

Robert Sharrock and the *History of the Propagation & Improvement of Vegetables*

In an earlier Note, ‘Early Science in New College III: John Tayler, College Gardener, d. 1686, and a Library of Botanical Books’, William Poole gives several fascinating glimpses into gardening activities in New College during the seventeenth century.¹ We learn that Warden Pincke dug in the garden every morning, that the college employed a weeding woman, and that a bequest made by the college gardener John Tayler was used to purchase plant-related books. This note picks up on the invitation to take closer look at another New College gardener, Fellow Robert Sharrock (1630–1684) and his *History of the Propagation & Improvement of Vegetables . . .* (Oxford: Anne Lichfield for Thomas Robinson, 1660).² Given the ferment of gardening activity in New College and Oxford more widely in the mid-seventeenth century, I am curious about how the *History* may have been shaped by this context.

The *History* reflects how close reading and digging, plants and books, the library and the garden were, as well as telling a very local story about knowledge produced and published in and around New College towards the end of the Interregnum. It reflects the easy access this ‘Fellow of *New Colledge*’ (as he is presented on the title page) had to libraries and books, to a publishing house down the road, to college and physic gardens and a community of similarly curious scholars, experimenters and enquirers, most notably Robert Boyle.³ Sharrock was involved in the publication of several of Boyle’s works, and the list of books Sharrock donated to the college include a group of works by Boyle.⁴ The two prefatory poems, signed by ‘*Will Parker, Scholl: of New Coll*’ and ‘*Ed. Spencer Fell: of N.C.*’, strengthen the sense in which the *History* is a New College work.

It is tempting to imagine Sharrock moving between garden and library, perhaps setting a graft or two before returning to his books. The *History* clearly demonstrates the integration of the scholarly world of bookish learning and a growing dedication to empirical observation given formal backing around the same time as the founding of the Royal Society. These were not oppositional or mutually incompatible approaches, and did not simply map onto an Ancients versus Moderns divide. In the Epistle Dedicatory, addressed to Boyle, Sharrock explains how he went about writing it:

I gave my self the trouble to run over with my eye, all Books I could procure of these subjects, not intending to trust any, but thereby to be put in mind of the particulars, concerning which, I had no reason to have a Register ready in my head. Here fist my fortune was to fine a multitude of monstrous untruths, and prodigies of lies, in both Latine and English old and new Writers, worse in their kind then the stories in Sir *John Mandeval’s* Travels or in the History of Fryer *Bacon* and his Man *Miles*; or else what may be more ridiculously removed not onely from truth, but from any semblance thereof. And which moved me most at this very season, when we esteemed the World to be now awaked, I found in the Shops Authors newly set forth (I hope against their own wills) who seriously professed to have *made a select choice of Experiments* of this nature, *and to report nothing, but what from observation and experience they have certainly found true*, yet deserving not to have the credit of *Wecker* and *Porta*. Professions in such Papers, which seem to me at no time proper, but when the persons credits, together with their Books, are jointly to be set to sale.⁵

¹ William Poole, ‘Early Science in New College III: John Tayler, College Gardener, d. 1686, and a Library of Botanical Books’, *New College Notes* 7 (2016), no. 8.

² Robert Sharrock, *The History of the Propagation & Improvement of Vegetables, By the concurrence of Art and Nature . . .* (Oxford: Printed by A. Lichfield, Printer to the University, for Tho. Robinson, 1660).

³ This note is adapted from part of ‘Between the Field, the Library and the Garden: Translating and Transplanting the Book of Nature in Seventeenth-Century Oxford’, a chapter in a forthcoming anthology on field science institutions edited by Helena Ekerholm, Karl Grandin, Christer Nordlund & Patience Schell.

⁴ Sharrock’s donations are listed in New College Library’s benefactors register, pp. 97-8 and 115-16.

⁵ Sharrock, ‘The Epistle Dedicatory,’ in *The History of the Propagation & Improvement of Vegetables*.

Sharrock clearly had accumulated considerable experience in grafting and gardening, an art which required years of precise and patient trial and error ‘by the concurrence of art and nature’ – yet he explicitly begins not in the garden but in the library. He claims to have consulted ‘all Books I could procure on these subjects’, but where did he get his books? Where did he read them? There is a copy of the sales catalogue of the *Bibliotheca Sharrockiana* (London, 1711) for the auction of his and his son’s books in 1711 in the Bodleian Library (Broxb. 105. 17) advertising more than 2000 volumes on a wide range of subjects including natural history.⁶ A preliminary comparison of the books he mentions against the sales catalogue, the Bodleian Library catalogue of 1674, the Benefactor’s List and the New College catalogue yields some matches, but no striking patterns that I could see. It seems likely that many books, particularly the more recent publications on natural history and horticulture, would have been in informal circulation, and that he borrowed some from friends and contacts.

The *History* reflects Sharrock’s eclectic reading, presenting a patchwork of genres and styles—he himself declares it a rough work. He moves between catalogue-like lists of plants in alphabetical order, practical husbandry instructions, descriptions of experiments, rational discussions weighing the probability of truth-claims he has been unable to verify, ironic accounts of some of the ‘monstrous untruths’ he came across in his readings, a long list of queries about plants, eloquent descriptions of the seed and other providential forms, and finally, theological reflections that resemble Ray’s later work on natural theology.⁷ This eclecticism is also reflected in the wide range of authors referred to as authorities. However, Sharrock relies not only on textual authorities, but consults them alongside friends, professional groups (gardeners, husbandmen, woodsmen), custom, and hearsay. He evaluates the credibility of his sources, reasoning around any differences in his experience, in the absence of which he leaves ‘the Reader to his own trial, belief, or doubt.’⁸ At some points he simply hands over the word and quotes extensively from trusted sources, such as Parkinson and ‘Mr. *Blib* . . . who was both a Practicer himself, and questionless a very faithful and true Reporter of his experience.’⁹

One of Sharrock’s trusted sources is the Jacob Bobarts, father and son, keepers of the University Physick Garden. From several references to the Bobarts and the Garden, at least some of Sharrock’s observations and experiments took place there. Bobart is the first authority Sharrock mentions in the narrative to support the contested claim that ferns have seeds, backed up by the authority of the microscope.¹⁰ A curious case is the discussion on the transmutation of species, which the two Bobarts have sworn they had observed, but which Sharrock could not verify by his own observations:

and for satisfaction about the curiosity in the presence of Mr. *Boyle* I tooke up some bulbs of the very numericall roots whereof the relation was made, though the alteration was perfected before, where we saw the diverse bulbs growing as it were on the same stoole, close together, but no bulb half of the one kind, and the other half of the other: But the change-time being past it was reason we should believe the report of good artists in the matters of their own faculty.¹¹

⁶ *Oxford Dictionary of National Biography*, s.n. ‘Sharrock, Robert’, article by Anita McConnell.

⁷ These last-mentioned passages are particularly interesting, giving a glimpse of Sharrock the scholar and future clergyman who published *De officiis secundum naturae jus*, a refutation of Thomas Hobbes, the same year as the *History*. Yet in the latter work Sharrock explicitly steers clear of entering into contentious debates.

⁸ Sharrock, *History of the Propagation & Improvement of Vegetables*, p. 102.

⁹ *ibid.*, p. 87.

¹⁰ *ibid.*, p. 9.

¹¹ *ibid.*, p. 30.

This would not have been possible without numbered tallies which enabled the identification of the roots in question.¹² Numbered roots are a step towards making the world below ground knowable, which would otherwise be hidden from sight.

Seeking to observe the hidden world of plants is a recurring concern for Sharrock, for whom form was always linked to a providential function. He discusses the mystery of the sprouting seed, 'being beyond any ocular discovery of the most acute Searchers.'¹³ Windows in beehives are a measure to overcome such obstacles, also encountered when studying roots. In order to observe roots as they develop, he grows cuttings in glass vials: 'for prevention of the same hindrance the use of beds of a Diaphanous soyl, in as Diaphanous bounds, or plainly of water in a glasse, I have found a proper remedy'.¹⁴ He describes the orderly development of the roots, 'in very handsome order and proportions'. This is one of the experiments conducted indoors, bringing his activities closer to those of the laboratory.¹⁵

On different scales, a thorough understanding of location and place were important both for transplantation/propagation through seed and for grafting. The former requires knowledge of microclimates, a plant's natural habitat, as it were, and the latter requires an intimate knowledge of plant physiology. For an inoculation to be successful, the scion and the stock must be compatible with each other, particularly in terms of species and size. Following Hugh Plat, Sharrock suggests adapting a desk tool—a pair of sharpened compasses—and using it as 'an apt Instrument to cut away Bark for Inoculation, both for a true breadth and distance all at once; and so likewise with the same you may take off the bud truly to fit the same place again in the stock.'¹⁶ The different ways of propagation through grafting are collected on a single stock in the only figure in the book. As grafting required cutting, revealing the inner structure of a plant or tree, the effect was not unlike the dissections carried out in the anatomy theatre, with the significant difference that he worked with living organisms.

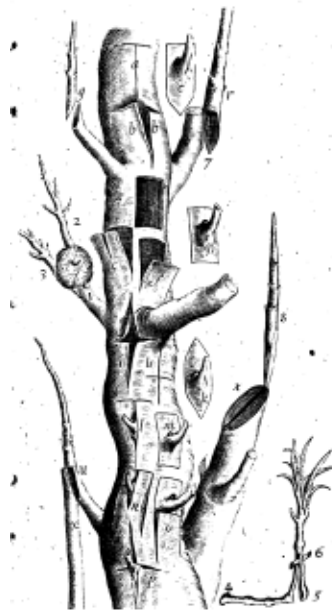


Plate from Sharrock, *The History of the Propagation & Improvement of Vegetables*, facing p. 60.

¹² Stephen Harris has recently discovered such a metal tally in a drawer at the Botanic Garden.

¹³ Sharrock, *History of the Propagation & Improvement of Vegetables*, p. 40.

¹⁴ *ibid.*, p. 55.

¹⁵ Sharrock conducted the experiment 'in a Room over my Laboratory'. Gardens often had 'laboratories' attached to them. For an overview of seventeenth-century (e)laboratories, see Steven Shapin and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life*, 2nd ed. (Princeton, 2011), note on p. 57.

¹⁶ Sharrock, *The History of the Propagation & Improvement of Vegetables*, p. 72.

Working in a garden stocked with plants collected from far and wide would necessarily foster an understanding of the relationship between a plant and its environment. Referring to Virgil, Sharrock states: 'For divers states of ground, and various Fermentations are required to different Plants, nor can any one Soyl indifferently and equally agree with all.'¹⁷ Plants requiring wet or damp conditions call for 'an artificial bog' like the one in the Physick Garden, 'artificially made by Mr. *Bobart*, for the preservation of Boggy Plants, where being sometimes watered, they thrive as well as in their natural places.' For other plants, their growing conditions can be adapted by either changing the environment *in situ*, or by planting in pots which can be moved into the hot house or into the shade.

The best shades are made by thin well pruned Hedges drawn through the Garden or Nursery, or by Mats laid over them, and underpropt by a frame of light poles: But all Seedlings, Flowers, or other Plants that are kept in Pots, are readily removed into convenient shade at pleasure.¹⁸

The garden was thus not a static space, but was like the field a combination of movement and rootedness in a particular place. Interestingly, the walls and neatly trimmed box hedges which are so associated with the formal, decorative garden, themselves can become tools. For instance, a brick wall can be used instead of dung beds to speed up germination. This combination of knowledge, skill and tools was needed in order to protect newly introduced plants and make acclimatization possible.

Acclimatization blurred the distinction between wild and cultivated species, which was evidently cause for some confusion. This distinction is often remarked upon by Parkinson, as in the case of the gillyflower which is, with the exception of one or two varieties, entirely a garden plant. A recurring question in Sharrock's *History* is whether the changes brought about by transplanting wild plants into the garden, such as a single anemone going double and the improvement of wild chicory, make it into a different plant. In the case of angelica seeds, he suggests that gardeners would do well to follow Nature's example of when to plant.¹⁹ Much improvement work in effect sought, through great expense and labor, to artificially create the growing conditions that had been described as already occurring naturally in warmer parts of the world.²⁰

Ultimately, Sharrock's observations and reading convince him of the providential order of nature as the work 'of a most Powerful, Skilful, and Wise Artist and Author.'²¹ He rejects Bacon's claim that branches grow in a random, chaotic fashion, on the basis of his observation of the orderly growth of roots, and of Thomas Browne's recent publication on leaves growing in a quincunx or lattice arrangement.²² Sharrock goes on to trace different arrangements of this pattern (the basic unit of which is the letter V), particularly drawing on his intimate knowledge of the structure of the stem and arrangement of buds. He is convinced that all such forms, even deviations or the lack of form, are providentially ordered to serve the plants optimal needs, particularly relating to propagation. As with the doctrine of signatures, Sharrock was interested in the relationship between form and function, and believed this relationship to be providential. However, it was not the function of plants as medicine for the descendants of Adam and Eve

¹⁷ *ibid.*, p. 135.

¹⁸ *ibid.*, pp. 107–8.

¹⁹ *ibid.*, p. 11.

²⁰ A manuscript *Natural History of Virginia* describes how 'apples from the kernel never degenerate into crabs or Wildings' and often bear fruit twice in one year, and hops grows well 'without y^e labour of hilling, or weeding'. (MS Sherard 38, fol. 54).

²¹ Sharrock, *The History of the Propagation & Improvement of Vegetables*, p. 147.

²² Thomas Browne, *Hydriotaphia, Urne-Buriall, or, a Discourse of the Sepulchrell Urnes Lately Found in Norfolk. Together With: The Garden of Cyrus, or the Quincunciall, Lozenge, or Network Plantations of the Ancients... Mystically Considered* (London, 1658).

that he focused on, but the function of form in the workings of the plant itself and its relationship to its environment. Thus for Sharrock, the legibility of the garden was in its patterns of growth and propagation (in contrast to the static space of the herbarium).

With ink stains on his fingers and earth beneath his nails, as it were, Sharrock could mediate between the often disparate accounts of ‘Gardeners that work’ and ‘Authors that write.’ However, there does seem to have been some tension for Sharrock, who would perhaps not have combined the two roles of author and gardener without Boyle’s encouragement. The *History* insistently tests truth claims against experience and reason, drawing on a wide range of authorities, texts and subject matter, while references to the recent troubles and to ongoing philosophical debate (particularly against Thomas Hobbes) are conspicuously absent. Thus Sharrock the scholar is both central to the *History* and in some sense deliberately held at bay. The respect with which Sharrock was held as an authority on gardening and in particular, the art of grafting is reflected in the success of the slim volume of the *History*, which was published in a second and third edition (1666 and 1672), and in John Evelyn’s references to the *History* in his monumental but unpublished *Elysium Britannicum*. Sharrock’s legacy to the college is most visible in the books he bequeathed, his plants having long-since perished, but the *History* is the lasting fruit of the close proximity of both worlds, the library and the garden.

Anna Svensson
KTH Royal Institute of Technology, Sweden
(formerly of New College)