- 42 Staf, Polisväsenaet i Stockholm, p. 60, cf. note 43 above.
- 43 Ibid., pp. 42, 56-59.
- 44 Ibid., p. 170.
- 45 Letter 12 November 1813, (SE/RA/1134/13/125).
- 46 Stockholm City Archives, Överståthållarämbetet för polisärenden 1, Äldre poliskammaren, Protokoll, äldre serien, vol. 10 (SE/SSA /0021/01/AIa1/10).
- 47 Staf, Polisväsendet i Stockholm, pp. 225-26, 343-44.
- 48 Wakefield, Disordered Police State.

From Geese to Steel: Stories about the Quill and the Nib Pen

Martina Wernli

undamental changes in writing and reading are usually dated to the fifteenth century; far away from and long after the much earlier Chinese inventions of woodblock printing and movable types, central Europe finally implemented the printing press. Thanks to Johannes Gutenberg and his coworkers, books were no longer the products of years of copying by monks anymore, but easier to disseminate and obtain. But what about handwriting—are there any historical shifts discernible in the use of different kind of writing implements? Assuming that what was written depended and still depends not only on the mind of the person who wrote it at a certain time, but also on the situation and the kinds of writing implement a text was written with, I would like to present some observations and thoughts about pens—more precisely, about the quill and the steel pen. I will pursue such questions as: When and how did writing change due to this replacement of writing tools? What kind of sources

bear witness to this change—how do they present or talk about writing implements? But my principal interest is in the literary traces of pens. Accordingly, the first section of this chapter treats the quill as a theme in central European culture, the second is on writing (with) animals, the third discusses pens from the time around 1600 on, the fourth leads from then to the eighteenth century by comparing different portraits of famous English penmen, the fifth presents some experiments with steel and the sixth and last focuses on writing on whales, ganders and pens.

Ι

Stories about writing with and about quills usually start by mentioning Isidor of Seville. In his work *Etymologies*, the bishop, who lived at the turn of the seventh century, wrote of writing instruments:

The scribe's tools are the reed-pen and the quill, for by these, the words are fixed onto the page. A reed-pen is from a tree, a quill from a bird. The tip of a quill is split in two, while its unity is preserved in the integrity of its body.¹

It is not simply the mention of a writing implement that is of interest here, but in particular the fact that Isidor brings up two objects at the same time—and neither of them is the antique stylus.² This is why most authors of books on writing see the shift from the ancient world to the Middle Ages initiated by a change

in the writing implement and date it back to Isidor.³ This quote designates a time and place where scribes used different writing tools in general. The geographical spread and the commonly use of the writing tools differed later on: For the hundreds of years following Isidor's time, in the oriental world the reed pen was preferred, while in central Europe the quill served as the main writing instrument. Both kinds of pens depend on material accessories: With a pen alone—be it from a reed or goose—there can be no writing. Pens go together with ink, parchment or paper, a measuring rule, sand and most importantly: with a knife. In the European case, the centre of this combination of things in a writing scene is the quill, of which pens are made.

The modern word 'pen' goes back to the Latin penna for (flight) feather—or pin or pinna (as in Isidor's example). The quill as the part of the feather which has to be sharpened is related to the German word Kiei, it probably goes back to the Middle Low German term quiele. The Latin penna is taken over and still used in Italian, whereas the French plume for pen derives from Latin pluma for down. Both Feder, the standard German term for pen, and 'pen' itself are polysemes; they fuse material and metaphorical elements. First they refer to material objects and as such connect the animal goose to humans. Over centuries human writers used animal matter. But the quill needs customisation: The natural product, the outermost wing feather, is shaped and sharpened into what Hans-Jörg Rheinberger calls a 'technical object,'

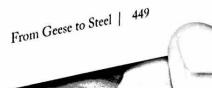
the writing pen. The material of the quill is valued for its elasticity which makes it possible to differentiate its broad or thin writing from the writings by the reed pen in its constant broadness. And it is this quality that proved impossible to duplicate in any manufacturing process for a very long time. This is one of the reasons why there was no sudden change in writing technology, and the steel pen did not arrive on the scene as a revolutionary invention that changed everything within a short time: Quills and steel pens coexisted in stationery shops in the second half of the nineteenth century. This was in part because of the long time it took to develop the optimum elasticity of the nib, but it also reflected writers' personal preferences; many simply liked the quill better and went on using it, even at the time when the steel pen was available in good quality and at low prices. Theodor Fontane (1819-1898) is one of these men of pen who preferred the quill for a lifetime. A portrait from 1883 painted by Carl Breitbach shows the writer with a quill in his right hand—at a time when the steel pen has been in use for quite a long time. This portrait can be regarded as a statement for individuality in writing or for a tendency of a backward view the author is also known for.

The Saturday Magazine commented on the coexistence of the quill and the steel nib in 1838, in a passage that reflects a characteristic combination of enthusiasm and anxiety about social and technological progress:

It is a cheering statement, that in spite of the immense consumption of steel pens, the demand for quills has not abated, but, on the contrary, is on the increase. This is to be accounted for by considering that, within the last few years, population has greatly increased, and, that by the diffusion of the refining influence of education, that class of persons now can write which twenty years ago was altogether illiterate. Besides this, the Continent and America are supplied by us with steel pens. When first introduced, they were as high as 8s. per gross, then they fell to 4s., and now they are manufactured at Birmingham at so low a price as four-pence per gross! As yet, it appears that the only branch of trade that has suffered by the introduction of steel pens is the cutlery trade: pen-knives are in less requisition than formerly.

Π

The quill's main constituent substance keratin connects birds with mammals and feathers with hair and fingernails. In terms of keratin there is no big difference among birds, humans or indeed porcupines with their bristles. But this animal-human connection is also a dissociation: The quill is the material object, the human being the writing subject. Accordingly the term 'pen' is also used as a metaphor; it can now refer to a ballpoint pen or fountain pen. It then goes together with another metaphorical term like the ink well in fountain pen and leads back to Latin and the ancient world, and with the Latin denotation to birds and animals. However, not only are the names of today's writing



implements metaphors, but their use in poetic texts is often metaphorical: In texts about writing, 'pen' as a verb means writing and as a noun it stands for the process of writing itself and most often for problems with writing, for failures in articulating thoughts and ideas. As Bill Brown has put it in his early paper on Thing Theory, it is the recalcitrance or even the failure of things that make them visible and perceptible. Bill Brown writes:

We begin to confront the thingness of objects when they stop working for us: when the drill breaks, when the car stalls, when the windows get filthy [...]. The story of objects asserting themselves as things, then, is the story of a changed relation to the human subject and thus the story of how the thing really names less an object than a particular subject-object relation.⁷

The 'particular subject-object relation' founded by the specific thing 'pen' is always material as well as—and this is what I would like to add to Brown's paper—metaphorical. Referring to Donna Haraway, one could speak of a pen as a 'material-semiotic actor' or of 'material-semiotic generative nodes'. In her paper 'Situated Knowledges' Haraway adapts the thoughts of Katie King on the constructive production of poetry to bodies as objects of knowledge. In the same paragraph the material-semiotic conjunction is once called actor, and once node. As far as the quill is concerned both descriptions make sense: The pen is an actor in the writing scene, where it produces ink blots and scratches on

paper or parchment on the one hand and 'meaning' on the other hand, and it is furthermore a node in a network consisting of geese, human animals, knives, ink and more.

But seeing this conjunction of material and semiotics is not peculiar to the perspective and the specific interest of poststructuralist scholars, although these approaches have provided the theoretical vocabulary. In the case of the pen, the observation of an interlinked relationship has a history: In his Historia Pennarum (1726) Heinrich Acker collects and presents quotations about the pen in the manner of the Encyclopedists. In this potpourri of pens, names and titles Acker cites in his Procemium the Danish physician and theologian Thomas Bartholin (1616-1680) and his definition of a pen in terms of its material characteristics, and continues with a quote by the Spanish diplomat Didax Savedra (also known as Diego de Saavedra Fajardo, 1584-1648), whose 'descriptio sapit metaphoram', in that Savedra characterises the pen as a 'mute tongue forming words on a page'.9 Writings about pens, therefore, can be understood in two ways: materialistic and metaphoric. This is even the case when in Acker's collection (and translation) both Bartholin and Savedra use the same definitional words: 'penna est'. These two meanings are often. Acker himself is not only collecting quotations about the pen, but also sorting the writing on quills into categories of materialistic and metaphorical speech. This attempt shows how these two ways of speaking and writing are often intermingled.

In this double existence we find the pen not only in scientific texts, but also in literature, for example in Sir Philip Sidney's sonnet series *From Astrophil and Stella*, written in the 1580s, published in 1591. There is a pen mentioned in the first of these sonnets:

Loving in thruth, and fain in verse my love to show,

That the dear she might take some pleasure of my pain,

Pleasure might cause her read, reading might make her know,

Knowledge might pity win, and pity grace obtain,

I sought fit words to paint the blackest face of woe: Studying inventions fine, her wits to entertain, Oft turning others' leaves, to see if thence would flow Some fresh and fruitful showers upon my sunburned brain.

But words came halting forth, wanting Invention's stay;
Invention, Nature's child, fled step-dame Study's blows,
And other's feet still seemed but strangers in my way.

Thus great with child to speak, and helpless in my throes,
Biting my trewand¹⁰ pen, beating myself for spite,

'Fool,' said my Muse to me, 'look in thy heart and write.'

In the reflection on how to reach a beloved person, the suffering first person speaker is chaining up his (writing) actions and hypothetical reactions of the beloved. The written love is supposed to find 'pleasure' (V2), and linked with pleasure is reading and knowing. The speaker pictures himself with writing metaphors,

he writes 'in verse' (V1), 'paint[s]' (V5) and he bites his 'trewand pen' in the final couplet. The writing object pen is described as an allegoric partner, a quasi-subject as Michel Serres calls it, on whom the speaker depends. Only the Muse in the last verse can undo the dependence on the material of writing: in her proposal to the 'Fool', the writing self should consider his heart and write—the pen now is an omission. The Muse presents a dreamlike writing without media, without any transforming process, and: without the pen. The sonnet describes an unfortunate love but also the trouble of writing—not only about love, but with pens that can be truant.

But pens are also found in other kinds of texts, which are explicitly dedicated to writing. Writing manuals show handwriting, hand and finger positions and provide help in writing letters. One early English manual that has survived dates back to the same time as Philip Sidney's sonnets do. 12 It is called A Newe Booke of Copies, containing divers sortes of sundy hands, as the English and French secretarie, and Bastard secretarie, Italian, Roman, Chancery, and Court hands. Set forth by the most Excellent Wryters of the sayd hands for the instruction of the unskilfull and dates from 1574. It contains examples of model handwriting as well as guidance for children on how to produce their pen from a quill and how to hold it best. The Rules made by E.B. for Children to write by include also recipes for making ink. The rhyming couplets not only teach the reader how to prepare ink or quill, but also how to memorise.

About the quill it recommends:

To chuse your quill

Take quill of a goose that is some what rounde,
the thirde or fourth in wynge to be fownde:
And if at some tyme of those ye do want,

Take pinion¹³ as next when Rauens quilie is skant,
And ryue it iust in the backe, as may bee.
For ragged your flinte else shall ye see,
Amidde the slype¹⁴ that ronnes vpp the quill:
Were it of gander yee do it not spill,
The fether shaue of the quill do not pare,
The stronger your penne in hande ye may beare.

To make your penne.

Make clyft without teeth your penne good, & hard:
Thinner, an shorter on right hand regarde:
The clyft somewhat long, the nebb not to shorte,
Then take it in hand in most comly sorte. 15

The Booke afterwards presents the paragraphs To holde your penne, To make a good penne knife, How to sit writing and How to write faire. These Rules are set in typed letters. Their content discusses the preparation of a pen for handwriting, but the shown writing in the book is a typed one. The examples of neat and correct handwriting such as The Secretary Hand or The Italic Hand are presented as though hand-written, but of course they are 'Plates', typographical prints manufactured after handwritten models, but

transferred into print. The quill and its writing are therefore seen best or at least seen in a new way, when they have gone through a media shift: The invention of the printed book makes it possible to disseminate models of handwriting—by printing the engraved and transformed handwriting.¹⁶

The Newe Booke not only tells children how to create their writing tools or ink, it not only contains diverse and ideal examples of handwriting, but it also shows the correct and incorrect postures of the writing self.¹⁷ The copperplate with the title Howe you ought to hold your penne shows two good examples contrasted to two bad ones.¹⁸ The quill is thus shaping children's bodies, its use disciplines the students.¹⁹

The quill is an 'animal-made-object' as Erica Fudge has proposed in her paper on leather. ²⁰ This 'animal-made-object' is (as Fudge argues) at once an object made from an animal and the objectified animal. An objectified animal includes both the living and the dead animal—the quill for example is linked both to the living and the dead goose. Within the pedagogical discourse this objectification goes even further: The student is an object as well. In the touch of fingers and pen the objectified animal, the quill, meets the objectified human animal, the student. The handwriting is the trace of this conjunction. For writing purposes, the bodies are disciplined, directed by the quill. Later on, when the keratin is replaced by steel, the posture called for by the quill will be unsettled, as we will see further on.

Thanks to the extension of education, increased literacy and faster postal services, the use of the quill reached its climax in the late eighteenth century. Penmanship books like The Universal Penman (1741)21 edited by the Londoner engraver George Bickham the Elder taught people how to write neatly, but they were also displaying the range of their own styles and crafts that went into their production. The work appeared in 52 parts between 1733 and 1741.22 The leaflets were sent to subscribers and Bickham collected and distributed contributions from around 25 calligraphers and penmen. The engravings show writing in various hands, but some also picture the scribes. The 'scripsit' and 'sculpsit' markings and the signatures of the scribes and penmen at the bottom of the folio pages showed the skills and training required for these artworks. Most of the times they were made by a team: the scribe wrote the text and the cutter put it into woodcut orfrom the second half of the 16th century on—the engraver transmitted the handwriting onto copperplates. Portraits of Writing Masters show this job-sharing and the specializations of the masters. Prefixed to their works we find portraits of Writing Masters and their writing implements, accompanied by illustrations of their skills. These stagings change over time, which I'd like to show with some examples later on. But these 'scripsit' and 'sculpsit' markings inform not only about authorship but also point out the medial shift within these works: What is showed on these pages is handwriting as a skill or artistic or didactic topic, but it

is no handwriting on the paper of the leaflet or book. The original prints or facsimiles in good quality sometimes show the frame of the copper plates as marks on the paper. These frames are the material traces of the media shift: they embody the paradox of handwriting within print. 'Scripsit' refers to the (absent) handwriting and 'sculpsit' points out the modern craft which transfers handwriting into print. Even the 'scripsit' on these pages is a 'sculpsit'. But it is this craft of engraving which allows the revival and epiphany of handwriting.

IV

Penmanship Books present not only handwriting transformed in print but also the masters of these 'hands' themselves.²³ Sometimes the portrayed masters are in action, sometimes next to or draped with ornaments of their handwriting. Five examples show the richness of staging strategies as well as the artistic capabilities of these writing masters. They lead from the early 17th century to the portrait of George Bickham in the mid-eighteenth century. The first example (Fig. 12.1) shows Richard Gething.²⁴ This engraved frontispiece was prefixed to his work *Calligraphotechnia* from 1619.²⁵ The medallion portrait is framed with his name in Latin. Above his head a laurel wreath holds two quills under the motto 'Nil Penna sed Arte'—a quill is nothing, if not for art.

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Fig. 12.1

Underneath the portrait there is a poem in praise of the master. To the right of the portrait there is the right hand holding a quill with the correct position for writing. The shirt cuff and the bow which end the anatomic drawing to the right show an aristocratic writer. Above and underneath this hand are manuscript letters drawn in a single line. The frontispiece units the portrait, hand and the strokes of the pen—a network of engraved handwriting.

The second example (Fig. 12.2) is a portrait of Martin Billingsley; it is the frontispiece to his 1618 work The Pen's Excellence and was engraved by William Hole.26 It shares some elements with the portrait of Gething: The portrait is in the centre of an oval, and below the portrait there is a poem on the virtue of

writers in general. Around the oval there are four Latin words: 'LINGUA, PENNA: MENTIS MUTA'.



Fig. 12.2

Jonathan Goldberg suggests six possible translations for these four words.27 Above the oval we find 'aetatis suae 27'—the age of the subject. Billingsley wears a suit of armour which is visual on his left side. The right arm is covered by a coat. In the right hand Billingsley holds a quill, which points to an abbreviation for 'Anno Domini' (under which we find the year 1648). The disturing feature of this picture is not the fact that Billingsley seems to be writing upside-down, but the way he holds the quill.

Compared to the hand and quill next to Gething, Billingsley's quill is at a 90-degree angle.

The third example (Fig. 12.3) shows Edward Cocker, from a supplement to his work *The Guide to Penmanship* of 1664. This



Fig. 12.3

oval is relatively simple; the master holds a quill in his right hand and looks outward. The special feature of this portrait is the decorations: a male and a female figure placed on either side of the oval, and two angels above it, each of them drawn in a single line (similar to but more complex than the letters next to Richard Gething's portrait) to demonstrate the skill of the master as well as the capacity of the quill itself to produce a line of varying width. Acheson gets to the heart of it when she writes: "This is writing which is not writing — it does not signify or represent

semantically.'28 But these figures are not pure drawing either, because they appear like alphabets written in different hands. They are not art—at least not art considered as autonomous. Masters, their skills and their writing implements are part of one ensemble, as seen for example in a portrait of Thomas Weston from 1723, which is attached to his work *A Copy Book* (1726) (Fig. 12.4).



Fig. 12.4

Weston sits at a table, dressed in a coat of satin or similar material. The index finger of his right hand points toward a cone, signifying the relation between calligraphy and mathematics.²⁹ In front of him stands a quill in an inkstand. The quill is almost in the centre of the picture and its end points in the direction of the

writing master's heart. On his left, next to a case that probably contains a pair of compasses, lies a book with the title 'Lectiones Astronomicae, Lectio 12'. The author of *A Copy Book* presents himself not only as an artist, but also as a scientist.

In all these portraits the quill is shown as the implement with which the works were written—even though none of these books are manuscripts. Therefore, they show what they are and are not at the same time. My last example of a penman (Fig. 12.5) shows George Bickham the Elder (from around 1750).



Fig. 12.5

In contrast to the other portraits, we find in this example only two elements: The master and the burin—tool of the engraver. The burin points towards Bickham's chin, and it is upside down from the normal working position. The editor of *The Universal*

penman is clearly depicted as the artist of the newer discipline engraving, but we are reminded it was the skill of the engraver that made it possible to visualise and pass on the art of handwriting in the first place.

The heyday of the quill was also that of the masters; portraits connected the skills of the master with his writing implement by presenting them together. They showed the person, the tool and the profession at the same time. These portraits depict the state of the art of writing even though there is not always writing on them (as the example of Bickham's shows). With the start of the nineteenth century, when natural science became the paradigm for scientific knowledge, and the results of scientific enquiry were presented as 'objective' facts, this nexus dissolved. 'Modern' inventions like the steel pen, to which I now turn, were represented without their inventors. The object (in this case the writing implement) stood for itself; it was presented alone. Conversely, the inventors (including inventors of the steel pen) were portrayed without their inventions. This was also the time when the age of calligraphy as a science came to an end. The more positivistic and pragmatic forms of science which depended on accelerated processes had neither time for nor interest in nicely drawn lines and letters or writing implements.

V

Writing with quills could be laborious: the acid of the ink damaged the material of the quill, and the instrument broke easily. had to be sharpened periodically, and did not travel well. Andmost important—making pens out of quills was difficult for most people, and became a business for professional quill-dressers. This is why the end of the eighteenth century was characterised by the search for alternative and more durable writing implements. The goals were twofold: On the one hand there were efforts to make quills easier to use. For this purpose Joseph Bramah (1749-1815) (who by the way also invented a water-closet and a beer engine)30 patented a mechanical quill cutter. Bramah also constructed a penholder to which a quill nib could be attached. This technology maintained the animal material quill, but reduced the burden of repairing and cutting. The writing subject now became much more of a consuming user than a fabricating person, the manufacturing of nib pens a job for machines and experts in small factories. The pen itself transitionally became a hybrid between animal and technology.

The other aim was to replace the animal material entirely. In order to achieve durability, scientists and inventors used steel.³¹ Elasticity was gained by piercing the steel. The use of steel helped manufacturers to achieve independence from agricultural/biological rhythms like seasonal moulting (when quills were easily

found and best for use). There are no sources to confirm the practice of plucking quills for the use of writing; only the plucking of down for beds and pillows is documented.³² This makes it extremely difficult to explain where all those quills came from. The Popular Encyclopedia; or, 'Conversations Lexicon' has only this to say about the quantity and origin of goose quills: In 1832, the number of quills entered for home consumption was 33,668,000, the greater part of which come from the Netherlands and Germany. Immense quantities are also imported from Russia and Poland, where flocks of geese are kept for their quills alone.³³

The use of steel thus also made it possible—very importantly for Britain—to become economically independent in this sector, since the production of quill pens depended heavily on imported feathers. *The Mirror* reported in 1835:

The average number of quills manufactured by some of the old established houses in the metropolis was 6,000,000,000 each, annually. During the last seven years the imports of quill into London were – in

- 1828 22,418,600
- 1829 23,119,800
- 1830 19,787,400
- 1831 23,670,300
- 1832 17,860,900
- 1833 23,976,600
- 1834 18,732,000³⁴

Industrial countries like Britain or Germany no longer depended on agricultural countries and regions like Eastern Europe but provided their own pens and—even better—became exporters. The popularity of steel rose as soon as three conditions were met: improved quality, mass production and reduction in price.

In 1838 The Saturday Magazine featured the article cited above 'On Writing Materials. The History of Steel Pens'. It describes the inventors (the names are James Perry, Samuel Harrison and Josiah Mason), but also the amount of steel used: 'It is calculated that the total quantity of steel employed in this manufacture, amounts to 120 tons per annum, from which upwards of 200,000,000 of pens are produced.' While the first industrial manufacturing of pens in great quantities can be backdated to the late 1820s, cities like Birmingham witnessed a huge change towards the middle of the century, as contemporaries observed:

When the British Association first met in Birmingham (in 1839) steel pens were almost unknown; but when the second visit was made, in 1849, the steel pen trade had risen to a very important place among the manufactures of our town. Between the two periods named there had been eighteen makers of steel pens, but these had been reduced to twelve in 1849; and although the number is now twelve, the quantity of pens produced has enormously increased.³⁶

Most of the employees in the steel pen factories were women.³⁷ The workers, especially the women, can be seen in Henry Bore's The Story of the Invention of Steel Pens (1890) (Fig. 12.6 and 12.7).³⁸ By the end of the nineteenth century, stories about steel pens and the industrial progress were appearing in the review pages of the press. In the German press, the topic was linked to visions of national industrial genius and competition between different countries—in this case the question of whether the Germans or the English invented the steel pen.





Fig. 12.6

Fig. 12.7

The story of this 'invention' is in fact much more international. Finlay cites French (seventeenth and eighteenth century) sources and an American one from around 1800.³⁹ The German publications of the late nineteenth century basically follow two strategies, which both make Germany at least hypothetically the country of the invention of the steel pen: They either mention a German forerunner of the English invention or avoid mentioning specific

individuals or countries.⁴⁰ English sources like *The Popular Encyclopedia* list only British inventors.

After having ruled the European world of writing for almost a thousand years, the time of the quill came slowly to its end: In an overlay of animal matter, hybrid versions and steel products. writers became participants in and witnesses of a bionic shift (avant la lettre): The quill was first used in its 'natural' form, then cut in pieces which featured the qualities of the material keratin in a new quantity (more nibs out of one quill) and finally was replaced by a steel product shaped in the form of a quill and carrying its name, pen, with only a loose, non-material connection to the Latin penna. The steel pen presents bionic strategies not only in its form but also in the way it works: capillary attraction was gained (for example by Bramah) by using more than one nib. The bionics covering physical aspects temporarily led to a new form of pen, independent of its initial shape. Because the steel pen held in the disciplined way tended to catch on the paper, the 'oblique pen' was invented (Fig. 12.8). The problems of the early steel pens are addressed in this advertisement: 'their liability to tear the paper, spurt the ink, and gather fibres from the surface of the paper, which blot the writing'.41 The oblique pen provided the advantage that 'the writer is not confined to any particular position, but may use the pen freely, and without the restraint of attitude usually directed by the teachers of writing'. The disciplinary impact of the penmaster's guidance to hold the quill correctly must have felt like a limitation on personal freedom and the design of the oblique pen promised physical liberation. But the oblique pen was not a success. It was still the body that was mastered by the pen and had to adapt to the instrument—a show-case example for what Marcel Mauss has described as techniques of the body.⁴²



But in the history of writing not only did objects form bodies, but aesthetics made objects: The Engineer's and Mechanic's

Encyclopedia, Comprehending Practical Illustrations of The Machinery and Processes Employed in Every Description of Manufacture of the British Empire (1836) suggests that the appearance of the oblique pen was to blame for its failure:

Many persons having been strongly prejudiced against the one-sided appearance of the original oblique pen, Messrs. Mordan & Co. were induced to attempt an improvement in this respect, and they have fully succeeded. The improvement has been accomplished by the introduction of an additional shoulder, opposed to the former. This novel and curious pen has been very much admired, and it is as useful as curious; it has the advantage of holding a very considerable quantity of ink, and of retaining, from its obliquity, a position adapted to the slope of the writing, while to the eye a perfect equilibrium is preserved. The effect of the third nib in metallic pens (see Fig. 12.9), is to enable the pen to carry a larger quantity of ink, and to force it down in uniform and never-failing succession to the paper.⁴³

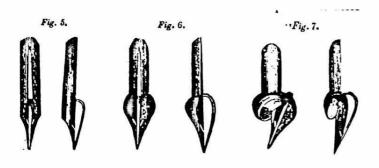


Fig. 12.9

In sum: the steel pen was not just a single object which one person invented at a certain time and a certain place; the Popular Encyclopedia discusses at least five types of steel pens (the threeslit Pen, Mr. Gillott's new pen with parallel-sided nibs, Mordan's oblique pen, the Lunar Pen and Mordan's Counter-oblique pen), and even reports on models that had yet to be tested by the authors.44 Knowledge about the new tool was clearly not yet firmly established. Using again the terms of Hans-Jörg Rheinberger one could say the 'epistemic thing' steel pen of the 1820s to the 1840s was a steel pen which was as comfortable as the quill pen, but more durable. The 'technological things' comprised different forms of steel pen inventions—none of them yet a perfect substitute for the quill. These artefacts that bear witness to the changes in writing are preserved in encyclopedia descriptions and perhaps as rare objects in collections, but most of them have simply been forgotten. In general, publications like the technological encyclopedias treat 'the new' as progress, in a positivist spirit. Paradoxically, presenting the new always implies a look back. The nineteenth century is thus the time when the quill slowly disappears in practice, but reappears in scientific discourse, represented as 'the old', as a tradition that has been transcended, or just as a symbol of past centuries.

VI

Literature can incorporate the operations of science in ways that go beyond simply representing its outcomes. In some cases literature presents and addresses scientific achievements in reflecting on its own constituents: thinking, writing and the conditions for both. The last example to be presented here is taken from Herman Melville's Moby Dick, or The Whale (1851), which—read in the context of Melville's personal correspondence—offers a particular kind of reflection on human and non-human beings and the writing process. Chapter 65 of the novel is called The Whale as a Dish. The storyline about this meal has started in chapter 64—Stubb's Supper—in which a midnight dinner is the occasion for a comparison between the steersman Stubb, unusual among whalers in eating the flesh of his quarry, and the sharks simultaneously feasting on the whale carcase.⁴⁵

The Whale as a Dish begins with an observation and a philosophical reflection, after Stubb has eaten a whale steak:

That mortal man should feed upon the creature that feeds his lamp and, like Stubb, eat him by his own light, as you may say; this seems so outlandish a thing that one must needs go a little into the history and philosophy of it.⁴⁶

This paragraph offers an analogy between the human feeding on the meat of the whale and the metaphorical feeding of a thing—the lamp, which is fuelled by the oil of the same animal.⁴⁷

Writing, the whale and eating can also be found together in letters that Melville wrote while he was working on *Moby Dick*. For example, to the lawyer and writer Richard H. Dana Jr. Melville expresses his doubts about his book:

It will be a strange sort of a book, tho', I fear; blubber is blubber you know; tho' you may get oil out of it, the poetry runs as hard as sap from a frozen maple tree; – & to cook the thing up, one must needs throw in a little fancy, which from the nature of the thing, must be ungainly as the gambols of the whales themselves. Yet I mean to give the truth of the thing, spite of this.⁴⁸

The whale's blubber is described as the material out of which the author makes poetry, not by writing, but by 'cook[ing] the thing up'. The pen is not mentioned, and neither is the analogical object, the cooking spoon. And to Nathaniel Hawthorne, Melville writes in 1851: 'Shall I send you a fin of the *Whale* by way of a specimen mouthful? The tail is not yet cooked—though the hell-fire in which the whole book is broiled might not unreasonably have cooked it all ere this.'49 The book in progress is referred to as something Hawthorne could taste, and writing becomes (metaphorically) cooking. In the reflection on Stubb's meal, the light

is produced by the whale (or its oil), which enables the eating of yet another whale:

But Stubb, he eats the whale by its own light, does he? and that is adding insult to injury, is it? Look at your knife-handle, there, my civilized and enlightened gourmand dining off that roast beef, what is that handle made of? – what but the bones of the brother of the very ox you are eating? And what do you pick your teeth with, after devouring that fat goose? With a feather of the same fowl. And with what quill did the Secretary of the Society for the Suppression of Cruelty to Ganders formally indite his circulars? It is only within the last month or two that that society passed a resolution to patronize nothing but the steel pens. 50

This paragraph presents different conjunctions of eating and feeding: the knife-handle and the bones (while eating roast beef) or teeth picking and goose (while eating roast goose). The narrator aligns eating practices with the derivation of the instruments with which humans eat or which are used after eating. Things like the feather as a tooth pick come in contact with other parts of the same animal, which will be, or are already, eaten. With the words 'And with what' there begins another one of these rhetorical questions, yet the semantic field of feeding is replaced by the theme of writing. Despite the analogy in rhetoric and syntax, there is a substantial shift within the topic. The chapter ends with the description of a sociological change—the fictitious 'Society for the Suppression of Cruelty to Ganders' pursues an ethical

goal, namely a change in animal breeding practices. As in *The Newe Booke*, the male animal is mentioned: ganders, not geese, even though quills are (as in the connection of the term goose quill) often used either in a neutral sense or associated with the female animal. In general, both terms, ganders and geese are used as generic terms, when it comes to pens and writing—there is no difference in writing with a gander's or a goose's pen. Still, Ishmael's referring to ganders (and not to geese) is remarkable because it is uncommon and a gendering gaze.

But most importantly Melville's chapter ends with thoughts on writing, indited while writing with—we may imagine—the new writing implement.⁵¹ Melville makes a subject of discussion not only of one of the latest technical achievements, but also of its adoption by writers. In this fictional scene, the change is a sudden and political: the society has 'passed a resolution' to not use quills anymore, but only steel pens. Unlike the dream presented in Sidney's sonnet—writing without a writing implement—Ishmaels reflections propose writing with the correct—the latest—object. It is the new steel pen which offers a way out of the dilemma: a way to write (for example) about animals without using animals—assuming the writer/reader is inclined to reflect on the former animal matter of their writing implement.⁵²

Writings about quills contain and transgress different discourses—the pedagogical in writing manuals, the calligraphic in penmanship books or the scientific and economic in encyclopedias and treatises. Paradoxically, the pen is most present in its absence. Historically, the key shifts took place (first) in the fifteenth and sixteenth centuries, after the introduction of printing reduced the need for large-scale manuscript production, and (second) around 1800 and during the early nineteenth century when the search for a pen made of a different material, with the same qualities and advantages but greater durability, was successful. The quill was not yet replaced, but a lively discussion of writing implements, writers' practice and technological progress was underway. Literature is one of the places where these overlapping discourses found their implementation and continuation: simultaneously materialised in handwriting, in print and on paper, and aestheticised in storylines, metaphors and themes.

NOTES

'Instrumenta scribae calamus et pinna. [...] calamus arboris est, pinna avis [...]': *The Etymologies of Isidore of Seville*, transl., with Introduction and notes by Stephen A. Barney, W. J. Lewis, J. A. Beach, Oliver Berghof (Cambridge: Cambridge University Press, 2006), p. 142. I would like to thank Jermain Heidelberg for his research help.

- The pencil is younger than the stylus or the pen; graphite was first found in England in the 1550ies. See Henry Petrosky, *The Pencil. A History of Design and Circumstance* (London: Faber and Faber, 1990).
- Finlay mentions in his book on Western Writing Implements an earlier illustration of the quill in a mosaic in the Byzantine Church of San Vitale in Ravenna, in the early sixth century AD: Michael Finlay, Western Writing Implements in the Age of the Quill Pen (Carlisle: Plains Books, 1990), p.1.
- 'pen, n.3' in OED Online. (Oxford University Press, March 2019) www.oed.com/view/Entry/139975?rskey=PCEhyx&result=4 'quill, n.1' www.oed.com/view/Entry/156537?rskey=JBu6l8&result=1 [both accessed May 08, 2019].
- Rheinberger uses the term 'technical object' in his redefinition of experimental systems. Its counterpart is the 'epistemic object' with which the technical object is strongly associated: 'But the point to be made is that within a particular experimental system both types of elements are engaged in a nontrivial interplay, intercalation, and interconversation, both in time and in space. The technical conditions determine the realm of possible representations of an epistemic thing; and sufficiently stabilized epistemic things turn into the technical repertoire of the experimental arrangement.' Hans-Jörg Rheinberger:

 Toward a History of Epistemic Things. Synthesizing Proteins in the Test Tube (Stanford: Stanford University Press, 1997), p. 29.

- The Saturday Magazine, Volume the eleventh, 17 February 1838, p.
 64.
- 7 Bill Brown, Thing Theory, Critical Inquiry 28 (2001), 1-22.
- B Donna J. Haraway, Simians, Cyborgs, and Women. The Reinvention of Nature (London 1991), p. 200.
- 9 Acker writes in the second paragraph: "Pennam THOMAS BAR-THOLINUS ita describit: penna est instrumentum, e quo crena extremitatis incisa liquor stillat litteras efformans [(]dissert. IV. de libris legendis p. 7[)]. DIDACI SAVEDRAE descriptio sapit metaphoram: penna est lingua muta, verba efformans in charta, quae voce oporteret eloqui, in idea principis Christiano politici symb. XL.p.m. 83.' Heinrich Acker, Historia Pennarum Pennae Inclitissimi Polyhistoris et Consummatissimi Theologi Io. Francis Buddei (S. Altenburg 1726), p. 8.
- 10 Editor's note: truant.
- 11 The Norton Anthology of English Literature, sixth edition, Vol. 1, edited by M. H. Abrams (New York and London: Norton, 1993), p. 460.
- 12 An excellent survey of writings by (mostly Italian with translations, but also from the first English) pen masters is given by: A.S. Osley, Scribes and Sources. Handbook of the Chancery Hand in the Sixteenth Century. Texts from the Writing-Masters. With an account of John de Beauchesne by Berhtold Wolpe (Boston, MA.: David R. Godine, 1980).
- 13 The outermost wing feather.

- 14 The hollow.
- A Newe Booke of Copies 1574. A facsimile of a unique Elizabethan Writing Book in the Bodleian Library, Oxford. Edited with an Introduction and Notes by Berthold Wolpe, R.D.I., (London: Oxford University Press 1962), without page numbers.
- William Caxton printed the first book in the English language 1474:
 Recuyell of the Histories of Troy. The first edition of the Canterbury
 Tales followed soon after in 1478. See for example: William Caxton.
 An Exhibition to Commemorate the Quincentenary of the Introduction of
 Printing into England (London: British Library, 1976). Lotte Hellinga describes and analysis the insecurities, that are connected to
 Caxton and the first prints: Lotte Hellinga, William Caxton and early
 printing in England (London: British Library, 2010) pp. 40-51.
- Other writing manuals show the writing hand as well, see for example John Davies, *The Writing Schoolemaster* (London 1636; facsimile: The English Experience Nr. 794, Amsterdam and Norwood: Walter J. Johnson 1976) p. 17.
- Role models for these kind of books are the ones of the Italian calligraphers. In Switzerland, one of the first Scribe's Books comes from Urban Wyss, Libellus valde doctus (Zürich, 1549). In Germany, the pioneering calligrapher was Johann Neudörffer the Elder (1497–1563) with his works Anweisung und eigentlicher Bericht, wie man einen jeden (Feder-)Kiel zum Schreiben erwählen, bereiten, teilen, schneiden und temperieren solt, or Fundament ... seinen schülern zu einer

- unterweysung gemacht and Gute ordnung und kurzer Unterricht ... Zierlichs schreybens. Some of his manuscripts are published in: Oliver Linke, Christine Sauer, Zierlich schreiben. Der Schreibmeister Johann Neudörffer d.Ä. und seine Nachfolger in Nürnberg, (Memmingen: Typographische Gesellschaft, 2007).
- 19 For a very precise analysis of the circulating relations between hands and quills see the chapter 'The Violence of the Letter: Instruments of the Hand' in Jonathan Goldberg, Writing Matter. From the Hands of the English Renaissance (Stanford, CA: Stanford University Press, 1990), pp. 57–107.
- 20 Erica Fudge, 'Renaissance Animal Things', Contents, 76, (2012), 86– 100.
- 21 George Bickham, The Universal Penman. Engraved by George Bickham [1741]. With an Introduction by Philip Hofer [1941], (Noderstedt: BN Publishing, facsimile 2012).
- 22 See the great work on English writing masters with lots of biographic and examples from copy-books: Ambrose Heal, The English Writing-Masters and their Copy-Books 1570-1800. A Biographical Dictionary & a Bibliography with an Introduction on the Development of Handwriting by Stanley Morison. Illustrated with Portraits of the Masters and Specimens of their Hands, (Cambridge: University Press, 1931). For George Bickham see pp. 16f. Handwriting on manuscripts and plates is the topic of a work by Joyce Irene Whalley, English Handwriting 1540-1853. An illustrated survey based on material in the National Art

- Library, Victoria and Albert Museum (London: Her Majesty's Stationery Office, 1969).
- See also the chapter 'Writing Versus Drawing' in Katherine Acheson, Visual Rhetoric and Early Modern English Literatur (Aldershot: Ashgate, 2013), pp.111–117. Acheson analysis three kinds of illustrations in copy-books: the frontispiece portrait, the 'floating or severed arm that holds a pen' (p. 114).
- 24 Sometimes written Gethinge.
- 25 Richard Gethinge, Calligraphotechnia [London, 1619] (Reprint Amsterdam and New York: Da Capo Press, 1973).
- 26 Martin Billingsley, The Pens Excellence (London, 1618, The English Experience, Number 84, Amsterdam and Norwood, 1977). On this book, see Ambrose Heal, The English Writing-Masters and Their Copybooks 1570–1800. A Bibliographical Dictionary & Bibliography (New York: Olms 1962), p. 18. One interesting feature of Billingsley's book (which cannot be elaborated here any further) is that he defends writing as an art even for women (C1, C2). The Pens Excellence also provides a section on Observations for the holding of the Pen (D3; D4).
- 27 Goldberg writes: 'Lingua, Penna Mentis Muta. 1. The pen is the mute tongue of the mind. 2. The tongue is the mute pen of the mind. 3. The mute pen is the tongue of the mind. 4. The mute tongue is the pen of the mind. 5. The tongue of the mind is a mute pen. 6. The pen of the mind is a mute tongue.' Goldberg, Writing Matter, p. 276.
- 28 Acheson, Visual Rhetoric and Early Modern English Literature, p. 115.

- 29 The historic relations between mathematics and writing is already a topos in very early Italian books on writing. See for example Sigismondo Fanti: Trattato di scrittura. Theorica et pratica de modo scribendi (Venezia 1514), ed. by Antonio Ciaralli and Paolo Procaccioli, notes on the text by Piero Lucchi (Rome: Salerno editrice, 2013).
- 30 Ian McNeil writes that Bramah was 'the first engineer to employ steam pipes for process heating in the making of beer.' Ian McNeil, *Joseph Bramah. A Century of Invention*, 1749–1851, Plymouth: David & Charles, 1968, p. 126. Bramah got various letters patents, one for his water-closet in 1778.
- 31 Other materials experimented with included horn, tortoiseshell, seashells, and precious stones: The Popular Encyclopedia; or, 'Conversations Lexicon:' Being a General Dictionary of Arts, Sciences, Literature, Biography, History, Ethics, and Political Economy, ed. By Sir D.K. Sandford, Thomas Thomson and Allan Cunnigham, Vol. VII (Glasgow and London: Blackie & Son, 1841), p. 733.
- 32 On the breeding and plucking of geese in rural Britian, see John Britton, The Beauties of England and Wales; or, Original Delineations, Topographical, Historical, and Descriptive, of Each County (London: Thomas Maiden, 1807), p. 554.
- 33 The Popular Encyclopedia, p. 732.
- 34 The Mirror, 18. April 1835.
- 35 'On Writing Materials. No. II. The History of Steel Pen', The Saturday Magazine, Volume the Eleventh, 1838, p. 64. The exact

- procedure of making the steel pens is described in Andrew Ure, A Dictionary of Arts, Manufactures, and Mines; Containing a Clear Exposition of Their Principles and Practice. (New York: D. Appleton & Company, 1868, earlier editions from 1840/1856), pp. 366-67.
- The Resources, Products and Industrial History of Birmingham and the Midland Hardware District: A Series of Reports, Collected by the Local Industries committee of the British Association at Birmingham, in 1865 (London: Robert Hardwicke, 1866), p. 634.
- The Industrial History of Birmingham lists the numbers: The numbers of actual makers of steel pens is twelve. The number of men employed, 360. The number of women and girls, 2,050. The amount of horse power employed may be estimated at 330, including say fifty employed in out-work rolling. The number of pens made weekly, 98,000 gross. The quantity of steel used weekly, 9½ to 10 tons. The value of pens per gross, 1½ d. to 1s., and of barrel-pens from 7d. to 12s. per gross, some of the larger pens being very much higher according to their size and finish.' Ibid., p. 635. For further evidence on the importance of the business for the Birmingham economy, see The Penny Cyclopedia of the Society for the Diffusion of Useful Knowledge, Vol. IV (London: Charles Knight & Co., 1835), p. 445.
- Henry Bore, The Story of the Invention of Steel Pens. With a Description of the Manufacturing Process by Which they Are Produced (New York: Ivison, Blakeman & Co, 1890).
- Finlay, Western Writing Implements, p. 45.

- 40 See for example the anonymous 'Zur Geschichte der Stahlfeder', Alte und Neue Welt. Illustriertes katholisches Familienblatt 19/12 (1885), 2; [O.F.], 'Etwas über die Stahlfeder', Frankfurter Zeitung, Nr. 262, 18 September 1872
- 41 Letters by His Majesty's Royal Letters Patent. S. Mordan & Co's Oblique Steel Pens. Patent granted September 20 September, 1831.
- 42 Marcel Mauss, 'Notion de technique du corps' [1934/36], in Sociologie et anthropologie, Introduction par Claude Lévi-Strauss (Paris: Presses Universitaires de France, 2013 [1950]), pp. 365–86.
- 43 Luke Hebert, The Engineer's and Mechanic's Encyclopedia, Comprehending Practical Illustrations of The Machinery and Processes Employed in Every Description of Manufacture of the British Empire, 2 vols., II (London: Thomas Kelly, 1836), p. 280.
- 44 The Popular Encyclopedia, p. 734.
- 45 Herman Melville, Moby-Dick; or, The Whale, ed. by Hershel Parker and Harrison Hayford (New York and London: Norton, 2002 [1967]), pp. 236, 240.
- 46 Melville, Moby-Dick; or, The Whale, pp. 240-41.
- 47 Roland Borgards, Kapitel 65: The Whale as a Dish. Situiertes Essen (forthcoming).
- 48 Herman Melville to Richard H. Dana Jr., New York May 1, 1850:. Melville, Moby-Dick; or, The Whale, p. 533.

- Herman Melville to Nathaniel Hawthorne, Arrowhead June 29, 1851: Melville, *Moby-Dick; or, The Whale*, p. 542.
- Melville, Moby-Dick; or, The Whale, p. 242. Henry Petrosky dedicates the chapter Poor Goose in his book on the toothpick to the use of quills and feathers as toothpicks; as in its application for writing, the flexibility of keratin was the advantage of the quill toothpick: Henry Petrosky, The Toothpick. Technology and Culture (New York: Alfred A. Knopf, 2007), p. 25–35.
- Unfortunately, no manuscript of Melville's Moby Dick has survived; see Peter Shillingsburg, 'Anglo-amerikanische Editionswissenschaft. Ein knapper Überblick', in Rüdiger Nutt-Kofoth, Bodo Plachta, H.T.M. van Vliet, Hermann Zwerschina, Text und Edition. Positionen und Perspektiven (Berlin: Erich Schmidt Verlag, 2000), pp. 143-64 (p. 152).
- Not using animals for writing at all would mean that neither the ink nor the writing surface is made of animal matter. But in writing processes the use of animal materials has a long tradition; they are found as ingredients for example in iron gall ink, fish glue (as a base for pin sharp letters), pigments (like the cochineal's carmine) and obviously in parchment and vellum.

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The Materiality of Writing

Manuscript Practices in the Age of Print

Eve Rosenhaft, Helga Müllneritsch & Annie Mattsson (Eds.)



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