

Signs of Use, Techniques, Patterns and Materials of Textiles – A Joint Investigation on Textile Production of Late Antique Egypt*

Ines Bogensperger / Aikaterini Koroli
Österreichische Akademie der Wissenschaften
ines.bogensperger@oeaw.ac.at / aikaterini.koroli@oeaw.ac.at

1. Introduction

Papyrus documents abound in information related to textiles and textile production. These valuable papyrological data are far from being fully examined and interpreted in a satisfactory way. A comparative study of the vast corpus of published documentary papyri and the fabrics preserved in the arid sands of Egypt offers the opportunity to examine thoroughly their meaning. To date, Theodor Reil's, Ewa Wipszycka's and Kerstin Droß-Krüpe's study on textile production in papyri are considered to be standard works.¹ The present paper constitutes additionally an approach of combining data and methods of Papyrology, Philology, Archaeology and Textile History. The objects of our study are the already published documentary texts preserved on papyri or other writing materials dated to a period extending from the Roman to the early Arab period of Egypt on the exception of Zenon's archive dated to the Ptolemaic period. These written sources will be compared on the one hand with literary texts and on the other hand with the rich textile evidence dated to ca 300-800 CE. In particular, we will examine information related to signs of using textiles in everyday life, textile patterns, techniques and materials used in textile production.

2. Signs of use: 'Wear and Tear'

As our second skin, textiles form part of our life and constantly undergo daily wear and tear. Due to the time- and labour-intensive manufacturing process, ancient societies used their goods for longer periods. Textiles were estimated and evaluated on the basis of their actual condition. Therefore, it is no surprise that in papyrus documents from everyday life, we find words and prepositional phrases that meticulously denote different conditions of new and already used textiles bearing traces of wear and tear. These specifications concern both garments and furnishing textiles.

1.	New textiles
	καίνός = καινούργιος; new ²
	νέος; new

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¹ Reil (1913); Wipszycka (1965); Droß-Krüpe (2011).

² For all English translations offered, we critically examined Ancient Greek dictionaries, such as Adrados *et alii* (1989²-2009); Sophocles (1992); Lampe (1978); LSJ⁹; Beekes (2010); as well as the editors' suggestions.

When used in a textile context, the commonly attested adjective *καινός* as well as its variation *καινούργιος* qualify fabrics which are either unused or lightly used and are undoubtedly in good condition; cf. P.Tebt. II 406 = Sel.Pap. I 189 = M.Chr. 379. l. 17-18 (ca 266 CE; Tebtynis, Arsinoite nome): *κολόβιον λινούν δ[ί]σημον καινόν, | φακίανον (l. φακιάλιον) λινούν καινόν*; P.Oxy. LXXVII 5126. l. 8 (early 7th century CE; Oxyrhynchos): *σινδ(όνια) καινούργια δ*.

The very frequently attested *νέος* is found only once in a textile context to date: P.Fam.Tebt. 49, (b) col. ii. 3 (205 CE?; Antinoopolis): *τύλαι νέ[αι - -]*.

2.	Already used textiles (I): various signs of wear and tear
	<i>παλαιός</i> : old
	< <i>χράομαι</i> ('to use') <i>ἀπὸ χρήσεως</i> : used <i>ἀπὸ ὀλίγης χρήσεως</i> : slightly / hardly or partly used
	< <i>τρίβω</i> ('to rub', 'to wear out') <i>τριβακός</i> : rubbed, worn-out <i>ἡμιτριβής = μεσοτριβής = μεσοτριβακός</i> : half or partly worn-out <i>τρίβων-τριβόνιον, τριβωνάριον</i> (morphological diminutives): worn-out garment (cloak) <i>τριβάς</i> : worn-out / worn-out garment
	<i>ῥυπαρός</i> : filthy <i>πεπλυμένος</i> (< <i>πλύνω</i> , 'to wash, to launder'): laundered

The linguistic elements contained in table 2 are used for fabrics bearing signs of wear and tear:

When related to textiles, the frequently attested adjective *παλαιός* moreover implies that a fabric is in a less than perfect condition because it was worn out over time; cf. P.Apoll. 104. ll. 11-12; 17-20 (2nd half of 7th century CE; see BL VIII 10; Apollonopolite nome): *[ἀκ]ρούλι(ον) καινούργι(ον) | [ἀ]κρούλι(ον) παλαι(όν) | ... | βράκ(ια) παλαι(ά) | βράκ(ια) καινούργ(ια) | ἀλαξαμ(άριον) καινούργ(ιον) | ὄμ[ο](ίως) παλαι(όν)*. In addition, the two prepositional phrases including the substantive *χρήσις* point to the notion of the 'already used' or 'second-hand' fabric; cf. SPP XX 245. l. 11 (6th century CE; unknown provenance): *καμίσι(ον) ῥοδινοπορφ(υροῦν) | ἀπὸ χρήσε(ως) α*.

Due to their etymology, words deriving from *τρίβω* are evidently connected with used textiles;³ cf. P.Cair.Zen. IV 59659. l. 20 (after Oct. 23, 241 BCE; see HGV; Philadelphia?, Arsinoite nome): *τριβόνιον ἄξιον (δραχμῶν) γ*; SB XVIII 13766. l. 24 (2nd/3rd century CE; unknown provenance): *τύλαι τριβακαῖ β (δραχμαὶ) ιβ*; SB XXVI 16645. l. 21 (2nd/3rd century

³ For the words deriving from *τρίβω* (except of the noun *τρίβων* and its diminutives) as well as the adjectives and prepositional phrases belonging to the word family of *χράομαι*, cf. the study of Diethart (1992) 57-64, where examples and bibliography are offered.

CE; unknown provenance): χιτῶν μόρινος ἡμιτριβ(ῆς) α; P.Michael. 18 (b) col. iv. l. 7 (mid-3rd century CE; unknown provenance): [- - - τ]απήτιον μικρὸν μεσοτριβές.⁴

The substantive τρίβων is often translated as ‘worn cloak’.⁵ This word, as well as its morphological diminutives, are frequently attested in literature for an outer garment, of which the actual condition is less than perfect. Most of the texts, where τρίβων occurs, deal with the contempt of material goods; for instance, Plutarch (before 50 CE-after 120 CE) writes: Κράτης δὲ πήραν ἔχων καὶ τριβώνιον παίζων καὶ γελῶν ὡσπερ ἐν ἑορτῇ τῷ βίῳ διετέλεσε, «Crates bearing a pouch and a *tribonion* spent his life playing and laughing, as if he was celebrating» (Plut. De tranq. anim. 466e).

In addition, the derivative τριβάς is attested so far only in P.Fam.Tebt. 49 (205 CE?; Antinoopolis); in fragm. a, col. ii. ll. 4-5 (τύλη τριβάς ᾧ | περιστρῶ(μα) ῥ̄ . . . κος τριβάδο(ς) ᾧ) the word is used as an adjective, whereas in fragm. b, col. i. 6 (τριβάς ἡμιτριβ(ῆ) [l. ἡμιτριβῆ])] ᾧ as a noun.⁶

In general, the word families of τρίβω and χράομαι concern the extent to which a fabric is worn. Nevertheless, it is difficult to draw the line between the phrases ἀπὸ χρήσεως and ἀπὸ ὀλίγης χρήσεως (which is attested only in P.Fouad 74. ll. 6-7 (6th century CE?; see BL III 61 and BL XI 82; unknown provenance): στιχάριον ἀντιοχήσιον, ἔμπλουμον, ἀπὸ ὀλίγης χρήσεως, | ἔως τιμῆς κερ(ατίων) ι, πλέον ἔλαττον). Similarly, the less informative context of papyrus documents for derivatives of τρίβω does not allow us to define the exact difference between their meaning, namely the extent to which a fabric was worn, even when they coexist in the same text; cf. P.Oxy. XIV 1645. ll. 9-10 with BL IX 187 (308 CE; Oxyrhynchus): τ[υ]ρία (l. τυλεία) μικρὰ τριβακὰ δύο, στρωμάτια τριβακὰ δύο, | [- - -] ἰδιόχρωμον μεσο[τριβ]ακόν, ὑπολύχνιον, τραπέζι[ο]ν, κιθών[ιο]ν πεδικόν (l. παιδικόν) τριβακόν.

Filth is another sign of use. The adjective ῥυπαρός, frequently attested as designation of coins and other products, as well as the participle πεπλυμένος show the circulation of filthy textiles, and also the necessity to launder them every now and then; cf. P.Cair.Zen. I 59092 = Sel.Pap. I 182. ll. 2; 3; 6; 9-10; 13; 18; 20 (257 BCE?; Alexandria?): περίβλημα λινοῦν πεπλυμένον α | χλαμὺς γεωβαφῆς χειμερινῆ πεπλυμένη α | ... | αὐτόχρους χειμερινῆ πεπλυμένη α | ... | χιτῶν λευκὸς χειμερινὸς | χειριδωτὸς πεπλυμένος α | ... | λευκοὶ χειμερινοὶ (l. χειμερινοὶ) πεπλυμένοι β | ... | ἱμάτιον λευκὸν χειμερινὸν πεπλυμένον α | ... | θέριστρον λευκὸν πεπλυμένον α; P.Mich. I 120. ll. 3-4 (mid. 3rd century CE; see HGV; Philadelphia, Arsinoite nome): λινὸν στυπύν<ο>ν (l. στυπέινον) | πεπλυμένον. P.Giss.Apoll. 28 = P.Giss. I 76. ll. 2-3 (117-120 CE; see HGV; Hermopolite nome?; see HGV): τρίβωνα[ς] | ῥυπαρά[ς] β̄ καὶ στολὴν ὁμοίως λευκῆν, τριβωνα ῥυ[πα]ρὰν ᾧ.⁷ In a few cases, we learn that this also holds true for wool as raw material for manufacturing textiles; cf. P.Col. IV 113. ll. 31-32 (mid-3rd century BCE; see HGV; Philadelphia?, Arsinoite nome): ἔχω δὲ καὶ παρὰ Καλλίππου (l. Καλλίππου) ἔριον ῥυπαρῶν. The ancient recipes P.Holm. 90 and P.Holm. 151 particularly

⁴ For the use of μεσο- instead of ἡμι-, cf. Diethart (1992) 59-60 n. 10.

⁵ Cf. LSJ⁹ supplement s.v.; P.Giss.Apoll. 28 (= P.Giss. I 76; 117-120 CE; see HGV; Hermopolite nome?; see HGV), note to l. 2.

⁶ In the editor's opinion (note to l. 6), the words belonging to the word family of τρίβω should be related to a sort of smoothing technique (polishing or rubbing), which does not seem to be the case considering the rest of the attestations.

⁷ This is the only case where the noun τρίβων is feminine. The adjective καθαρός (or καθάρειος) ('clean') for fabrics as finished products is attested in P.Harr. I 105. l. 13 with BL VII 67 (3rd century CE?; see BL XI 90; unknown provenance). Youtie (1973) 1031-1034; esp. 1032 and 1034, though, suggests a different approach to the meaning of the word in this context.

inform us about washing wool to remove the lanolin, a natural grease, as preparation before dyeing.⁸

Papyrological attestations, like the above-mentioned, prove that already used fabrics were not considered as useless, unless of course, they were completely damaged. This assumption is based on three observations:

a. They are included in lists along with new ones; cf. the aforementioned case of P.Apoll. 104. ll. 11-12; 17-20, and cases like P.Oxy. VI 921r. ll. 12-21 with BL X 140 (3rd century CE; Oxyrhynchos): *σανανοφακιάριον* (l. *σαβανοφακιάριον*) *Θαήσι(ος) α*, | *ἄλλο τριβακὸν α*, | *ἐπικάρσιον καινὸν α*, | *σινδόνια σκιωτὰ β*, | *κολόβια τριβακὰ δ*, | *ἀναβολάδια γ*, | *βαλανάριον α*, | *σινδόνιον παχὺ α*, | *κερπικάρια τριβακ(ᾶ) β*, | *σινδόνιν Κυγοπολ(ιτικὸν) τριβ(ακὸν) α*.

b. They are asked to be sent in private request letters; cf., for instance, the aforementioned case of P.Giss.Apoll. 28 = P.Giss. I 76. ll. 2-3.

c. They have a price, which proves even more that they were sold and bought; cf. the above cited SB XVIII 13766. l. 24 and P.Fouad 74. ll. 6-7.

3.	Already used textiles (II): damaged but repaired
	τεθεραπευμένος (<θεραπεύω ‘to take care of, to treat medically’): mended

The (so far twice attested) *τεθεραπευμένος* in a textile context reminds us that damaged garments were repaired until they have been completely worn out; cf. P.Giss.Apoll. 24 = P.Giss. I 79 col. iv. ll. 2-5 (ca 117 CE; Hermopolite nome): *τοὺς φ[αι]ν[ο]ύ[λ]ας σου τεθεραπευμένους | ἤνεγκε<ι>ν ἀπ’ Ἀλεξανδρείας Ἀπολλωνίου ὁ ἀδελφός σου*. The use of this participle is in line with the preserved textiles from Late Antique Egypt that were often repaired, patched, darned, refashioned, or even re-used as shrouds for the deceased (fig. 1).



Fig. 1: A cover from Late Antique burial grounds showing exceptionally colourful decorations with various traces of darning. © Kelsey Museum of Archaeology, Ann Arbor, acc.-no. 0000.09.0257.

⁸ Reinking (1938) 2, no. 2; 41, no. 64. The verb *πλύνω* is moreover seen as one of the stages of fulling.

4.	Already used textiles (III): damaged and useless
	ἄχρηστος (< ἄ + χράομαι, ‘to use’): useless
	σεσημμένος (< σήπω, ‘to rot’) = σαπρός: rotten
	σεσινωμένος (< σινώω, ‘to damage’): destroyed

The above-mentioned words define fabrics which are damaged beyond repair and are consequently useless, i.e. ἄχρηστα. In this case, the written evidence almost serves as the ‘only witness’ we have as these textiles were thrown away and hardly survived; cf. P.Giss.Apoll. 1 = P.Giss. I 21. ll. 6-7 (ca 113-115 CE; Hermopolis): ἄταλιανὸν σα|πρόν; P.Oxy. XII 1449. ll. 50-51 and 55-56 (213-216 CE; see HGV; Oxyrhynchos): σεση(μμεν) | [ἄ]χρηστ(ο) α, τὰ δὲ ἱμάτια πάντ(α) ἀπὸ τ(οῦ) χρο(ν)οῦ σεση(μμένα) ἄχρηστ(α) | ... | περίστρωμα | φοι]ν{ε}ίκινον σεση(μμένον) ἄχρηστ(ον); P.Iand. VI 100. ll. 11-13 (2nd half of the 4th century CE; unknown provenance): καὶ περὶ τοῦ | κολοβίου, σεσινωμένον ἐ[στί]ν.⁹

3. Textile techniques and their patterns

Preserved textiles from Egypt are well known for their multi-coloured decorations in tapestry weave that were used as ornaments on particular parts of garments and furnishing textiles. In addition, other ways to decorate textiles can be seen, as the following paragraphs will show.

a. σκουτουλάτος; pattern or technique?

The Latin loanword σκουτουλάτος derives from *scut(u)latus* (< *scutla*: ‘lozenge’ or ‘rhombus’) and is translated as ‘diamond’, ‘lozenge-shaped’, ‘checkered’ or ‘checked’.¹⁰ Apart from the geometric form of a rhombus, Pliny the Elder uses this adjective in order to describe particular textiles: *Plurimis vero liciis texere quae polymita appellant Alexandria instituit, scutulis dividere Gallia*, «But the fabric called damask woven with a number of threads was introduced by Alexandria, and check patterns by Gaul». (Plin. HN 8.196).¹¹

This translation is not completely satisfying, and a closer examination might be helpful for our cause. Beginning with the second part, the substantive *scutla* can also denote a rectangular form and, as suggested by John Peter Wild, *scutulatus* refers to a checkered design of textiles.¹²

Within papyrus texts, the adjective is securely attested so far in SPP XX 41v. l. 5, where a set of kermes-red, checkered garments is mentioned: συνθεσίδιον κόκκινον σκουτουλά[τον (2nd century CE; Hermopolite nome?).

In literature, the term occurs more often, for instance in the *Periplus Maris Erythraei*, a first century CE handbook on the Red Sea trade.¹³ A passage informs us about these textiles as exported goods to the Arabian Peninsula: φορτία δὲ εἰς αὐτὴν προχωρεῖ πορφύρα διάφορος καὶ χυδαία καὶ ἱματισμὸς Ἀραβικὸς χειριδωτός, ὃ τε ἀπλοῦς καὶ ὁ κοινὸς καὶ σκουτουλάτος καὶ διάχρυσος [. . .], «Merchandise for which it offers a market are: purple cloth, fine and

⁹ See also Naldini (1998) 87.

¹⁰ Hoffmann (1989) s.v.

¹¹ English translation: Rackham (1940) 137.

¹² Wild (1964).

¹³ Casson (1989) 7.

ordinary quality, Arab sleeved clothing, either with no adornment or with the common adornment or with checks or interwoven with gold thread». ¹⁴ (Peripl. M. Rubr. 24).

Here, σκοτουλάτος καὶ διάχρυσος ἱματισμός are presented in contrast to non-patterned, plain textiles (ὁ τε ἀπλοῦς καὶ ὁ κοινός).

In Late Antiquity, in particular in Diocletian's *Edictum de Pretiis Rerum Venalium* (301 CE), the word is used in connection with specialized craftsmen and their wages for working on silk textiles (Edict.Diocl. 20.11: εἰς ὄλοσειρικὸν σκοουτλάτον). ¹⁵

These snapshots from various written sources show that σκοουτλάτος as a checkered pattern (tartan) was used throughout the Roman Empire, in connection with different materials and was even estimated as merchandise.

b. τρίμιτος – πολύμιτος

The compounds τρίμιτος (τρεις + μίτος) and πολύμιτος (πολύς + μίτος) have particularly caught the attention of textile scholars. ¹⁶ In dictionaries τρίμιτος is translated not only as three-threaded but also as made of coarse textile or drill, an interpretation which we will discuss further, taking into consideration textile technology in the following: ¹⁷ In her comprehensive work, Elizabeth Barber examines τρίμιτος with the eye of a weaver; considering μίτος as term for heddle, she suggests identifying τρίμιτος with twill, a special type of weave. ¹⁸ Although Egypt is particularly famous for its plain tabby weaves that form the majority within the preserved textiles, twill fabrics have been attested from archaeological excavations. ¹⁹ The characteristic structure makes it more durable for the use as clothes and furnishing textiles.

Diocletian's Edict on Prices lists many textiles, and therein a δελματικὴ ἄσημος Λαδικηνὴ τρίμιτος is recorded, an undecorated Laodicean δελματικὴ which is further designated as τρίμιτος (Edict.Diocl. 19.39). It appears plausible that the technique of the weave, i.e. twill, is meant because decoration and material are described by the other two preceding terms.

In papyri, τρίμιτος is found in P.Stras. III 131 = SB V 8013. l. 9 (363 CE; Arsinoite nome): προσκεφάλειον (l. προσκεφάλαιον) ἡμιτριβῆ<ν> τρίμ{ε}ιτον ἔν and SB XVI 12291. l. 4 (3rd century CE, Arsinoite nome): φαι(νόλης) τρίμ(ιτος) ἀμμι() (δραχμαὶ) ρξη.

Polymitos is attested in P.Princ. II 82 = SB III 7033. l. 37 (481 CE; Lykopolis): προσκεφάλαια πολύμι(τα), and P.Cair.Masp. I 67006v. l. 61 (ca 566-570 CE; Antinoopolis?): προσκαιφάλεια (l. προσκεφάλαια) πολύμι[τα] δύο. It is semantically related to τρίμιτος and literally means 'consisting of many threads', which does not give a clear picture of a textile, or even a textile technique at first sight. Some dictionaries translate τὰ πολύμιτα as 'damask stuffs'. ²⁰

In order to identify a technique denoted as πολύμιτος, let us consider once again the above-mentioned passage in Pliny's Natural History, especially the first part *plurimis vero liciis texere quae polymita appellant Alexandria instituit*. Following Elizabeth Barber's suggestion, that the Greek term μίτος denotes the heddle, we learn from Pliny that πολύμιτα were woven

¹⁴ English translation: Casson (1989) 65.

¹⁵ Lauffer (1971) 161.

¹⁶ Recently see Wild / Droß-Krüpe (2017); Spantidaki (2017), esp. 203-206.

¹⁷ LSJ⁹; Montanari 2004² s.v.; this compound is also attested as noun (τὸ τρίμιτον).

¹⁸ Barber (1991) 267-268.

¹⁹ See, e.g., the finds from the Roman town Karanis, or Mons Claudianus: see Thomas (2001); Bender Jørgensen (2007).

²⁰ See WB; LSJ⁹; Montanari, s.v.

with several heddles or heddle bars on a loom. Generally, heddles that are tied on a heddle bar separate the warp threads and open the sheds in which the weft is inserted. This description does not correspond to damask, which is, per definition of CIETA's vocabulary of technical terms, a «figured textile with one warp and one weft in which the pattern is formed by a contrast of binding systems».²¹ It corresponds, though, to the structure used for taqueté, a «weave, derived from reps lancé, with two warps, main and binding, and two wefts, main and pattern».²² Still much discussion is going on regarding the type of loom used to weave such πολύμιτα.²³ However, among preserved textiles from Egypt, including finds from archaeological excavations, several taquetés or weft-faced compound tabbies have survived.²⁴ With a glance to taqueté textiles from the Roman town Karanis, one might understand why Pliny chose to compare these two techniques from different provinces of the Roman Empire (figs. 2 and 3). Both were used to produce checkered patterns.



Fig. 2: Taqueté with a checkered pattern from Karanis. © Kelsey Museum of Archaeology, Ann Arbor, acc.-no. 0000.02.9916a.

²¹ CIETA (2006) 12.

²² CIETA (2006) 47.

²³ Wild (1987); Ciszuk (2000); Ciszuk / Hammarlund (2008).

²⁴ Pritchard (2014).



Fig. 3: Taqueté with checked pattern and red warp threads from Karanis. © Kelsey Museum of Archaeology, Ann Arbor, acc.-no. 0000.01.2798.

4. Material: gold

Linen and wool are the most commonly used fibres in ancient textile production. Sometimes other materials were used, such as cotton, hemp, silk, nettles, or even asbestos or gold. In this paper we would like to focus on the latter.

Using gold for fabrics poses some challenges in practical terms. Gold for textiles was used for decoration because of its shining effect. Being a metal, gold is rigid. In order to apply gold in a flexible textile structure, ancient craftsmen used different techniques, which can be seen in preserved textiles in the Mediterranean.²⁵

- a. gold wire or strip.
- b. gold wire twisted around a fibre core.
- c. gold strip twisted around a fibre core.
- d. gilded membrane twisted around a silk core.

To produce a thin gold wire and strip that is been twisted around a fibre core implies highly skilled and experienced metalworkers. In other words, ancient weavers had to cooperate with other craftsmen.

²⁵ Gleba (2008).

Textiles with gold have rarely survived. Plundering graves and melting gold for re-using the precious metal is one of many reasons. Fortunately, some fabrics with golden decorations, *auratae vestes*, have survived from Late Antique Egypt.²⁶ In this period, it appears that the predominant technique used golden strips that were twisted around yarns made of linen or silk; these strips were woven in tapestry technique (see fig. 4). This corresponds to the technique listed as c.



Fig. 4: Macro image of Late Antique tapestry decorated with gold threads: thin gold strips are twisted in z-direction around a linen yarn (core). Private collection © Ines Bogensperger.

In addition to those rarely preserved *realia*, written sources have to be considered as further evidence of this precious material and its use in ancient textile production.

In papyrus documents, we find a few cases where gold is used as material for textiles:

SB III 6024. ll. 7-10 with BL XII 185 (4th-7th century CE; see HGV; Hermopolis?) lists two different garments, both of which were made with gold threads: στιχαρομοφόριν (l. στιχαρομαφόριον) χρεσ|όν (l. χρυσούν) /α/, όμοί(ως) στιχα[ρο]]μαφ[όριν] χρεσσόν (l. χρυσούν)²⁷ π[αλαι]]όν /α/. SB III 6222. ll. 33-34 (Dec. 22 after 301 CE?; see HGV; Alexandria) is one of the few written sources, where, in addition to gold, silver is attested for a κολόβιον: καὶ ἔλαβ[ον κ]ο[λό]βιον ἀργυροῦν καὶ κολόβιο(ν) | καὶ τὸ ἀργύριον. The list CPR VIII 65. l. 6; 8; 14 (6th century CE; unknown provenance) provides some remarkable terminology: three fabrics are recorded which are described as χρυσόσημος, ‘decorated with gold’:²⁸ ῥάχνη λευκὴ χρυσόσημος(?) α | ... | κερβικάριον χρυσόσημον α | ... | ῥάχνη

²⁶ Stauffer (2007).

²⁷ A different approach to the reading of this passage is suggested by Russo (2003) 57-58: «Quanto a χρεσσον ... potrebbe trattarsi anche di una variante grafico-fonetica di un termine della sfera semantica di χράμαι, utilizzato per indicare una veste più o meno ‘usata’: si potrebbe pensare all’espressione ἀπὸ χρήσεως, o all’aggettivo ἄχρηστος, forse storpiati». In our opinion, assuming a spelling mistake by the writer in ll. 8-9 (στιχα[ρῶ]]μαφ[όριν]; op. cit.; see also BL XII 185) is questionable.

²⁸ The Greek σημεῖον denotes the decoration of textiles, which is best seen in the encyclopedia Etymologicum Magnum: Ὁ φορῶν στολὴν ἔχουσαν σημεῖα ὡς γαμμάτια (Etym. Magn. 766.6-7).

χρυσόσιμος (l. χρυσόσημος) α. Considering the preserved textiles, we might assume that tapestry decoration with gold threads, as discussed above, is meant.

A different case can be seen with adjectives χρυσανθής and χρυσάνθινος, which are once attested in the texts under study: P.Mich. II 121r. col. iv.1 l. 3, (Apr. 30-May 28, 42 CE; Tebtynis, Arsinoite nome): καὶ κιθῶν(α) (l. χιτῶνα) χρυσανθῆ; SPP XX 67r. l. 12; 26, 2nd/3rd century CE; Arsinoite nome): γαννάκης χρυσάντινο(ς) (l. χρυσάνθινος), | ... | [λ]ωδίκια χρυσάντ(ινα) (l. χρυσάνθινα). So far, dictionaries offer translations such as ‘with flowers of gold’ for χρυσανθής and ‘gold-coloured’ for χρυσάνθινος.²⁹ Therefore, the adjectives should be either connected with dyeing or some sort of adornment.

We should draw our attention to some attestations literature provides for gold-tapestries: Herodian (2nd/3rd century CE), for instance, literally mentions χιτῶνες with gold woven in: χιτῶνας χρυσοῦφείς καὶ ἀλουργεῖς χειριδωτοὺς καὶ ποδήρεις ἀνεζωσμένους [...] ἐσθῆσιν [...] χρυσοῦ καὶ πορφύρα πεποικιλμέναις, «...wearing a long-sleeved *chiton* that hung to his feet and was gold and purple ...with garments ornamented with gold and purple...» (Hdn. 5.3.6).³⁰ This is one of the rare cases, where we find the textile technique clearly described with ὑφαίνω, ‘to weave’. In terms of colours, i.e. gold threads used with purple, this passage corresponds well to the particular group of purple-coloured textiles from Egypt as seen above. Also Athenaeus (fl. ca 200 CE) refers to a purple-coloured ἱμάτιον with golden tapestry decoration: περιεβέβλητο δὲ ἱμάτιον πορφυροῦν χρυσοποίκιλον, «a purple-coloured himation, spangled with gold, was thrown around [i.e. his shoulders]» (Ath. 5.198c).³¹

5. Conclusion and discussion

The linguistic elements on which we focused in the present paper could be divided into three categories on the basis of their frequency in the papyrus documents under study as well as of their connection to textiles:

vocabulary clearly connected to textiles	σκουτουλάτος τρίμιτος, πολύμιτος τρίβων, τριβώνιον, τριβωνάριον
vocabulary attested only in a textile context that could be potentially used in a different context as well	The once attested ἀπὸ ὀλίγης χρήσεως, τριβάς, σεσημμένος, σεσινωμένος, χρυσόσημος, χρυσανθής, χρυσάνθινος, and the twice attested τεθεραπευμένος
vocabulary attested in various contexts but bearing a special meaning when used	καινός, καινούργιος νέος

²⁹ The adjective ἄνθινος is also used in documentary papyri dated to Late Antiquity and are usually translated as ‘colourful’ or ‘with flowers’: P.Cair.Zen. IV 59696. l. 6 (mid-3rd century BCE; see HGV; unknown provenance): ἀνθίνη [scil. ταυρία]; P.Sorb. III 110. l. 18 (after Aug. 13-Sept. 11, 219 BCE?; Muchis?, Arsinoite nome): χιτῶν ἄνθινος; SPP XX 245. l. 7 with BL IX 349 (6th century CE; unknown provenance): λε[υ]κοῦ (or κρ[όκου]) ἀνθίν(ου); cf. also BGU XIX 2800. ll. 2-3 (7th century CE; Hermopolis): καμίσια ἀνθίσκ(ινα) ἢ τι[μ]ῆ νο(μίσματα) [- - -] | μαλλωτὰ ἀνθίσκ(ινα) θ [τ]ι[μ]ῆ - - -; for the supplementation of the abbreviation ἀνθίσκ() suggested by the editor, see his commentary to ll. 2-3 on p. 92; for a different reading and interpretation of the word, see Hagedorn (2007) 11-12; cf. BL XIII 44.

³⁰ English translation: Whittaker (1970) 21.

³¹ Cf. also the third meaning of ἄνθος (in pl.) offered in LSJ⁹ s.v.

in textile contexts	ἀπὸ χρήσεως τριβακός ῥυπαρός πεπλυμένος ἄχρηστος σαπρός χρυσοῦς
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The frequent attestation of vocabulary for wear and tear in papyrus documents demonstrate the high circulation of used textiles in daily life. Moreover, the distinctive use of different grades, such as ‘half-worn’ in comparison with ‘worn’, confirm the perceived value of textiles.

In addition, written sources complement and shed a new light on our perception of textiles and their patterns. Apart from well-known decorative ornaments (*clavi, orbiculi, tabulae, manicae*), other possibilities of patterning textiles are evident. On a closer look, these patterns match with the style of preserved textiles, although less known. However, they illustrate the broad spectrum of decoration throughout the Mediterranean region.

Finally, the use of materials is based on availability and climate, but also includes a high level of technology and cross-cooperation with other crafts. This is best seen in the case of gold, where metalworkers (goldsmiths), but also dyers are involved in textile production, which confirm a highly specialized industry.

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