Which who is he that may not learne of you,
Whom learning doth with his light's throne endow?

9.D2 A sonnet by Harriot

This somewhat mysterious poem Harriot took great pains over, and there is material relating to it in at least three places in his manuscripts. It seems to concern the sign rule for multiplication.

If more by more must needs make more
Then lesse by more makes lesse of more
And lesse by lesse makes lesse of lesse
If more be more and lesse be lesse

Yet lesse of lesse makes lesse or more
Use which is best keep both in store
If lesse of lesse you will make lesse
Then bate the same from that is lesse.

But if the same you will make more
Then add to it the signe of more.
The rule of more is best to use
Yet for some cause the other choose

So both are one, for both are true
Of this inough and so adeu.

9.D3 Examples of Harriot's algebra

(*a*) *The roots of a cubic equation*

From the original

$$\left.\begin{array}{r} a-b \\ a-c \\ a-d \end{array}\right| \sqcap\!\sqcup\ aaa - baa - bca - caa - bda - daa - cda - bcd.$$

It is deduced that I put b or c or d equal to a itself.

This symbolism on the left means $(a-b)(a-c)(a-d)$ in modern notation. Harriot showed that this has no roots apart from b, c and d.

(*b*) *A quartic equation with imaginary roots*

$$\left.\begin{array}{r} b-a \\ c-a \\ df+aa \end{array}\right| \sqcap\!\sqcup\ 0000 \qquad a \sqcap\!\sqcup\ b, c \qquad a \sqcap\!\sqcup\ \sqrt{-df}$$

(*c*) *Another quartic equation with imaginary roots*

$$12 \sqcap\!\sqcup + 8a - 13aa + 8aaa - aaaa$$

$$a \sqcap\!\sqcup\ 2, 6 \qquad \left.\begin{array}{l} a \sqcap\!\sqcup - \sqrt{-1} \\ a \sqcap\!\sqcup + \sqrt{-1} \end{array}\right\}\text{noetic roots}$$

This equation has no hypostatic roots other than 2 and 6. [. . .] But it has two other noetic ones.

(*d*) *A quadratic equation with complex roots*

$$25 \sqcap\!\sqcup\ 6a - aa$$

$$a \sqcap\!\sqcup\ 3 + \sqrt{-16}$$

$$a \sqcap\!\sqcup\ 3 - \sqrt{-16}$$

9.D4 Letter to Harriot from William Lower (1610)

Doe you not here startle, to see every day some of your inventions taken from you; for I remember longe since you told me as much, that the motions of the planets were not perfect circles. So you taught me the curious way to observe weight in Water, and within a while after Ghetaldi comes out with it, in print. a little before Vieta prevented you of the Gharland for the great Invention of Algebra. al these were your deues and manie others that I could mention; and yet too great reservednesse hath robd you of these glories. but although the inventions be greate, the first and last I meane, yet when I survei your storehouse, I see they are the smallest things, and such as in Comparison of manie others are of smal or no value. Onlie let this remember you, that it is possible by too much procrastination to be prevented in the honor of some of your rarest inventions and speculations. Let your Countrie and friends injoye the comforts they would have in the true and great honor you would purchase your selfe by publishing some of your choise works.

9.D5 John Aubrey's brief life of Harriot

Mr Hariot went with Sir Walter Raleigh into Virginia, and haz writt the *Description of Virginia*, which is printed. Dr Pell tells me that he finds amongst his papers, an Alphabet that he had contrived for the American Language, like Devills.