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Flax and Linen Terminology in Talmudic Literature

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Flax and Linen Terminology in Talmudic Literature

Nahum Ben-Yehuda¹

Material culture data is mentioned in Talmudic (or ‘rabbinical’) literature when a relevant legal (*‘halakhic’*) or homiletic (*‘midrashic’*) context arises. Therefore, certain details may be lacking or ambiguously stated. This however is not presented in a systematic and detailed manner, such as in ‘Pliny’s Natural History’.² Additional classical authors mention flax and linen. First and foremost: Diocletian³ in his edict of maximum prices. And in less scope and detail: Xenophon,⁴ Virgil,⁵ Strabo,⁶ Columella,⁷ Pausanias,⁸ and Theodosius II⁹ – in his codex. In some instances, these sources may be useful for comparison, contrast and clarification – to Talmudic sources.

It is difficult to gauge the exact societal extent of the phenomena mentioned in this literature, however it may be assumed that they can be viewed as a representative sampling, or reliable cross-section of the material culture found in contemporaneous society in

those periods (*c.* 2nd - 5th centuries AD) and regions (Land of Israel and Babylonia). This premise is unaffected by the academic disagreement which exists regarding the extent to which Talmudic laws were actually practiced by the general populace outside of the sphere of the Sages themselves. There is, however, academic consensus regarding those aspects of material culture which are described in this literature as reflecting *Sitz im Leben*.

Historiography based upon Talmudic literature source material is a complex and challenging science. It will encompass aspects such as the use of various Aramaic dialects, the identities, backgrounds, times and locales of tradents¹⁰ and the legal and homiletic contexts in which the material culture data is presented. Nevertheless, these are outside of the scope of the current paper, which will focus strictly on material culture itself.

The principal rabbinic works from which data is

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2. (23-79 AD) Primarily in book 19, chapters 1-6.

3. (244-311 AD)

4. (430-354 BC)

5. (70-19 BC)

6. (64 BC-24 AD)

7. (4-70 AD)

8. (110-180 AD)

9. (401-450 AD)

10. One who is responsible for preserving and handing on the oral tradition, in this case the Rabbis or “Sages”. Oxford Bible Studies Online.

gleaned include: Mishna, Tosefta, Mekhilta, Sifra, Sifre,¹¹ Jerusalem Talmud,¹² Babylonian Talmud,¹³ Midrash Bereshit Rabba, Midrash Tanḥuma,¹⁴ and Aramaic ‘Targums’¹⁵ of the Pentateuch and Hebrew Bible. Each of these works embodies content originating in various periods, some of them long before the date of their respective final redactions.

Pioneers in this field of Talmudic material culture research in general, and textiles specifically, were Gustav Dalman,¹⁶ R.J. Forbes,¹⁷ Abraham Herszberg,¹⁸ Samuel Krauss,¹⁹ and Saul Lieberman.²⁰ Since then, our knowledge of Roman-era textiles has been greatly enhanced, due to research advances²¹ in the fields of archaeology, botany, iconography and philology. Notable among those whom have contributed to this field are Yehuda Feliks,²² John Peter Wild,²³ Daniel Sperber,²⁴ Ze’ev Safrai,²⁵ and Michael Sokoloff.²⁶ All of the above will be accounted for in the current paper.

Flax-linen²⁷ production: *longue durée*

Reconstruction of the complete flax-linen *chaîne opératoire* may be performed by comparison and cross-checking flax-linen production in the Land of Israel²⁸ with that in various other regions and periods, such as Ancient Egypt,²⁹ Roman-era Europe, Asia Minor and Egypt, Roman³⁰ and Medieval Iberia,³¹ and modern-day Northern Ireland and Great Britain,³² Croatia,³³ Lithuania³⁴ and Flanders.³⁵ In light of parallel descriptions, we can deduce that the processes of flax-linen production are a *longue durée* phenomenon with quite similar *chaîne opératoire*, notwithstanding some minor variations. This basis corroborates the Talmudic information, enables filling of any gaps and enhances clarification of ambiguities which may exist therein.

An additional benefit of this deduction is that the implements historically used in the various stages of

11. Final redactions of these five works: 3rd century AD, Land of Israel.

12. (Also known as the Palestinian Talmud, or Talmud of the Land of Israel) Final redaction: c. 4th century AD, Land of Israel.

13. Final redaction: c. 6th century AD, Babylonia.

14. Final redactions: c. 5th century AD, Land of Israel.

15. ‘Translations’. Final redactions: c. 3rd-5th centuries AD.

16. Published 1937.

17. Published 1956.

18. Published 1924.

19. Published 1945.

20. Publications 1939 - 1968.

21. Research in textile history and archaeology has advanced in recent years, partly thanks to research consortia such as CTR, NESAT, Purpureae Vestes, DressID, TRC, CIETA, and the Archaeological Textile Review (ATR).

22. Publications 1963 - 2005.

23. Publications 1963 - present. Several additional publications relevant to this paper are listed in the bibliography.

24. Publications 1974 - present.

25. Publications 1977- present.

26. Publications 1974 - present.

27. The term “flax” in this paper indicates the plant *Linum usitatissimum* and its derived fiber. “Linen” in turn indicates yarn and cloth derived from that fiber. This is in accordance with ASTM Designation: D 6798–02 Standard Terminology Relating to Flax and Linen.

28. Amar 2002 (160, 331, 336, and 340) tracks the cultivation and use of flax in the Land of Israel from the Byzantine Period (330 AD) through the Muslim conquest (640 AD and onwards) and up to the Middle Ages.

29. Vogelsang-Eastwood 1992.

30. Alfaro 1984, 49-58

31. Córdoba De La Llave 1990, 85-93. Veiga de Oliveira 1978, 8-23. In addition, presented there is a detailed essay on modern flax-linen production in Portugal.

32. Warden 1967, 248-680.

33. Cruickshank 2011.

34. Meek 2000.

35. DeWilde 1999.

manufacture, which have indeed become more sophisticated or mechanized with time, but their respective basic functions remain essentially the same. One may choose, therefore, to illustrate Talmudic era production processes with implements from other periods and regions when contemporaneous and local illustrations are not available.

A noticeable exception to the above rule is modern field or dew retting³⁶ as opposed to historical pool retting. The hot dry climates of Egypt and the Land of Israel³⁷ proximate to the flax-pulling season do not enable the growth of fungi essential for to this process, in contrast to the respective damp temperate climates of Western and Eastern Europe. Therefore, field retting apparently did not and does not exist in the

regions generally relevant to Talmudic literature.³⁸

Detailed *chaîne opératoire* (with respective occupational names)

- {1}³⁹ Soil preparation⁴⁰
- {2} Sowing (**Sower**)⁴¹
- {3} Weeding (**Weeder**)⁴²
- {4} Commerce – of plants currently growing in the field.⁴³(**Trader, Merchant**) This procedure is optional, for the flax may be further processed by the farmer (and his family) himself.⁴⁴
- {5} Pulling, uprooting (**Puller**)⁴⁵
- {6} Drying, stooking (**Stooker**)⁴⁶ This procedure is optional, for sometimes the flax straw is already

36. Nowadays, pool retting is subject to strict regulation by the European Union, and therefore rarely used. http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AJOL_2014_174_R_0015. Criterion 2. Flax and other bast fibres. The historical record of dew-retting is currently obscure.

37. Pausanias, *Elis I*, v. 2-5: “The fine flax of Ellis (Approximately 38° N. latitude, 70 M elevation) is as fine as that of the Hebrews, but it is not so yellow.” Assumedly he is referring to the flax fiber. Pool-retted flax in the hot climate of the Land of Israel (Beth Shean is 32.5° N. latitude, 121M **below sea level** elevation) produces blond-colored fibers. Dew-retted fibers range in color from ecru through dark gray. (NBY) See Carter 1920, 32: Different colors of flax under various water-retting conditions.

38. Freckman 1979, 91-102: Retting could be undertaken in ponds or tanks – or simply by long exposure in the fields. Dew retting in the climatic conditions of modern and historical Mesopotamia is a topic which has not yet been researched (NBY).

39. For the significance of the various types of parentheses and brackets used in this paper, see “**Symbols**” *infra*.

40. Pliny, *Book 19*, chapter 2: “Flax is chiefly grown in sandy soils, and with a single ploughing. No other plant grows more quickly: it is sown in spring and plucked in summer, and owing to this also it does damage to the land.” Bradbury 1920, 39-41. Carter 1920, 19. DeWilde 1999, 19-22.

41. Columella *Book II*. x.17: “Flax-seed should not be sown unless it yields a heavy crop and brings a good price in the region where you farm; for it is particularly hurtful to land. For this reason it requires a soil which is very rich and moderately moist. It is sown from the first of October to the rising of Aquila, which falls on the seventh day before the Ides of December 6. An *iugerum* of land is sown with eight modii of it. Some hold that it should be sown in poor land, and very thickly, so that the flax may grow with a more slender stem. The same people also say that if it is sown in rich ground in February, ten modii should be broadcast to the *iugerum*.” Vogelsang-Eastwood 1992, 5 mentions that flax is sown in Egypt in mid-November. That is nearly identical to the sowing date in the Land of Israel, in contrast to Spring sowing in many other regions. DeWilde 1999, 32-29. Feliks 1963, 149 examines the dates for sowing flax in the Land of Israel. On p. 156 he discusses the proper density of seeds necessary to obtain the desired non-branching plants.

42. Columella *Book II*. xii.5: “Eight or ten *modii* of flax seed are sown with four days ploughing, harrowed with three days’ work, weeded with one, and pulled with three, the total amounting to eleven days’ work.”

43. Wipszycka 1965, 45-46 mentions merchants and trade of “raw materials” in flax context. The exact stage of production is not indicated, and could vary. DeWilde 1999, 203. See: *infra* **Temporary and auxiliary professions: commerce**.

44. Safrai 1994, 229; “A number of sources also indicate that the wife of a farmer, who raised sheep or cultivated flax, would sell clothes woven from either wool or linen.” Presumably, she herself either performed the labors herself or supervised them being performed on site.

45. Pliny, *Book 19*, chapter 3: “With us the ripeness of flax is ascertained by two indications, the swelling of the seed or its assuming a yellowish color. It is then plucked up and tied together in little bundles each about the size of a handful, hung up in the sun to dry for one day with the roots turned upward...” Vogelsang-Eastwood 1992, 45 provides an illustration of Ancient Egyptian flax pulling. DeWilde 1999, 49-64. Feliks 1963, 197-198 examines the dates for pulling flax in the Land of Israel. On p. 219 emphasis is placed on the method of harvesting – by pulling, not cut with a sickle as grain crops.

46. Bradbury 1920, 80-81. DeWilde 1999, 65-66.

- dry when pulled and suitable for retting, or is retted while still moist.
- (7) Binding, stacking, storing (with seed bolls still attached to their stems).⁴⁷ This procedure is optional, for the flax straw may be deseeded and retted immediately after pulling.
- (8) Transport of the flax straw to site of deseeding.⁴⁸ Transport in antiquity was executed by porter, donkey or camel.⁴⁹ This procedure is possible, not mandatory, as deseeding may be performed on-site, without need for transport at this stage. (**Porter, Cameleer, Donkey driver**)⁵⁰
- (9) Commerce – in pulled and dried flax straw. This procedure is possible, not mandatory, as further stages of production may be performed by the farmer himself. (**Trader, Merchant**)
- [10a] Crushing seed bolls [with a mallet] – to de-seed before retting (the retting process would ruin the seeds, rendering them unusable for sowing the next year).⁵¹ (**Crusher**)
- [10b] Rippling [with a “ripple”- a comb with widely spaced tines] seed bolls from the remainder of the flax plant, to deseed before retting.⁵² Sometimes flax straw is retted without deseeding, either when the seeds are immature due to early pulling (in order to obtain very fine fibers), or when new seeds are purchased to sow each year, rendering deseeding extraneous.⁵³ Only one of the above two procedures is performed.⁵⁴ (**Rippler**)
- {11} Rebinding – in preparation for subsequent pool retting.⁵⁵
- [12a] Pond (or: pool, pit) retting (or: steeping, watering⁵⁶).⁵⁷ In this process, bacteria such as *Clostridium butyricum* and/or *Clostridium pectinovorum*⁵⁸ which are naturally present in the environment multiply and create a culture, in turn producing the enzyme pectinase which dissolves the naturally-occurring pectin present in the flax stalks and has glued the fibers together. Only after this procedure, can the further processing of the flax
47. DeWilde 1999, 67-73.
48. DeWilde 1999, 74-79.
49. Safrai 1994, 289 calculates the respective mass of each method’s maximum load while transporting wheat. Figures for flax (at different stages of production) may be different due to its reduced specific gravity (especially retted and dried flax straw). Porter – 42.7 liters (= 32 kg). Donkey – 128 liters (= 96 kg). Camel – 256 liters (= 192 kg). Safrai 1995, 190 comments that commerce between the small villages was enabled by transporting goods via camel-train or donkey-train. In this paper, we will quote Talmudic passages which mention the transport of flax (at some stage of production) by porter, by donkey and/or by camel.
50. The above methods of overland transport are all mentioned in Talmudic literature. See: Sperber 1976, 113-114, 123-125, and 133-136: Re transport of goods by boat to and from Egypt. Flax and linen in various stages of production were exported and imported between the Land of Israel and Egypt. The commerce and transport of flax-line via inland waterways (The Sea of Galilee, The Dead Sea, or The Jordan River) and the coastal seaways of the Mediterranean (between locales in the Land of Israel, e.g. Jaffa and *Caesarea Maritima* or Acre, or to and from Asia Minor, the Aegean Sea, and Rome) and the Red Sea require additional research.
51. Dewilde 1999, 82-86.
52. See Georgacas 1959, 259: ξελιπίζω “beat the dry flax so that its seeds fall away”. DeWilde 1999, 86-94.
53. Warden 1967, 18: “If good seed is required for future sowing, a little of the flax should be allowed to remain after the bulk of the crop is pulled, that it may ripen fully, and yield seed with the germinating principle really in it.” Carter 1920, 19: Preservation of the seeds for future sowing may be unimportant. Feliks 1968, 282, and Feliks 2005, 262: Flax seeds were used for food, but since this use requires later pulling - after the seeds have ripened - it damages the crop which is primarily intended for its fine fibers, it was therefore discouraged. Flax seed oil for consumption as food and use in oil lamps was used in Asia Minor during this period, but is not mentioned in Talmudic literature – NBY. See: Ertuğ 2000, 171-185.
54. Weindling 1947, 238 suggests that rippling is done if the straw is green and crushing if the straw is dry. If the green seed bolls are rippled, they will have to be dried and subsequently threshed.
55. Carter 1920, 28: Flax straw is carted to the retting dam.
56. Hann 2005, 8-9. DeWilde 1999, 103-126.
57. Pliny Book 19, Chapter 3: “...the actual stalks of the flax are plunged in water that has been left to get warm in the sun, and a weight is put on them to press them down, as flax floats very readily. The outer coat becoming looser is a sign that they are completely soaked, and they are again dried in the sun, turned head downwards as before...”. Theodosius (NVal 13-1) mentions municipally operated flax steeping in Numidia (Tunisia).
58. Hellinger 1951. Rahman 1963. Kozłowski 2012, 70-71.

be done. Removal of the flax straw from the retting liquor must be done at the proper time, by an expert. Early removal, while the flax is still under-retted, will render fiber separation impossible. Second-retting can rectify this situation, but is obviously time and money-consuming. Late removal from retting will cause the fibers themselves to be damaged (a state which is irreversible) by the enzyme and unfit for further use. The retting process is malodorous, and the acidic effluent⁵⁹ may leach into adjacent soil thus causing damage to crops. (**Retter**)

[12b¹] Drawing (or pulling out) of the retting pond, and transport to the drying area.⁶⁰

[12b²] Ringing out the excess retting fluid, to expedite drying.

[12c] Dew (or field) retting. In this process, fungi such as *Alternaria alternate* or *Alternaria linicola* reproduce in warm and moist conditions, and disintegrate the pectin of the flax straw, enabling subsequent fiber separation.⁶¹ This method is suitable in some European and Russian climates and is widely used in modern production, in place of pond-retting. Egypt and the Land of Israel are both unsuitable for this manner of retting, due to their respective hot and arid climates, which deter fungus growth, adjacent to the season of flax pulling.

{13} Drying (or: grassing, spreading) and gaiting (erecting ‘chapels’, and subsequent rebinding). Drying is essential after pool retting, before subsequent processes of fiber separation.⁶²

{14} Transport – to (and from) the scutching mill. In antiquity, this was executed by porter, camel or donkey. This procedure is possible, not mandatory, for scutching may have been done adjacent to the retting pool. (**Porter, Cameleer, Donkey driver**)

{15} Commerce – of retted and dried flax straw. Again, this procedure is possible, not mandatory,

as subsequent fiber processing may be done by the retter himself. (**Trader, Merchant**)

{16} Breaking (or ‘braking’) – preliminary separating of the flax fibers by breaking up the woody parts of the stalks, using a mallet or similar implement.⁶³(**Braker**)

[17a] Roughing – combing or hackling by hand to remove woody impurities and short fibers and to square them on the root end thereby producing a piece of flax which could be gripped by the hacklers with improved yields as result.⁶⁴ Apparently, this terminology and separate procedure were traditionally used only in Northern Ireland, and in other regions would be included in scutching. (**Rougher**)

[17b] Scutching – scraping, batting, shaking and/or flailing the flax fibers to begin their alignment and remove remaining woody impurities and short fibers.⁶⁵ The product of this procedure is “scutched line” (long fibers) and the by-products produced are “scutched (coarse) tow” and coarse shives. (**Scutcher**)

{18} Hackling – combing the scutched flax fibers in series of ‘hackles’ (combs) with increasingly compact tines, to remove the remaining short fibers and shives, and to straighten them in preparation for spinning. The product of this procedure is ‘hackled line’ (long fibers), and the by-products are ‘hackled (fine) tow’, and fine shives. In modern industry, the hackled line is converted into continuous ribbons – ‘sliver’, and subsequently given a slight twist – ‘roving’, in preparation for spinning.⁶⁶ (**Hackler**)

{19} Transport – to the spinning mill. (**Porter, Cameleer, Donkey driver**) An optional procedure. In antiquity, it is possible that most or all of the intermediate stages of production were done in the same vicinity, by the farmer and his laborers.

59. Kempa & Bartoszewski 1992, 515-517.

60. DeWilde 1999, 133, 136, and 140.

61. Kozłowski 2012, 71-72. DeWilde 1999, 100-103.

62. Carter 1920, 45. DeWilde 1999, 126-133.

63. Pliny Book 19, Chapter 3: “...afterwards when thoroughly dry they are pounded on a stone with a tow-hammer.” DeWilde 1999, 151-161.

64. Carter 1920, 73. Weindling 1947, 255-256. Elaine Flanigan, Keeper of Collections, Irish Linen Center, Lisburn, NI – personal correspondence.

65. DeWilde 1999, 162-188.

66. DeWilde 1999, 192-197.

{20} Commerce – line, tow, and shives.⁶⁷ Commerce at this stage is optional, as above. (**Trader, Merchant**)

{21} Spinning. In antiquity, as today, flax was often wet-spun, utilizing water or saliva to soften the fibers. This will produce a finer quality yarn, and in turn finer cloth. In modern industry; ‘line’ (long fiber) is spun wet,⁶⁸ dry or semi-wet; and ‘tow’ (short fiber) is usually spun dry. Plying (or: ‘doubling’) may also be done wet for certain applications.⁶⁹ (**Spinner**)

{22} Transport – as above, to the weaver. (**Porter, Cameleer, Donkey driver**)

{23} Commerce – in spun yarn.⁷⁰ (**Trader, Merchant**)

{24} Weaving⁷¹ (**Weaver**)

{25} Boiling (and bleaching) – may be done at different stages of production: hackled fiber (in modern industry – sliver or roving⁷²), spun yarn, or as a post-loom process to woven cloth.⁷³ Boiling, which is an integral part of some historical and modern production processes - and is often integrated with bleaching,⁷⁴ softens the fiber and further dissolves remaining impurities such as pectin and wax, and thus enables a finer yarn to be spun. When performed after weaving, this improves the handle of the woven cloth.⁷⁵ (**Bleacher, Boiler**)

{25a} Beetling⁷⁶ – woven cloth may be (wetted and subsequently) beaten with a mallet or similar implement, in order to provide it with a smoother

tactile surface and visual sheen. Pliny the Elder mentions that, in antiquity, this was also done to yarn. In the modern era, this is considered a procedure characteristic to Northern Ireland.⁷⁷ (**Beetler**)

{25b} Polishing – rubbing with a glass, stone or bone implement to give smoothness and sheen to the cloth. Initially this may be performed after weaving and subsequently after each laundering. In the medieval period this was practiced in Western Europe, and in the early-modern era, is considered a characteristically Scandinavian procedure.⁷⁸

{26} Transport of woven cloth.⁷⁹ (**Porter, Cameleer, Donkey driver**)

{27} Commerce of woven cloth. (**Trader, Merchant**)

{28} Rope, cord and twine manufacture – by two possible different methods: ‘laying’ (or: ‘twisting’)⁸⁰ or ‘plaiting’ (or: ‘braiding’).

{29} Production of other end products – nets, garments, and various textile applications.

{30} Laundering and post-laundry treatment of linen textiles.

Linguistic and etymological fundamentals

This paper focuses on the Hebrew and Aramaic language flax production terminology in Talmudic literature. Nevertheless, the language of the Hebrew Bible is a predecessor dialect, and will be presented herein. Standard Biblical Hebrew (SBH) is the stratum of

67. Curchin 1985, 35 quotes Diokletian 32.26 that “raw flax was purchased in bundles”, but this partial text offered by Graser 1959, 416, is omitted by Lauffer 1971. DeWilde 1999, 200-201.

68. Carter 1919, 213-239.

69. Sándor Nagy, managing director, Hungaro-Len spinning mill, personal correspondence. In addition, fine linen spun threads may be cold-water polished. Plyed linen twines may be hot-water polished with added starch.

70. Marzuq 1955, 39 – yarn merchants. Curchin 1985, 35 – barter of spun skeins.

71. Wild 1967, 656 mentions “*linyphi*” – the linen-weavers of Scythopolis, as liable to the state levy (*publico canoni obnoxii*).

72. Hann 2005, 17.

73. Bleaching and beating woven cloth in Ancient Egypt: Allgrove-McDowell 2003, 36.

74. Woodhouse 1928, 261-273. Hann 2005, 24-26.

75. Wild 2003, 102 “flax boilers”. Carter 1920, 97. Kernaghan & Kiekens 1992, 343-445.

76. Pliny book 19, Chapter 3: “...Then it (the fiber) is polished in the thread a second time, after being soaked in water and repeatedly beaten out against a stone, and it is woven into a fabric and then again beaten with clubs, as it is always better for rough treatment.”

77. Woodhouse 1928, 308-320. Carter 1920, 98. Hall 1957, 131-134.

78. Macquet 1990, 319-334. Scott 1953-1955, 226-227. Steppuhn 1998, 74-76. Noss 1976. My thanks to Professor Eva Andersson Strand for her assistance with this topic.

79. Theodosian Code 8.5.48: “(Coarse) linen and cloaks... shall no longer be dispatched by carriages but by (express) postwagons or boats... But the other delicate garments and the (fine) linen for cloaks... shall be sent by (express) carriages... The additions in parentheses are after Wild 1967, 662. Forbes 1956, 43 mentions that in Ancient Egypt flax was transported in bundles or bales.

80. Denton & Daniels 2002, 41, 194, and 286-287.

language used in the relatively early books of the Hebrew Bible, prior to the Babylonian exile, and often embodies Egyptian loanwords. Late Biblical Hebrew (LBH) is used in relatively late books of the Hebrew Bible, during and after the Babylonian exile, and is increasingly influenced by Aramaic.⁸¹ In these two linguistic strata, there are several different terms referring to flax-linen.

SBH terminology of flax-linen

Bād⁸²

Etym: Of unknown etymology.⁸³

Selected HB pericopes:

He shall be dressed in a sacral **bād**⁸⁴ tunic, with **bād** breeches next to his flesh, and be girt with a **bād** sash, and he shall wear a **bād** turban...⁸⁵ (Leviticus 16:4)

Samuel was engaged in the service of the Lord as an attendant, girded with a **bād** ephod. (I Samuel 2:18)

One said to the man clothed in **bādīm**,⁸⁶ who was above the water of the river... (Daniel 12:6)

It is currently impossible to discern the textile differentiation between this and the term **šeš**, both of which have the identical LBH (and Targumic) parallel – **būš** (*infra*).

Kūtōnet > **Kūtōnōt**. Construct state: **Kʾtōnet** > **Kōtnōt**
Etym: This term originates from the Akkadian *kītū*, *kītītū*, *kītīntu* – linen, flax, or linen garment; and the Aramaic *kītan*.⁸⁷ It subsequently became the Greek *χιτών*, and later the Latin *tunic* – after metathesis.⁸⁸ It is the name of a garment, originally made of linen, but later on became a generic name for a shirt-like tunic made of any textile material.⁸⁹ Sometimes a modifier is used⁹⁰ to specifically indicate a linen garment.⁹¹

Selected HB pericopes:

And the Lord God made skin **kōtnōt** for Adam and his wife, and clothed them. (Genesis 3:21)

You shall make the fringed **kʾtōnet** **šeš**... (Exodus 28:39)

He shall be dressed in a sacral **kʾtōnet** **bād**... (Leviticus 16:4)

Nʾōret⁹² – flax tow. Short fibers, often with remnants of shives, usually of lesser value.⁹³

81. Hurvitz 2014, 3-4.

82. **Bād** is a homonym in HB with four meanings: 1) linen cloth, 2) a branch or pole, 3) a part or portion, 4) a lie, boasting. Apparently there is no connection between them. Nevertheless, Murtonen 1990, 105 suggests that all shades of meaning are derived from the basic notion of separation, and the word for fine linen fits that pattern on the assumption that it originally referred to a *piece* of linen.

83. HALOT 1994, 109. Gesenius 1987, 105. Grntz 1975, 13-15 Identifies a rare, archaic Egyptian term for a hard stiff cloth. Dickson 2006, 47: [bDA] stiff roll of linen.

84. TO (Pentateuch), TY (Prophets) both consistently translate **bād** as **būš**, or the determined **būšā**. The term **bād** is not used independently in Talmudic literature, excluding Biblical quotes and their respective Talmudic discussions.

85. LXX, VUL, KJV, NIV: linen. RVR: lino. LUT: leinenen.

86. Masculine plural form

87. Gesenius 1987, 480-481. Murtonen 1990, 241-242.

88. Kutscher 1961, 98.

89. HALOT Vol. 2, 505

90. Presumably, all of the **Kūtōnōt** mentioned in priestly vestments' context (Exodus, Leviticus, Ezra, and Nehemiah) are made of linen. Additional **Kūtōnōt**, mentioned in Genesis, Exodus, and II Samuel may not be linen. Ezekiel Ch. 44 describes these priestly vestments using the term **bīgdei pīšīm**, and does not use the term "kūtōnet". Ezekiel also uses the alternative terms: **Šeš** (16:10, 16:13, 27:7) and **Būš** (27:16) albeit in other contexts.

91. The Aramaic Targums - Onqelos, Neofiti and Pseudo-Yonatan - of the Pentateuch consistently translate this term using the respective parallel Aramaic forms e.g. **Kītūnā**, **Kītūnīn**, **Kōtnān**, etc.

92. TY consistently translates this term **kītānā**. **Nʾōret** (and its Aramaic parallel **dāqtā**) appear in Talmudic literature in several contexts (*infra*).

93. The production of hemp and jute fibers also creates tow. These textile materials are not present in HB *Sitz im Leben*. The contexts of hemp in Talmudic literature infer to its production process being similar to that of flax.

Etym:⁹⁴ Something which is shaken out or shaken off, as is done in scutching and hackling.⁹⁵

HB pericopes:

... Whereat he pulled the tendons apart, as a strand of **n^oōret** comes apart at the touch of fire...⁹⁶ (Judges 16:9)

Stored wealth shall become as **n^oōret**, and he who amassed it a spark; and the two shall burn together, with none to quench. (Isaiah 1:31)

Pšt

Etym: This is the basic consonantal form of a Semitic term, a primary noun.⁹⁷ It is found in the non-vocalized Gezer Calendar from 10th century BCE.⁹⁸ Its vocalized variants are as follows:

a) **Pešet** – “flax”. In HB, found only in Hosea. This is a dialectic variation, possibly of Phoenician influence.⁹⁹

... I will go after my lovers, who supply my bread and my water, my wool and **pīštī**,¹⁰⁰ my oil and my drink. (Hosea 2:7)

b) **Pīštā**

1) A collective, comprehensive designation – “all of the flax”, or “flax in the field”.¹⁰¹

Now the **pīštā** and the barley were ruined, for the barley was in the ear and the **pīštā** was in bud.¹⁰² (Exodus 9:31)

2) *Nomen unitatus*– *i.e.* a single example of a class – “a flax fiber”, “a flax plant”.¹⁰³

... they lay down to rise no more, they were extinguished, quenched like **pīštā**.¹⁰⁴ (Isaiah 42:17)

c) **Pīštīm** – linen. This morphological plural-like form indicates a natural/raw product when represented in a manufactured condition.¹⁰⁵

Selected HB pericopes:

The cloth, whether warp or woof, in wool or **pīštīm**, or any article of leather in which the affection is found, shall be burned...¹⁰⁶ (Leviticus 13:52)

... Go buy yourself a loincloth of **pīštīm**, and put it around your loins...¹⁰⁷ (Jeremiah 13:1)

They shall have **pīštīm** turbans on their heads and **pīštīm** breeches on their loins...¹⁰⁸ (Ezekiel 44:18)

94. HALOT, 707-708, Kadari 2006, 721 “refuse of the flax”, “something small(er)”, Gesenius 1987, 654. Murtonen 1990, 254-255 “ofall (tow, scraps, chips)”. Also known as “oakum”. http://www.etymonline.com/index.php?allowed_in_frame=0&search=oakum

95. A probable BT synonym, and certain Syriac synonym – “s^rrāqt^a” – indicates “something which has been combed out”. DJBA 833, ASR 1051.

96. Cf. Judges 15:14 for similar phrasing, albeit the text uses the term **pīštīm** and TY translates **kītānā**.

97. HALOT, 983.

98. Borowski 2002, 34-35. Gil^oad 1976, 543-549. Talmon 1968, 3-14. Amar 2012, 57-58.

99. Murtonen 1990, 351. Morag 1995, 82, 103.

100. “... my flax”. With suffixed possessive pronoun – first person. Also *Ibid.* verse 11. TY translates both as **būš**.

101. Kautsch 1966, 394. HALOT *ibid.*

102. TO translates **kītānā**.

103. Kautsch *ibid.* HALOT *ibid.*

104. JPS translates “a wick”. Also *Ibid.* 42:3. TY translates both occurrences **būšīm** (plural form).

105. Kautsch 1966, 400.

106. TO consistently translates **pīštīm** as **kītān** or the determined **kītānā**.

107. TY translates **pīštīm** as **kītān** (or the determined **kītānā**) or **būš**. In contrast to TO’s translation consistency, *i.e.* **pīštīm** = **kītān**. We have not found the key to resolve which translation was chosen by TY for each specific context.

108. LXX, VUL, KJV, NIV: linen. RVR: lino. LUT: leinenen. Examination of the Aramaic Targums to the HB indicates that **šeš**, **bād**, **būš**, and **pīštīm** (and **kītān**) are interchangeable terms, thus casting doubt upon English translations of “fine linen” or “white linen” vs. (plain) “linen” in various contexts. The Aramaic Targums’ collective advantage over other translations is their continuous diachronic tradition of Biblical Hebrew.

Šeš¹⁰⁹

Etym: An Egyptian loanword – šš with the clothing determinative.¹¹⁰

Selected HB pericopes:

... Pharaoh put it on Joseph's hand; and he had him dressed in robes of šeš¹¹¹... (Genesis 41:42)

You shall make the fringed tunic of šeš. You shall make the headdress of šeš.¹¹² (Exodus 28:39)

... Her clothing is šeš and royal-purple. (Proverbs 31:22)

indicates that it is a newcomer on the Akkadian linguistic scene ... Although its ultimate origin has not yet been definitely established, its geographical diffusion points to a northern milieu."¹¹⁴ Or, a *Kulturwort* of unknown origin.¹¹⁵

Selected HB pericopes:¹¹⁶

... with a magnificent crown of gold and a mantle of būš and royal-purple.¹¹⁷ (Esther 8:15)

... and the families of the būš factory at Beṭ-ʿašbea¹¹⁸ (I Chronicles 4:21)

All the Levite singers, Asap, Heman, Yeduṭun, their sons and their brothers, dressed in būš.¹¹⁹ (II Chronicles 5:12)

LBH terminology**Būš** – The LBH parallel to **Šeš** and **Bād**.¹¹³

Etym: “The distribution pattern of the Akkadian *bušu*

109. Šeš appears only once independently (not as an explanation of a Biblical text) in Talmudic literature. Tosefta Tractate M^enaḥoṭ 9:17, in context of the raw materials used to produce articles required for use in the Temple. This subchapter states that “šeš” (*sic*)—required for priestly vestments – is **pištān** (flax), and if they are produced from **qanabūs** (hemp), they are unfit (and therefore forbidden) for use. I am not aware of an explanation for the use of this term there. **Qanabūs** is familiar to the Mishnah (Tractates Kīlʿayīm 9:1 and N^egaʿīm 11:2) as a textile fiber similar to flax.

110. Lambdin 1953, 155. Murtonen 1990, 439. Kadari 2006, 1150. Gesenius 1987, 1534. HALOT, 1663 entry III: “Homonymous with the Egyptian loanword for limestone alabaster. Both share the same property in that they are dazzling white.” Loanwords may change from their exact original meaning in transition from the donor language to the recipient language. Therefore, šeš in HB may not necessarily be “dazzling white”. Actually, the color **white** is not mentioned in context with garments anywhere in the HB, as it is in other contexts, e.g. “teeth” (Genesis 49:15), “manna” (Exodus 16:31), skin and hair affections (Leviticus 13 *passim*). Notably, Mishna Yoma chapters 3 and 7, indeed describes the high-priest’s vestments used on the Day of Atonement as being **white**, in contrast to his daily vestments which are multi-colored. Rabbinic literature does not define the degree of whiteness of these garments, as it does regarding affections of the skin. (Mishna N^egaʿīm Ch. 1, 1.)

111. TO (Pentateuch), TY (Prophets), and the Targum of Proverbs – all consistently translate šeš as būš, or the determined būša.

112. LXX, VUL, KJV, NIV: fine linen. RVR: lino. LUT: weißer Leinwand.

113. Hurvitz 2014, 50. TO (Pentateuch) and TY (Prophets) – all consistently translate šeš and bād (in their textile contexts) as būš, or the determined būša.

114. Hurvitz *Ibid*.

115. Murtonen 1990, 108. Gesenius 1987, 132.

116. This term is used in Talmudic literature rarely, and in only three specific contexts: 1) The white vestments of the High Priest, worn during his parts of his service in the Jerusalem Temple on the Day of Atonement, (Mishna Yoma Chapter 3, subchapters 4 and 6, and parallels in Sīfrā and the Talmuds), 2) The curtain or screen (**sādīm**) used in the Temple on that same day to conceal the High Priest while he is doffing and donning his vestments. (*Ibid*. Chapter 7, subchapter 1, and 3) A curtain used in the Temple to conceal the procedure in which a women suspect of adultery (“**sōṭā**”) has her head bared. (Numbers 5:18, Sīfrei BaMīdbar chapter 11) This philological phenomenon may be explained thus, that both the **Yoma** and **Sōṭā** respective ceremonies’ descriptions are relatively ancient literary works – from the second Temple period – in relation to most other content in Talmudic literature (Melamed 1973, 61-62). Therefore, ancient second Temple biblical terminology was selected, instead of the regular Mishnaic **pištān**. A *hapax* is the *Nomina agentis* used in Geonic literature – būšaʿei *infra*.

117. Parallel to Genesis 41:42 *supra*.

118. A guild, factory or workshop. Demsky 1966, 213-214

119. Parallel to Leviticus 16:4 *supra*. LXX: linen. VUL, NIV: fine linen. KJV: white linen. RVR: lino fino. LUT: feiner Leinwand. We have commented (*supra*) on this usage.

Talmudic terminology

The evolutionary process of the regular Rabbinical Hebrew term for flax-linen **pištān** – is as follows. The HB term **pištā** was adopted as the basis, and subsequently the final character “nun” was added to close the ultimate open syllable.¹²⁰ This is a familiar linguistic-phonetic phenomenon in later Hebrew dialects. Following are several similar examples:

- Pištā (Exodus 9:31) ► Pištān (RH passim)
 Y^hhūdā (Genesis 29:35, passim) ► Yūdān (RH passim)
 Kaisāreia (Greek) ► Qesārī (RH passim)
 ► Qesārīn (RH passim)
 Sephoris (Greek) ► Šipōrī (RH passim)
 ► Šipōrīn (RH passim)
 M^giddō (Joshua 12:21, passim) ►
 M^giddōn (Zekhariah [LBH] 12:11)
 ► Ἀρμαγεδών (LXX NT Revelations 16:16) ► Armageddon (KJV *ibid.*)
 Š^lōmō (II Samuel 12:24, passim) ►
 Šlemun (Syriac) ► Σαλωμών (LXX passim) ► Solomon (KJV passim)

Unfortunately, the HB differentiation between flax and linen is lost in Mishnaic Hebrew. **Pištān**, as well as **kītān** in Aramaic, indicate both flax and linen, and therefore require a suitable interpretation in each context.

Modern languages vary in this same aspect:

Some differentiate:

- English: Flax – Linen
 Hungarian: Len – Vászón
 Swedish: Lin – Linne
 German: Flachs – Leinen
 Dutch: Vlas – Linnen

Others do not differentiate:

Spanish: Lino

Russian: “лѣн” - in transcription [le³n]¹²¹

In the continuation of this linguistic process, the noun **pištān** may become adjectival by *nisba*¹²² form, *i.e.* the addition of the suffix “-ī”, hence “**pištānī**” – flaxen,¹²³ or “related to flax”. By addition of “man”, in Hebrew – “ʾīš”, “ʾīš pištānī” = “a man dealing with flax”. With nominalization, “ʾīš” is omitted, and “**pištāni**” retained, now forming an occupational name (*Nomina agentis*). The occupational name does not indicate what specific activity is done, *e.g.* flax-farmer, flax-worker, flax-producer, flax-trader or flax-transporter – only “**flaxman**” or “**flaxist**”, quite similar to the Spanish “linero”. Again, additional information must be gleaned from textual context, and may be translated using periphrasis. The Aramaic parallel to **pištāni** is **kītānāi**.¹²⁴ There are additional forms of occupational names in Hebrew, *e.g.* qāṭṭāl, qāṭlan, qāṭōl, and the use of the participle - qōṭel.¹²⁵ All have applications in our context.

Glossary of Talmudic flax-linen terminology¹²⁶

The terms are arranged in accordance with the stages in the *chaîne opératoire* with which they are affiliated. When a number of possible affiliations are applicable, such will be indicated.

Selected quotes from rabbinic literature will be cited.

Procedures

Entries are presented alphabetically,¹²⁷ in Semitic tri-consonantal¹²⁸ verbal root form.

120. This process is referred to as “nunation”. Ben-Ḥayim 1972, 46: This is not an actual “nun”, but “nasalization”. Nevertheless, the common pronunciation is “n”. (NBY)

121. This information was provided by Professor Igor Uschapovsky, All-Russian Research and Engineering Institute for Flax Production.

122. Hilman 2016: The gentilic suffix ʾ - ī (sometimes referred to by the Arabic term *nisba*) is used to form adjectives that denote some form of relation, such as affiliation, origin, or numerical order.

123. *Cf.* silk – silken, wood - wooden, wool – woolen.

124. More on this topic *infra*.

125. Bendavid 1971, 441, 445, 446. Gross 1994, 265.

126. The transliterations of Talmudic texts in this paper are vocalized generally accordant to Sokoloff 2012, Melamed 1992, Jastrow 1903 or Kohut 1878.

127. ʾ (aleph) and ʿ (ayin) are placed before “a”. Subsequently: b, c, d, g, h, ḥ, k, l, m, n, p, q, r, s, š, ś, š, t, ṭ, w, y, z.

128. Also referred to as **trilateral**. Occasionally, the verbal root form is **quadrilateral**.

ʾrg (Hb) ± **mḥy**, **nwl** (Ar). To weave linen, wool,¹²⁹ etc. Literally – “to beat-up (weft insertions)¹³⁰”. “... I told him, to buy flax (“leʿerōg”) to weave...” (Midrash Tanḥūmā Wāyeleḵ 2). “‘ōbād māḥei” (weaver’s¹³¹ work) of the linen tunics... (TO Exodus 39:27). A certain woman when she (“māḥya”) beats-up on the Sabbath is liable for the labor of weaving (JT Šabbat 10g). DJPA 300, DJBA656, 735. {24}

ʾly↓šly
 ʾqr↓tlš
 ʾzl↓ṭwy
 bqʾ↓pšl

dqq (Ar). 1) To make thin (or fine) by beating (or rolling out). {25a}{25b} “Rāḥā permitted to beat (“lʾmedāq”) rough-cloth garments (“šādreī”) during the intermediate days of the festival” (BT Bāḥā Mʾšiʾā 60b). 2) Braking flax stalks. “Flax which is braked (“dāyīq”) but not (yet) scutched.” (BT Šabbat 20b) {16} DJBA 349.

± **nqš** (Hb, Ar). To hammer, beat (beetle), pound.¹³² {16}{25a} “This pīštānī (flax worker), when he knows that his flax is good... the more he beats (“māqīš”) it, the more it shines...” (Bereshit Rabba 32:3, Codex Vatican 30). DJBA 776. DJPA 361.

± **ktš** (Hb, Ar). To “pestle”¹³³ (pound and rub, to apply pressure and friction). {16}{25a}{25b} “This pīštānī (flax worker), when he knows that his flax is good... the more he beats (“kōteš”) it, the more it improves ...” (Bereshit Rabba Codex 32:3, Vatican 30). DJBA 610. DJPA 273. See also: Māʾārōkā *infra*.

dwš (Hb, Ar). [10a] To thresh – remove the seed bolls from the flax straw, by striking them with a mallet or other implement. “That flax-worker (“kītānāyā”) – using a mallet (on the Sabbath), is liable for performing the labor of (“dāš”) threshing”. (JT Šabbat 10a) DJBA 322-323.

gdl (Hb, Ar) ± **qlʿ** (Hb/Ar). To twist or plait various items (cord, hair, wreaths, fringes, etc.) or to make nets. “Rabbi Ḥīyyā planted flax and gāḏelnā (made) nets¹³⁴...” (BT Kʾtūbōṭ 103b). {27} “One strand of (yarn), doubled into two, (“qʾlīʾā”)¹³⁵ into three, plied into six, and “double plied” into twelve...” (JT Šqālīm 51b) {21} DJBA 261, 1021. DJPA 494-495. “One who (“gāḏel”) braids/plaits a chain (braided cord). (BT Pʾsāḥīm 72a). {26}

ghš (Hb). To rub¹³⁶ (and therefore polish) with a round stone or glass¹³⁷ a linen [especially white] or wool garment, or to launder well. “Rav Yosep teaches:

129. We do not find in Talmudic literature specific occupational names: “linen weaver” (or “wool weaver”) as in Greek λινολόκος or λινουργός. Nevertheless, two foreign-originated terms for weavers are fairly common in Talmudic literature: *Tarsi* (a weaver originally from Tarsus?) [DJPA 231] and *Gardi* (from the Greek γερδιός) [DJPA 135. DJBA 283, 299]. Further research is required to assess if, in Talmudic literature, either term indicates one who weaves linen. See: Blackwell 1974, 359. Rosenfeld & Menirav 1999. Wild 1969.

130. Denton & Daniels 2002, 23. Or: “to throw the shuttle”. <http://cal1.cn.huc.edu/mḥy> G1a.

131. Here serving as an active participle.

132. Cf. “There is an art of combing out and separating flax: it is a fair amount for fifteen ... to be carried out from fifty pounds’ weight of bundles; and spinning flax is a respectable occupation even for men. Then it is polished in the thread a second time, after being soaked in water and repeatedly beaten out against a stone, and it is woven into a fabric and then again beaten with clubs, **as it is always better for rough treatment.**” (Pliny’s Natural History, Book XIX, Chapter III)

133. Archaic transitive verb: to beat, pound, or pulverize with or as if with a pestle. <http://www.merriam-webster.com/dictionary/pestle>. Cf. *ghš infra*.

134. For various types of nets, see: Denton & Daniels 2002, 233. These were probably knotted nets, which are suitable for trapping animals. See: Davidson 2012, 6.

135. I am uncertain exactly how to explain this technique, literally “braided”. (NBY)

136. Cf. *dqq*, *nqš* and *ktš supra*.

137. Rashi BT Kʾtūbōṭ 10b (s.v. gīhūš) identifies this as: “*lischier* – with a glass stone” (Catane 1996, 92). There is currently no firm evidence that this procedure was actually practiced in the Land of Israel or Babylonia during the Talmudic period.

In the Land of Israel one should purchase – for his wife, as a festival gift – (“m^ogōhāšīm”) pressed linen garments.” (BT P^osāhīm 109a). “Linen garments are not restricted from (“gīhūs”) being pressed adjacent to the fast of Ab” (BT Tā^oānīt 29b).{25b}, {28}

hbl (Hb). To steam, in order to soften and/or bleach flax. “...It is forbidden to place (“ūnīm”) [moistened and] hackled flax fibers¹³⁸ into the oven on Friday, unless they (“yāhābīlū”) steam before (the entrance of Šābbāt in) the evening...” {25}

kbr ↓ lbn

kbš (Hb, Ar). To press¹³⁹{28} [See: Mākbeš *infra*] “On the Sabbath, it is permitted to open (or “release”) a homeowner’s press, but not to begin (“kōb^ošīm”) pressing. A professional fuller’s press may not be touched.” (Mishna Šābbāt 20:5) DJBA, 551. DJPA, 249.

kbs (Hb). To launder.¹⁴⁰ “Linen garments are permitted (“kābsān”) to be laundered during the intermediate days¹⁴¹ of the Festival”. (BT Mōeđ Qāṭān 18a){28}

kss ► **ksks**¹⁴² (Hb, Ar). To rub or knead (with the fingers) a linen garment after laundering, in order to soften and whiten it. {28} “Is it permitted to

(“k^okāskōsei”) rub a (“kītānītā”) linen tunic on the Sabbath? ... If one’s intention is to soften it, then it is permitted. But if the intention is to whiten it, then it is prohibited.” (BT Šābbāt 140a) DJBA 592.

ktš ↑ dqq

lbn (Hb) ± **kbr** (Ar). To bleach, literally “to whiten” (“kbr” = with sulfur). “Hackled flax fibers (become susceptible to halakhic impurity) only after they have been (“mīš^oyītlābb^onū”) bleached.” (Mishna N^ogā^oīm 11:8) “...d^okābrei kab^orōyei...” They have certainly been (sulfured) bleached. (BT Bābā Qāmā 93b) DJBA 551.¹⁴³{25}

mhy ↑ ’rg

mzr (Hb, Ar). To spin yarn. {21} “One who has had ‘a fit of jealousy and is wrought up’ about his wife, that she has ‘secretly gone astray’¹⁴⁴ must divorce her and remit the k^otūbā¹⁴⁵ ... only if this has been gossiped about by the women (“mōz^orōl”) whom are spinning by moonlight.” (Mishna Sōṭā 6:1). In JT Sōṭā 20d it is offered that the following are variant readings of this verbal root. DJPA 311, 326, 543. (Cf. “Māmzōr” *infra*)

→ **mšr**¹⁴⁶ (Hb, Ar). To spin wool yarn. “One who reads “mōš^orōl” – understands the text to indicate ‘spinners (f.pl.) (“māš^orān”) of wool.” (JT *ibid.*)

138. Or spun yarn. See: ‘ūn *infra*.

139. Further research is required to determine to what extent linen garments were pressed in this fashion, in comparison to wool. Flohr 2013, 116-117, 145-148 describes this process and its respective apparatus in detail. The “homeowner’s press” is not mentioned.

140. Flohr 2013, 63-64 leans toward the position that linen garments were not usually laundered by a professional *fullo*.

141. This may refer to either the Festival of Unleavened Bread, of the Festival of Booths. Generally speaking, laundering (among other secular and time-consuming activities which should be performed **before** the festival) is prohibited during this period, in order to both ensure that the entry to the festival will be with an honorable appearance, and to preserve free time to rejoice. Several explanations have been offered regarding this specific permit: 1) Linen garments soil quickly even if they were (as required) laundered immediately before the festival. (Linen garments were as a rule white – in contrast to woolens which were dyed - so that soiling was quite noticeable, and considered dishonorable particularly during a festival – NBY.) 2) Laundering linen garments is relatively easy and not very bothersome. (In contrast with laundering and fulling wool garments, which is both difficult and time-consuming – NBY.)

142. Originally from a biconsonantal root - just two root letters (*ks*), which subsequently became a triconsonantal or quadriconsonantal root by either geminating the last letter (*kss*) or reduplicating both root letters (*ksks*).

143. Sokoloff assigns this to linen, notwithstanding the local context of wool.

144. Translation of Numbers 5:13-24 - after JPS.

145. Marital monetary compensation obligated by rabbinical law.

146. The second radical shifts from “z” to the phonetically similar “š”.

→ **šzr**¹⁴⁷ (Hb, Ar). To ply flax yarn. (Cf. **gdl**, **qlʿ** *supra*) “One who reads “mōzʿrōt̄” – understands ‘pliers (f.pl.) (“šāzʿrān”) of flax.” (JT *ibid.*)

npš נִּפְּשׁ **nps** (Hb, Ar). To scutch (by beating and/or by flailing) or hackle (comb) flax fibers. “In the household of Bar Marion son of Rabin, when they were (“nāpšī”) scutching flax, the shives and tow would go out and damage people...” (BT Bāḇā Bātrā 26a). “Rāḇa said: Flax that was braked but not yet (“nāpīš”) scutched.” (BT Šābbāt 20b). “When one separates flax fibers on the Sabbath, he is liable for the labor of (“mānāpes”) scutching (and/or hackling)...” (JT Šābbāt 10a).¹⁴⁸ DJPA 356. DJBA 763. [17a-b] {18}

nqš ↑ **dqq**

nwl ↑ **ʿrg**

plg (Ar). To separate flax fibers by scutching. “When one (“māpāleg) separates flax fibers on the Sabbath, he is liable for the labor of scutching (and/or hackling)...” (JT Shabbat 10b) DJBA 908. DJPA 433. [17a-b] {18}

pqʿ ↓ **pšl**

pšl (Hb, Ar) ± **pqʿ** ≈ **bqʿ**.¹⁴⁹ To lay/twist (and/or braid/plait?) rope.¹⁵⁰ “It is forbidden to ... and to

make (“lḥāpšīl”) ropes ... (...in a desolate synagogue)” (Mishna Mōgīllā 3, 3). {26} “Everybody else makes (“mapqīʿin”) ropes of regular wool and flax, but he (King Ahasuerus) makes them (for his banquet) of fine linen and royal-purple.” (Esther Raba 2:7). DJBA 926-927, 944. DJPA 110, 443.

qlʿ ↑ **gdl**

rty (Hb). To wring or spin out (liquid) from flax to expedite the drying process (?). The term is exclusive to the Tosefta lexicon¹⁵¹ and of unclear application in the *chaîne opératoire*.¹⁵² “One who launders his garment, or wrings out his hair or “rōṭeh” his flax...” (Tosefta Tāhōrōt̄ 5:16). [12b²] {25}

šdy ↓ **zrʿ**

šdy #2. To spin yarn. ↓ **ṭwy**

šly (Hb, Ar) ± **ʿly** (Hb). To pull or draw flax out of (retting) water. “(One is permitted) to (“šōleh”) pull his flax out of the retting pool (during the intermediate days of the Festival of Unleavened Bread¹⁵³)” (Mishna Mōʿeḏ Qāṭān 2:3). “One whom has hired workers to (“lḥaʿalōt̄”) pull his flax out of the retting pool...” (Mishna Bāḇā Mōšṭʿā 6:1) [12b¹] DJBA 1149 2#. DJPA 553 2#.

147. The relationship between the verbal roots √**mzr** and √**šzr** may be based upon the Akkadian biconsonantal verb ʿzāru – to twist, (CAD z 72) and adjective ʿzēru – braided, plaited. (CAD z 89).

148. Perhaps this is also a *hapax nomen agentis*: **nppš** (Hb) ≈ **nāppsʿā** (Ar) (BT Yʿḇāmōt̄ 118b).

149. This is a rare usage of **pqʿ** (3 or 4 times in Talmudic literature), as opposed to other, more frequent meanings: “to rend (tear), to unravel, to break, to confiscate, etc.” – all destructive. In this instance, the meaning is converse - constructive, *i.e.* “to build or manufacture (rope)”. This is an example of one verbal root which expresses both a meaning and its opposite meaning. The other sources for this meaning are: JT Sūkkā 55g, Bereshit Raba 68:12. The consonant shift from “p” to “b” is (alternation of voiced and non-voiced counterparts) is common.

150. Cf. **ḥebel**.

151. The only other occurrence is in this same tractate 4:11.

152. Cf. Wipszycka 1965, 23: “The artisans boiled flax (hackled fiber), in large vases of clay or metal in water containing oil and sodium carbonate (Na₂CO₃) which formed a kind of soapy substance... Finally, they would **sponge (wring out)** and wash the flax, wrapping the tangles around poles and exposing them to the sun decomposed coloring and fats.” I have not found any parallel to this description – NBY. See also Liebermann 1939, Part IV, P. 68, footnote 32 at end.

153. This festival falls in March-April, adjacent to the season of flax pulling in the Land of Israel. Retting is done as soon as possible after pulling the dry straw. In addition, the warm temperatures at this time are suitable to support the necessary bacterial culture for retting. The other festival which has intermediate days is the Festival of Booths, which falls in September-October, months after pulling flax, and the temperatures are too cool to support the bacterial culture. Labor is permitted during the intermediate days of a festival, in order to prevent monetary loss. In this case, flax which is not pulled out of the water at the correct time will be over-retted and therefore almost worthless. The exact time of pulling is difficult to plan, as it depends on climatic and other natural conditions.

srq (Hb, Ar). To comb, hackle, or ripple flax. “(The *wadi*¹⁵⁴ where the calf’s neck has been broken) may not be sown nor tilled, but it is permitted to (“līsrōq”) comb¹⁵⁵ there flax.” [10b], {18} DJPA 339. DJBA 832 2#. See: **Sreq** *infra*.

šry¹⁵⁶ (Hb) ± **try** (Ar). To steep (ret) flax in water. “It is prohibited to bring flax straw from outside of the country (Land of Israel) and (“šōrīn”) ret it in the country.” (Tosefta Šōrīt 4:19). “After he saw that they were using it (the water drawn out by a “water wheel”¹⁵⁷ on the Sabbath) for (“tārū”) retting flax, he forbade it.” (BT ‘erūbīn 104b).[12a] DJPA 591. DJBA 1233 2#.

šzr ↑ **mzr**

tlš (Hb) ± **qr** (Hb, Ar). To pull(-up), uproot. Flax is not harvested as grains are with a scythe, the entire plant is pulled up for cutting is difficult due to the fibrous stem, and in order to gain the fibers in their entirety. {5} “Rav Yehuda permitted to pull up (“lōme‘āqer”) flax... during the intermediate days of the Festival of Unleaved Bread.”¹⁵⁸ (BT Mō‘ed Qātān 12b). “One who purchases a crop of flax from a fellow man ... if the flax is still rooted in the ground, and he (“tālāš”) pulled-up any amount, this is considered a purchase (of

the entire crop).” (Mishna Bābā Bātrā 5:7) DJPA 416, 583. DJBA 877, 1211.

try ↑ **šry**

twy (Hb/Ar) ± **‘zl** √ **’zl**, **šdy** (Ar). To spin flax (or wool) yarn.¹⁵⁹ “As one (f.) who lifts her left arm to spin flax...” (Mishna Nōgāīm 2:4). “Flax which was spun by a woman during her menstrual period... if it was (still) damp¹⁶⁰, one who moves it is rendered halakhically impure.” (Tosefta Tāhōrōt 4:11). “He saw Orpah¹⁶¹ Ishbi’s¹⁶² mother, and she is (“āzlā”) spinning flax...” (Midrash Tehilim 18:30). {21} DJBA 102, 496, 849-850. DJPA 322, 401.

zr^c (Hb) ± **šdy** (Ar). To sow. “One who leases a field from another for only a few years is prohibited to (“yīzrā‘enā) sow flax...” (Mishna Bābā Mōšī‘ā 9:9). “I go and (“šādenā”) sow flax and make nets...” (BT Bābā Mōšī‘ā 84b). “Raḥ saw a man that was (“šādeh”) sowing flax on (the holiday of) Pūrīm...” (BT Mōgīllā 5b). {2} DJBA 1111.13.

Workplaces

Bei Kitānā (Ar). An area (where an unspecified activity is performed) of flax. “A bill of divorce

154. After Deuteronomy 21:4, JPS translation: “...and the elders of that town shall bring the calf down to an everflowing wadi (creek), which is not tilled or sown. There, in the wadi, they shall break the calf’s neck.”

155. It may be assumed that the intention is to rippling, **before** the flax straw is to be retted in the adjacent everflowing wadi (creek). A parallel reading, Midrash Tanaim to Devarim 21:4, mentions also “laying out wool fleece and flax fibers to dry”. Perhaps, according to that version, the flax was also scutched and hackled on site, **after** be retted in the wadi (creek). And perhaps all three of these combing processes were performed there.

156. See also: Mīšrā *infra* workplaces.

157. Apparently: ἀντλεῖν (antlein): <http://www.n-k.org.il/?CategoryID=321&ArticleID=251> Or perhaps: Archimedes’ screw. https://en.wikipedia.org/wiki/Archimedes%27_screw

158. In the Land of Israel, flax ripens during March-April, and may coincide with this festival (whose date is based on the lunar calendar). Not all labors are permitted during the intermediate days, but if the flax is not pulled on time, it will continue to develop thicker and less valuable fibers, which incurs a monetary loss for the farmer.

159. Peshitta (Syriac targum to the Pentateuch) translates **plied** linen (Exodus 26:1, *passim*) as “āzīlā” (passive determined participle, serving as an adjective). ASR 1090. The *nomen agentis* derived from this root is “āzālwayā” – a spinner (m.s.). DJBA 102.

160. Dampened – with her saliva, as historically used for wet-spinning flax. See also Lieberman 1967, 262-263, Ketubot Ch. 5 – “One shall not compel his wife to spin flax”.

161. After Ruth 1:4 “They married Moabite women, one named Orpah...”

162. After II Samuel 21:16 “...and Ishbi-benob tried to kill David.”

was found in “an area of flax” in Pumbedita...” (BT Gīṭīn 27a, BT Bāḇā Mṣṣṣā 18b). DJBA 199, 208 #1, 6.

→ **Dūktā hekā dṭarū kītānā** (Ar). A place where flax is steeped. (See: **try**√ *supra*, **Mišrā** *infra*). “... some say that it was an area (“hekā dṭarū kītānā”) in which flax is retted, and convoys (passersby) **are not** present... (*Ibid.*). [12a]

→ **Dūktā dṭmṣabnei kītānā** (Ar). A place where flax is sold. “...some say that it was an area in which (“dṭmṣabnei kītānā”) flax is sold...and convoys (passersby) **are** present...” (*Ibid.*). (9), (15), (20), (23), and/or (27).

Ḥanwātā (Ar f. pl.). Stores, workshops, or guild offices.¹⁶³ “At the (“ḥanwātā”) workshops of (“kītānā’y”) flaxmen there was a meeting ...” (JT Peṣā 16a, Leiden codex). DJPA 208, 460. DJBA 473, 967 #2.¹⁶⁴

Mišrā (Hb). A rettery¹⁶⁵ - place of steeping (retting) flax. “One may draw out his flax from the (“mīšrā”) rettery (during the intermediate days of the Festival of Unleavened Bread) in order to prevent it from being damaged ...”.¹⁶⁶ (Mishna Mōṣeḏ Qāṭān 2:3). [12a]

Tools and implements

ṣōr (HB). A hide (leather) apron. See: Kāttān *infra*, and various uses for an apron in flax manufacture.

Koš ha-ʿArbelī (Hb). A spindle¹⁶⁷ that was probably used in the town Arbel¹⁶⁸ for spinning relatively coarse flax. The whorl of this spindle is more firmly attached to the shaft than a regular flax spindle. “Koš ha-ʿArbelī – its parts are considered fastened together for applications of susceptibility to halakhic impurity, and the sprinkling of the ‘water of lustration’¹⁶⁹...” (Tosefta Pārā 12:16){21}

Koš šel pīštān (Hb). A spindle used especially for spinning regular flax (in contrast to one designated to use for rope or for coarse flax). The whorl is relatively loosely attached; therefore each part should be sprayed separately. Nevertheless, if it happened that one part has been sprayed (while the implement is assembled), the entire spindle has still been purified. (Tosefta Pārā *supra*, Mishna Pārā 12:8 and Maimonides commentary *ad. loc.*){21}

163. See: I Chronicles 4:21 “families of flax/linen-workers” – guild, factory or workshop. After Demsky 1966, 213-214. See also: Theodosian Code 10-20-6 “... guild of imperial weavers, either a linen weaver or a linen worker ...” *Ibid.* 10-20-8 “Scythopolitan (Hebrew: Beth Shean) linen workers” – are probably a guild. Safrai 1994, 225: “... the store or shop is synonymous with the workshop.” Kasher 1979, 311-313 and 1985, 352-353 describes Jewish textile guilds in the Land of Israel. Retzleff & Mjely 2004, 40 report that a section of the 3rd century AD odeum of Gerasa Trans-Jordan (50 km east from Beth Shean) was designated by inscription: “The place of the linen-workers”. This was most likely the section in which guild members were seated.

164. From available literary context, it is impossible to determine exactly which activities of the chaîne opératoire usually took place there.

165. <http://www.merriam-webster.com/dictionary/rettery>. Georgacas 1959, 257: λιναρίτης “water in which flax is retted”.

166. Safrai & Lin 1988, 129-162, 171, 178-180. Ancient facilities which have been tentatively identified as a rettery have been discovered in Kibbutz Geva.

167. **Koš** literally means shaft, spindle or stick. In this context it probably indicates the entire spindle, including whorl, stick and possibly hook.

168. Leibner 2009, 257-258. Cf. Bereshit Rabba 19:1 “Garments (or textile products) of linen made in Arbel – what is their worth? What is their price?”. This is in contrast to the linen products produced in Beth Shean (Scythopolis) – the center of production of fine linen in the Land of Israel, which are “very fine and therefore ignite (or become soiled by ashes) easily”. These products are alluded to in Bereshit Rabba 32:3, Codex Vatican 30. See: √ktš and √nkš. Diokletian consistently ranks Scythopolis-produced linen garments as the highest quality and consequently most expensive. XXVI 13-63, 78-134. XXVII 8-22, 16-30. Laufer 1971, 168-177. In accordance, “*Expositio totius mundi et gentium*” (c. 459 AD) ranks Scythopolis as the source of finest quality linen clothes. Stern 1974-1984, 497. Possible reasons for the production of inferior linen products in Arbel have been presented in Ben-Yehuda N. 2011. “The Mysterious Flax Industry of Arbel” (unpublished, in Hebrew).

169. HB Numbers 19:3 “A man who is clean shall gather up the ashes of the cow and deposit them outside the camp in a clean place, to be kept for water of lustration for the Israelite community. It is for cleansing.”

Mā'ārōkā (Hb ~ Ar). A pestle, or rolling pin used for crushing seed pods or braking flax straw.¹⁷⁰ “That flaxman ... when using a (“mā'ārōkā”) pestle (on the Sabbath), is liable for the labor of grinding...” (JT Šabbat 10a). DJPA 323.[10a] {16} See: **ktš**√↑.

Mākbeš (Hb). A clothing press.¹⁷¹ (See **kbš**√*supra*) (28)

Māsreq šel pīštān (Hb). A comb, hackle or ripple for flax (in contrast to that used for wool).¹⁷² “A (“māsreq šel pīštān”) comb for flax, if some of its teeth have been broken off, and two remain it is still susceptible to halakhic impurity...” (Mishna Kelīm 13:8). [10b] {18}

Mei Mīšrā (Hb). The water (or: “liquor”) of the retting process. See: **šry**√↑. “One whom is reciting (“Qārī'at Š'mā")¹⁷³...shall not do so while he is immersed in foul-smelling water or (“mei mīšrā”) retting liquor,¹⁷⁴ unless he dilutes them.” (Mishna B'rākōt 3:5) [12a]

Nāwla ≈ **Nābāl d'kītān**^{174b} (Ar). Loom. “One must not place a loom which being used for wool near a (“nābāl d'kītān”) loom which is being used for flax,¹⁷⁵ because of the dangling yarns (that may become attached to one another)”. (JT Kīl'ā'im 32a) {24} DJPA 344. DJBA 735 #1.

Qāsiyā.¹⁷⁶ Leather glove(s), worn by a flax worker. See: **ōsei pīštān** *infra*.

Qōpnā (Ar < κόπανος Gr).¹⁷⁷ A mallet¹⁷⁸ used for braking flax straw or crushing seed pods. This context does not infer the use of Qōfnā for beetling, although a similar implement may be used for that purpose. “That flaxman who uses a (“qōfnā”) mallet on the Sabbath is liable for the labor of threshing” (JT Šabbat 10a). DJPA 483 (hapax). [10a] (15) {25a} See: **dwš**√, **dqq**√↑.

Materials and products

Raw materials

Pīštān (Hb) ± **Kītān** ~ **Kītānā** (Ar). Flax, linen (*Linum usitatissimum*). *Passim*. DJBA 579. DJPA 257.

Qānābūs (Hb) ± **Qīnbā** (Ar). Hemp (*Cannabis sativa*). “...also the (“pīštān”) flax-linen and the (“qānābūs”) hemp, when they are blended together¹⁷⁹...” (Mishna N'gā'im 11:2, Kīl'āyim *infra*). DJBA 1014.

Šemer (Hb) ± **āmār** ~ **āmra** (Ar). Sheep's wool (*Ovis aries*). “There is no prohibition of mixed species (in garment context) other than (“šemer”) (sheep's) wool and (“pīštīm”) flax-linen...” (Mishna Kīl'āyim 9:1, N'gā'im *supra*) DJBA 870. DJPA 411.

Šemer Gefen (Hb) ± **āmār Gūfnā** (Ar). Cotton

170. In Mishna Kelīm 15:2 this refers to a baker's rolling pin.

171. See: Sperber 2014 and Granger-Taylor 1987 for description of this implement and its use. Additional research is required to examine its specific usage for wool and linen garments.

172. See Wild 1968 for a discussion of the roman flax-hackle. Barber 1991, 14 illustrates a possible ancient flax hackle.

173. This prayer-like recitation consists of passages from the HB, and therefore is considered holy and must be performed in a clean environment.

174. Kozłowski 1992, 252-253. The odor is a result of toxic and acidic gases which are released during water retting.

174b. The w/b labial consonant alternation is a familiar phenomenon in Mishnaic Hebrew due to their similar or identical pronunciation (Steve Kaufman, personal correspondence). Sharvit 2016, 288-291

175. We do not currently have information regarding the exact construction of these looms themselves, and if it varies from a “wool loom” to a “flax loom”.

176. Etymology unknown.

177. See Georgacas 1959, 257: λιναροκόπανος – “wooden beater of flax.

178. Vogelsang-Eastwood 1992, 12 presents illustrations of possible flax mallets.

179. The literary context (and current textile science) indicate that these two fibers are similar in appearance and feel, and therefore compatible to be blended together.

(*Gossypium arboretum*).¹⁸⁰ “This proselyte is similar to (“amrā gūfnā”) ‘grape wool’ (cotton), whether you want to put it with (“āmra”) wool – that is permitted, or with (“kītānā”) flax – that is also permitted...” (JT Qīdūšīn 64c). DJBA 870. DJPA 411.

*Materials and products (intermediate and final)*¹⁸¹

Hōšen > **Hōšānīm** > **Hōšānei** (construct state) ≈ **Hōšen**¹⁸² (Hb/Ar). Stalks of flax, flax straw. “Two (“hōšānei”) stalks of flax left in the field shall not be retrieved;¹⁸³ three or more may be retrieved...” (Mishna Pe’ra 6:5). “If one roofed his festival booth with (“hōšānei”) flax straw, it is fit for use. However, if that was done with (“ānīšei”) scutched flax fibers, it is unfit.”¹⁸⁴ (Tosefta Sūkkā 1:5). {4} – {15}. DJBA 374.

Kītānā’ d’āvīd b’ṭūnei (Ar). A load of flax straw. “A live fowl that fell on a load of flax – there is concern that it has been internally injured, and is subsequently unfit for use as (edible) poultry.” (BT Ḥūlīn 51b). DJBA 508. {7} – {15}

’Īsorītā > **’Īsoryātā** (Ar). Bundle(s) of flax sheaves or cane. “A live fowl that fell on bundles of flax sheaves – there is concern that it has been internally injured, and is subsequently unfit for use as (edible) poultry.” (BT Ḥūlīn 51b). DJBA 121. {7} – {15}

Kepa > **Kep’eh** (pl. construct state) **d’kītānā** (Ar). Sheaves of flax. “A man whose son stole sheaves of flax,¹⁸⁵ he (the father) vowed that his possessions would be forbidden to that son.” (BT Nēdārīm 48b). DJBA 578. {7} – {15}

Qīršīn (Hb pl.). “Divisions” – piles ready for division into shares.¹⁸⁶ “One who leases (as tenant) a flax field from another, is required to tend to it through to the phase of preparing piles of (pulled) flax.” (Tosefta Bāḥā M’šī’ā 9:19) Jastrow 1903, 1425. DJPA 507 2#. {7} – {15}

Māšeḇeṭ šel pīštān (Hb). ‘Chapels’ of flax. “These materials are flammable ... chapels of flax ...” (M’kīlt’ā D’Rābī Šīm’ōn Bār Yōḥāy 22:5). Krauss 1945, 61. Literally: ‘column’ or ‘pillar’. {7} – {15}

Kītānā d’āvīd bīzrei (Ar). Flax straw that has seed bolls attached – prior to rippling and retting. “A live fowl that fell on flax straw that has seed bolls attached, there is concern that it has been internally injured because of the protrusions, and is subsequently unfit for use as (edible) poultry.” (BT Ḥūlīn 51b). DJBA 195. {5} – [10b]

(Kītānā) d’ḏāyīq w’lā n’pīš (Ar). Flax which has been braked but **not** scutched. “A live fowl that fell on flax straw that has been braked but not yet scutched, there is concern that it has been internally injured, and is subsequently unfit for use as (edible) poultry.” (BT Ḥūlīn 51b). {16} See: dqq√ nps√.

(Kītānā) d’ḏāyīq w’n’pīš (Ar) Flax which has been both braked and scutched. “A live fowl that fell on flax straw that has been both braked and scutched, there is **no** concern that it has been internally injured, and is subsequently **fit**¹⁸⁷ for use as (edible) poultry.” (BT Ḥūlīn 51b). {16} – [17b] See: dqq√ nps√.

180. Talmudic terminology related to various silks and other minor fibers is not within the scope of the current paper.

181. Arranged according to *chaîne opératoire*.

182. Possibly ✱.

183. Based upon HB Deuteronomy 24:19 “When you reap the harvest in your field and overlook a sheaf in the field, do not turn back to get it; it shall go to the stranger, the fatherless, and the widow...” Flax is considered a food crop in this context, as the (ground) seeds are edible and edible oil can be extracted from them.

184. The regulation is that roofing for the festival booth, must be of non-edible vegetable matter, in its natural state. Flax straw is considered natural, whereas flax fiber is considered a manufactured product, and therefore unsuitable.

185. Rashi *ad. loc.* offers an additional interpretation: “The son worked with sheaves of flax and therefore neglected his study of Tora.”

186. Safrai 1994, 194. See also: Lieberman 1967, 290 *ad loc* for a different, albeit unlikely, interpretation.

187. The fowl must be ritually slaughtered before consumption.

N^ooreṭ¹⁸⁸ (Hb) ± **Srāqtʿā** (Ar). Flax tow. “How did they ignite the beacons? They brought long poles of cedar-wood, reeds, pine-wood (“oilwood”) and (“n^ooreṭ šel pīštān”) flax tow, which they wrapped with twine ...” (Mishna Rōš Hā-Šānā 2:3). “A fast is effective for dissipating a (bad) dream, just as fire rapidly burns (“n^ooreṭ”) tow.” (BT Šābbāt 11a). DJBA 833 (- corrected according to ASL 1051)

→ **Gāsā** (Hb). Coarse (scutched) tow (probably with shives). “It is permissible to cover up food (to keep it warm on the Sabbath) with (“dāqā”) fine tow. Rabbi Yehuda prohibits (“dāqā”) fine tow and permits (“gāsā”) coarse tow.” (Mishna Šābbāt 4:1). [17b]

→ **Dāqā** (Hb). Fine (hackled) tow (probably without shives). See previous entry. {18}

→ **Dāqtā** (Ar). Fine (scutched) tow (probably with shives). “A live fowl that fell on (“dāqtā”) fine tow, there is concern that it has been internally injured, and is subsequently unfit for use as (edible) poultry.” (BT Ḥūlīn 51b). DJBA 349. [17b]

→ **Dāqdāqtā** (Ar). Very fine (hackled) tow (without shives). “A live fowl that fell on (“dāqdāqtā”) very fine tow, there is **no** concern that it has been internally injured, and is subsequently **fit** for use as (edible) poultry.” (BT Ḥūlīn 51b). DJBA 348. {18}¹⁸⁹

ʿānīš > **ʿānīšin** > **ʿānīsei** (construct state) ≈ **ʿānīš**, **ʿānūš** (Hb). Scutched or hackled flax fibers. “One who has vowed not to don linen is permitted to cover himself with (“ʿānīsei pīštān”) flax fibers.” (Mishna N^odārīm 7:3). “One who has found

abandoned (“ʿānīsei pīštān”) flax fibers – they belong to him...” (Mishna Bābā M^ošīʿā 2:1). [17b] {18} See: **Sereq** *infra*.

Sereq¹⁹⁰ (Hb). Flax sliver. “One who is suspected that he violates the laws of the Sabbatical Year – it is forbidden to purchase from him flax even (“sereq”) sliver, but spun or woven material is permitted.” (Mishna B^okōrōṭ 4:8). {18} See: **ʿānīš** *supra*.

Seret (Hb). Band or ribbon. “It is prohibited to tie together a (“seret”) ribbon of wool and a (“seret”) ribbon of flax to use as a belt, even if there is a leather strap between them.” (Mishna Kīlʿayīm 9:9). {18} {24}¹⁹¹ {29?}

ʿūn > **ʿūnīn** (Hb). {22} A hank (or: ‘skein’) of spun linen.¹⁹² “...and the (“ʿūnīn”) after they have been bleached...will be susceptible to the impurity of an eruptive affection”.¹⁹³ (Mishna N^ogaʿim 11:8 and Maimonides commentary *ad loc.*) “[Utensils which are permitted to be loaned out during the Sabbatical Year, notwithstanding their conventional use for currently forbidden agricultural products, because it is possible that they will be employed for a permitted use, for example]... an oven to conceal therein **ʿūnīn** of **pīštān**...” (JT Š^obīʿīt 36a). {21}

Ḥūṭ Pīštān (Hb) > **Ḥūṭei** ± **Ḥūṭʿa D^oKītanā** (Ar) ± **ʿAzil** (Ar). Linen yarn or string.¹⁹⁴ “One who

188. Liddell & Scott 1996, 1658: στρωπειον – tow, oakum. Appropriate Greek suffixes form nomina agentis: tow-dealer, tow-maker, and tow-worker. These specific occupational names do not exist in Hebrew. Cleland, Davies & Llewellyn-Jones 2008, 113 provide differentiation between fine linen fabrics “*amorginon*” (made from long fibers – “line”), and coarse ones “*stuppionon*” (made with short fibers – “tow”). Three grades of tow are mentioned (from fine to coarse) by Diokletian XXVI, 1-3, Lauffer 1971, 169.

189. The last three descriptions of different grades of fine tow may overlap.

190. JT Mā^oserōṭ 52g quotes this Mishna, but reads: “pīštān sārūq” (hackled flax). “ʿānīš” and “sereq” could be of overlapping meaning. In any case, **sereq** is a mass noun, in contrast to **ʿānīš**, which is a count noun.

191. Perhaps this is a narrow fabric, woven with a belt loom or tablets. The parallel Tosefta (5:22), in place of **seret** (‘band’ or ‘ribbon’), reads “**sereq**” (flax sliver). Cf. *supra*. Perhaps sliver was used as part of a belt (?).

192. Feliks 1970, 356. Cf. **hbl** *supra*.

193. After HB Leviticus 13:47 “When an eruptive affection occurs in a cloth of wool or linen fabric...”

194. Nine grades of linen yarn are mentioned (from fine to coarse) by Diokletian XXVI 4-12, Lauffer 1971, 169.

found a (“ḥūṭ⁹a d⁹kītānā”) linen yarn in his woolen cloak and pulled it out. He wasn’t sure if it had been entirely pulled out or not...” (BT Nīdā 61b). “One who makes a tunic entirely of camel hair or rabbit hair, and wove one strand of woolen yarn on one side and one strand of (“ḥūṭ pīštān”) linen yarn on the other side – the garment is forbidden.” (Tosefta Kīl’āyīm 5:12). “A woman shall not go out¹⁹⁵ on the Sabbath with (“ḥūṭei ṣemer”) wool yarns or (“ḥūṭei pīštān”) flax yarns or laces in her hair. (Mishna Šābbāt 6:1). DJPA 401. DJBA 436. {21}

Ṭ⁹wy (Hb - RH¹⁹⁶). Spun material (thread, yarn, etc.). “One who is suspected of violating the laws of the Sabbatical Year, it is forbidden to purchase from him flax, even it is hackled. But it is permitted to purchase (“ṭ⁹wy”) spun or (“ārīg”) woven material.” (Mishna B⁹kōrōṭ 4:8) {21}

Māmzōr (Hb). Plied linen yarn. Cf. √mzr↑. “One who makes (or plies) (“māmzōr”) plied yarn (or cord) on the Sabbath is liable for the labor of spinning.” (JT Šābbāt 10g). {21}

Š⁹ṭiy LāPīštīm/BāPīštīm (Hb) ± **Š⁹ṭiyā L⁹Kītānā⁹/B⁹Kītānā⁹** (Ar). Flax yarn intended for use as warp. The Hebrew phrases are Biblical quotations (Leviticus 13:48-58), which are quoted in

Rabbinic literature (Sifra 5:13, 15) for the purpose of halakhic discussion. The Aramaic phrases are from the targums of the respective Biblical verses. {21/24}

‘ereḥ LāPīštīm/BāPīštīm (Hb) ± **‘irba⁹ L⁹Kītānā⁹/B⁹Kītānā⁹** (Ar). Flax yarn intended for use as weft.¹⁹⁷ See previous entry, for parallel phrases and sources. {21/24}

P⁹qa⁹at (Hb). Skein, of one of the above two types of yarn. (Mishna N⁹gā⁹īm 11:8) {21/24}

‘ārīg (Hb). Woven material. “...but it is permitted to purchase from him (“‘ārīg”) woven material (of linen).” (Mishnah B⁹kōrōṭ 4:8) {24}

Nāšbā > **Nīšbei** (Ar) ± **Rešet** (Hr). Net.¹⁹⁸ “Rabbi Ḥīyyā planted flax and (from it) made (“nīšbei”) nets¹⁹⁹ to trap gazelles...” (BT K⁹tūbōṭ 103b) DJBA 778. {30}

Ḥebel > **Ḥābālīm/n** (Hb, Ar) ± **‘ašlā** ≈ **Ḥāšlā** (Ar) ± **‘aṭūnei** (Ar) ± **Mīṭn⁹a** (Ar). Rope or cord. “There are three materials from which (“ḥābālīm”) ropes are made... from flax for measuring (or surveying).” (BT ‘erūbīn 58a). “Ropes (“ḥābālīm”) of flax are forbidden to use as the roofing for the festival booth.” (JT Sūkkā 52b). “Rabbi Ḥīyyā

195. The reason for this prohibition is that the woman might take the yarns out of her hair and carry them in her hands in the public domain, which is forbidden on the Sabbath.

196. BH = Māṭweh (Exodus 35:25). This is a Biblical *hapax legomenon*.

197. The difference between warp and weft yarns is not mentioned in these sources. There are a number of possibilities: 1) The yarns may be of different twist directions (‘S’ or ‘Z’) to enhance interlock, or of different counts (thicknesses). Cf. BT ‘abōdā zārā 17b. 2) The warp yarn may be of a tighter twist than the weft. 3) The warp yarn may be sized (treated with starch or the likes) or boiled to make it more durable. Cf. Rashi to BT M⁹īlā s.v. ‘mai l⁹‘āhīzā’- “...he smoothes (or: ‘polishes’) the yarn for weaving with bran or anything else...” 4) Different qualities of fibers may be used, e.g. (stronger) long fiber flax for the warp and short fiber for the weft. (After John Peter Wild, personal correspondence.)

198. Pliny Book 19, chapter 2: “From the same province of Spain Zoēla flax has recently been imported into Italy, a flax especially useful for hunting-nets; Zoelā is a city of Gallacia near the Atlantic coast. The flax of Comae in Campania also has a reputation of its own for nets for fishing and fowling, and it is also used as a material for making hunting-nets.” Xenophon, On Hunting, Chapter 2, Section 7: “The net-keeper should be a man with a keen interest in the business, one who speaks Greek, about twenty years old, agile and strong, and resolute, that, being well qualified to overcome his tasks, he may take pleasure in the business. The purse-nets should be made of fine Phasian (Colchian) or Carthaginian flax, and the road-nets and *hayes* (meaning unclear – NBY) of the same material.” *Ibid.*, Chapter 10, Section 2: “The nets must be made of the same flax as those used for hares, of forty-five threads woven in three strands, each strand containing fifteen threads.”

199. Cf. JT M⁹gīllā 74d that he made ropes for this purpose.

bought flax seeds, planted them, harvested them, and made (“ḥāḇālīn”) ropes²⁰⁰ ...” JT M^ogillā 74d). “...A diver descended, and tied (“ʿaṭūnei”) ropes of flax to a reef, and to the ship.” (BT Rosh HaShana 23b). “...One who tied a (“mīṭnʿa”) cord of wet flax to his loins ...” (BT Baḇa M^oṣṭʿa 113b). DJPA 185. DJBA 173, 427, 721. {28}

M^oṣṭʿā (Hb/Ar). Cord or twine, often used for surveying.²⁰¹ Māšōḥā – surveyor.²⁰² √mšḥ – to measure or survey. “The surveyors (māšōḥōṭ) do not measure exhaustively...” (Mishnah ʿerūḇīn 4:11). DJPA 333-334, DJBA 712. {28}

Dardas > **Dardasin** (Ar). Stockings or foot coverings made of linen or wool. “‘Dardasin’ of wool on one foot and ‘dardasin’ of linen on the other foot...” (JT Kīlʿayīm 32d). DJPA 154, 155. {29}

K^olei Pīštān ± Bīgdei Pīštān (Hb) ≈ **Mānei D^oKītānā** (Ar). Flaxen or linen garments or other textile product. “One may purchase, from a (married) woman, woolen items in Yehuda, and (“k^olei pīštān”) flaxen items in the Galilee.” (Mishna Bāḇā Qāmā 10:9). “One must delight his wife during the festival, with a gift that is appropriate for her. In Babylonia – dyed (woolen) garments, in the Land of Israel – pressed (“bīgdei pīštān”) linen garments.” (BT P^osaḥīm 109a). DJBA 579. {29}

→ **Kītānā Rōmītā** ≈ **Rōmʿāʿā** (Ar). Very expensive

and quickly worn-out linen garments, or very fine flax yarn. “One who inherited a large sum or money and wants to waste it should wear linen garments, specifically ‘kītānā rōmītā’.” (BT Bāḇā M^oṣṭʿā 29b). “One shall not compel his wife to (wet-) spin flax yarn (through her mouth), because it causes halitosis and scars the lips.²⁰³ Specifically, ‘kītānā rōmʿāʿā’.” (BT K^oṭūbōṭ 61b). {29}

Kītūnā, Kītānītā, Kītōnītā (Ar). A tunic or garment, presumably made of linen. “Rav Ḥīsdā says: ‘A rabbinic disciple who wants to purchase a (“kītōnītā”) linen tunic, should purchase it in ‘Nahar Abba’ (toponym). He should launder it every thirty days, and then it will last twelve months. I guarantee that!’” (BT Šābbāt 140b). DJBA 579. {29}

Sādīn > **S^odīnīm** (Hb) ≈ **S^odīnā** > **S^odīnāyā** (Ar). One of various simple (flat) textile products, e.g. bed sheet, curtain, veil or awning; possibly made of linen. Also, a *specifically* linen wrapped-garment.

This is a rare HB term, appearing three times:²⁰⁴ “I shall give you thirty “s^odīnīm” and thirty sets of clothing.” (Judges 14:12-13). “And the lace gowns, and the “s^odīnīm”, and the kerchiefs and the capes.” (Isaiah 3:23). In these two appearances, the context is garments. The following offers no direct inference as to the identity of the item: “She makes a sādīn and sells it...” (Proverbs 31:24)²⁰⁵. None of the HB texts indicate what material the sādīn is made of.²⁰⁶

200. Cf. BT K^oṭūbōṭ 103b reading, in which he made **nets**. See “Nāšbā”.

201. Not mentioned as being of flax, but flax **rope** is recommended for surveying (BT ʿerūḇīn 58a), therefore extrapolation here is probable.

202. An additional nominal form (Ar) of this root – **mīšḥāʿ** – translates: ‘measurement’, ‘dimension’, or ‘size’. DJPA 333, DJBA 712. Worthy of mention is the homonymic root, meaning ‘oil’ (n. Ar) and ‘to anoint’ (v. Hb).

203. See also Lieberman 1967, 262-263, Ketubot Ch. 5 - “One shall not compel his wife to spin flax”.

204. Etymology: Akkadian *sadinnu* – item of clothing (HALOT, 743-744). Perhaps a foreign word. (Gesenius 1987, 1381).

205. Nevertheless, this is obviously a textile product, as are additional products, materials and implements mentioned in this chapter: vs. 13: wool and flax, vs. 19: spinning implements, vs. 21: crimson dyed garments, vs. 22: “mārḇādīm” (coverings), Egyptian linen and Tyrian-purple dyed garments.

206. Lacking any modifier which could identify the material being used, and/or the specific use of this object, the term **sādīn** is open to polysemy. Testimony to this can be found in the respective Aramaic Targums of (the identical term) in each of these three verses, in each instance using a different (and often obscure) term. Judges 14:12: TY: **pldys** (of uncertain origin), PS: **ʿpqrsʿ** (from Greek ἐπικάρσιον – “striped garment”). Isaiah 3:23: TY: **qrṭys** (a type of head covering??), PS: **tklytʿ** (hyacinth blue). Proverbs 31:24: TP: **ptḡ** (unknown), PS: **ktnʿ** (linen).

Talmudic sources may or may not indicate that this product is made of linen:²⁰⁷

“She spread a (“**sādīn**”) bed sheet of (“**pīštān**”) linen on his bed...” (BT B^ṛrākōt 10b). “(“**Sādīn**”) with attached (“**šīšīl**”) fringes²⁰⁸ (or: ‘tas-sels’)²⁰⁹ – what is the law?” (Mishna ‘edūyōt 4:10)²¹⁰ “A (“**sādīn**”) curtain (or: ‘screen’) of “**būš**” was placed (or: ‘drawn’) between the High Priest and the people...” (Mishna Yōmā 3:4). “(A) **sādīnā** of “**kītānā**” (linen) and its tatters.” (BT Š^ḥḥōt 6b). DJBA 788. DJPA 368.

Occupational names (Nomina agentis)

The challenges involved in accurately defining these occupational names emanate from both the ambiguity of context in ancient text and the uncertain organization of the historical labor force. Curchin²¹¹ encounters these very difficulties regarding the definition of two Greek occupational names in this industry. His discussion is quite relevant, if not parallel, to our own deliberations in this paper. Here we will quote selected portions:

*Lintearius*²¹² is presumably a producer. One can therefore readily understand the translation “linen-weaver”,²¹³ adopted by

Lewis and Short... Susan Treggiari suggests that *linteariae* were basically linen-sellers who may, however, have woven the linen they sold... I (Curchin) would alter the emphasis... and see the *lintearius* as primarily a linen-weaver who could (and frequently would) sell his own products in his shop²¹⁴ ... This does not explain the difference between *lintearius* and *linarius* or the need for two types of tradesman²¹⁵ in the same product in the same town... *Linarius* may be a dealer in *linum* – flax, and *lintearius* a dealer in *lin-teum* – linen cloth... In the East we find... flax could be purchased raw in bundles... or to barter the spun skeins... Merchants of linen yarn – *linemporoi* – are attested selling to professional weavers, and the guilds of such merchants are attested ...

In synopsis, linen-merchants themselves may be linen-weavers, or perhaps linen-workers at other previous steps of production. The distinction between merchants and workers is therefore blurred. We shall find similar ambiguities/complexities in Talmudic terminology, as follows.²¹⁶

Following are the five major *nomina agentis* for this field in rabbinic literature:²¹⁷

- 1) ‘ōsei (construct state) **Pīštān** (Hb pl.)
- 2) **Būš’ai** > **Būš’a’ei** (Ar)
- 3) **Kāttān** (Hb)

207. Cf. also: **būš** *supra* and footnote on the curtains (or: ‘screens’) used in the Jerusalem Temple.

208. Numbers Ch. 15:37-38 “The Lord said to Moses as follows: Speak to the Israelite people and instruct them to make for themselves fringes on the corners of their garments throughout the ages; let them attach a cord of blue to the fringe at each corner.” (JPS)

209. NIV

210. The legal discussion here deals with affixing woolen fringes on this linen garment, which may violate the HB prohibition of mixed species. (Maimonides commentary *ad loc.* Leviticus 19:19 “... a garment from a mixture of two kinds of material shall not come upon you.” Deuteronomy 22:11 “You shall not wear a garment combining wool and linen.”)

211. Vol. 10, no. 1. 34-35.

212. The Theodosian Code mentions the public tax on “Scythopolitan linen workers” (10.20.8). “*Linteones* and *linyfi* are apparently synonymous there as elsewhere.” Wild 1967, 656 Identifies these workers as linen-weavers, and the state levy as *publico canoni obnoxii*.

213. Cf. Georgacas 1959, 254: λινλόκος “linen-weaver”.

214. Jerrard 2000 (no pagination) presents evidence for the connection between retailing and manufacture in the Roman textile industry in *collegia* (craft union) inscriptions. Both retailers and manufacturers were members of the same *collegium*.

215. Cf. Georgacas 1959, 254: λινοπώλης “linen merchant”.

216. Shatzmiller 1994, 121 presents a similar situation of ambiguity in Medieval Arabic flax-related nomina agentis: **Kattān** = weaver of flax, linen flax manufacturer, seller, flax spinner, or flax comb. **Ḳattān** = cotton spinner and/or seller, cotton manufacturer and/or seller, carder. **Kattānī** = flax spinner.

217. A second group of temporary and auxiliary flax-linen nomina agentis will follow.

4) **Kītān'āi, Kītānyā'** (definite) > **Kītān'a'ei** (Ar)

5) **Pīštānī** (Hb)

The common denominator of this group of occupational names in various forms is the often lack of mention of any specific activity, whether it is commerce or some stage of production. The only fact mentioned is that the occupation deals with flax-linen, which is indeed ambiguous. English does not have a conventional word for accurate translation of these terms without applying circumlocution. The Spanish “linero” is an excellent candidate. Innovative terms, either “flaxman”²¹⁸ or “flaxist”²¹⁹ would serve this purpose well. We will attempt to extrapolate each name’s more definite application from its contexts, but that does not eliminate the possibility that the same occupational name included additional applications.

1) **‘ōsei pištān** (Hb pl.). Flax makers or producers.²²⁰

Qasiya (leather gloves) of *zor^oei g^rranot* (winnowers of granaries), of *hol^okei d^rarakim* (wayfarers), of **‘ōsei pištān** (flax makers or producers) – are susceptible to (halakhic) impurity. But those of *šabbaⁱim* (dyers) and of *nappa^him* (blacksmiths) are insusceptible...” (Mishna Kelim 16:6)

This occupational name embodies both the material used and the procedure performed, at least in general. Therefore we have translated “flax producers” – in accordance with the participle’s meaning. In order to determine in what specific activity these “flax producers” are engaged, we must

identify the purpose of this leather glove. Perhaps it is worn while pulling flax in the field, both to enable a good grip on the plants and to prevent wounding the hands – thus they are “flax pullers”.²²¹ Or it is worn during the subsequent braking, scutching and hackling processes – again enabling a good grip on the stalks and fibers while working – they are “flax brakers”, “flax scutchers” or “flax hacklers”.

Notice should be taken of the two groups of occupational names in this subchapter, arranged by rhyme and prosody: 1) *zor^oei g^rranot*, *hol^okei d^rarakim*, *‘ōsei pištān* – all plural participles. 2) *šabbaⁱim*, *nappa^him* – both in the qāṭṭāl pattern, in plural form. We will mention this phenomenon in the **kattān** entry.

An additional direction of inference to differentiate between the two occupational names – **kattān** (*infra*) and the current *‘ōsei pištān* is by comparison with a similar pair of occupational names – *zāggāg* and *‘ōsei z^okūqīt*. Both occupations are glass workers, and appear jointly in the same subchapter of Mishna (Kelim 8:9) and Tosefta (Kelim Baḅa M^oš^o‘a 3:10) or separately (*zāggāg*– Mishna Kelim 24:8, *‘ōsei z^okūqīt* - Tosefta Kelim Bava M^oš^o‘a 3:11). The joint appearances indicate that they are two different occupations, not synonyms. Here, as in our own context, *zāggāg* is in qāṭṭāl form, based on the material being worked with – glass. A literal translation would be “glazier” notwithstanding the current dictionary definition – “one who fits glass into windows”, or a synthetic “glassman” or “glassist”. And just as “√ktn”, “√zgg” is an Aramaic nominal root, imported into the Mishna. These have become Hebrew words.

218. All of the current *nomina agentis* appear in masculine gender in rabbinical literature, which is the default option. Other, predominantly or exclusively women’s occupations, may appear in feminine gender, cf. *mōz^rrōt* (spinners or plyers) *mzr^l supra*, *‘ō^rrgōt* (weavers), *tōwōt* (spinners). *Sārōqōt* (*infra*) is the exclusive non-gendered plural form of the qāṭṭāl *nomina agentis*. According to Tosefta Qidushin 5:14, they are men.

219. English language occupational names, often based upon the material or object involved, may appear with suffixes “-ist” and “-man”. Due to the intended vagueness of our proposals, it is equally possible that he is a **flax craftsman, tradesman, or transporter**. Cf. cowman, horseman, iceman, laundryman, milkman, woolman, etc. And florist, colorist, machinist, etc.

220. Cf. Isaiah 19:9 “Flax workers (“‘ōhdei pištūm”) too shall be dismayed, both hacklers and weavers of white (or: ‘nets’) chagrined.”

221. Moore 1922, 86: “These experts are ever ready to explain the knack which ensures no blistering of hands and no creaking of stooped backs...” Ibid. 87-88: “Pulling flax calls for skill... A schoolmaster, who presumes himself to be adept, is eager to demonstrate to others the right finesse of the pulling art. Just a few minutes later he has retired... to have oiled silk affixed to his lacerated finger.” DeWilde 1999, 53-54: “Another frequent inconvenience, especially with the young pullers, was the blisters that formed on the hands... Pricks from thistles and other weeds sometimes caused chaps or other wounds...”

In contrast, $\text{ʿōsei z}^{\text{ʿ}}\text{kūḳīṭ}$, are literally “glass producers”. Grossmark²²² identifies “ $\text{ʿōsei z}^{\text{ʿ}}\text{kūḳīṭ}$ ” as the producers of slabs or chunks of glass – the raw material, and “ zāggāg ” as the artisan who manufactures (and often sells them himself) glass utensils – the end product. Perhaps the redactors of the Mishnah were consistent in this formula, and we may deduce that “ ʿōsei piṣṭan ” is one who works in early stages of production (e.g. pulling – with gloves), and “ kāttān ” in later stages of production (e.g. hackling – with an apron).

2) **Būṣʾai** > **Būṣʾaʾei** (Ar). A flaxman or flaxist.

“When the *Sanhedrin* ceased to exist, song ceased from the places of feasting; as it is said, they shall not drink wine with a song...” (Mishna Soṭa, 9:11)

The authority of the *Sanhedrin* (‘Synedrion’ – the supreme court of Israel) was terminated by Roman General Gabinius in the middle of the first century BCE.²²³ That was considered a national disaster, and as a result appropriately solemn behavior was enacted. Among the restrictions, certain types of song were prohibited. This concept is based upon the HB verse: “They drink their wine without song...” (Isaiah 24:9).

The Talmud discusses the above Mishnaic law. “Rav Huna said: The singing of boat-draggers and herdsmen is permitted, but that of weavers is prohibited.” (BT Soṭa 48a)

Here, the Talmud discerns between different types of song, for the purpose of defining their respective legal standing in this context. Apparently, singing only assists the boat-draggers and herdsmen in their work and is considered solemn, and therefore permissible. In contrast, the singing of weavers it is joyful and therefore forbidden, because it contradicts the appropriately solemn

national mood.²²⁴ These historical work songs are not currently identifiable.

Šʾeltōṭ of Aḥai Gaon²²⁵ (a post-Talmudic work) adds (or: ‘reads’): “...but that of weavers **and būṣʾaʾei** is forbidden.”²²⁶

Būṣʾaʾei are “flaxists”, as no specific activity is inferred, only the material dealt with.^{226b} From this source, we cannot correctly extrapolate which activity in the production process is performed by them. We have chosen “flaxist” (cf. *supra*), an occupational name consisting of the material used with an added noun suffix, as an attempt to accurately and elegantly reflect the original terminology.

This agent noun is a *hapax legomenon* in Talmudic and post-Talmudic literature. It is parallel in form to the Hebrew *piṣṭani/piṣṭanim* and Aramaic *kitaṅʾai/kitaṅʾaʾei*.

3) **Kāttān** (Hb). A flaxman or flaxist.

“These hides are susceptible to “*mīdrās*” (a specific class of halakhic impurity)... the hide of the *ḥāmmār* (donkey driver), the hide of the **kāttān** (flaxman), the hide of the *kāttāp* (porter²²⁷)...” (Mishna Kelīm 26:5)

This occupational name requires some linguistic explanation. Despite the Mishnah being a primarily Hebrew language work, an imported Aramaic nominal root $\sqrt{\text{ktn}}$ is employed here,²²⁸ in the Hebrew *qāṭṭāl* pattern of *nomina agentis*, thus resulting in a Mishnaic *hapax legomenon*. Perhaps this relatively uncommon stylistic choice was deemed necessary by the editors of the Mishna (and Tosefta - *infra*) which was intended primarily for oral rote learning - in order to avoid the aural ambiguity of the possible Hebrew “*pāššāṭ*” (flaxman, extracted from “*pešet*”) and “*pāššāṭ*”

222. Grossmark 2008, 47.

223. Cf. Josephus, Ant. XIV, v. 4.

224. Mirsky 1977, 50.

225. Rav Aḥai Gaon, Babylonia 680 - LOI 752 AD.

226. Cf. Mirsky 1977, 50. Epstein 1987, 438.

226b. Cf. *Būṣ supra*.

227. Literally, a “shoulderer”.

228. Gluska 1987, V-VI.

(animal skinner) - both of which could well use an apron while working. During the Mishnaic period, the differentiation in pronunciation between emphatic consonants and their respective contrasting non-emphatic (”ט” ✎ “t”) had been weakened, and as a result these became homophones (albeit not homograms). The use of the Aramaic root in qāṭṭāl form here, and not the more expected Hebrew “ōsei pištān” - flax producers (Mishna Kelim 16:6), is also necessitated by the poetic character of Mishnah, which incorporates rhyming and prosodic passages. This particular subchapter lists leather products related to various uses and occupations, which are in turn grouped for rhyme and prosody: 1) “hide of s̄cortīā’ (table-cover), 2) hide of qatabolīā’ (bed-cover) – both Greek loanwords; 3) hide of the ḥāmmār (donkey-driver), 4) hide of the kāttān (flaxman), 5) hide of the kāttāp (porter) – all qāṭṭāl pattern agent nouns. A pertinent parallel to this prosodic phenomenon may be offered from the same tractate (16:6) in context with “ōsei pištān”, and has been discussed *supra*.

The specific activity of the kattān is unclear; as a result we prefer to translate “flaxman”, as the most faithful representation of the original term which does not allude to any specific activity, only to the material being dealt with.

Maimonides, in his commentary to the Mishnah *ad loc.* identifies these particular hides as aprons. He explains that the worker is engaged in scutching or hackling and that the leather apron protects his garments from tow, shives and dust – a “flax scutcher”.²²⁹ Other possibilities are that the apron is worn while pulling the flax straw from the retting water hence a “flax retter”²³⁰ and subsequently

while “gaiting” or “stooking” for drying– a “flax stooker”. In that case, the leather apron protects the worker’s clothes (at least partially) from becoming wet and malodorous. We also find that in modern Flanders, a leather apron was worn by “flax pullers”, to protect their garments from dew.²³¹ In modern industrial wet-spinning, waterproof bibs and aprons were donned by workers.²³²

The parallel Tosefta (Kelim Bābā Bātrā 4:8) repeats this term. In one variant (Zukermantel edition) “pāttān” replaces kāttān. Perhaps this is a visual-mistake (graphic) scribal error, or “permutation”, for these two Hebrew letters “k” (כ) and “p” (פ) are similarly shaped.²³³ In addition, kāttān is a *hapax* and unfamiliar to the scribe. Another possibility may be suggested, that this variant represents an attempt (or a textual tradition) in which this qāṭṭāl patterned *nomen agentis* is based on the Mishnaic Hebrew pštān (deleting the “š” from the quadruple form²³⁴), instead of the Aramaic “kītān”.

4) **Kītān’āi, Kītānyā’** (definite) > **Kītān’ā’ei** (Ar). A flaxman or flaxist – flax worker, flax merchant.²³⁵ See *supra*: **Ḥanwātā, Hōšen** (JT Pe’’a 16a), **Qōfnā** (JT Šābbāt 10a), **dwš**√, **npš**√. DJPA 257.

5) **Pištānī** (Hb). A flaxman or flaxist. There are three examples:

“Once a young girl entered to obtain flax from the (“pištānī”) flaxman, and he said to her: ‘this is for your engagement²³⁶ to me’”. (JT Y’bāmōt 13g). It is difficult to identify the specific procedure performed by this **pištānī**, other than being a merchant of flax or linen.

229. “Breaking Flax”, c.1850-1851, painting by Jean-Francois Millet (Normandy – Paris). <http://www.jeanmillet.org/Breaking-Flax,-c.1850-51.html> DeWilde 1999, 82.

230. DeWilde 1999,128. This was originally a **leather** apron.

231. DeWilde 1999, 50.

232. Carter 1920, 81.

233. See however: Lieberman 1939, Part 3, 83 who rejects this reading.

234. The middle consonant of this qāṭṭāl pattern is **not actually doubled** in Hebrew, it is emphasized by a dot in its center (in this case: ‘n’), called ‘*dageš characteristic*’. Nevertheless, scientific transliteration requires doubling the English consonant. Also worthy of mention, the parallel Phoenician root is √ptt. Nevertheless, this is certainly unknown to the Mishna.

235. An unpublished 5th century AD plaster inscription from the R’ḥōḥ synagogue in the Beth Shean Valley mentions “*ktnh*” (*Nomina agentis*). Dr. Hagai Misgav, personal correspondence.

236. The attempt to engage her was later deemed invalid.

“This (“pīštānī”) flaxman, at the time he knows that his flax is strong, the more he beats it – the finer and shinier it gets, and when he knows that it is weak he doesn’t even beat it more than once and it breaks up...” (BR 32:3 Vatican codex 30). See: **ktš**√. This **pīštānī** is a flax beater (or: “beetler”).

“This (“pīštānī”) flaxman, his camels entered loaded with flax. The collier wondered: ‘How where can all that flax fit in?’ There was an ingenious person on hand who remarked: ‘One spark from your bellows and the flax will burn up!’” (Rashi to Genesis 37:1²³⁷). In this case, the **pīštānī** is probably either a merchant or transporter of flax straw.²³⁸

Temporary and auxiliary professions

Commerce

6) **Hāwā ‘āseq** (‘āsīq)²³⁹ ≈ ‘āsāq **bāhādā kītānā**²⁴⁰ (Ar). “(He) was engaged in, or was dealing with flax”. This indicates a long term affiliation with the occupation. Further details are gleaned from context. “Rabbi Zerā[?] was engaged in flax. He went to ask Rabbi Abhū: ‘Am I permitted to improve

the appearance²⁴¹ of the flax (which may be deceptive to a prospective consumer, and gain a higher price)? Rabbi Abhū answered: ‘You may do as you see fit!’” (JT Bāḅā M^ošī^oā 9d). Apparently, Rabbi Zerā[?] is a merchant of flax fibers. “(Rabbi) Šīm^on Ben Šeṭāḅ was engaged with that flax. His pupils told him: ‘Rabbi! Release yourself from that, and we will buy you a donkey so that you will not have to exert yourself.’” (JT Bāḅā M^ošī^oā 8g). Perhaps Šīm^on Ben Šeṭāḅ was a flax merchant and he himself had delivered the merchandise while functioning as a porter.²⁴²

7) **Hāwā lei kītān** (Ar). “(He) had flax”. This indicates a short term affiliation with this occupation. “Rav (PN) had flax and it was damaged²⁴³. He asked Rabbi Hīyyā Rūbā²⁴⁴ (the elder): ‘Am I permitted to slaughter a fowl and mix its blood into the flax seed?’”²⁴⁵ (JT Ma^oaser Šenī 56d, BT Hūlīn 85b²⁴⁶). Presumably, Rav had cultivated flax.

8) **Broker** “Rav Kahana made a down payment²⁴⁷ on flax,²⁴⁸ later on it became more expensive.²⁴⁹ The owners (or: ‘customers’) of the flax bought

237. Probably quoted from a rabbinical midrash aggada, which is not currently known.

238. Note terminological differentiation between occupations. “Collier” is a charcoal producer, while “coalman” is one who delivers coal to houses. http://www.etymonline.com/index.php?term=collier&allowed_in_frame=0 <http://www.oxforddictionaries.com/definition/english/coalman>

239. The two different possible vocalizations represent either the active or passive forms of the participle. The original text is not vocalized.

240. Perhaps: “Was once dealing with flax.”

241. It is unclear to me exactly how that would be done (NBY).

242. Mishna Bāḅā Qāmā 3:5 describes various encounters between two porters in which an accident and subsequent damage occurs. One encounter involves a collision between a porter of flax (straw) and one carrying a (burning) lamp. Small quantities of flax could be delivered by porter instead of by beast of burden.

243. It is unclear exactly what happened. Perhaps the seed had gone bad (become moldy?) and he knew that it would not properly germinate, or he had made a test plot, or there was still enough time to re-sow his field after germination failure, so he sought a way to cure the malady with fowl blood.

244. Rabbi Hīyyā himself had raised flax, at least once. Cf. *supra* √**gdI**, **Nāšbā**.

245. According to Biblical law, (most of) the blood of a slaughtered fowl must be covered with soil, and not otherwise used. After HB Leviticus 17:13 “And if any Israelite or any stranger who resides among them hunts down an animal or a bird that may be eaten, he shall pour out its blood and cover it with earth.”

246. In the BT version, Rabbi Hīyyā is he who had the flax and asked Rabi (PN) the question.

247. It is not clear if he did this just once, or was accustomed to doing so. Also unclear if this was for his own purchase, or that he was acting as an intermediary for clients.

248. Perhaps a flax crop growing in the field, or possibly other intermediate stages of production.

249. The reason is not indicated, probably price fluctuations in the marketplace.

it themselves and reimbursed Rav Kahana.” (BT Bāḥā Mʿšīʿā 49a, Bāḥā Qāmā 103a, JT Bāḥā Mʿšīʿā 10g). “Ībo (PN) deposited flax at the estate of Bar Ronia (PN). The flax was stolen...” (BT Bāḥā Mʿšīʿā 93b).²⁵⁰

Comber

9) **Sōreq** ± **Sārōq** > **Sārōqōt** (Hb). Flax ‘hackler’ or wool ‘comber’.²⁵¹ See: **srq**√, **Māsreq**, and **Sereq** *supra*. “...the hide of the (‘sōreq’) comber...” (Mishna Kelīm 26:5). Major commentators²⁵² of the Mishna have interpreted this as either a flax hackler or wool comber.²⁵³ “The rod of the (‘sārōqōt’) combers’ scale...” (Mishna Kelīm 12:2). Maimonides in his commentary to the Mishna explains that a scale of this type is used both by wool combers and flax hacklers. {18}

Conclusions and Future Research

In this paper we have compiled and analyzed the textile terminology of flax and linen in Talmudic (rabbinical) literature. We have found that there is quite an extensive vocabulary for this field. That may well indicate certain ethnographic characteristics, such as the centrality of flax-linen production and use in the Talmudic era Jewish society of the Land of Israel and Babylonia.²⁵⁴ In addition, virtually all of these terms are linguistically Semitic, *i.e.* Hebrew or Aramaic.²⁵⁵ This contrasts to Talmudic nautical terminology, which consists almost entirely of Greek loanwords.²⁵⁶ The primarily Semitic vocabulary aspect may indicate an indigenous and perhaps ancient industry.

Research is never complete. Future expansion of this topic may proceed in various directions. In

addition to flax and linen, wools and silks have a significant place in this literature, and their respective terminologies should be treated in a similar fashion. The etymologies of the terms may be further pursued. Illustrations of the materials mentioned (*e.g.* textiles and implements) from contemporaneous archaeological finds in the appropriate regions may be furnished and their relation to the texts analyzed.²⁵⁷ Parallel and geographically adjacent contemporaneous literary sources, such as Latin, Greek,²⁵⁸ Syriac, Mandaic and Middle Persian (Pahlavi) can be examined and their terminology’s relation to the Talmudic terminology analyzed. And, as mentioned in the introduction to this paper, semantic nuances within Talmudic literature itself, emanating from various tradents, dialects, time periods and locales can be addressed.

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250. Insight into this issue is from Beer 1974, 189-191 - although I have altered it somewhat.

251. Wool “carding”, as opposed to “combing”, did not exist until the Middle Ages. (John Peter Wild, personal correspondence.)

252. Ovadiah ben Abraham of Bartenura (*c.* 1445, Bertinoro, Italy - *c.* 1515, Jerusalem), and Sh’lomo bar Y’hoshua Adeni (1567-1625, Ṣan’a and Aden in southern Arabia).

253. See also: Ayali 1984, 49-50.

254. The well-known legend maintains that there are innumerable terms for camels in Arabic, as a result of the camel’s centrality in Arab society.

255. Qānābūs, Qōpnā, and Qāsiyā are foreign loan-words.

256. After Sperber 1986, with my own deductive conclusion (NBY).

257. Discrepancy between historical literary, iconographic and archaeological sources is a well-known and challenging phenomenon.

258. See: Georgacas 1959.

Other Languages:

JPS: Jewish Publication Society <http://taggedtanakh.org/>
(This is the default translation used in the paper, unless otherwise indicated.)

KJV: King James Version <https://www.biblegateway.com/versions/King-James-Version-KJV-Bible/>

LUT: Luther <https://www.die-bibel.de/online-bibel/luther-bibel-1984/bibeltxt/>

LXX: Septuagint <http://www.ellopos.net/elpenor/greek-texts/septuagint/>

NIV: New International Version <https://www.biblegateway.com/passage/?search=1+Chronicles+1&version=NIV>

RVR: Reina-Valera <https://www.biblegateway.com/versions/Reina-Valera-1960-RVR1960-Biblia/>

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Legend

Symbols

- Singular form > plural form
- Derived from <
- Indefinite noun ~ definite noun
- X ► Y ► Z – Stages of linguistic evolution
- Sub-distinctions, provided within the text
- ↑ See above entry X
- ↓ See below entry X
- ↘ Weakening of gutturals: ^ʿ [Ayin] ↘ ^ʔ [Alep], ^ʔ [Alep] ↘ [no consonant], “h” ↘ “h”
- ↘ Weakening of emphatic consonants: “q” ↘ “k”, “š” ↘ “s”, “ṭ” ↘ “t”,
- = Parallel Hebrew/Aramaic terms
- ≈ Alternate wordings/spellings (in printed editions and/or codices)
- ± Synonyms (in parallel texts)
- { } Required production stages
- { } Optional production stages
- [] Alternate production stages

Diacritics

(Scientific transliteration will be employed in quotations from Hebrew and Aramaic texts, albeit not necessarily in the names of the texts themselves or their authors.)

^ʔ – Alep (א) – glottal stop.

^ʿ – Ayin (ע) – voiced pharyngeal approximant.

ā – As in **father**, **bother** (Long and short vowels will not be differentiated in this paper.)

◌◌ – “Mobile shwa”, ultra-short vowel

ħ – Voiceless pharyngeal fricative. Pronunciation is similar to the “j” of Juan in Spanish.

ī – As in **beat**, **nosebleed**

ō – As in **bone**, **know**

q – Emphatic “k” – “qop”

š – Emphatic “s” – “šadi”

ś – Hebrew “sin”, also used in Ancient Egyptian

š – Pronounced as “sh” – “šīn”

ṭ – Emphatic “t” – “ṭet”

ū – As in **rule**, **youth**

Fricative (soft) consonants

b̥ – (bh, v)

g̥ – (/ɣ/gh, voiced velar fricative. Arabic ġ).

d̥ – (/ð/ dh, voiced th, as in “**those**”, “**feather**”)

k̥ – (kh, as in J. S. Bach)

p̥ – (ph, f)

t̥ – (/θ/voiceless th, as in “**thin**”, “**tooth**”)**Abbreviations**

Ar = Aramaic (The various Aramaic dialects, *e.g.* Jewish Babylonian, Jewish Palestinian, Jewish Literary, Targumic, Late Jewish Literary, etc. will not be indicated in the present paper.)

ASL = A Syriac Lexicon

BASOR = Bulletin of the American Schools of Oriental Research

BR = Bereshit Raba

BT = Babylonian Talmud

CAD = Chicago Assyrian Dictionary

DJBA = Dictionary of Jewish Babylonian Aramaic (2002)

DJPA³ = Dictionary of Jewish Palestinian Aramaic (2017)

DJPA = Dictionary of Jewish Palestinian Aramaic (2002)

Gr = Greek

Hb = Hebrew

HB = Hebrew Bible

JPS = Jewish Publication Society translation of HB

JT = Jerusalem Talmud (aka: Talmud of the Land of Israel, Palestinian Talmud)

JNES = Journal of Near Eastern Studies

KJV = King James Version

LBH = Late Biblical Hebrew

LUT = Luther Bible

LXX = Septuagint

M = Mishna

NIV = New International Version

NT = New Testament

PS = Targum Peshitta to the HB (in Syriac)

RH = Rabbinic Hebrew

RVR = Reina-Valera Bible

SBH = Standard Biblical Hebrew

T = Tosefta

TO = Targum Onkelos (to the Pentateuch)

TP = Targum Proverbs

TY = Targum Yonatan (to the Prophets)

VUL = Vulgate