οὐλομένη ensured, however, that to most people the feminine participle would not, in Protagoras' example, appear to be a solecism.

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fact be masculine, ὁ κάρδοπος, but that it should be ἡ καρδόπη (678ff.). Here, as well as in lines 681ff., some theory about consistency of word ending and gender may be implied. The passages from Aristotle and Aristophanes have no direct bearing on that concerning Protagoras' statement about solecism in the *Sophistici Elenchi*, nor can they be considered direct parallels, but they do seem to reflect similar preoccupation with the possible linguistic peculiarities that proper names could be used to illustrate.

ARISTOTLE ON SPERM COMPETITION IN BIRDS

In *Generation of Animals* (730a7–9), Aristotle reports that if, after impregnation by a first male, a second male copulates with a hen while the eggs are forming, the whole brood will take after the second cock: ἐάν τε ὑφ' ἑτέρου ὠχευμένη <ᾖ> καὶ ἔτι ὠχροῦ ὄντος, κατὰ τὸν ὕστερον ὀχεύσαντα τὸ γένος ἀποβαίνει πᾶν τὸ τῶν νεοττῶν ('And if she is covered by another male while the egg is still yellow, the whole brood of young takes after the male which copulated later'); he goes on to remark that high-quality poultry-breeders imitate the process artificially. The assertion is repeated at 757b2–3 καὶ τὰ προωχευμένα ὑφ' ἑτέρου γένους τῶν ἀρρένων μεταβάλλει τὴν φύσιν εἰς τὸν ὕστερον ὀχεύοντα ('and the eggs previously fertilized by another breed of male change their nature to <that of> the male which copulates later') and in *HA* 560a9–14 Γίνεται δὲ τὰ ὑπηνέμια γόνιμα καὶ τὰ ἐξ ὀχείας ἤδη ἐνυπάρχοντα μεταβάλλει τὸ γένος εἰς ἄλλο γένος, ἐὰν πρὶν μεταβαλεῖν ἐκ τοῦ ὠχροῦ εἰς τὸ λευκὸν ὀχεύηται ἡ τὰ ὑπηνέμια ἔχουσα ἢ τὰ γόνῳ εἰλημμένα ἐξ ἑτέρου ὄρνιθος· καὶ γίνεται τὰ μὲν ὑπηνέμια γόνιμα, τὰ δὲ προϋπάρχοντα κατὰ τὸν ὕστερον ὀχεύοντα ὄρνιθα ('Wind-eggs become fertile, and those already existing from a copulation change their nature to another nature, if the hen bearing the wind-eggs or the fertilized eggs is covered by another bird before they change from yellow to white. And the wind-eggs become fertile and the existing eggs take after the bird which copulates later.') Arthur Platt, the translator and editor in the Oxford Aristotle series, was scathing: 'A. can hardly be mistaken about the habits of Greek breeders, and such people have strange fancies, but it is a very astonishing statement.'[1] Yet in fact, Aristotle (and his informants) were right,[2] though this was established only in the course of the last century, and the mechanisms involved are still the subject of investigation. Poultry breeders have been aware of the phenomenon for some seventy years,[3] while the underlying mechanisms of sperm competition, and in particular the principle of 'last male precedence', have been

1 A. Platt, *Aristotle* De Generatione Animalium (Oxford, 1910), ad 730a7–9 [there is no pagination].

2 Substantially, though modern studies of mate substitution or artificial insemination using dissimilar males report proportional advantage (c. 70–90 per cent) rather than complete dominance: T. R. Birkhead and A. P. Møller, *Sperm Competition in Birds: Evolutionary Causes and Consequences* (London, 1992), 70–6.

3 The earliest studies cited by Birkhead and Møller (n. 2), 73 date from the later 1920s.

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investigated and elucidated in the last few decades.[4] Indeed, Aristotle's observation was cited in a specialist journal in 1961, though at second hand,[5] but I do not think that the three passages have previously been cited together in this connection, and since they may not be familiar to classicists, it seems worth seeking wider publicity for another case in which Aristotle's empirical observations of biology, though apparently bizarre, have been vindicated by modern science.[6]

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[4] Birkhead and Møller (n. 2), esp. 69–81; more recent developments are surveyed in T. R. Birkhead, 'Sperm competition in birds: mechanisms and function', in id. and A. P. Møller (edd.), *Sperm Competition and Sexual Selection* (London, 1998), 579–622, esp. 580, 598–604.

[5] L. F. Payne and A. J. Kahrs, 'Competitive efficiency of turkey sperm', *Poultry Science* 40 (1961), 1598–1604 refer to 'Aristotle G. A., 2. 3 737 a30' [*sic*] as quoted by 'U. Aldrovandi (1599–1603) Ornithology [i.e. *Ornithologiae hoc est de avibus historiae*, Bologna] Volume II Book XIV pp. 183–352. Translated from the Latin by L. R. Lind, 1960 (Manuscript in Kansas State University Library)'; this was subsequently published as L. R. Lind, *Aldrovandi on Chickens* (Norman, 1963), the relevant passage being on pp.74–5. There is some confusion here: the erroneous citation of Aristotle in Payne and Kahrs (and so presumably in Lind (1960) [*non vidi*]) is the immediately preceding one in Aldrovandi ('*Lib.2 de Generat. c.*3'); this is correctly placed in Lind (1963), but the relevant citation ('*Lib.1 de Generat. c.20*') is missing there. Aldrovandi's account of the passage reads: 'longe aliter docet Aristoteles, dum avem quae ovem coitu conceptum gerit, si cum alio mare coierit, simile eius, quocum postea coivit, omne pullorum genus excludere statuit, ideoque nonnullos, qui, ut Gallinae generosae procreentur, operam dant, ita mutatis admissariis facere' (cited from *Ulyssis Aldrovandi Ornithologiae* [Frankfurt, 1610], XIV, 99a11–18, abbreviations resolved; I am grateful to the Bodleian Library for allowing me access to John Locke's copy of the work).

[6] A similar case concerns reproduction in octopuses (specifically, the transfer of the sperm from male to female through hectocotylization of one of the male's tentacles), which *had* been confirmed by 1910 (see Platt [n. 1] on *GA* 720b32–6; also J. Barnes, *Aristotle* [Oxford, 1982], 10–11), though here Aristotle disagrees with the fishermen whose correct account he reports.

A PUN IN ANTIPHANES (fr. 225 K-A = ATH. 60C–D)

τὸ δεῖπνόν ἐστι μᾶζα κεχαρακωμένη
ἀχύροις, πρὸς εὐτέλειαν ἐξωπλισμένη,
καὶ βολβὸς εἷς <τις> καὶ παροψίδες τινές,
σόγχος τις ἢ μύκης τις ἢ τοιαῦθ' ἃ δὴ
δίδωσιν ἡμῖν ὁ τόπος ἄθλι' ἀθλίοις.
τοιοῦτος ὁ βίος, ἀπύρετος, φλέγμ' οὐκ ἔχων

οὐδεὶς κρέως παρόντος ἐσθίει θύμον,
οὐδ' οἱ δοκοῦντες πυθαγορίζειν

τίς γὰρ + οἶδ' ἡμῶν τὸ μέλλον ὅ τι παθεῖν
πέπρωθ' ἑκάστωι τῶν φίλων; ταχὺ δὴ λαβὼν
ὄπτα μύκητας πρινίνους τουσδὶ δύο

Our dinner is barley-cake palissaded with chaff, armed for cheapness, and one bulb and some side-plate dainties: some sow-thistle or a mushroom or the sort of wretched things the locality provides for wretched us. Such is our life, unfevered and uninflamed.

Nobody eats *thymon* when there's meat on the table, not even those who make out that they are Pythagoreans.

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