

Bad Bronze

Thomson, George

DOI:

[10.1017/S0009840X00097067](https://doi.org/10.1017/S0009840X00097067)

License:

None: All rights reserved

Document Version

Publisher's PDF, also known as Version of record

Citation for published version (Harvard):

Thomson, G 1944, 'Bad Bronze', *The Classical Review*, vol. 58, no. 02, pp. 35-37.
<https://doi.org/10.1017/S0009840X00097067>

[Link to publication on Research at Birmingham portal](#)

Publisher Rights Statement:

© Cambridge University Press 1944

Eligibility for repository: checked July 2014

General rights

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- Users may freely distribute the URL that is used to identify this publication.
- Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- Users may not further distribute the material nor use it for the purposes of commercial gain.

Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

Take down policy

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact UBIRA@lists.bham.ac.uk providing details and we will remove access to the work immediately and investigate.

The Classical Review

<http://journals.cambridge.org/CAR>

Additional services for *The Classical Review*:

Email alerts: [Click here](#)

Subscriptions: [Click here](#)

Commercial reprints: [Click here](#)

Terms of use : [Click here](#)



Bad Bronze

George Thomson

The Classical Review / Volume 58 / Issue 02 / December 1944, pp 35 - 37
DOI: 10.1017/S0009840X00097067, Published online: 27 October 2009

Link to this article: http://journals.cambridge.org/abstract_S0009840X00097067

How to cite this article:

George Thomson (1944). Bad Bronze. The Classical Review, 58, pp 35-37 doi:10.1017/S0009840X00097067

Request Permissions : [Click here](#)

is a technical sense of *ἐπισκοπεῖν* and *ἐπισκοπεῖσθαι*, which in this connexion often mean not merely 'visit' (as the dictionaries translate them), but 'visit and look after' or simply 'look after' a sick person. So, for example, Xenophon, *Cyrop.* viii. 2. 25, *καὶ ὅποτε δέ τις ἀσθενήσειε τῶν θεραπεύεσθαι ἐπικαιρίων, ἐπεσκόπει καὶ παρέιχε πάντα ὅτου ἔδει*, and *Mem.* iii. 11. 10, *καὶ ἀρρωστήσαντός γε φίλου φροντιστικῶς ἐπισκέψασθαι*, and especially [Demosthenes] lix. 56, *ἐβάδιζον γὰρ πρὸς αὐτόν, ὡς ἡσθένει καὶ ἔρημος ἦν τοῦ θεραπεύσοντος τὸ νόσημα, τὰ πρόσφορα τῇ νόσῳ φέρουσαι καὶ ἐπισκοπούμεναι ἵστε δῆπου καὶ αὐτοὶ ὅσου ἀξία ἐστὶ γυνὴ ἐν ταῖς νόσοις, παροῦσα κάμνοντι ἀνθρώπων*, and Demosthenes, liv. 12 *ὡς οὖν καὶ ταῦτ' ἀληθῆ λέγω, καὶ παρηκολούθησέ μοι τοιαύτη νόσος, ἐξ ἧς εἰς τοῦσχατον ἦλθον, ἐξ ὧν ὑπὸ τούτων ἔλαβον πληγῶν, λέγε τὴν τοῦ ἱατροῦ μαρτυρίαν καὶ τὴν τῶν ἐπισκοπούντων*, where the context shows that strictly medical evidence is being given.

It may be added that l. 1248 of the *Agamemnon*

ἀλλ' οὔτι παιὼν τῶδ' ἐπιστατεὶ λόγῳ

seems to show the same technical use of *ἐπιστατεῖν*, for the physician in charge of a case, which I have mentioned as Hippocratean.

(4) *Agamemnon* 76 ff. (I print Murray's Oxford text)

ὁ τε γὰρ νεαρὸς μυελὸς στέρνων
ἐντὸς ἀνάσσω
ισόπρεσβυς, Ἄρης δ' οὐκ ἔνι χῶρα,
†τόθιπερ γήρωσ φυλλάδος ἦδη
κατακαρφομένης τρίποδας μὲν ὁδοῦς
στείχει, παιδὸς δ' οὐδὲν ἀρείων
ὄναρ ἡμερόφαντον ἀλαίνει.

I wish to discuss here only the latter part of l. 78, Ἄρης δ' οὐκ ἔνι χῶρα.

The manuscript tradition is pre-

dominantly for ἐνι (= ἔνεστι), though M has ἐνι, and the impossibility, in tragic anapaests, of treating the word as ἐνί (= ἐν) was implicitly recognized by all the early editors, and explicitly asserted by Hermann against Boissonade's proposal to follow Ven. 468 in reading ἐνί χῶρα. It was left to Kirchhoff, Verrall, Headlam, and Thomson to print and defend this reading without even raising the question of the legitimacy of the use.

Nevertheless Hermann and others have rightly felt that χῶρα is an awkward appendage to the self-sufficient words Ἄρης δ' οὐκ ἐνι, so well matched by the οὐκ ἔνεστ' Ἄρης of *Suppl.* 749.

Many emendations have been proposed, but none is convincing, and I would suggest another, which involves practically no change, and produces excellent sense: Ἄρης δ' οὐκ ἐνι χῶρα (= Ἄρης δὲ καὶ ὄρα οὐκ ἔνεισι).

The arrangement of the words is unusual, but not really difficult. I have found no exact parallel, but a similar freedom in the handling of paired negations is common in Aeschylus: for instance, *P.V.* 172 ff.

καὶ μ' οὔτι (οὔτοι M) μελιγλώσσοις πειθοῦς
ἐπαοιδάσιον θέλξει, στερεάς τ'
οὔποτ' ἀπειλὰς πτήξας τὸδ' ἐγὼ
καταμηνήσω.

Sept. 399

λόφοι δὲ κώδων τ' οὐ δάκνουσ' ἄνευ δορός.

Agam. 228

λιτὰς δὲ καὶ κληδόνας πατρώους
παρ' οὐδὲν αἰῶνα παρθενείον (τ')
ἔθεντο φιλόμαχοι βραβῆς.

Eum. 389

τίς οὖν τὰδ' οὐχ ἄξεταί
τε καὶ δέδοικεν βροτῶν . . . ;

D. S. ROBERTSON.

Trinity College, Cambridge.

BAD BRONZE

Aesch. *Ag.* 390-3 *κακοῦ δὲ χαλκοῦ τρόπον τρίβῳ τε καὶ προσβολαῖς μελαμπαγῆς πέλει δικαιωθεῖς.*

IN *Proc. Brit. Acad.*, vol. xxviii, pp. 17-18 ('Aeschylus: New Texts and Old Problems') after arguing that what is needed in Aeschylean studies 'is not a new creed, Marxist or another, applied to, or enforced upon, the work

of the poet, but observation, more observation, and ever more observation', Professor Fraenkel writes of the passage quoted above: 'Some interpreters have attempted to blunt the edge of the phrase by using non-committal circumlocutions, others to persuade us that *χαλκός* may mean "gold",

which is of course impossible. Those who do not play such tricks produce something like this: "Like to false bronze betrayed by touch of sure-testing stone" (Prof. G. Thomson). Was ever a Greek half-witted enough to believe that you could test bronze with the touchstone, *βάσανος*? And what about the alleged meaning of the word *δικαιοῦν*, which seems quite inconsistent with its well-known usage? . . . What the passage really means was perfectly understood by William Sewell. . . . "And unto brass adulterate like, blackened with bruise and many a blow, to sentence he is brought."

If the idea of the touchstone is to be excluded, what is the point of the simile? In what sense is the sinner, blackened and bruised and brought to sentence, comparable with bad bronze? That is the root of the problem. Sewell's rendering does not touch it. Professor Fraenkel raises it, then abruptly throws it aside. Headlam's interpretation, which I accepted, is admittedly inadequate, but, as I shall now try to show, it was a step in the right direction and sound as far as it goes.

Gold was assayed in ancient times by rubbing it on the so-called *Λυδία λίθος*, which, if the metal was impure, left a black streak (Bacch. fr. 10, Theog. 449-51). This process inspired the traditional image of the unrighteous man or false friend whose true nature is revealed by Time the touchstone. The relevant passages have been collected by Headlam. But there is no evidence that *χαλκός* (copper, bronze, brass) was, or could be, tested in this way. Why then have we *χαλκοῦ* here instead of *χρυσοῦ*?

A similar problem is raised by another passage (611-12), *οὐδ' οἶδα τέρψιν οὐδ' ἐπίμογον φάτιν ἄλλου πρὸς ἀνδρὸς μᾶλλον ἢ χαλκοῦ βαφάς*. Clytemnestra is pretending to have been an exemplary wife: 'I know no more of delight or disrepute at the hands of other men than I know of—tempering steel.' That is what we should say in English, but the Greek says 'tempering bronze'. The process of tempering iron by heating it in the fire and then plunging it in water (*Od.* 9. 391-3) is still familiar,

but no art of tempering bronze is known to modern metallurgy. It has been described as a 'lost art', but according to W. Gowland ('Ancient Bronze', *The Mining Magazine*, vii. 458-9) it never existed. 'In the old days', he says, 'the bronze castings for tools, weapons, etc., were hammered at the cutting edges to produce the right degree of hardness and temper. No other method was employed, such as heat treatment.'

There is very little in ancient literature to set on the other side: Antiphon 40 Diels = Poll. 7. 169 *Ἀντιφῶν δὲ εἶρηκε βάψιν χαλκοῦ καὶ σιδήρου*, Virg. G. 4. 172-3 *stridentia tingunt aera lacu*, Procl. *ad Hes. Op.* 142 *καὶ τῷ χαλκῷ πρὸς τοῦτο* (sc. *ὄπλων κατασκευῆν*) *ἐχρῶντο, ὡς τῷ σιδήρῳ πρὸς γεωργίαν, διὰ τινος βαφῆς τὸν χαλκὸν στερροποιούντες, ὄντα φύσει μαλακόν*. From the context in Pollux it appears that Antiphon did not mean tempering at all, but painting; Virgil follows Aeschylus; and Proclus is misled by the poets. The scholiast's paraphrase of Aeschylus is noteworthy: *ὡςπερ οὐκ οἶδα τὰς βαφὰς τοῦ σιδήρου, οὕτως οὐδὲ ἤδονην ἑτέρου ἀνδρός*. He takes 'bronze' simply as a poetical substitute for 'iron'.

Why should the poets have described bronze as though it was iron? Not because they were ignorant or half-witted. In their day weapons were made of iron, but the epic tradition, derived from the Bronze Age, was so strong that *χαλκεύς* became the accepted term for any kind of smith (*Od.* 9. 391) and *χαλκός* persisted in poetry as the metal of arms and armour: Alcaeus 54, Simon. 144, Pind. I. 3. 33, 6. 25, N. 1. 16, etc. Aeschylus himself describes the battle of Salamis as though it has been fought with bronze (*Per.* 408 *χαλκήρη στόλον*, 456-7 *εὐχάλκουσιν ὄπλοισι*), and Pindar characterizes iron by a contradiction in terms (oxymoron) as *πολιῷ χαλκῷ* (*P.* 3. 48, 11. 20), the epithet being transferred from *Il.* 9. 366 *πολιόν τε σίδηρον*, cf. *P.* 3. 48 sch. *τῷ πολιῷ καὶ λαμπρῷ σιδήρῳ*, where *χαλκῷ* is explained correctly but not *πολιῷ*. Similarly in

χαλκοῦ βαφάς Aeschylus takes advantage of this conventional association of χαλκός with weapons of war to suggest a weapon that is to be steeped not in water, like iron, but in blood: *P.V.* 863 δίθηκτον ἐν σφαγαίσι βάψασα ξίφος.

Returning to the passage before us, we see it in a new light. The allusion to bronze reminds us, if we need reminding, that Paris has been punished by the Trojan War. The φῶς αἰνολαμπές (389) is the blaze of the burning city, which he has involved in his own ruin (395 πόλει πρόστριμμα θεῖς ἄφερτον), cf. 818 καπνῶ δ' ἀλοῦσα νῦν ἔτ' εὔσημος πόλις, Eur. *Tr.* 1295 λέλαμπεν Ἴλιος. Now from a military point of view bad bronze would be copper with a low percentage of tin and hence too soft, for the effect of the alloy is to harden it (Emped. 92 Diels = Arist. *GA.* 2. 8. 3 ἐκ δὲ τῶν τοιούτων γίνεσθαι ἐκ μαλακῶν σκληρόν, ὥσπερ τῷ καττιτέρῳ μειχθέντα τὸν χαλκόν). Good bronze, therefore, was a protection in time of need: Soph. *fr.* 780 Nauck λάμπει γὰρ ἐν χρεΐαισι ὥσπερ εὐπρηπῆς χαλκός. Bad bronze would fail in the test of battle.

Why then does it turn black? This brings me to another point. What is the meaning of μελαμπαγής? Professor Fraenkel translates 'black throughout' (p. 17). But how does he get 'throughout'? In view of the common phrase μέλαν αἷμα (1020, 1510-11, *Eum.* 183, 980) and the equally common usage of πήγνυμαι in the sense of 'freeze' or 'congeal' (*Cho.* 67 τίτας φόνος πέπηγεν οὐ διαρρύδαν, Plut. *Cim.* 18 τοῦ δ' αἵματος τὸ πηγνύμενον), the reference is surely to the colour of congealed blood, *Sept.* 737 μελαμπαγές αἷμα. (This is the only other passage in which the word occurs.) Just as base gold turns black under the friction of the touchstone, so the bad bronze in which the sinner arms himself against the assaults (προσβολαῖς) of his enemies is blackened with his own blood.

And so he is brought to justice, δικαιοθεῖς. 'In hoc loco δικαιοθεῖς videtur significare *probatum*' Blomfield. So far from being an example of 'unwarranted traditionalism', as Professor Fraenkel asserts, this comment is quite

correct. In general δικαιοῦν is to 'bring to justice' or 'punish', but here, in reference to the simile, it stands for βασανισθεῖς, 'brought to the test'. And, what is more, it is designed to recall the proverb on which, as Headlam saw, the whole sentence depends: Soph. *OT.* 614 χρόνος δίκαιον ἄνδρα δείκνυσιν ἄριστος, Pind. *fr.* 159 ἀνδρῶν δικαίων χρόνος σωτήρ ἄριστος, Chaeremon *ap.* Stob. *Ecl. Phys.* 1. 8. 28, p. 98 W. χρόνος δίκαιον ἄνδρα μηνύει ποτέ. The language of Aeschylus is not to be measured by the dictionary.

I suggest therefore that the proper scholium on these lines would have been *μαστιγοῦνται δικαιοθεῖς, ὑπὸ τοῦ χρόνου δηλονότι, χαλκοῦ τρόπον κακοῦ ὅς μελαίνεταί προσβολαῖς ταῖς τῶν πολεμίων αἱματόμενος ὥσπερ τριβῆ χρυσός.* Aeschylus began with the proverbial image of Time the touchstone, but, as he envisaged the battlefield, the blackened gold was transmuted into bloodstained bronze as a symbol of the castigated criminal, who was in fact slain in battle.

This is language at a very high tension, and only intelligible because the proverb was so familiar. But Aeschylus is full of these imaginative conceits, φωνάεντα συνετοῖσιν, and, granted the traditional background, without which he cannot be understood at all, the present instance is not more difficult than 104-5 ὄδιον κράτος αἰσιον ἀνδρῶν ἐκτελέων, where, since the eagles *are* the kings, ὄδιον τέρας αἰσιον αἰετῶν is merged with κράτος ἀνδρῶν ἐκτελέων, i.e. βασιλείων, in allusion to the eagle as king of birds: *Il.* 24. 310-15 πέμψον δ' οἰωνόν, ἐὼν ἄγγελον, ὅς τε σοὶ αὐτῷ φίλτατος οἰωνῶν, καὶ εὐ κράτος ἐστὶ μέγιστον . . . ὡς ἔφατ' εὐχόμενος, τοῦ δ' ἔκλυε μητιέτα Ζεὺς, αὐτίκα δ' αἰετὸν ἦκε, τελειότατον πετεηνῶν (see my note).

This poet was certainly not lacking in wit, rather the reverse, περισσόφρων, and there is more in him than met William Sewell's eye. Let me conclude therefore by subscribing to Professor Fraenkel's appeal for 'more observation'.

GEORGE THOMSON.

University of Birmingham.