the use of the monogram  $\chi$  for common words, which we noted in the Roman documents before 313 CE, is even more striking after that turning point. Even more remarkable is the fact that none of the common words that we discussed above appears to be abbreviated in such a way. Conversely, we find new instances:  $\chi\rho$ (ἡται), containers recorded in some accounts on ostraca from Trimithis and Kysis;<sup>30</sup>  $\chi\rho$ (έος) “obligation, debt” in a very late loan contract;<sup>31</sup>  $\epsilon\chi\rho$ (ήγματι) in P.Mich. XV 740v, 22 (unknown provenance, 6th century CE) (Fig. 84). There are also some further instances of *ἐκατοντάρχη*.<sup>32</sup>

The most important use of the monogram  $\chi$  from the 4th century onwards is however to render the terms  $\chi(\epsilon\iota)\rho(\acute{o}\gamma\rho\alpha\phi\omicron\nu)$  “autograph”<sup>33</sup> (Fig. 85) and  $\chi(\acute{\alpha}\iota)\rho(\epsilon\iota\nu)$

<sup>27</sup> Cf. Mason 1974, 41-42.

<sup>28</sup> P.Worp 55, 1 (Thebes?, 1st c. CE); O.Did. 80, 1 (Didymoi, early 2nd c. CE); O.Claud. II 360, 1 (Mons Claudianus, 137-145 CE); BGU II 600, 12 (Arsinoites, 140 CE); BGU I 4, 1 (Arsinoites, 177 CE); O.Did. 71, 2 (Didymoi, late 2nd – early 3rd c. CE); O.Did. 143, 2 (Didymoi, early 3rd c. CE); BGU I 98, 1 (Soknopaiou Nesos, 211 CE); BGU I 275, 1 (Karanis, 215 CE); P.Flor. I 76, i 4 (Arsinoites, 266 CE); P.Cair.Isid. 91, 4 (Karanis, 309 CE). In O.Did. 48 (Didymoi, early 2nd c. CE) the  $\chi$  is reduced to a horizontal line.

<sup>29</sup> O.Did. 436, 2 (Didymoi, early 2nd c. CE); O.Did. 69, 2 (Didymoi, early 3rd c. CE); P.Prag. II 204v, 15 (Theadelphia, 253 or 256 CE); P.Giss.Bibl. III 27, 19 (Theadelphia, 3rd c. CE). In P.Giss. I 111, 23 (unknown provenance, end 2nd c. CE) the  $\chi$  is reduced to the upward diagonal stroke only, so that the monogram resembles a sort of staurogram.

<sup>30</sup> O.Trim. II 578, 3 (Trimithis, end 3rd – first half 4th c. CE); O.Douch, passim (Kysis, 4th – early 5th c. CE).

<sup>31</sup> P.Grenf. II 86v (Hermopolis, 596 CE)  $\chi\rho$ (έος)  $\kappa\iota\tau$ (ου) ( $\acute{\alpha}\rho\tau\alpha\beta\acute{\omega}\nu$ )  $\epsilon$   $\delta$   $\kappa$ ( )  $\gamma\epsilon\nu\acute{o}\mu$ (ενον)  $\epsilon\iota\varsigma$   $\Phi\omicron\iota\beta$ [άμμουα].

<sup>32</sup> P.Louvre II 120, 29 (Hermopolites, ca. 340 CE); SB XXII 15768, 3 (Oasis Parva, 364 CE); P.Flor. III 320, 3 (Hermopolites, 373 CE).

<sup>33</sup> E.g. P.Col. VII 145, 1 (Karanis, 335 CE); P.Köln. II 102v (Oxyrhynchites, 418 CE); BGU XII 2188 (Hermopolis, 526 CE); P.Leid. inv. 1948/3.5, passim (unknown provenance, 6th c. CE); BGU XII 2210 (Hermopolis, 617 CE); CPR IX 29v (Hermopolites, 631-641 CE). See above for a couple of attestations before 313. The term is also frequently abbreviated with the monogram  $\chi$  after its iotacistic variant  $\chi\rho\acute{o}\gamma\rho\alpha\phi\omicron\nu$ , cf. e.g. P.Oxy. IX 1196v, 1 (Oxyrhynchus, 212/3 CE); P.Oxy. VII 1040v (Oxyrhynchus, 225 CE); SB XIV 11385v, 1 (Karanis, 326 CE); SB XIV 12109v, 1 (Karanis, 377 CE);

“greetings”.<sup>34</sup> Both cases are surprising in that the monogram does not express the first two letters of the terms, since the ρ belongs to the middle of the word. It is possible that they derive from earlier, longer abbreviations like χειρ( )<sup>35</sup> and χαιρ( ),<sup>36</sup> later further contracted.

Other abbreviations involving the group χρ- develop the shapes already noted above: the ρ appended to the upward diagonal of χ, with or without further indications of suspension;<sup>37</sup> the ρ appended to the downward diagonal of χ, with or without further indications of suspension;<sup>38</sup> the plain sequence of letters χρ, with or without

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P.Köln. XIV 586v (Oxyrhynchites, 477 CE); BGU I 295v (Krokodilopolis, 591 CE); P.Grenf. II 88v (Krokodilopolis, 602 CE). Sometimes the ι of χ is traced with a top leftward loop, which has led to certain misinterpretations: for example, the editors of BGU 295 and P.Grenf. 88 transcribed χρ(έος), but a new reading of the former, proposed through the database papyri.info by Nikolaos Gonis, correctly resolves the monogram as χι(ρόγραφο) = χειρόγραφο (<<https://papyri.info/ddbdp/bgu;1;295v>>), which must be applied to P.Grenf. 88 as well.

<sup>34</sup> E.g. P.Gascou 66, 9 (Hermopolis, 5th/6th c. CE); P.PalauRib. 24, 5 (Aphrodito, 6th c. CE); BGU XII 2188, 6 (Hermopolis, 526 CE); BGU XII 2200, 6 (Hermopolis, 561 CE); P.Cair.Masp. I 67097v, A, 1 (Aphrodito, 571/2 CE); P.Rein. II 107, 3 (Koptites, 573 or 588 or 603 CE); P.Lond. V 1728, 7 (Syene, 584 or 585 CE); BGU XIX 2834 (Antinoopolis or Hermopolis, 590 CE – here the monogram displays a further “tail” appended to the upward diagonal of χ, interpreted as an abbreviating marker by Kruit and Worp 2003, and a seeming horizontal bar; the “tail” also appears in SPP XX 164, 1 from 5th c. CE Herakleopolites and the horizontal bar in P.Lond. V 1794, 7 from 488 CE Hermopolis). All the instances predate 313 except for SB V 7741, 2 (Herakleopolites, 126–133 or 164–167 CE), where the monogram shows the shape with ρ appended to the upward stroke of χ (similarly PSI VII 835, 2, Oxyrhynchus, second half 6th c. CE). In SB XXIV 16288, 11 (Arsinoiton Polis, 600 CE) the word is written plainly χρ with a crossing, almost horizontal stroke.

<sup>35</sup> This is attested since the Ptolemaic age, cf. χειρ(ογραφία) in P.Köln. X 412, fr. A, i 14 (Arsinoites, 178 BCE?); several other χειρ-words are abbreviated like that before and after 313 CE, especially the term χειρικτῆς: e.g. P.Princ. I 8, passim (Philadelphia, 46/7 CE) χιρ(ικτῶν); for other terms cf. e.g. χιρ(ι) ἄρ(κτερά) in P.Stras. IV 289, 9 (unknown provenance, 48 CE).

<sup>36</sup> This abbreviation is not attested in Ptolemaic papyri but it appears as early as the first decades of the Roman rule in Egypt (BGU XVI 2588, 2: Herakleopolites, 10/9 BCE; BGU XVI 2652, 1: Herakleopolites, ca. 10–2 BCE) until the Byzantine age (e.g. BGU I 255, 4: Memphis, 599 CE).

<sup>37</sup> E.g. P.Oxy. LXIII 4357, 9 (Oxyrhynchus, 317 CE) χρ̄ = χρημ(άτων); P.Giss. I 53, 2 (Hermopolis?, 4th c. CE) μέ]χρ(ι); SB XVI 12614, 11 (unknown provenance, 4th c. CE) χρ/ = χρ(όνο); SB XX 15070, 6 (unknown provenance, 4th/5th c. CE) χρ(όνο); P.Oxy. LVI 3861, 25 (Oxyrhynchus, 4th/5th c. CE) χρ/ = χρ(όνο); SPP X 185, 7 (unknown provenance, 4th/5th c. CE) χρ/ = χρ( ); SB XVIII 14004, 5 (unknown provenance, early 5th c. CE) χρ/ = χρ( ); P.Mich. XI 624r, 20 (unknown provenance, early 6th c. CE) χρ(όνο); SPP VIII 1244, 5 (unknown provenance, 6th c. CE) χρ( ); O.Petr.Mus. 557, 3 (unknown provenance, 6th c. CE) χρ/ = χρ(υκοῦ) or χρ(εία); SB XXII 15635, 9 (unknown provenance, 6th c. CE) προχρ/ = προχρ(εία); SPP VIII 977, 3 (unknown provenance, 6th c. CE) χρ/ = χρ( ). Several are the instances of χρ/ ὐ = χρ(υκοῦ) νο(μικάτια).

<sup>38</sup> E.g. P.Ryl. IV 627, iii 63 (Hermopolis, early 4th c. CE) ἰδιόχρ(ωμοι); P.Oxy. LXV 4493, 23 (Oxyrhynchus, first half 4th c. CE) χρ̄ = χρ(όνο); P.Ammon II 41, 38 (Alexandria or Panopolis, 348 CE) χρ(όνο); SB XXII 15471, 10 (unknown provenance, early 5th c. CE) χρ(όνο); P.Oxy. XVI 1913, iv 49 (unknown provenance, ca. 555 CE) χρ/ = χρ(εία); P.Rain.Unterricht 93v, 11 (unknown provenance, 7th c. CE), χρ( ).

further indications.<sup>39</sup> Such further indications are often the diagonal strokes crossing the vertical bar of ρ, according to a very common Byzantine writing convention.

##### 5. CHI-RHO IN MEDICAL PAPYRI

A special field in which the monogram ϥ frequently appears is medicine. In Greek medical papyri of prescriptive typology,<sup>40</sup> it is used to express the term χρῶ, which originally was the imperative “use” in the sections of the recipes containing the instructions for the employment of the described remedies: see P.Oxy. LXXX 5250, 6 (Oxyrhynchus, 3rd century CE) χρ(ῶ) δὲ καὶ πρ(ὸς) γαγγραίν[α]ς “use also against gangrenes”. In the evolution of the prescriptive language, it gradually lost its syntactic function, becoming a sort of formulaic mark, especially when represented in the graphical form of the monogram:<sup>41</sup> see particularly the cases in the Tebtynis *receptarium* PSI X 1180 (2nd century CE), where it is used at the very end of some recipes (Fig. 86) (fr. G, 8 – compare with SB XIV 12175, 6,<sup>42</sup> unknown provenance, 2nd century CE), in some occasions even centered in the line and accompanied by the abbreviation of ὕδ(ωρ), i.e. “use with water” (fr. B, ii 14, iii 10, 19). The instances just mentioned are comparable with P.Oxy. LXXIV 4977, 1 (Oxyrhynchus, late 2nd – 3rd century CE) ὕδωρ χρ(ῶ) isolated at the end of a recipe, with the last two letters of ὕδωρ oddly written as the monogram ϥ and the formulaic expression followed by the duplicated indication μεθ’ ὕδατος – circumstances suggesting that the phrase was by then felt as a purely semiotic indicator (Fig. 87). The asyntactic role of monogrammatic χρ(ῶ) is clear also in both sides of P.Princ. III 155 (unknown provenance, 2nd/3rd century CE), each containing a complete prescription for an eye-salve: οἴνου χρ(ῶ) “use with wine” (front side, 7) (Fig. 88) inflects the name of the substance in the genitive as the ingredients of the preceding list instead of the regular μετ’ οἴνου or οἴνω; ὕδωρ χρ(ῶ) ἕως | γένητ(αι) γλυοῦ τὸ | πάχος “use with water until it achieves a glutinous consistency” does not inflect ὕδωρ at all (expected:

<sup>39</sup> E.g. P.Harr. I 107, 27 (Hermopolis?, early 4th c. CE?) χρς = χρ(όνους); P.Oxy. LX 4087, i 29 (Oxyrhynchus, 4th c. CE) ἀχρ(ου); P.Cair. Masp. II 67141 (Aphroditis Kome, end 6th c. CE) χρ/ = χρ(εῖαν); P.Giss. I 56, 3 (unknown provenance, 7th c. CE?) χρ(όνον); P.Oxy. LVIII 3943v (Oxyrhynchus, 606 CE) προχρ/ = προχρ(εῖας); P.Oxy. LVIII 3946v (Oxyrhynchus, 606 CE); προχρς = προχρ(εῖας); P.Oxy. LVIII 3944v (Oxyrhynchus, 606 CE) προχρ/ = προχρ(εῖας); CPR XIV 46, 19 (unknown provenance, 8th c. CE) ηρακσοχρ̄ = Ηρακσοχρ( ).

<sup>40</sup> On the typology of the medical recipes attested on papyrus see Gazza 1956a and 1956b, out of date as far as the catalogue of the texts and ingredients is concerned, but still valid for the discussion of the general structure of the textual type. On the expressive features and the medical practice of prescribing cf. Andorlini 2017, 3–36 and 85–98, and Andorlini 2019. On the topics of textual transmission and the material aspects of recipes and collections of recipes on papyrus cf. Reggiani 2018, 2019a, and 2020; Jördens 2021; Monte 2024.

<sup>41</sup> See more details in Reggiani 2022, 125–128.

<sup>42</sup> χρ(ῶ), “seemingly ϥ” according to the edition of Youtie 1978.



μεθ' ὕδατος or ὕδατι) just as in the aforementioned cases (and in other cases without the monogram).<sup>43</sup>

Though a compound of the verb χράομαι is abbreviated with  $\text{✠}$  in a Ptolemaic documentary papyrus,<sup>44</sup> the attested use of  $\text{✠}$  for χρῶ seems limited between the 2nd and the 3rd century CE, but I wonder whether a couple of staurograms, traced at the end of medical recipes of Byzantine age,<sup>45</sup> should be interpreted as a sort of later evolution of this peculiar medical  $\text{✠}$ , rather than an example of the scribal habit mentioned above, § 1. In particular, these cases can be compared with the two “staurograms” traced in the margins of two pages of the so-called Michigan Medical Codex, a collection of medical recipes on papyrus codex dated to the 4th century CE (P.Mich. XVII 758, folio H recto, 10; folio M recto, 9) (Fig. 89–90). These are usually interpreted as critical indicators of useful passages just as the marginal  $\text{✠}$  with the meaning of χρηστός, which is used in a medical *receptarium* (P.Oxy. VIII 1088, iii 69: Oxyrhynchus, 1st century CE) as well as in several other literary papyri, where again they sometimes appear as staurograms.<sup>46</sup> It must be noted, however, that proper staurograms could be used in the medical texts too, as in MPER N.S. XIII 14 (unknown provenance, end of the 6th – 7th century CE), where such marks frame the titles of each prescription in a collection.

## 6. CONCLUSIONS

The fact that the monogram  $\text{✠}$  is not used systematically in any context (documentary papyri, medical texts) shows that there was not a stable rule – it likely depended on the personal habits of individual scribes or on local administrative customs. It is however interesting that a sort of change or transition in the use of the monogram can be perceived from the Ptolemaic to the Roman age, and from the first centuries of the Roman Empire to the Byzantine period. I do not think that the rise of Christianity influenced these uses; conversely, it is possible that the consolidated use of  $\text{✠}$  in documentary writings prevented the Christian meaning of the monogram to be applied to non-literary papyri. The only possible Christian influence might be seen in the use of the staurogram  $\text{†}$  instead of  $\text{✠}$ . Further details must certainly be added to the present survey,<sup>47</sup> but I hope I provided a starting point for further discussion, even on the digital side of the textual encoding of papyri.

<sup>43</sup> On this papyrus and its texts see Andorlini 2019, 6–9.

<sup>44</sup> P.Petr.Kleon 124, 11 (Arsinoites, ca. 260–236 BCE) καταχρ(ησθεις). I could not check the abbreviation for χρ(ησιμου) in BGU XIV 2441, iii 50 (Herakleopolites, 2nd/1st c. BCE).

<sup>45</sup> P.Cair.Masp. II 67141 2r, 20–29 (Aphrodito, 6th c. CE; a medical recipe in a private notebook from the Dioskoros archive); P.Ant. III 132, fr. 1, side B, 6 (Antinoupolis, 6th c. CE). These are interpreted as abbreviations for χρ(ῶ) also by McNamee 1981, 108.

<sup>46</sup> See McNamee 1981, 109; McNamee 1992, 20–21 and Table 3.

<sup>47</sup> Anna Monte – to whom I express my gratitude for useful bibliographical references about the matter – will be publishing soon a contribution about the *chi-rho* in Byzantine papyri.

## REFERENCES

- Amory, Y. 2023. “Usi intratestuali dei simboli cristiani nei papiri documentari di epoca bizantina ed araba”, in A. Ghignoli, M. Boccuzzi, A. Monte, and N. Sietis (eds.), *Segni, sogni, materie e scrittura dall’Egitto tardoantico all’Europa carolingia*. Rome.
- Andorlini, I. 2017. *πολλὰ ἰατρῶν ἐστὶ συγγράμματα*. *Scritti sui papiri greci e sulla medicina*, ed. by N. Reggiani. Florence.
- Andorlini, I. 2019. “From Prescription to Practice: The Evidence of Two Medical Papyrus from Roman Egypt”, in N. Reggiani (ed.), *Greek Medical Papyri: Text, Context, Hypertext*. Berlin – Boston, 3–18.
- Black, M. 1970. “The Chi-Rho Sign: Christogram and/or Staurogram?”, in W. Ward Gasque and R.P. Martin (eds.), *Apostolic History and the Gospel. Biblical and Historical Essays presented to F.F. Bruce on his 60th Birthday*. London, 319–327.
- Blanchard, A. 1974. *Sigles et abbreviations dans les papyrus documentaires grecs: recherches de paléographie*. London.
- Caldara, A. 1924. *I connotati personali nei documenti d’Egitto dell’età greca e romana*. Milan.
- Carlig, N. 2020. “Les symboles chrétiens dans les papyrus littéraires et documentaires grecs: forme, disposition et fonction (iiiie – viiie/viiiie siècles)”, in N. Carlig, G. Lescuyer, A. Motte, and N. Sojic (eds.), *Signes dans les textes. Continuités et ruptures des pratiques scribales en Égypte pharaonique, gréco-romaine et byzantine*. Liège, 271–281.
- Gazza, V. 1956a. “Prescrizioni mediche nei papiri dell’Egitto greco-romano, I”, *Aegyptus* 35, 86–110.
- Gazza, V. 1956b. “Prescrizioni mediche nei papiri dell’Egitto greco-romano, II”, *Aegyptus* 36, 73–114.
- Gonis, N. 2009. “Abbreviations and Symbols”, in R.S. Bagnall (ed.), *The Oxford Handbook of Papyrology*. Oxford, 170–179.
- Hasebroek, J. 1921. *Das Signalement in den Papyrusurkunden*. Berlin – Leipzig.
- Hurtado, L.W. 2006. *The Earliest Christian Artifacts. Manuscripts and Christian Origins*. Grand Rapids, MI – Cambridge.
- Jördens, A. 2021. “Galens Rezeptbücher”, in A. Ricciardetto, N. Carlig, G. Nocchi Macedo, and M. de Haro Sanchez (eds.), *Le médecin et le livre. Hommages à Marie-Hélène Marganne*. Lecce, 463–484.
- Kruit, N., and K.A. Worp. 2003. “APF 48 (2002) 229–232”, *Tyche* 18, 255.
- Mason, H.J. 1974. *Greek Terms for Roman Institutions. A Lexicon and Analysis*. Toronto.
- McNamee, K. 1981. *Abbreviations in Greek Literary Papyri and Ostraca*. Chico, CA.
- McNamee, K. 1992. *Sigla and Select Marginalia in Greek Literary Papyri*. Bruxelles.
- Monte, A. 2024. “Riflessioni sul formato dei papiri greci di contenuto farmacologico”, in N. Reggiani (ed.), *Materialità della medicina antica. Aspetti grafici e materiali dei papiri medici dall’antico Egitto*. Parma, 101–116.
- Montevecchi, O. 1988. *La papirologia*. Milan.
- Overcash, B.R. 2019. “Sacred Signs in Human Script(ure)s: Nomina Sacra as Social Semiosis in Early Christian Material Culture”, in A. Nodar and R.M. Hernandez (eds.), *Proceedings of the 28th Congress of Papyrology (Barcelona 1-6 August 2016)*. Barcelona, 422–428.
- Paap, A.H.R.E. 1959. *Nomina Sacra in the Greek Papyri of the First Five Centuries*. Leiden.

- Reggiani, N. 2018. "Prescrizioni mediche e supporti materiali nell'Antichità", in N. Reggiani (ed.), *Parlare la medicina: fra lingue e culture, nello spazio e nel tempo. Atti del Convegno Internazionale (Parma, 5-7 settembre 2016)*. Florence, 128-144.
- Reggiani, N. 2019a. "Transmission of Recipes and Receptaria in Greek Medical Writings on Papyrus Between Ancient Text Production and Modern Digital Representation", in R. Berardi, N. Bruno, M. Filosa, and L. Fizzarotti (eds.), *On the Track of Books: Scribes, Libraries and Textual Transmission*. Berlin - Boston, 167-188.
- Reggiani, N. 2019b. *La papirologia digitale. Prospettiva storico-critica e sviluppi metodologici*. Parma.
- Reggiani, N. 2020. "ΛΑΒΕ ΤΗΝ ΓΡΑΦΗΝ! Book Format, Authority and Authorship in the Ancient Greek Medical Papyri", in R. Berardi, M. Filosa, and D. Massimo (eds.), *Defining Authorship, Debating Authenticity. Problems of Authority from Classical Antiquity to the Renaissance*. Berlin - New York, 165-173.
- Reggiani, N. 2022. "Towards a Socio-semiotic Analysis of Greek Medical Prescriptions on Papyrus", in K. Bentein and Y. Amory (eds.), *Novel Perspectives on Communication Practices in Antiquity. Towards a Social-Semiotic Approach*. Leiden - Boston, 113-130.
- Sulzberger, M. 1925. "Le symbole de la Croix et les monogrammes de Jésus chez les premiers Chrétiens", *Byzantion* 2, 337-453.
- Yiftach, U. 2019. "The Rise of the Flexible Template: Patterns of Change in Identification Methods between the Ptolemaic and the Roman Period", in R. Guicharrouse, P. Ismard, M. Vallet, and A.-E. Veïsse (eds.), *L'identification des personnes dans les mondes grecs*. Paris, 77-89.
- Youtie, L.C. 1978. "A Medical Text", *ZPE* 29, 279-286.