

Fig. 1. Four bone hair bodkins from London/Colchester/Essex. London, British Museum. From left to right: PRB 1883.1-12.22 (Sir A. W. Franks); 1934.12-10.20 (Christy Trustees); 1870.4-2.357; 1870.4-2.359 (bone and gold).

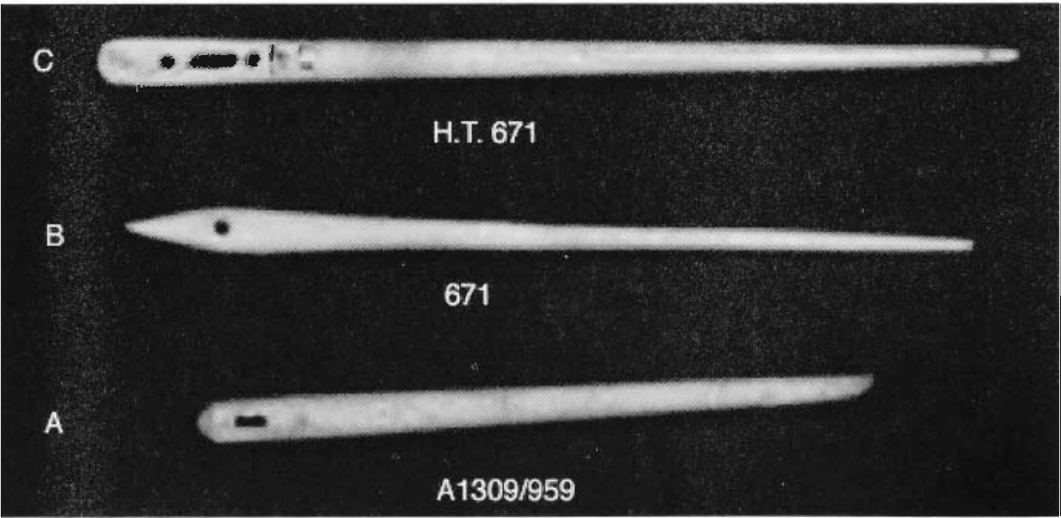


Fig. 2. Three bone needles, (3rd c., Antioch?). Baltimore, The Johns Hopkins University Archaeological Collection. Inv. A1309/959; 671; H.T.671.

Ancient Roman hairdressing: on (hair)pins and needles

Janet Stephens

Introduction

The reconstruction of ancient hairdressing techniques might seem a simple task, but it is not. There are few surviving ancient sources that even mention the act of hairdressing, let alone describe its mechanics.¹ Like all body-related services in Rome, hairdressing was a low-status trade performed by slaves and former slaves. It is probable that Roman hairdressers learned their craft by watching, listening, and doing, rather than by reading. Despite the difficulties, some modern scholars have taken an interest in the study of ancient hairdressing, even if they tend to focus on its final result — the hairstyle² — rather than the physical ‘how-to’ necessary to re-create ancient hairstyles with period-appropriate equipment on real hair. Since the 1980s, however, interest in the technical aspects of Roman hairdressing has grown. E. Bartman has asserted, correctly, that most Roman hairstyles can be arranged using the wearer’s own hair instead of needing a wig, while P. Virgili and M. Mannsperger have written extensively on the history of Roman hairstyles and hairdressing.³

Yet virtually all commentators demonstrate modern technological biases that lead to anachronistic speculation: in both looking at images and interpreting literary passages, they assume that the Romans used the same hairdressing technologies as do moderns.⁴ In addition, not being hairdressers, they fail to understand the technical possibilities of the tools that the Romans did have at their disposal. I will analyze the physical capabilities of the single prong hair-pin in order to show the impossibility of its application in many contexts. As an alternative I will propose sewing needles, arguing that, as Roman women of the 1st c. A.D. abandoned *vitta*-based coiffures in favor of more elaborate fashions,⁵ they used needles (artifacts well attested in antiquity) invisibly to stitch together the style’s various components. To demonstrate my thesis, I will re-create a number of the best known and most complicated Roman coiffures on real hair using needle-and-thread. I will also examine some of the more problema-

1 Isid., *Etym.* 10.5.7, 11.1.31, 19.31.8, 19.31.9, 20.13.4; Juv., *Sat.* 6.490-94; Mart. 2.14, 2.66, 6.52, 7.83, 8.52, 9.37, 11.84, 14.24, 14.36; Ov., *Am.* 1.14, *Ars. Am.* 3.133-55, 3.168, 3.225-30, 3.239-46, *Rem. Am.* 379; Quint., *Inst.* 2.5.12; Sen., *De. Brev. Vit.* 12.3; Tert., *De cult. fem.* 7.2.

2 For many, the hairstyle serves as a means of supporting (or challenging) portrait identification, of chronicling the styles of a particular period, or of illustrating particular social phenomena such as wig wearing.

3 E. Bartman, “Hair and the artifice of Roman female adornment,” *AJA* 105 (2001) 1-26; M. Mannsperger, *Frisurenkunst und Kunstfrisur: die Haar mode der römischen Kaiserinnen von Livia bis Sabina* (Bonn 1998); P. Virgili, *Acconciature e maquillage* (Rome 1989). See also now a 7-minute video, made by E. Bartman and B. Bergmann, of a contemporary hairdresser creating Faustina the Elder’s hairstyle at <http://www.youtube.com/watch?v=4FpwGG07y2l>.

4 For example, Bartman (*ibid.*) uses 20th-c. technical terminology to explain curl phenomena that can occur naturally: e.g., “fingerwaves” and “pin curls” (14, 18, 19 and 9-11, 18, respectively). She also presumes the use of hair extensions/“extender tresses” (1), “hairpins” (3), “bleach” and “gel” (5), but all these terms imply a distinctly modern technical framework and can be misleading. Virgili (*ibid.* 35) presumes the existence of “forcine in metallo” (U-shaped wire hair-pins), Mannsperger (*ibid.* 24-25, 60, 94) the kind of 19th-c. papillote curls which required tissue paper. The process depicted in the YouTube video utilizes bobby pins and steel pin-curl clips and does not clarify that Roman “metal and ivory pins” were not designed in the same way as modern bobby pins.

5 Cf. Isid., *Etym.* 19.30.4, 19.31.6. Ov., *Am.* 3.6.56, *Ars. Am.* 1.31, *Met.* 1.477, *Pont.* 3.3.51, *Rem. Am.* 386; Pl., *Mil.* 792; Prop. 4.11.34; Tib. 1.6.67; Val. Max. 5.2.1; Verg., *Aen.* 7.403. *Vittae* were linen or woollen ribbons used to tie the hair together when arranging it. *Vittae* can be seen in Etruscan sculpture and the Hellenistic art of S Italy. I speculate that the transition from *vittae* to hair-sewing began sometime around 50 B.C. The wide dissemination of the *nodus* hairstyle (epitomized by Livia) was probably most influential in promoting hair-sewing techniques. After this transition, the use of *vittae* became primarily associated with ceremonial (bridal) and hieratic (Vestal) hairdressing.

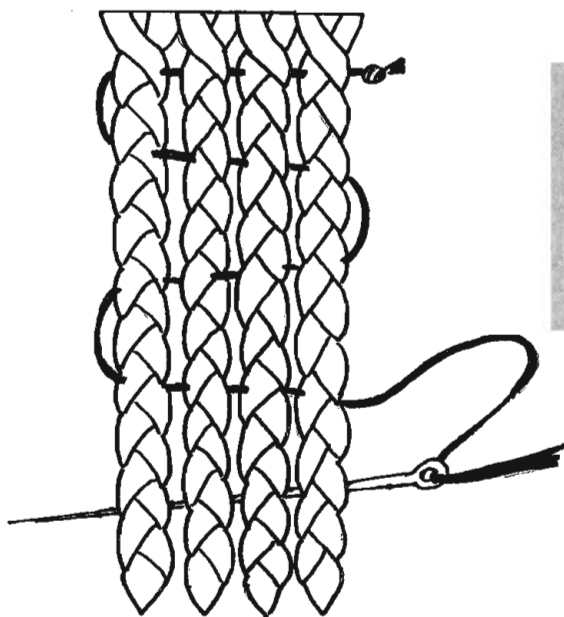


Fig. 3. How to laterally stitch thin braids so they become panels.

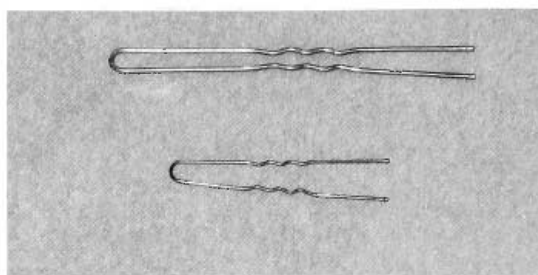


Fig. 4. Modern wire U-pins, 7.6 and 3.9 cm respectively.

tic hairdressing passages in Roman literature in terms of practical hairdressing and its physics.

Definitions

In order to avoid confusion, I will employ less familiar but more precise names for the tools commonly used (or thought to have been used) in ancient hairdressing. In both Latin and English, the terms are ambiguous. The single Latin word *acus* is often used to describe very different objects. Therefore I wish first to clarify both the descriptive terminology and the functional idiosyncrasies of each tool.

Hair bodkins

Here Roman hairpins will be referred to as *hair bodkins*⁶ (fig. 1). In their basic design, hair bodkins are similar to modern knitting needles. Hair bodkins are always single-pronged; one end is pointed to facilitate insertion in the hair while, in most cases, the end opposite the point is finished with an enlarged figurative or geometric head. Shaft shapes normally fall into one of three categories: 1) a uniform cylinder; 2) an undulating shape carved so that the shaft gradually widens and then narrows along its length; and 3) a gentle wedge shape, where the shaft gradually widens from the point toward the opposite end. Hair bodkins were made in various lengths. Hair bodkins made of gold or silver and decorated with precious stones are mentioned in sources⁷ and depicted on some of the Fayyum mummy portraits, but most surviving Roman hair bodkins are made from bone.

Needle-and-thread

Needles are rod-shaped objects that are pointed on one or both ends and drilled through with one or more small, circular or elongated holes (*eyes*); these holes are designed to carry thread. These objects will be referred to as needle-and-thread (fig. 2). By definition, a needle must have a hole meant to carry thread, and it cannot have an enlarged head meant to inhibit its passage through the material to be sewn. The majority of ancient needles suitable for

6 As late as 1771, single-prong hairpins were still being referred to as "bodkins": J. J. Winckelmann, *Critical account of the situation and destruction by the first eruptions of Mount Vesuvius, of Herculaneum, Pompeii, and Stabia ...* (London 1771) 76-77; J. Stevens Cox, *An illustrated dictionary of hairdressing & wigmaking* (London 1984) s.v. bodkin.

7 Ulp., *Dig.* 34.2.25.10; Isid., *Etym.* 19.31.8.

hairdressing would be unsuitable for most textile-sewing because of their large size: they commonly range between 10 and 15 cm in length and 0.5 to 1 cm in diameter. The widest diameter of the needle is usually near the eye. (In order to minimize pricking or otherwise injuring the head, the point of the needle would be slightly blunted.) Among surviving Roman needles suitable for hairdressing purposes, bone and ivory examples predominate. However, suitable needles were also made from rarer materials such as gold⁸ or even glass.⁹

There are special hairdressing situations where additional, long thin needles (greater than 9 cm in length but less than 0.3 cm in diameter) were necessary to construct some hairstyle components (fig. 3, lateral stitching). In most cases these needles were indistinguishable from textile needles, except for their exceptional length.

U-pins

Due to their characteristic shape, U-shaped wire hairpins will be referred to as *U-pins* (fig. 4).¹⁰ There is no Latin word for U-pin: as I discuss below, they are a modern invention. To date, no evidence of wire U-pins has been found before the late 18th c.

The Roman hairdressing vocabulary

The Romans used the word *acus* as a 'catch-all' for three similarly-shaped but distinctly different hairdressing tools: hair bodkin, needle-and-thread, and curling iron. No single ancient source explicates every Latin word (*discriminalia*, *discerniculum*, *acus*, *calamistrum*¹¹) for long, pointed instruments used in hairdressing contexts. Thus descriptions of each of these technical applications must be pieced together from sources spanning some 800 years.

The earliest known source for what I call a hair bodkin is Marcus Terentius Varro (116-27 B.C.). At *De Lingua Latina* 5.29.129 he gives etymologies for the names of objects associated with a woman's toilet-set (*mundus*). In this category, he includes the curling iron (*calamistrum*), comb (*pecten*), mirror (*speculum*), and the hair bodkin (*discerniculum*): *discerniculum quo discernitur capillos* ('bodkin, with which the hair is parted'). He gives no separate entry for the word *acus*.

The Augustan grammarian and antiquarian Marcus Verrius Flaccus includes hairdressing-related words in his *De verborum significatu*, a glossary of words whose meanings were difficult or obsolete.¹² Flaccus's original is lost. The late 2nd-c. grammarian Sextus Pompeius Festus made an abstract of Flaccus's glossary, which he titled *Glossaria Latina*. To this abstract he contributed many of his own arguments and sources, often in contrast to Flaccus's arguments. In the entry on needles and hairdressing he writes: *ACUS dicitur, qua sarcinatrix vel etiam ornatrix utitur*¹³ ('that which the cloth-mender as well as the hairdresser uses is called a needle'). The straightforward declaration in Festus indicates that 'sewing needle' is the default definition of the unmodified noun *acus*. Festus was not describing sewing needles for menders and physically different objects called hairpins for hairdressers, but simply stating that menders and hairdressers used an identical tool in identical ways: they *sewed* with needle-and-thread to perform their work. The *Glossaria Latina* does not contain entries for

8 L. Biagiotti and P. Virgili, *Bellezza e seduzione nella Roma imperiale* (exh. cat., Rome 1990) 108 for a 10-cm long gold needle found in a female tomb at Vetralla (Viterbo).

9 E.g., a 3rd-c.(?) glass needle on display in the British Museum, inv. GR1910.1-6.7.

10 Bob pins (also known as bobby pins or kirbigrips) are neither implied by this description nor included in this analysis. Bob pins were invented in the 20th c. to hold short, loosely-hanging 'bobbed' hair in place. Bob pins are engineered so that they exert an independent compressive force on the hair. Because bob pins grip firmly, the hair does not have to be coiled at all for a bob pin to stay in place. See Stevens-Cox (supra n.6) s.v. bob pin and fig. 5 (p. 236).

11 The terms *acus comatoria* and *acus crinali* are not present in word lists of the following lexicographers, but they are generally understood to mean hair bodkin.

12 The original of Festus's *Glossaria Latina* too is lost, but some of it survives in an 8th-c. abridgement by Paulus Diaconus, through which alone any glimmer of Flaccus' works now survives.

13 Festus, *Gloss. Lat.* s.v. *acus*.

calamistrum, *discerniculum* or *discriminalia*; whether these omissions were pre-existing or the result of the later abridgement which led to Festus' surviving text cannot be ascertained.

Given that Varro has no entry for *acus* and Festus none for *discerniculum*, the task of verifying a distinction in hairdressing contexts between the concepts of hair bodkin and needle-and-thread falls to Isidorus (c.A.D. 570-636). His *Origines sive Etymologia* 19-20 contain the definitions for 'hair bodkin', *acus* and *calamistrum*. Instead of using the word *discerniculum* for hair bodkin as Varro did, Isidorus employs the term *discriminalia*:

Discriminalia capitis mulierum sunt vocata ex eo, quod caput auro discernant, nam discriminare dividere dicitur.

'Separators of the heads of women are named from the fact that they part the head by means of gold, for *discriminare* means to divide' (*Etym.* 19.31.8).

Immediately following this entry, Isidorus describes *acus* as it pertains to female hairdressing:

Acus sunt quibus in feminis ornandorum crinium compago retinetur, ne laxius fluant et sparsi dissipentur capilli.

'Needles are those things by means of which, in adorning the hair of women, a bunch of hair is retained that it may not flow more loosely and scatter about in a disordered way' (*Etym.* 19.31.9).

Most would agree that having two entries implies two distinct objects. The *discriminalia*, like Varro's *discerniculum*, is a tool used to divide or part the hair, whereas the *acus* is a tool used to secure the hair.

In his definition of the word *calamistrum*, Isidorus uses the word *acus* to describe its shape:

Calamistrum acus est quae calefacta et adhibita calefacit et intorquet capillos. Unde et calamistrati appellantur qui comam torquent.

'A *calamistrum* is a heated needle that is used to curl the hair. Those who curl their hair in this way are called *calamistrati*' (*Etym.* 20.13.4-5).

The *calamistrum* was long and thin, with a tapered shape reminiscent of a needle or hair bodkin (fig. 5). When using *acus* to mean a *calamistrum*, Roman authors customarily accompanied it with a reference to curls or curling of the hair.¹⁴

In translating these terms in their many literary appearances, modern translations tend to reflect current hairdressing practice. When Juvenal speaks of a slave who is retired from using the *acus*, for example, the identification of her tool has ranged from "crisping pin" (a curling iron, the popular usage of the 17th and 18th c.¹⁵), to "toilet" (used in the 19th c.¹⁶), to "curlers" or "hairpins" (the 20th-c. rendering¹⁷). Note that in the 20th c. the singular form *acus* is being translated into plural forms and even into unrelated objects ("curlers"¹⁸). This is done to match

14 Ov., *Am.* 1.14.30, *Ars. Am.* 1.510 (Ovid also used the word *ferro* to imply the *calamistrum* at *Am.* 1.14.25, *Ars. Am.* 1.506); Juv. 6.497; *Sil.* 15.2; Quint., *Inst.* 2.5.12; Verg., *Aen.* 12.100.

15 B. Holyday's 1673 edition and translation of Juvenal, 81: "crisping pin"; T. Sheridan's 1739 translation (p. 175 in the 1978 edn.): "crisping pin".

16 W. Gifford's 1806 translation, 203: "toilet".

17 N. Rudd's 1991 edition, 54: "curlers"; P. Green's 1998 translation, 146: "hairpins"; S. M. Braund's 2004 Loeb translation, 281: "hairpins". It is instructive to compare how *acus* has been defined in the standard Latin dictionaries: Lewis and Short say, "1) A needle or pin, as being pointed, both for common use and ornament... -- Esp. a hairpin," thereby creating a functionally separate class of textile sewing needles and sewing pins for cloth working ("common use") and a nebulous second class of pointed objects used for "ornament". In the *Oxford Latin Dictionary* (1982), the definitions of *acus* have expanded to include a third object: 1) a needle or pin. 2a) A hair-pin; also *acus comatoria* (*crinalis*). 2b) a curling iron. ... To the majority of modern readers the word 'hair-pin' in entry (2a) could only mean a U-pin.

18 "Curlers" are perforated plastic cylinders, c.10 cm long, that come in a variety of diameters. Curlers rely on evaporation to create curl. A small section of wet hair is wrapped around the curler and secured at the scalp with a large bobby pin: it can take up to three dozen curlers to wrap a full head of hair. The curlers stay on the head until the hair is completely dry (which can take several hours). After the curlers are removed, tight springy curls result. A curling iron relies on heat to curl dry hair; a single curling iron is used to curl all the hair. Strands of dry hair are wrapped around the pre-heated tool and a curl instantly results.



Fig. 5. Monument to P. Ferrarius Hermes (Pisa, marble, 67 x 100 cm). Florence, Galleria degli Uffizzi. A *calamistrum* is the wedge-shaped object below the double-sided comb. I used a modern electric curling stick of this exact shape to curl the hair featured in fig. 21.

a contemporary understanding because modern readers recognize that curlers and hairpins are always used in multiples. Since about 1950, the singular noun *acus* is often translated to mean U-pins specifically; this trend is most obvious in Italian, where hairdressing nomenclature is unambiguous.¹⁹

How hair bodkins work

In order to understand why one tool is more suitable than another for re-creating a particular Roman hairstyle, it is necessary to understand the physical capabilities of each. Hair bodkins depend on *isometrics* to hold the hair in place: the hair must be coiled or twisted tightly so that, once the hair bodkin is inserted, the push of the hair against each end of the hair bodkin is balanced by a pull along the middle of the shaft. If there is too little isometric tension, the hair bodkin will fall out and the hair will collapse. Hair bodkins can easily support tight buns and twists with a pleasing decorative effect but, because of their reliance on stress and tension, they have major limitations if they are expected to be the sole support of a hairstyle:

1. Hair bodkins will not work where loose or fluffy hair is desired. Hair held in place by a bod-

19 E. Barelli's 1977 edition translates Ovid, *Ars Am.* 3.239-40 as "Odio colei che per nulla la graffia che di mano le strappa le forcine [acu] e gliele infigge rabbiosa nelle braccia". The Italian "le forcine" can only mean U-pins: the word for hair bodkin is "lo spillone" and for sewing needle "l'ago". Other Italian writers who appear to accept U-pins in antiquity include G. Ceronetti, *Le Satire/Decimo Giunio Giovenale* (Torino 1983) 133 and Virgili (supra n.3) 58.



Fig. 6. Typical hair bodkin positioning in a braided bun. The points of the hair bodkins are inserted at 10 o'clock and 2 o'clock.



Fig. 7. Faustina II, A.D. c.A.D. 161-70. Roma, Musei Capitolini Inv. 250/S. Archivio Fotografico dei Musei Capitolini. Marble, h. 0.635 m.

kin must be tightly compressed so that the bodkin can do its job. Only tight twisting and coiling creates enough isometric tension to trap the bodkin in the hair.

2. Hair bodkins cannot be used in short hair. Because hair is elastic, it resists winding and coiling; short hair will not stay coiled or twisted tightly enough to support the weight of a hair bodkin without extreme pain. In general, the hair must be long enough to reach the fifth thoracic vertebra for a single hair bodkin (or even two) to support the hair effectively for several hours.
3. Hair bodkins are limited as to where they can be positioned in a hairstyle. A hair bodkin must be placed so that it does not fall out as a result of gravity and centripetal force. To envision the ideal placement of hair bodkins in a hairstyle, one can picture the back of the head as the face of a clock: for the most secure placement, hair bodkin heads are usually inserted between 10 o'clock, noon, and 2 o'clock in a chignon, so that the point of the hair bodkin is directed toward the ground. This ensures that gravity pushes the head of the hair bodkin toward the hair, which it is physically unable to pass through. When a hair bodkin is inserted elsewhere (e.g., between 3, 6 and 9 o'clock), it can easily slip out, jostled by as simple a movement as a quick turn of the head. The heavier the decorative head of a hair bodkin, the more crucial it is that it be inserted higher on the clock to resist gravity's pull (fig. 6).
4. The end of a hair bodkin always shows. The decorative heads on hair bodkins maintain adequate isometric tension in the hairstyle by preventing the hair bodkin from passing through the hair and falling out. In the case of a hair bodkin without an enlarged head, the end of the *shaft* must protrude from the coiled hair. This is why ancient headless hair bodkins were often made in wedge-shapes²⁰ similar to Japanese chopsticks. The wider end of a headless hair bodkin increases slightly the isometric tension in a hairstyle as the bodkin is inserted, but, because there is no enlarged head, a length of the shaft near the wide end (usually 2-4 cm) must remain visible so that the coiled hair cannot slip over it. Styles utilizing headless hair bodkins require maximum isometric tension to stay in place since there is little else obstructing the hair bodkin's passage through the hair.²¹

20 C. Bianchi, *Spilloni in osso di età romana: problematiche generali e rinvenimenti in Lombardia* (Milano 1995) 47, 49-53.

21 Despite their limitations, even today hair bodkins are indispensable hairdressing tools. A pointed tool is necessary to draw clean parting lines in order more easily to divide and section the hair. Hair bodkins are helpful when detangling stubborn knots and dismantling small braids. They can be used as

In Roman times, hair bodkins had additional uses beyond hairdressing. Bodkins made of precious metals and gems or from carved ivory or bone added glamour to finished hairstyles. They were probably also used as genteel head-scratchers²² that could reach deep into elaborate styles where fingers could not. Hair bodkins could have substituted for writing *styli* for the wax-coated tablets used for note-taking, and *styli* may have been used as hair bodkins, much like when a modern woman pokes a pencil in her bun. Slender hair bodkins were probably used to anchor a matron's veil to her head while outdoors, thereby preserving her modesty in breezy weather and her piety during religious activities. Hair bodkins were probably also used to extract perfumed unguents from thin-necked bottles.²³

Hair bodkins also made convenient and uniquely feminine weapons. In Petronius (*Sat.* 21), Psyche pricks Encolpius's cheek with a hair bodkin (*acu comatoria*). In Apuleius (*Met.* 8.13), the young widow Charite wreaks vengeance on Thrasyllus, her suitor and murderer of her beloved husband, by gouging out both his eyes with a hair bodkin (*acu crinali*). Fulvia, the first wife of Mark Antony, is reputed (Dio Cass. 67.8) to have taken out her hair bodkin and pierced the tongue of Cicero's cadaver in revenge for his slanders. It should be remarked that none of these authors mentions the collapse of the woman's hairstyle once the bodkin is removed (an inevitable consequence were it to be the only support for the hair); see further below.

Archaeological evidence proves that hair bodkins were the main supports for some hairstyles. At York, the dressed hair of a 2nd- or 3rd-c. adolescent Roman girl was found preserved with her skeleton. Her hair was secured in a bun by two hair bodkins made of jet. In several other tombs at York, hair bodkins have been found near the skulls of female skeletons, even if the hair was not preserved.²⁴ Because of such evidence, many scholars conclude that women secured their hair exclusively by means of hair bodkins during all periods of Roman fashion history.²⁵ Yet hair bodkins would have been viable fasteners only when female hairstyles had a simple design and a strong isometric factor. To create the tight, matronly buns that Faustina the Younger wears, for example, only one or two bodkins are necessary (fig. 7, and fig. 6 above). However, the practicability of hair bodkins is challenged in periods when more complex and less isometric styles were in favor: the more fussy and detailed the hairstyle, the less effective a hair bodkin would be to support it. Styles with many small individual elements arranged in rigorous symmetry over broad surfaces of the head defy construction with hair bodkins. Non-isometric styles include (but are not limited to) the late Trajanic *turban* styles (fig. 8), the flat, *serpentine buns* of the 3rd c. (fig. 9), stacks of parallel braids built up into the air like the *towers*, popular during the reign of Antoninus Pius (fig. 10), and styles that dangle off the back of the head, such as an early version of the *hundred-strand braid* (wide, folded plaits most popular in the 4th c.) (fig. 11). Presuming they could even be made to work, hair bodkins would have been necessary in vast numbers to construct these elaborate and non-isometric hairstyles.²⁶

Hair bodkins are extremely rare in Roman portraiture. Only three out of the thousands of surviving Roman portrait busts clearly show hair bodkins, and each shows only one.²⁷ In the more flexible medium of portrait painting, hair bodkins can be seen in only a fraction of the Fayyum mummy portraits.²⁸ Of the 55 adult female portraits illustrated in E. Doxiadis, *The*

a "third hand" to keep one section of hair temporarily out of the way while dressing another. The hair bodkin has become the "tail" of the modern rat-tail comb.

22 Festus 52.17: *cnasonas acus, quibus mulieres caput scalpunt*.

23 D. K. Hill, "To perfume the Etruscans and Latins," *Archaeology* 18.3 (1965) 187-90.

24 RCHM. *Eboracum, Roman York* (London 1962) 79, 82, 100. See also A. T. Croom, *Roman clothing and fashion* (Stroud 2000) 105.

25 A. Carandini, *La Romanizzazione dell'Etruria: il territorio di Vulci* (Milano 1985) 184-85; Bianchi (supra n.20) 15; Croom *ibid.* 98, 105. For unease with this concept, cf. A. d'Ambrosio, *Women and beauty in Pompeii* (Los Angeles, CA 2001) 16.

26 I tried re-creating an Antonine tower using 8-cm roller pins with ovoid heads but gave up after about 30 pins when the style became hopelessly deformed and kept falling apart.

27 Bianchi (supra n.20) 18, fig. 1, statua da Apt (Vaucluse); fig. 2, Busto da Siviglia; fig. 3, Busto conservato a Roma, Palazzo Corsini.

28 After 30 B.C., women of the Fayyum followed Roman hair fashions: B. Borg, "Problems in the dating of



Fig. 8. Example of a *turban* hairstyle. Sabina as Venus Genetrix, c. A.D. 117. Ostia, Museo; sala vi, 12. Inv. n.25. Italian marble, h. 1.8 m, h. of head 23 cm (courtesy the Istituto Poligrafico e Zecca dello Stato, Roma).



Fig. 10. Example of a *tower* hairstyle. Young woman, mid-2nd c. A.D. Baltimore, The Walters Art Museum. Marble, h. c.12 cm. Inv. 23.213 (copyright, The Walters Art Museum; by permission).



Fig. 9. Example of a *serpentine braid* style. Julia Domna, c. A.D. 200. Baltimore, Walters Art Museum. Marble, h. c.25 cm. Inv. 23.210 (copyright The Walters Art Museum, Baltimore, by permission).



Fig. 11. Example of a *100-strand braid* style. Plautilla (back) early 3rd c. A.D., J. Paul Getty Museum Villa Collection, Malibu, CA (marble, h. 0.305 m).

mysterious Fayum portraits, forty-six do not show hair bodkins at all; six show the subject with one hair bodkin; and only three show two or more hair bodkins.²⁹ The overwhelming majority of female Roman portraits show hairstyles with no visible means of support.

Looking for bodkins: are Roman portraits 'mimetic'?

If hair bodkins were the only way to hold up a hairstyle in ancient Rome, should one expect to see them routinely represented in portraiture? The answer to this question may depend more on whether one believes Roman portraits were intended to mimic physical likenesses or whether Roman portraits were really intended to convey messages about the subject's position in society, virtue, or essential character, with little or no regard for physical likeness. Contemporary scholarship tends to favor the latter, anti-mimetic point of view, but, as a practicing hairdresser, I favor the former.

Although no one can judge whether the facial features on portrait sculptures and paintings exactly matched those of persons long dead, I believe the *hair* portrayed on Roman portraits to be extremely mimetic. On these portraits I recognize the same hair phenomena I see every day in the salon. I am constantly amazed by how precisely ancient sculptors conveyed the idiosyncracies of hairlines, cowlicks, growth patterns and directional movement in short hair, and wispy transitional hair at the ear and nape in long hair. The carving shows me where to divide the hair, in which direction to twist it, whether the curl was natural or artificial, and even whether a three-strand braid was woven over-hand or under-hand. Given how accurately I perceive sculptors to have portrayed these complex phenomena, I am convinced that, if hair bodkins *were* in the subject's living hairstyle, artists would have portrayed them. In any event, while there is proof that hair bodkins supported *some* ancient hairstyles, the physical inability of hair bodkins to hold up loose and intricate hairstyles (if not their relative scarcity in artistic representations) indicate that hair bodkins were not the sole, or even the preferred, support method for many female hairstyles.

How U-pins work

Wire U-pins are a more sophisticated technology than hair bodkins, in that one U-pin functions as two hair bodkins. Because a U-pin's two prongs are connected at one end, it does not require an enlarged head in order to be entrapped in the hair. U-pins are balanced in weight and do not fall out of a hairstyle as easily as hair bodkins are wont to do, even when they are inserted at between 3, 6 and 9 o'clock. U-pins can be pushed deep into, and be hidden by, the mass of hair they support without falling through the hair and out the other side. U-pins require far less isometric tension in a hairstyle than hair bodkins (though they do need some tension in order to function properly). U-pins can also be custom bent in various ways to hold the hair even more firmly. When a hairstyle is strongly isometric, only 3 or 4 U-pins may be necessary to support it.

U-pins would be capable of supporting some of the less isometric Roman buns — with two caveats: they would have to be of customized lengths (the wider the bun, the longer the U-pin), and there would have to be *lots* of them. In loose styles, U-pins must be 'interlocked' to prevent the hair mass from pulling apart or slipping away from the head. This is done by overlapping two or more U-pins at contrasting angles to one another at each support point. On a large bun like Julia Domna's earliest known styles (fig. 12) there might be 5 or more support points. The U-pins would be placed equidistant from one another around the outermost perimeter of the bun, just where the bun makes contact with the back of the head. If the U-pins are shorter than one

the mummy portraits," in E. Doxiadis, *The mysterious Fayum portraits: faces from ancient Egypt* (London 1995) 229-35.

²⁹ Images in Doxiadis (ibid.) showing no hair bodkins: figs. 1, 8, 20-21, 23-24, 27-29, 33, 36, 41, 43-44, 47-49, 51-55, 59, 63-66, 73, 75-76, 80-85, 96-97, 104-5, 108-11, 116. Images showing one hair bodkin each: figs. 25, 40, 42, 72, 86, 115. Images showing two hair bodkins each: fig. 30 [p. 216] and fig. 102. Image showing three hair bodkins: fig. 11.

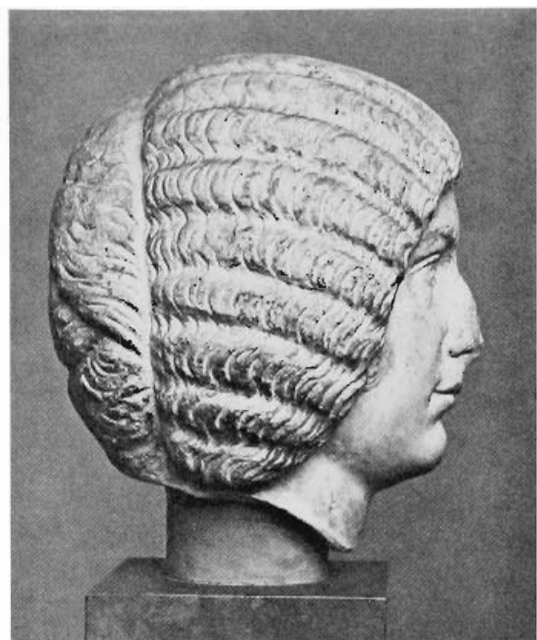


Fig. 12. Example of a loose, very wide *braided bun* hairstyle. Julia Domna, c.A.D. 190. Rome, marble, h. 0.25 m. Copenhagen, Ny Carlsberg Glyptotek.

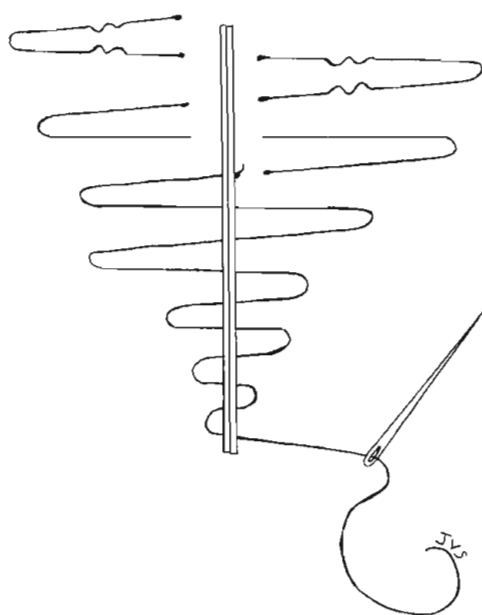


Fig. 13. Metamorphosis of thread to wire U-pins.

half the diameter of the bun, they must be grouped close together at slightly contrasting angles of entry, so that they overlap with each other along the edge of the bun. If the U-pins are longer than one half the diameter of the bun, they can be aimed straight toward the center point of the bun because they will overlap there. (One would need to keep extras on hand to compensate for accidental U-pin loss, as well as variations in the behavior of the hair from day to day.)

If U-pins had been the standard hair-fastener during the Empire, millions of them would have been manufactured during the four centuries (salons today buy them by the pound, like nails). Yet even at Pompeii and Herculaneum, sites that have yielded delicate surgical instruments, not a single U-pin has been recorded.³⁰ There is a good reason for the U-pin's absence from the archaeological record: they were probably invented in the 18th c. Before then, there was not even a word "hairpin". Technologies get their names when they are invented, thereby allowing us to distinguish them from pre-existing technologies. The *Oxford English Dictionary* (1989) dates the first use in the English language of the word 'hairpin' (meaning a U-shaped wire pin) to 1818, but the hairdressing historian and educator J. Stevens Cox traced "the double pointed hairpin" to Boston in 1775.³¹ It may not be a coincidence that early evidence of U-pins comes from the Americas, where it was often necessary for Colonial women to dress their hair on their own. While it is possible to sew one's own hair up, it is much harder to take it down after it is sewn. U-pins solve the problem of taking the hair down: they are easy to insert and remove, they are re-usable, and they can be used to hold up a variety of hairstyles. I conjecture that, when U-pins were invented, the inspiration may have come from a desire to mimic the path that thread follows through the hair or a piece of fabric (fig. 13). It is as if each stitch or 'arch of thread' were divided from its neighbor, and instead the limp thread became stiff wire.

³⁰ Mannsperger (supra n.3) 15 also notes the absence of U-pins from the archaeological record: "Gebogene, U-formige Haarnadeln, wie wir sie heute kennen, sind mir aus römischer Zeit nicht bekannt"; she cites dissertation research by E.-B. Mertzdorff, *Römische Schmuckgarnituren und deren Tragweise auf ägyptischen Mumienporträts* [non vidi]. Mannsperger speculates here that the hairstyles must have been held in place by some other, unknown type of hairpin, or by "tiny clamps" of an unspecified nature.

³¹ Stevens Cox (supra n.6), s.v. hairpin.

In any event, if U-pins cannot be proven to have existed in Imperial Rome, they cannot be considered for use in re-creating accurate Roman hairstyles.

How needle-and-thread works

In sewing, a needle is used to position thread accurately. The sewer repeatedly punctures the material being sewn with the needle and with each 'stitch'; the needle helps pull the limp thread through whatever is being sewn (textiles, hair, leather, etc.). The needle gives the sewer control and leverage to create either tight or loose bonds with the thread. Stitch patterns can be varied according to the type of bond or decorative effect desired: some stitch patterns are meant to show, others are not. Once the sewing is done, the thread is cut and the needle is put away and stored until it is needed to sew something else. A sewn item is held together with *thread*, not with a needle.

There is a huge variety of sewing needles because a huge variety of materials need sewing. Sewing needles are not chosen haphazardly. First, one must understand the character of the material to be sewn. If it is a woven fabric, is it thick, heavy and tough, or is it light, slippery and delicate? Is the weave loose and open or tight and compact? Is the material abrasive, like burlap, or sticky, like soft, thin leather? Next, one must choose a thread appropriate to the weight and toughness of the fabric and the amount of wear the finished piece will receive: tough fabrics usually require tough thread, lightweight fabrics require finer, more delicate thread. Finally, one chooses a needle that can accommodate both the fabric and thread. The eye of the needle must be large enough for the thread to pass through. The diameter of the needle must be just the right size to pass through the material without damaging it, while still having an eye large enough to accommodate the thread. The point of the needle is sharpened to ease penetration through the fabric.³² The length of the needle is chosen by the length of stitches needed.

During my experiments using needle-and-thread to reconstruct Roman hairstyles on real hair, I came to realize that the length and diameter of a needle serve a different purpose in hairdressing than in textile sewing, since hair behaves differently than woven fabric. First, hair does not show permanent puncture marks, as fabric will when it is sewn with too large a needle. Hair has no memory of the puncture made by the needle: the hair shifts and relaxes around the thread after the needle has passed through it. In the arrangement of hair, a longer length and fatter diameter make the needle easier to feel and retrieve if it gets lost inside hair. Longer needles can be passed more easily from one hand to the other through broad masses of hair. A large diameter permits the point of the needle to be blunted: this protects the scalp from pricking and injury by scratching. As the thread used for hair sewing can be either lightweight or bulky, so the eye size of a hair-sewing needle can vary.

A tradition of hair sewing in antiquity would help account for many of the long, startlingly wide, bone needles that survive. The needles I believe to be best suited to hairdressing are commonly between 0.5 and 1 cm in diameter and 10 cm or more in length, with blunted points. Many have eyes that seem too small relative to their shaft diameter (in textile sewing, one expects larger eyes on larger needles). A trio of unpublished 3rd-c. A.D. bone needles in the Johns Hopkins University Archaeological Collection (fig. 2 above) would have been particularly useful for hairdressing. Needle A³³ is plain, broken, and has a single, elongated eye. It measures 10.4 cm in length, 0.7 cm wide across its elongated eye and 0.4 cm wide at the broken tip. When new, it could have been quite long, making it suitable for passing through broad masses of hair. Needle B³⁴ is intact, measuring 14.1 cm in length, and 0.9 cm at its widest end (across its single, round eye). This needle has two points. If it was designed for hairdressing, it permitted taking stitches with either end of the needle. This needle would not necessarily have had to

32 Except for certain specialty needles, such as needle point and yarn needles; these are purposely dulled so that the threads of the canvas or knitting cannot be split during stitching.

33 Johns Hopkins collection A1309/959.

34 Johns Hopkins collection 671.



Fig. 14. Plaster cast of a *mundus muliebris* tomb (edicola, 22 x 60 x 65 cm). Rome, Museo della Civiltà Romana, inv. 2242. Original is from Kapljnc (Split Museum). The sewing needle is at the far right.



Fig. 15. Beauty case of Cumae (h. 14.5, w. 30.2, d. 24 cm. Cumae. Naples, Museo Nazionale di Napoli, inv. 85885. Ivory decorations, modern wooden supports. Contents, silver, gold, bone. The sewing needle is the rearmost rod-shaped implement.

fully exit the hair mass before the next stitch was begun; this stitching method would completely hide the thread used to support the hairstyle. Needle C³⁵ is 14.1 cm long and 0.9 cm wide at its eye end, which is rounded and flattened. It has three eyes: a central elongated eye, flanked by two small round ones. The three eyes would allow up to 3 threads at a time to be used. Perhaps this type of needle was used to perform multi-colored exposed stitching to bind the hair with silk ribbon and colored thread. In addition, the flattened end of this needle is very similar in shape to Roman cosmetic spatulas, and might also have been used to blend, measure out or apply cosmetics. Indeed, what I believe to have been a sewing needle used in hairdressing is depicted, along with a cosmetic spatula, in a frieze from the *mundus muliebris* tomb from Kapljnc (fig. 14).³⁶ This tomb depicted objects connected with female work (notably a work basket probably holding wool for spinning and a spindle at the far left). Yet the needle does not appear in conjunction with them but is artfully placed with the spatula in a functional pairing that Roman viewers would have understood as shorthand for the arts of personal adornment and the virtue of beauty (at the far right).

Likewise the 'beauty case of Cumae', now in the Museo Nazionale in Naples, contains a sewing needle³⁷ (fig. 15). Along with jewelry, a mirror, and several cosmetic-related objects of bone, the box contains what I propose to be a complete set of Roman hairdressing tools: comb, 'hairpin', needle, and spindle. A comb is needed to detangle and smooth the hair,³⁸ a 'hairpin' to part the hair, a needle to sew the hair together, and a spindle to make thread for the hairdressing needle. Craftspeople collect and store their tools according to function, because different tools must collaborate to execute a craft's various tasks.

Hair style re-creations

The hairstyle reproductions shown here are *arranged* as closely as possible to the originals; that is, the hair is sectioned, twisted, braided, coiled, curled where necessary, and stitched into position. The demonstration hairstyles were constructed on life-size manikin heads implanted with real human hair. Manikin heads are industry-standard practice tools for hairdressers. I used blonde-haired manikins for the majority of reproductions because in photographs blonde shows detail better than darker hair. Each reproduction was constructed using only a comb, hair bodkins (for parting and sectioning hair out of the way), a bone needle, a steel craft needle, and Persian-wool needlepoint thread. Plain water was the only styling aid. A modern electric curling stick was used to spiral-curl the manikins' naturally straight hair if needed. Any of these styles may be re-created on a live model, provided she has sufficiently long hair.

Note that, when comparing the reproduction to original sculptures, one must focus solely on the *arrangement* of the style — how the style is engineered: one must look beyond the surface differences between original and reproduction because it is impossible to make the reproductions match the originals in every detail: first, stone and hair simply do not look the same (stone is massive and opaque, hair is mobile and translucent); second, there is the inevitable difference in facial features between the original portrait and the reproduction model; third, the nuances of the individual's natural hair implied by the portraits (such as exact curl patterns and hair line paths) simply cannot be transferred to a reproduction.

In order to make the sewing more visible in the hair, I used white wool and coarse stitches; in practice, one would match the wool color to the color of the hair being sewn. When this is done, the stitching becomes nearly invisible against the background color of the hair (figs. 16–19 in color).

35 Johns Hopkins collection: H.T. 671.

36 Kapljnc, edicola, cm. 22 x 60 x 65, Spalato Museo, Calco, Roma, Museo della Civiltà Romana, inv. 2242. Virgili (supra n.3) 73 (where the tomb is mislabelled); Biagiotti and Virgili (supra n.8), 87, cat. no. 38.

37 M. R. Boriello et al., *Le collezioni del Museo Nazionale di Napoli: i mosaici, le pitture, gli oggetti di uso quotidiano ...* (Roma 1989) 230–31; Mannsperger (supra n.3) 12; Virgili (supra n.3) 82.

38 In this case the teeth of the comb appear worn: from this I conclude these objects were in daily use by the deceased before she died, and not just a formulaic assemblage of tomb gifts.

Effects of sewing the hair

These complex styles cannot be created by the wearer herself: at least one hairdresser is needed to arrange the hair and to take it down.³⁹ In order to take down a sewn style, one must stretch the various hairstyle components away from each other, isolate the wool thread, and cut a few of the stitches with a knife or small scissors. The remnants of thread can then be removed easily from the hair. In Roman antiquity, the ubiquity of slaves⁴⁰ meant that all but the most destitute had someone at their command to do their hair; among slaves and the very poor, women might have dressed each other's hair (in the same way that mothers, sisters and friends do today).

Sewn styles are more comfortable to wear than bodkin or U-pin styles because there are no rigid objects pressing against the head; further, since very little isometric tension is necessary in sewn styles, the hair does not have to be pulled uncomfortably tight, as is often the case when using hair bodkins. Consequently, hair sewing would have made it possible for Roman women to sleep in elaborate hairstyles such as the *turban* and *tower* (see figs. 8 and 10) with minimal pain. It is likely that elaborate, yet comfortable, hairstyles such as these may have been worn for several days before being taken down and re-arranged.

Thread adds little bulk to a hairstyle: many stitches can be placed in a confined area without compromising either the beauty of the final style or the comfort of the wearer. Aesthetically perfect ponytails (the foundation of many Roman hairstyles) are somewhat easier to make via sewing than with modern elastic bands because there is less manipulation and distortion of the hair. While an elastic band can only encircle the hair it controls, a needle-and-thread can be passed *through* compressed hair. Sewn ponytails stay in place with minimal slippage.

Sewn hairstyles are very stable: each stitch is connected to all the others by the continuity of the thread. After seeing how durable sewn hairstyles could be, I found it difficult to dismiss as poetic fantasy Ovid's description in the *Amores* (1.7) of his remorse over the beating he claimed to have given one of his lovers. He describes a kind of madness that drove him to tear his mistress's hair and wreck her hairstyle. Her terrified trembling and silent tears drive him to abject repentance and he begs her to beat him and tear *his* hair or, if not, at least to repair her own hairstyle so that the sight of its sorry state will no longer reproach him. Ovid refers to this incident again in *Ars Amatoria* 2.169-70. Here he repeats how he tore his mistress' hair (*turbasse capillos*), and laments over the many days she refused to see him. It is difficult to disarrange a well-sewn hairstyle, Ovid's double reference to this episode suggests to me that he shocked himself (as well as his mistress) with the violence of his attack.

The Roman needle in translation

Having established that sewing was integral to female hairdressing, I will revisit some celebrated passages in Latin literature that deal with the topic. In each, the often-misunderstood term *acus* plays a definitive rôle.

The hairdressing scene in Juvenal's *Satire* 6 (489-99) is a prime example of the challenge the word *acus* has posed for translators into English. At the beginning of this scene, a group of slave women is engaged in dressing a tyrannical mistress's hair. Two slaves seem to work actively: one is busy combing and twisting strands of her mistress's hair (*altera laevum extendit pectitque comas et volvitur in orbem* [495-96]) when suddenly the mistress explodes in anger at the slave Psecas for letting a curl stand up too high (*altior hic quare cincinnus?* [492]). The third slave's status is controversial: translators disagree about who she is and why she's there. She

39 Some modern African hairstyles are sewn: E. Sagay, *African hair styles: styles of yesterday and today* (London 1983) 36 and 60; R. Sieber and F. Herreman (edd.), *Hair in African art and culture* (New York 2000) 119 fig. 79.

40 A. Watson, *Roman slave law* (Baltimore, MD 1987) 95; K. Bradley, *Slavery and society at Rome* (Cambridge 1994) 10-11.

is given almost 4 lines of text (497-500) and Juvenal gives her a past as well as a present; in fact, he seems to give her a resumé:

[E]st in consilio materna admotaque lanis
emerita quae cessat acu; sententia prima
huius erit, post hanc aetate atque arte minores
censebunt, ...

Most translators agree that the third slave at one time had belonged to the mistress's mother (*materna*), that she has retired from a previous job (*emerita*), that she is elderly, and that she has been given a new job working wool (*lanis*). The job from which she retired involved a 'needle' (*emerita quae cessat acu*). Her seniority and skill are highly regarded. Her opinion will be sought first;⁴¹ but why? From what kind of 'needle' job has this slave retired? Given the obvious respect in which the slave is held, it seems likely that she is an expert at the task at hand, that is, she is retired as an *ornatrix*, and not a seamstress, as some have argued. The single word '*acus*' summarizes all the hairdressing possibilities (hair bodkin, needle-and-thread, and *calamistrum*). As a former *ornatrix*, slave no. 3's presence and authority in the scene are justified. Although re-assigned to wool work,⁴² she still serves as a resource for the younger, less experienced *ornatrices*.

Martial's epigram 2.66 must be re-envisioned in terms of the physics of hair bodkins. It focuses on the pointless slaughter of the slave Plecusa by her mistress Lalage. Plecusa is knocked dead with a mirror because her mistress is dissatisfied over a single, out-of-place curl:

Unus de toto peccaverat orbe comarum
anulus, incerta non bene fixus acu.
hoc facinus Lalage speculo, quo viderat, ulta est,
et cecidit saevis icta Plecusa comis.
A single ringlet out of the whole circle of hair had
gone amiss, fixed insecurely with an unsteady pin.
Lalage punished this misdeed with the mirror in
which she had seen it, and Plecusa fell smitten,
victim of the cruel tresses.⁴³

Martial's aim in describing the circumstances leading up to Lalage's outburst is to decry her arbitrariness and lack of self-control, but in passing he gives two important pieces of technical information. The *acus* was used to create Lalage's hairstyle, and she wore an *orbe comarum* ('circle of hair') — an apt description of the huge curly bangs of the late Flavian period (fig. 20) when this poem was in circulation.⁴⁴ Note that *acu* is in the singular form. In his translation Shackleton Bailey respects this by choosing the word *pin* in the singular, but this choice of word is exactly where the hairdressing physics go wrong. The gravity-defying fluffy bangs of that era literally contain more air than hair. As we know, hair bodkins cannot be used in loose, fluffy hairstyles where there is no isometric tension to keep them in place. A hair bodkin cannot immobilize a 'single ringlet' in such a frothy edifice for it would instantly fall to the floor. However, in *sewing*, the singular form of the word *acus* is natural: in sewing, there is one *needle* and many *stitches*. Tall Flavian bangs are made solid using two techniques: first, the



Fig. 20. Anonymous, known as the *Fonseca bust* (Rome, marble, late 1st c. A.D.). Roma, Musei Capitolini, Archivio Fotografico, MC 434/S. H. (chin to hair) 0.16 m.

41 Juv., *Sat.* 6.498-500; Braund's Loeb edition of 2004, 281.

42 S. Braund's Loeb edition of 2004 (p. 281) translates: "who was promoted to the wool when she retired from hairpins after serving her time". Wool working was socially respectable and a symbol of female virtue.

43 Mart. 2.66.1-4; translation by D. R. Shackleton-Bailey, Loeb edition of 1993, vol. 1, 181.

44 Ibid. vol. 1, 3.

CAPTIONS TO COLOUR PLATES ON THE FOLLOWING PAGES:

Fig. 16. Demonstration of a Hadrianic *turban* hairstyle (based on fig. 8). N.B. the *turban* style is very difficult to do without an assistant's help during step C.

Preparation: make a 4-cm deep, ear-to-ear parting along the front hairline. Secure the back hair out of the way with a hair bodkin.

A. Split the front hairline section in two with a center parting. Holding these side sections straight down in order to keep the braids low and tight to the head, make two braids on one side of the head and one braid on the other.

B. Cross the 3 braids over the forehead to the opposite sides of the head. Nest the single braid in between the other two braids. With a long slender needle, stitch the 3 braids together laterally (see fig. 3 for technique) until they remain firmly in place over the forehead.

C. Release the back hair and separate the nape section from the crown section. Secure the crown section up out of the way. Behind the proper left ear, begin a three-strand, assymetrically augmenting, outside braid, by picking up a small amount of nape hair near the ear and adding to it the unravelled tail of the forehead braid. This new, augmenting outside braid should travel tightly against the head sideways, and be augmented from the left hand only, until all of the remaining nape and crown hair are gradually used up. When done properly, the braid spirals continuously around the head 3-5 times depending on the length and density of the supplying hair.

D. When the *spiral* braid is completed, tighten and neaten it up with lateral stitching all the way around the head.

Fig. 17. *Serpentine bun* hairstyle (based on fig. 9).

A. Braid narrow sections of hair on each side of the front hairline into 2-strand rope braids that are overdirected and assymetrically augmenting. If one has no assistant, use pieces of thread to tie off the ends of the braids so that they won't unravel, as done here.

B. The remaining hair is split into 2 sections, left and right. Combine the tail of the respective rope braids with each section. Braid the left and right sections all the way to their ends with loose tension at the root and gradually tighter tension toward the ends.

C. To form the flattened disk shape of the *serpentine bun*, coil the left-hand braid sideways from the ends toward the root while simultaneously stitching together the adjacent edges of the braid as one coils.

D. Cross the right hand braid over the base of the left-hand disk and stitch this braid around the outside edge of the disk.

E. Once the disk is complete, lift it onto the back of the head and sew it to the scalp hair all the way around its edge. The style is now complete.

F. The completed style in profile.

Fig. 18. A *tower* hairstyle (based on fig. 10).

A. The front hair is separated from the back hair with an ear-to-ear parting. Begin at the back. Stitch all of the back hair into a high ponytail. Divide the ponytail into an even number of thin braids (at least 8).

B. Divide the braids into two equal groups, left and right. Stitch each group of braids laterally so that one ends up with two flat panels (see fig. 3 for technique).

C. Shape these panels into the *tower* around the top of the head. Carefully stitch the lowest edge of the *tower* to the scalp hair.

D. Divide the front hair into two with a center parting. Over-direct each section of front hair toward the back of the head and weave simple, three-strand braids until each braid is long enough to reach the back of the head just below the ponytail. Join the tails of both braids together to make a single 3-strand braid.

E. Turn this braid upward and lay it over the "seam" of the split ponytail, tuck the rest of the braid inside the *tower*, distributing the excess length around its interior, and stitch in place.

Fig. 19. *One-hundred strand braid* hairstyle (based on fig. 11).

A. Separate a narrow, vertical strip section at the back of the head and make a tight three-strand, augmenting inside-braid close against the scalp until one reaches the hairline, then continue three-strand braiding to the ends. (The inside braid will act as an anchor when the hair is looped upward in step D.)

B. Divide the remaining hair with a center part. Starting at the top of the head, you will make 4 narrow, strip partings from front hairline to nape hairline on each side of the head (total of 8 strips). Twist each strip of hair tightly on itself until one reaches the nape; then, without allowing the twists to come apart, three-strand braid the lengths all the way to the ends.

C. Attach the thread to the centermost 3-strand braid (the anchor braid). Stitch laterally all 9 braids to form a single, flat panel (see fig. 6 for technique).

D. Fold the tip of the flat panel upward, then stitch this folded edge to the top of the anchor braid.



Fig. 16. A C
 B D



Fig. 17. A B C
 D E F



Fig. 18. A B C D E





Fig. 19.

A B
C D



Fig. 21. Re-creation of a late Flavian/early Trajanic hairstyle.

A. Rear view: the high bangs are held in place by back-combing at the root and loose, looping stitches.

B. Front view (compare to fig. 20).

roots of the curls are back-combed;⁴⁵ then groups of curls are loosely but methodically stitched together in such a way that the silhouette of the *orbe comarum* is refined and the entire structure stabilized (fig. 21). However, if an inexperienced hairdresser fails to take enough stitches or places them inappropriately, individual curls will sag or fly-away. An additional, well-placed stitch of thread in a web of inter-connected stitches might have saved Plecusa's life.

Another passage where needles play a crucial rôle is Ovid's *Ars amatoria* 3.240-42. Here Ovid informs his female readers that men love to watch a woman's hair being combed, but cautions them that violent assault upon one's hairdresser in front of one's lover is a real 'turn-off'. He conjures up the image of a mistress stabbing her 'maid' in the arm with 'a needle' (*et rapta brachia figit acu*). Since in this case the weapon is in the hands of the mistress, *acus* could imply a textile-sewing needle or a hair-sewing needle-and-thread, but it could also imply a hair bodkin (a curling iron should be ruled out since Ovid refers at 242 to the *ornatrix* being bloodied rather than burned; equally, a textile needle should be rejected because it is impossible to perform embroidery while getting one's hair dressed — the head is constantly jostled, affecting one's balance and fine motor control). The needle in question should be either a hair bodkin or a hair-sewing needle. At a practical level, it is likely that both tools were present because Augustan-period hair-styles, especially the *nodus*, would have required that some sections of hair be separated and held out of the way temporarily while other sections are secured with the needle-and-thread. It is also possible that the number and types of tools necessary to create this woman's hairstyle could vary depending on how many personal attendants she had. In cases where an *ornatrix* was working alone, both a needle and a hair bodkin would have been necessary, since the slave needs more than two hands to control all the

⁴⁵ This is a hairdressing technique whereby a tangled matt of hair is intentionally concentrated near the scalp by holding up sections of the hair and combing it backwards, from ends to scalp. Back-combing can create a look of considerable fullness to the hair (it is also known as teasing and rattling).

sections of hair. If, however, two servants were working in tandem, a hair bodkin might not be necessary because an assistant could control the inactive sections of hair with her hands, while the *ornatrix* parted the hair and stitched the active sections together with the indispensable needle-and-thread.

Conclusions

The use of needle-and-thread reconciles the artifacts of Roman hairdressing to one another and to the literary, artistic, and archaeological evidence. The recognition that sewing was indispensable for the construction of many Roman hair fashions explains the absence of hair fasteners from portraits. It explains the placement of a needle across a spatula for make-up on the frieze of the Kapljnc tomb — sewing and personal adornment were literally inseparable — and, given that a sewing needle was necessary for arranging a woman's hair, the presence of a spindle in the beauty case of Cumae is fully justified — the spindle was kept there to produce thread for the owner's hairstyle. Hair sewing would help explain the large, dull sewing needles made of bone, as well as needles of similar dimensions made from exotic or 'impractical' materials, such as glass or gold; wealthy women could enjoy the distinction of being able to afford luxury tools for mundane activities, much as women today lust after a designer handbag, even though an inexpensive one is perfectly capable of containing one's purse and cosmetics.

The use of needle-and-thread helps to explain why so few hair bodkins are found in tombs near the skulls of female skeletons (presuming that the corpse's hair was dressed for burial, as was done in York). If thread were holding up the hair arrangements on female corpses, it would have rotted away along with the hair it held in place, leaving no clue as to how the hair had been arranged. Arranging the hair with biodegradable thread can explain the fact that hair bodkins are more often discovered in jewelry boxes among tomb furniture than next to the skull of the deceased.⁴⁶

Using needle-and-thread to arrange female hairstyles answers the question of how they were constructed with readily available equipment. The often complex hairstyles depicted on portrait busts can be reconstructed simply, economically and accurately on real hair, without the need for expensive false hair.⁴⁷ When a woman has living hair that she can arrange into a fashionable style, she does not need to buy a hairpiece. The majority of Roman women of all classes did not need or use false hair to achieve their fashionable hairstyles.

I hope that the technical insights presented here will inspire a greater appreciation of the verisimilitude of Roman portraiture and a wider discussion of hair fashion as a unifying rather than a dividing force within Roman society.

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46 Biagiotti and Virgili (supra n.8) 87 cat nos. 38 and 111: "corredo funeraria della dama di Callatis", cat. no. 221.2A.

47 The dominant scholarly view of Roman hairdressing postulates the extensive use of false hair, particularly wigs (e.g., J. B. Thiers, *L'histoire des perruques* [Avignon 1777] 1-12; F. Nicolai, *Über den Gebrauch der falschen Haare und Perrücken in alten und neuern Zeiten* [Berlin 1801] 24-44; J. H. Krause, *Plotina; oder die Kostüme des Haupthaars bei den Völkern der alten Welt* [Leipzig 1858] 8, 193-95; K. Fittschen and P. Zanker, *Katalog der römischen Porträts in den Capitolinischen Museen und den anderen Kommunalen Sammlungen* Bd. 3. *Kaiserinnen- und Prinzessinnenbildnisse Frauen porträts* (Mainz 1983) nos. 1, 6, 17; K. Fittschen, "Courtly portraits of women in the era of the adoptive emperors (98-180) and their reception in Roman society," in D. E. E. Kleiner and S. B. Matheson (edd.), *I, Claudia: women in ancient Rome* (New Haven, CT 1996) 42-52. This view probably originated in the 18th c. when fashionable European men and women wore false hair; it is usual for non-hairdressers to explain other people's hair in terms of their own.