

Third Series Vol. I part 1.

No. 209

Spring 2005

ISSN 0010-003X

Price £6.00

THE COAT OF ARMS

an heraldic journal published twice yearly by The Heraldry Society



THE COAT OF ARMS

The journal of the Heraldry Society



Third series

Volume I

2005

Part 1

Number 209 in the original series started in 1952

The Coat of Arms is published twice a year by The Heraldry Society, whose registered office is 53 High Street, Burnham, Slough SL1 7JX. The Society was registered in England in 1956 as registered charity no 241456.

Founding Editor

John Brooke-Little, C.V.O., M.A., F.S.A., F.H.S.

Honorary Editors

C. E. A. Cheesman, M.A., PH.D., Rouge Dragon Pursuivant

M. P. D. O'Donoghue, M.A., Bluemantle Pursuivant

Editorial Committee

Adrian Ailes, B.A., F.S.A., F.H.S.

John Goodall, F.S.A.

Andrew Hanham, B.A., PH.D.

Advertising Manager

John Tunesi of Lionam

The editors wish to thank Thomas Woodcock (Norroy and Ulster King of Arms), Robert Yorke, Christopher Harvey and John Rogers for assistance in the preparation of this issue.

JOHN DEE'S CREST, AND ARMS IN HIS 'MATHEMATICAL PREFACE'

Alistair Kwan

The sixteenth-century scholar John Dee (1527, London – 1608, Mortlake, Surrey) entertained many interests, all underlaid by mathematics. It was thus no accident that he wrote the preface to the first English translation of Euclid's *Elements of Geometrie*.¹ The preface lays out Dee's taxonomy of the mathematical arts, explains their great importance to establishing Britain's future, and hence urges support from Crown and State. Dee claims his intellectual heritage in his opening words:

Divine Plato, the great Master of many worthy Philosophers, and the constant avowher, and pithy perswader of Unum, Bonum, and Ens: in his Schole and Academie, sundry times (besides his ordinary Scholers) was visited of a certaine kinde of men, allured by the noble fame of Plato, and the great commendation of hys profound and profitable doctrine.

As is usual in Renaissance print, the initial D (**Figure 1**) is enlarged and ornamented, and in this case printed from a custom woodcut but not coloured or gilded. It contains a coat of arms—a finely detailed lion rampant within a bordure engrailed—with a nearly equilateral triangle above them, and a peculiar symbol beneath.

The arms almost match those recorded in the grant of a crest in 1576 (six years after the *Elements* were published) by Robert Cooke, then Clarenceux King of Arms: *Gules a lion rampant within a bordure indented or*. If the shield in the *Elements* had an indented bordure too, it would immediately read as Dee's, presumably by inheritance. But because the bordure is engrailed, we naturally ask whether these arms are really his. The difference may indicate another individual, perhaps someone whose financial, political or moral support contributed to this work. Or perhaps the difference is no deeper than the well-known spelling variations that colour Elizabethan texts. A resolution can be drawn by considering the arms in conjunction with the other parts of the initial which, as we shall see, point strongly to John Dee.²

¹ *The Elements of geometrie of the most auncient philosopher Euclide of Megara. Faithfully (now first) translated into the Englishe toung by H. Billingsley... Whereunto are annexed certaine scholies, annotations, and inuentions of the best mathematiciens... With a... præface made by M. I. Dee, specifying the chiefe mathematicall sciences, what they are, and whereunto commodius: where, also, are disclosed certaine new secrets mathematicall and mechanickall, until these our daies greatly missed* (London: imprint John Daye, 1570). It should be noted that this is not just a direct translation, but is expanded with commentary that compares Euclid's system with the systems of other important scholars in later centuries.

² Dee's *Letter Apologeticall*, which he presented to the Archbishop of Canterbury in 1599 to seek rehabilitation into British circles after an ill-fated sojourn with Emperor Rudolph, marshalls five coats of arms, including this one, into one, quarterly of six. The arms described here appear (with indented bordure) in the first and sixth places. This quarterly coat of arms is left for a future study.



Figure 1: Initial from John Dee's Mathematical Preface to Euclid's *Elements of Geometrie* translated by Billingsley (London 1570). Cushing/Whitney Medical Library, Yale University.

The letter itself is obviously the first letter of Dee's name, and its homophone, as well as being the first letter of 'Divine'. That may appear to refer to Dee's brushes with divinity during his conversations with angels (whom he reached through a scrying stone), but those encounters did not begin until later, c. 1581. And the letter D could obviously stand for another Dee, or another surname altogether. The remaining two items offer an attribution more conclusive.

The triangle above the shield can be understood as the Greek letter delta, which Dee used as his own initial in his notebooks. It may also be connected with the crest that Dee received in the 1576 grant (Plate 3): a lion sejant guardant, in the dexter forepaw a cross 'Cadwalladrine' (i.e. formy fitchy), the sinister paw resting on a 'Tetrahedre six-sided'.³ On the cross is a scroll with the words *hic labor*, and on the pyramid another scroll that reads, *hoc opus*. The text may have come from the *Aeneid*—where Aeneas is advised that the descent to Hell is easy, but getting back is hard—or perhaps Ovid's *Ars amatoria*, where Ovid describes the selfish suitor's ultimate aim, namely to get without giving.⁴ In both cases, the words refer to a substan-

³ CA record Mss Misc. Grants 1/143 and B.EDN/77.

⁴ Virgil, *Aeneid* vi 126–129: 'facilis descensus Averno... sed revocare gradum superasque evadere ad auras, hoc opus, hic labor est'. Ovid, *Ars amatoria* i 453: 'Hoc opus, hic labor est, primo sine munere iungi'. At B.EDN/77 (see plate 3) it seems that the upper scroll originally read *hinc labor*, and was later corrected.

JOHN DEE'S CREST

tial task with a greatly desired outcome. The scrolls may hence reflect Dee's efforts to fortify his country's intellectual weaknesses in spite of a stormy headwind that accused him of wielding black magic. Dee laments these troubles in a few angry lines of the Mathematical Preface where he did not welcome parody and persecution from his 'Brainsicke, Rashe, Spitefull, and Disdainfull Countrey men'.⁵ In Dee's eyes they clearly erred, for publication of an English *Euclid*, like the publication of many other anglophone technical treatises during the Tudor and Stuart reigns, would help to raise Britannia up to the same intellectual poise as her Continental neighbours. Whether the crest motto intentionally refers to Dee's work for the public good (in spite of the public response) can be only conjectured here, but given the circumstances, this explanation would seem apt.

The crest grant prescribes also a six-sided tetrahedron, which would seem to have two sides too many. But understanding the blason to mean a six-edged pyramid gives the four-faced solid. Its faces are triangular, matching Dee's delta. The tetrahedron may therefore have been chosen as the delta's three-dimensional substitute (for practicability), or as the simplest solid that can be made from triangles. Another possible meaning derives from alchemical notation, which used the upwards-pointing equilateral triangle to mean elemental fire. According to Divine Plato's dialogue *Timaeus*, the regular tetrahedron is the shape of elemental fire particles. Fire, according to both Plato and Aristotle, is the lightest terrestrial element, and rises always upwards towards the celestial realm. The tetrahedron may hence suggest Dee's aspirations towards higher knowledge of a Hermetic kind, given by divine inspiration from the upper, æthereal, realm.

The crest's cross Cadwalladrine likely points to Dee's Welsh ancestry: he was grandson of the first Dee, Bedo the Great, who was standard-bearer to the Lord de Ferrars at the siege of Tournai in 1513, when the city was captured by Henry VIII. Bedo's surname was phonetically anglicised from the Welsh, Ddu.⁶ According to John Dee's own testimony, his ancestry flows from Arthurian times, in the lineage of ninth-century Welsh prince Rhodri Mawr (Roderick the Great).⁷ The cross Cadwalladrine hence refers simultaneously, though perhaps only coincidentally, to that same Celtic-cum-Arthurian-cum-Druidic past on which Tudor intellectuals modelled Britain's Renaissance, in contrast to Continental revivals of Greece and Rome.

The crest's cross may also refer—by similarity of form—to the remaining item in our initial, the symbol beneath the arms, Dee's hieroglyphic monad (**Figure 2**).

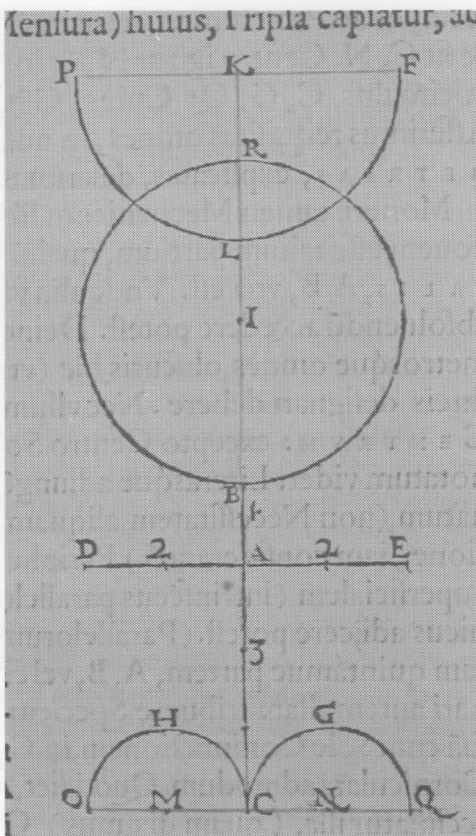
⁵ Dee, 'Mathematical Preface', fo. A.ij.

⁶ Ddu is an adjectival form of du (black). This explains why Dee is sometimes referred to as 'Black John' or 'Black Jack.'

⁷ Dee's self-declared pedigree is in BL Ms Cotton Charter XIII, art. 39; cf Bartrum, *WG*, Rhys ap Iewdwr 14. Dee also asserted his Welsh identity through the legend of an early colonization of the New World by Madoc, a younger son of the twelfth-century prince Owen Gwynedd. Shortly before the voyages of Sir Walter Raleigh, Dee put this forth as grounds for a Britannic claim to much of North America; see Robert W. Barone, 'Madoc and John Dee: Welsh myth and Elizabethan imperialism', *Elizabethan Review* (Autumn 2000; <http://www.jmucci.com/ER/articles/Dee.htm>). Dee's open Welshness was particularly timely, given that the reigning House of Tudor was likewise of Welsh descent.

THE COAT OF ARMS

Figure 2: Monad proportions from John Dee, *Monas hieroglyphica* (Antwerp 1564).
Cushing/Whitney Medical Library, Yale University.



Dee published his design and rationale for the hieroglyphic monad in 1564, six years before prefacing this translation of Euclid.⁸ The monad itself is designed on Hermetic alchemical and astrological principles to exploit astral influences. Close inspection will reveal that the monad contains the signs for all of the (then known) planets: the sun, moon, Mercury, Venus, Mars, Jupiter, Saturn. It also contains signs for Taurus and Aries, and the four elements, and several other entities of Hermetic significance. Incorporating all of these signs, Dee intended that the monad would draw influences from each of the represented sources. The signs can be a little hard to spot, however, because they are drawn to peculiar proportions. Dee determined those proportions mathematically, according to the quadrivial science known as 'music'. Mathematical music dealt essentially with tuning theory, explaining in Pythagorean and Platonist terms why some musical intervals are harmonious, others dissonant. By comparing the lengths of string or pipe needed to produce the note, one

⁸ John Dee, *Monas hieroglyphica* (Antuerpiæ: G. Silvius typog. regius, excud., 1564). See also the English translation by Michael T. Walton, 'John Dee's *Monas hieroglyphica*: Geometrical cabala', *Ambix* 23 (1976), pp. 116–123.

finds that consonant intervals correspond to ratios of small whole numbers, i.e. simple fractions. The octave, for instance, is produced by string lengths in a ratio of 2:1; the perfect fifth by 3:2.⁹ Less consonant intervals correspond to more complicated ratios. Good tuning, in essence, is numerical simplicity. The numerical relationships thus obtained were applied to cosmology and astrology, peaking in the 'music of the spheres' that Kepler derived in his *Mysterium cosmographicum* only a few decades later.¹⁰ Hermeticists applied these numbers also to the built environment, hence the harmonious proportions sought by Renaissance gardeners and architects. In the hieroglyphic monad, harmonious proportions give the lengths of the component lines and the radii of the arcs: all are small whole numbers, so that the hieroglyphic monad embodies all of the most harmonious consonances. When the planets enter favourably-tuned configurations, then, the monad would resonate, in a manner analogous to an archlute's drone strings or a Vitruvian theatre's sounding vessels: the drone strings and sounding vessels catch, enrich and amplify desirable sounds.¹¹ When the planetary configurations were less encouraging, the monad, like the drone strings and sounding vessels, would respond less. It would thus attract beneficent influences, while maleficent ones would be held at bay. The monad's full meaning is of course more complicated and hence left to Dee's explanation, but this outline of symbolic representation and resonant numerical harmony give enough for our present purpose.

In our example, the monad sits underneath a variation upon Dee's arms, which is in turn under the delta corresponding to his name and the word 'Divine', all of which is enclosed by a D standing for the same two words. The monad belongs categorically to John Dee, and to no other.

All four parts of the ornamented initial are hence coherent when interpreted as representing John Dee. The shield, with its engrailed border, is therefore most likely an accidental variation, rather than the arms of someone else.

⁹ Myth—routinely given in Renaissance and medieval accounts of music theory—attributes this discovery to empirical work by Pythagoras himself, working with a monochord. He found, for instance, that an octave was produced by halving the length of the string.

¹⁰ Johannes Kepler, *Prodromus dissertationum cosmographicarum, continens mysterium cosmographicum de admirabili proportionione orbium coelestium: deque causis coelorum numeri, magnitudinis, motuumque periodicorum genuinis & propriis, demonstratum per quinque regularia corpora geometrica* (Francofurti: Recusus typis E. Kemperi, sumptibus G. Tampachii, 1621). Cosmic harmony does not seem to have been concerned with tempering, important in both quadrivial and practical music, which aims to make more keys useful by distributing a mismatch called the 'Pythagorean comma'. Tempering slightly alters the intervals, and hence compromises the clean mathematical ratios favoured by Renaissance Platonists and Hermeticists.

¹¹ Vitruvius, *De Arch.* v 4-5.



Confirmation of arms and grant of a crest to John Dee, 1576.

CA record Ms B.EDN/77. See p. 10.