

PLATO'S TSUNAMI

Plato's *Republic* is, among many other things, a blueprint for a radical reform of political, social and educational structures. Three proposals in particular are introduced by the main speaker Socrates with an apology for the shock or incredulity they are likely to provoke.

The first shocking proposal (451 c – 457 b) is that women selected for their ability should be trained to be members of the elite class of the city's 'guards' or 'guardians', on a fully equal footing with men. Plato's overt motivation is not any conviction concerning women's rights; indeed, to locate the notion of 'rights' in ancient Greek ethics is not only difficult but quite possibly also unhistorical. Rather, he is driven by his determination that the city should not waste any of the talent available to it. The proposal, which involves *inter alia* women participating naked in athletic training alongside men, was not only outrageous to current Greek norms but almost certainly no less so to Plato's own male-centred philosophical coterie.

The second proposal (457 b – 466 d) is that in this same elite class the family as such should be abolished, to be replaced by a community of wives and a eugenic system of breeding which will maximise the chances of maintaining the elite's quality, while keeping secret each child's actual parentage. This inclusion of eugenics, a project hideously discredited by 20th-century history, is a reminder that our entirely proper admiration for Plato's proposal of female equality should not deceive us into mistaking him for anything remotely like a modern liberal. Nor does Plato's own evident anxiety about reactions to the proposal reflect any such squeamishness as we may today feel about eugenics; it is more likely to be focused on the threat to such preoccupations, central to the ideology of the polis, as the social and political advancement of one's own lineage.

The third proposal (471 c ff.) is the one Socrates expects to cause the most shock of all: government should be placed in the hands of trained philosophers. Only those who know the Form of the Good and the other eternal foundations of value are capable of administering a city in a way that will fully embody justice. Plato did not underestimate how uphill a task it would be to persuade the non-philosophical public to put their lives in the hands of this utterly unworldly intelligentsia.

In apologising for these three outrages to current values, Socrates adopts the metaphor of three waves. Each of the three proposals in turn faces a

‘wave’ (κῶμα) of reaction on behalf of the *status quo*, and the final one faces the biggest single wave within the ‘triple wave’ (τρικυμία, 472 a).

What are we to make of this metaphor? In particular, what is the significance of *three* waves? The number is not the merely accidental result of Socrates’ assembling and then counting up his most controversial proposals, because the word for a ‘triple wave’, τρικυμία, was well established in the Greek vocabulary by this date, and the list of three is clearly itself compiled with the meaning of that term in mind. According to W. S. Barrett’s commentary on Euripides’ *Hippolytus*,

The word must originally have meant ‘group or series of three waves’, and so – in the common belief that every third wave was the largest – Pl[ato] R[epublic] 472 a [...]; the shift in sense to ‘very large wave’ (here and elsewhere) was probably helped by the common use of τρίς, τρι- as an intensive with adjectives and adverbs (τρὶς μάκαρ, τρὶς ἄθλιος, etc.; τριγέρων, τρίπαλαι).¹

So far as concerns later ancient (and indeed modern Greek) usage, in which the word is extremely common, Barrett is clearly right that the τρι- prefix becomes a mere intensifier, so that the word comes to mean something no more specific than ‘storm’. But in Plato, the earliest surviving prose author to use the word, the meaning ‘triple wave’ is plainly still alive, as Barrett acknowledges, and the only evidence that Barrett and innumerable others have been able to cite for its being a common belief that every third wave is biggest is from the very part of the *Republic* that we are now considering, where Socrates remarks (472 a): “I barely escaped from the two waves, and now you’re urging upon me the biggest and most difficult of the triple wave (τρικυμία)”. Socrates’ remark is not in itself sufficient evidence that any such belief – a belief that could, after all, be easily falsified

¹ W. S. Barrett, *Euripides, Hippolytus* (Oxford 1964) 386. Cf.: H. Lloyd-Jones, “Modern interpretations of Pindar: the second Pythian and seventh Nemean Odes”, *JHS* 93 (1973) 130, who cites Barrett’s note in the course of commenting on Pindar, *N. 7. 17*: “The third wind [τριταῖον ἄνεμον] is the wind that will stir up the third and most formidable of three successive waves; the same notion is in Plato’s mind when in a famous passage of his *Republic* he compares the problems presented to Socrates by the formidable task of justifying the communistic elements of his ideal state to three successive waves, the last being the greatest, which he must stand up to”. If what I shall go on to argue is correct, such could indeed be the meaning of the Pindaric expression (for wind as supposed cause of the waves in question, cf. n. 8 below), even if it will presumably have to be divorced from the further notion that *every* third wave is the biggest.

by anyone spending five minutes at the beach² – was held by either Plato or anyone else.

Besides, the word *τρικυμία* is most naturally understood as designating a triple wave, not a third wave, and that assumption finds confirmation in Aeschylus' *Seven against Thebes*, where a huge and threatening wave is characterised as 'three-taloned' (*κῶμα ... τρίχαιλον*, 758–760).³ A much more plausible explanation of the three-wave image is available, or so I shall now go on to argue.

None of us is likely ever to forget how on 26 December 2004 an earthquake in the Indian Ocean triggered a tsunami, a massive wave which horrifyingly devastated entire coastlines and drowned some hundreds of thousands of people. Press reports of eye-witness accounts again and again spoke of a sequence of *three* waves, of which – as in Plato's image – some said that the third was the biggest and deadliest. Nor is this pattern unique to the 2004 tsunami, for reports of many past occurrences of the same natural phenomenon confirm that the three-wave sequence is, if not an invariable, at any rate a typical pattern. A tsunami is strictly speaking not a single wave but a series of waves, coming at intervals of between ten and forty-five minutes, with three waves a commonly reported total. Thus, to pick some prominent examples, the 1755 Lisbon earthquake was followed by a tsunami consisting of three waves,⁴ the tsunami that devastated the north-western coast of Papua New Guinea on July 17 1998 was constituted by three waves, and the Alaskan tsunami of 17 November 2003 was likewise reported as a three-wave sequence.

Equally, there can be no doubt that the seismically active eastern Mediterranean region experienced tsunamis in the classical period, as it has continued to do in modern times.⁵ The tsunami that hit the Cycladic island of

² Admittedly Ovid's implication (*Tr.* I. 2. 49) that every *tenth* wave is the biggest is ultimately just as open to disproof, but it is at least less obviously contradicted by experience.

³ See further, note 16 below.

⁴ Cf.: J. T. Kozak, Ch. D. James, "Historical Depictions of the 1755 Lisbon Earthquake", paper published at <http://nisee.berkeley.edu/lisbon/> by the National Information Service for Earthquake Engineering.

⁵ A. G. Galanopoulos, "Tsunamis observed on the coasts of Greece from antiquity to present time", *Annali de Geofisica* XIII (1960) 369–386. Cf. the catalogue compiled by Demetrius Callatianus and reproduced at Strabo I. 3. 20. 1–31, and, among other descriptions of tsunamis, Thucydides III. 89. 2–5 (an event of 426 BC). Further modern studies bearing on this theme include W. Capelle, "Erdbebenforschung",

Amorgos as recently as 1956, triggered by an earthquake measuring 7.7 on the Richter Scale, was 25 metres high and killed 56 people.

There is, incidentally, an additional respect in which Greek tsunamis, including the recent Amorgos one, are sometimes reported in terms of three waves, namely three simultaneous waves heading off in three different directions from the epicentre.⁶ This phenomenon may have contributed further to the currency of the ‘triple wave’ locution. It was, it seems, overdetermined that the word τρικυμία should be associated with the tsunami, regardless of how complete or defective speakers’ knowledge was of the precise phenomena involved.

Probably the most celebrated ancient Greek tsunami is the one that destroyed the town of Helike on the Gulf of Corinth in 373 BC. Two years before the Battle of Leuctra, Strabo tells us, Helike was deluged by a huge wave following upon an earthquake.⁷ The catastrophe, he adds, was attributed to the wrath of Poseidon.

This attribution to Poseidon was a natural enough assumption to make about the god who was after all by tradition both the ‘earth-shaker’ and the controller of the sea. That dual role itself makes a great deal more sense if we suppose that the earthquake-tsunami link was present all along in the Greek consciousness. And there is evidence to confirm this. Thucydides, for example, maintains that the dependence of tsunamis on preceding earthquakes must be an invariable causal link, but does not even hint that the link as such is his own discovery.⁸ And Aristotle (*EN* III. 7, 1115 b 27) uses a proverbial

RE Suppl. IV (1924) 348; G. A. Papadopoulos, “Tsunamis in the East Mediterranean: A Catalogue for the Area of Greece and Adjacent Seas” (2001), paper published at <http://www.gein.noa.gr/services/tsunami.htm>; D. Dominey-Howes, “Documentary and geological records of tsunamis in the Aegean Sea region of Greece and their potential value to risk assessment and disaster management”, *Natural Hazards* 25 (2002) 195–224. For the historical significance of Greek tsunamis cf. also: R. Bittlestone, J. Diggle, J. Underhill, *Odysseus Unbound: the Search for Homer’s Ithaca* (Cambridge 2005) esp. pp. 489 ff.

⁶ Cf. Strab. I. 3. 20. 14–17 (κῦμά τε ἔξαρθέν τριχῆ τὸ μὲν πρὸς Τάρφην ἐνεχθῆναι καὶ Θρόνιον, τὸ δὲ πρὸς Θερμοπύλας, ἄλλο δὲ εἰς τὸ πεδῖον ἕως τοῦ Φωκινοῦ Δαφνοῦντος, which incidentally mirrors the way in which a tsunami is often spoken of in the same breath as *a* wave and *three* waves); also the later Greek tsunamis described by Galanopoulos (n. 5) 378 (the Leucas tsunami of 1869) and 380 (the Amorgos tsunami of 1956).

⁷ Strab. VIII. 7. 1. 55–2. 4; 7. 2. 20–37; cf. Diod. Sic. XV. 48, Paus. VII. 24. 12. 1–10.

⁸ Thuc. III. 89. 5, αἴτιον δ’ ἔγωγε νομίζω τοῦ τοιοῦτου, ἧ ἰσχυρότατος ὁ σεισμός ἐγένετο, κατὰ τοῦτο ἀποστέλλειν τε τὴν θάλασσαν καὶ ἐξαπίνης πάλιν ἐπισπωμένην βιαιότερον τὴν ἐπὶ κλυσιν ποιεῖν· ἄνευ δὲ σεισμοῦ οὐκ ἂν μοι δοκεῖ

expression for entirely fearless people such as the Celts: 'they fear neither earthquake nor waves'. Clearly a reference here to ordinary waves would be utterly anticlimactic after the preceding mention of an earthquake. The expression must be referring to a single phenomenon: an earthquake along with the ensuing tsunami waves.⁹ Finally, in Plato's *Timaeus* (25 c–d) the destruction and submersion of Atlantis was the result of 'enormous earthquakes and floods' – perhaps a further allusion to the tsunami phenomenon. Even if more the stuff of fantasy than of history, this would once more confirm the presence of the earthquake-tsunami link in the Greek consciousness.

The date of Helike's inundation, 373, is likely to be extremely close to that of Plato's composition of the *Republic*, and, if it preceded it, might in principle have inspired his use of the metaphor, enabling him to appeal to his audience's live memories of the cataclysm. But there are reasons to doubt such a conjecture.

For one thing, not only does none of our surviving references to the Helike disaster mention a triple wave-structure in connection with it (which in itself would be unremarkable), but, worse, a recently discovered epigram of Posidippus explicitly speaks of Helike as being destroyed 'by one wave'.¹⁰ This is not in itself conclusive evidence, because the same expression, 'one wave', might easily have been used of the 2005 tsunami, despite its additionally reported triple structure; but it does suggest at the very least that popular perceptions of the Helike wave did not pay sufficient attention to the number of component waves – if indeed there were more than one – to make Plato's 'three waves' a likely allusion to it.

Secondly, Plato's *Euthydemus*, which for stylometric reasons I take to predate the *Republic* by a significant number of years,¹¹ at 293 a uses the

τὸ τοιοῦτο ξυμβῆναι γενέσθαι. A contrasting view is that of Aristotle, *Meteor.* II. 8, 368 a 34–b 12, who likewise recognizes the phenomenon of coincident earthquake and tsunami, referring to the Helike disaster in particular, but takes them both to share a single cause, namely wind.

⁹ In a parallel passage of the *Eudemian Ethics* (1229 b 27–29) Aristotle adds that the Celts make armed attacks on these waves – again, not just any waves but, as he makes specific, highly dangerous ones.

¹⁰ ἐνὶ κύματι πάισας, Posidippus 20. 1, in: C. Austin and G. Bastianini, *Posidippi Pellaei quae supersunt omnia* (Milan 2002).

¹¹ See: C. H. Kahn, "On Platonic chronology", in: J. Annas and C. Rowe (ed.), *New Perspectives on Plato, Modern and Ancient* (Cambridge, Mass. – London 2002) 93–127 for well-reasoned acceptance of a basic stylometric division of Plato's dialogues into three groups, according to which the *Republic* is in the small transitional group leading on to the final group of six late dialogues, while the *Euthydemus* stands among

term *τρικυμία* in a context where it is easy to assume an oblique forward reference to the *Republic*'s third wave. Socrates' self-confessed philosophical *τρικυμία* there lies in the danger of vacuity in explaining what could possibly serve as the 'good' which rulers' knowledge enables them to confer on others: if the good is itself knowledge, then the only good that their knowledge can confer is... that knowledge itself! It is presumably no coincidence that the *Republic*'s third wave is stirred up by the proposal of *philosopher* rulers, whose knowledge will have an external object, the Forms, or more specifically the Form of the Good, thus breaking out of the vicious circle that Plato's earlier Socrates was unable to resolve.¹² This would suggest that the *Republic*'s metaphor was foreseen some years ahead, and was therefore not a direct borrowing from hot news.

Thirdly and finally, there is no need to insist that, for Plato's metaphor to be understood, an event such as the Helike catastrophe had to be fresh in the minds of his contemporary readers. The phenomenon, including its typical three-wave structure, had almost certainly long been well known. We in fact possess, or so it seems to me, an eloquent description of it dating from 428 BC. It occurs in the very passage of Euripides' *Hippolytus* on which Barrett, as quoted above, was commenting. The messenger is describing the monstrous bull sent by Poseidon, which has emerged from the sea and so terrified Hippolytus' horses as to precipitate his death. Before the monster itself emerges, we get a description (1198–1214) which seems to me designed to evoke the familiar sequence of a massive earthquake followed by a tsunami:

As we entered the deserted region, where there is a headland jutting beyond this land in the direction of the Saronic sea, from it a noise in the ground like the thunder of Zeus send forth its deep roar, terrifying to hear. ... And looking towards the sea-lashed headland we saw an awesome wave (*κύμα*). It was riveted to the sky, so that my eyes were blocked from seeing the coast of Skiron, and it hid the isthmus and the rock of Asclepius. Next, swelling up and foaming all around with much froth, it advanced with a sea-driven blast towards the shore where Hippolytus' four-horse chariot was. And along with the actual surf and triple wave (*τρικυμία*, 1213), the wave (*κύμα*) sent forth a bull, a savage monster...¹³

the stylometrically undifferentiated great bulk of the dialogues preceding those two final phases.

¹² I owe the link between the two passages to Myles Burnyeat, although he may disagree about whether the allusion to the *Republic* is prospective, as I take it, or retrospective.

¹³ ἀὐτῷ δὲ σὺν κλύδωνι καὶ τρικυμία
κύμ' ἐξέθηκε ταῦρον, ἄγριον τέρας.

The opening description of a terrifying noise from the ground suggests a massive earthquake. True, a natural earthquake will normally involve at most a low rumbling noise from the ground, hardly the thunderous one described here, and in open countryside it will normally generate less secondary noise than in a city. Still, the degree of exaggeration is no more than one expects when a prodigious event is being evoked in poetic discourse. And, correspondingly, it is likely that the frightening character of earthquake noise had already been exaggerated in the popular consciousness. Thus Aristotle (*Meteor.* 368 a 24) reports that earthquakes “emit all kinds of noises, so that sometimes, as the tellers of marvels put it, the earth seems to bellow”.

Euripides' sequence, then, is that of an earthquake followed by a giant wave. This is already enough to mark the event from the start as a tsunami – a not insignificant detail which as far as I am aware has passed unnoticed in modern discussions of the passage. In the light of that identification, the inclusion of *τρικυμία* may well be significant too. It must at first seem odd, if not incoherent, that a single wave (*κῶμα*) is here described as incorporating a triple wave (*τρικυμία*).¹⁴ But that very oddity reflects the typical talk of tsunamis.¹⁵ Much as the Pope wears a crown which consists of three crowns, so too a tsunami is regularly spoken of as a giant wave (singular), yet also as constituted by a series of (typically three) waves. Although Aeschylus' ‘three-taloned’¹⁶ wave may convey this slightly more elegantly, the very oddity of Euripides' language in the last lines tends to confirm that locutions inspired by the tsunami phenomenon are showing through in his description.

With the bull's emergence, we leave behind the realm of natural phenomena and enter that of the fantastical. But the lesson down to this point seems clear. The natural phenomenon of the tsunami, an earthquake followed by a towering wave which is itself further analysable as a triple one, was well enough known to be drawn upon by Euripides in setting a suitably menacing scene for a supernatural epiphany.

¹⁴ G. O. Hutchinson, *Aeschylus, Septem Contra Thebas* (Oxford 1985) ad 758, discussing *κῶμα* ... *τρίχαιλον* (see above), takes *κῶμα* not as a count noun designating a single wave, but as ‘swell’. That same interpretation, if adopted, would lessen the oddity of Euripides' words, but not suffice to remove it.

¹⁵ Cf. n. 6 above.

¹⁶ Editors since Paley have seen Aeschylus' *κῶμα* ... *τρίχαιλον* as a picturesque variant on *τρικυμία*. If they are right the expression, by interpreting *τρικυμία* in terms of three ‘talons’, helps confirm my proposal that the ‘three’ in it was understood as indicating the wave's triple structure, not merely its size.

If I am right, both the three-wave phenomenon and the association with earthquakes were familiar enough features of the tsunami to occur in a description of a prodigious event such as we find in the *Hippolytus*. Another widely reported feature of the 2004 tsunami was that before the first wave arrived the sea drew back, leaving large stretches of the sea-bed exposed, complete with floundering fish. This too is a regular feature of tsunamis, described briefly by Thucydides (III. 89. 5) and in graphic detail by Ammianus Marcellinus (26. 10. 15–19) with regard to the great tsunami of 365 AD, to whose aftermath he had been an eye-witness.¹⁷ Does it occur elsewhere in ancient descriptions of the same phenomenon? Conceivably it does. In a passage I have already cited, Aeschylus, *Seven against Thebes* 758–761, the chorus speaks figuratively of a giant wave hitting the ‘stern’ of the city: “It is like a sea that brings a wave of evils: one wave falling, but it pushes up another, a three-taloned one, which seethes around the very stern of the city...”¹⁸ Since the city is represented as a ship, hit by a wave while at sea or at anchor, there is no direct appeal here to the phenomenon of a tsunami deluging a city, in the way that Helike was later to be deluged. But the very specific detail of one wave going down, only to push up a subsequent huge triple wave, sounds once again as if it could preserve and embody, however imprecisely, the folk memory of past tsunamis.¹⁹

These passages – more especially the Euripidean one – suggest that the salient features of a tsunami were sufficiently imprinted on the ancient Greek consciousness to be invoked allusively in poetic discourse. Even if, understandably in view of the phenomenon’s relative rarity, a variable degree of precision is evident in the allusions to it, the tsunami’s anatomy may nevertheless seem, at the very least, to have bulked larger in the minds of classical Greeks than it did in those of the modern western public prior to the 2004 catastrophe.

Returning now to the *Republic*, we can see the advantages of taking the references there too to be designed to evoke a tsunami.

¹⁷ See the detailed study by G. Kelly, “Ammianus and the great tsunami”, *Journal of Roman Studies* 94 (2004) 141–167.

¹⁸ κακῶν δ’ ὅσπερ θάλασσα κῶμ’ ἄγει,
τὸ μὲν πίτνον, ἄλλο δ’ ἀείρει
τρίχαιλον, ὃ καὶ περὶ πρύμναν πόλεως καχλάζει.

¹⁹ The *prima facie* plausible alternative would seem to be a wave breaking on the beach and flowing back under the next breaker. But this relatively banal reading is discouraged by the further information that the wave thus pushed up buffets a ship, presumably not a beached one.

The first two waves, 457 b 7 – d 3

‘So concerning the law about women, when we stipulate that our male and female guards should pursue all their activities in common, let’s talk of this as one wave (κῶμα), so to speak, that we have escaped, with the result that we haven’t been altogether drowned in a deluge (κατακλύζειν, 457 b 8–9) and that the thesis is somehow self-consistent as to the feasibility and utility of what it says?’

‘Quite so’, he said. ‘It’s no small wave you’re escaping’.

‘You’ll say it’s no *big* wave when you take a look at the next one’.

‘Tell me, then’, he said, ‘and let me take a look’.

‘This law’, I said, ‘and the others that went before lead to the following one’.

‘Which?’

‘That all these women should belong in common to all these men, and that none should cohabit privately. And that they should have their children in common, so that parents don’t know who are their children and children don’t know who are their parents’.

The third wave, 472 a 3–7, 473 c 2 – d 6

‘...I barely escaped from the two waves, and now you’re urging upon me the biggest and most difficult of the triple wave (τρικυμία). When you see and hear it, you will entirely forgive me and see that it was after all reasonable of me to be hesitant and nervous about voicing so unbelievable a thesis and seeking to examine it’.

[.....]

‘I’ve reached what we compared to the biggest wave (κῶμα)’, I said. ‘And it is going to be stated, even if it is destined, like a laughing wave, to drown us in a deluge (κατακλύζειν) of mockery and unbelievability. Consider what I am about to say’.

‘Say it’, he replied.

‘Unless’, I said, ‘either philosophers become kings in the cities, or those who are now called kings and rulers become, to a sufficient degree, authentic philosophers ... there is no respite from trouble for the cities, Glaucon, or, I think, for the human race’.

The three proposals in question are radical reforms, calculated to obliterate certain existing socio-political structures. Socrates’ fear is that his own agenda will be washed away *with* these, in a deluge of outraged incredulity. Although in English usage the word ‘deluge’ can be deployed hyperbolically to describe something as mild as a downpour of rain, the Greek verb κατακλύζειν, which occurs in both the above passages, is the proper word for singling out the action of genuinely catastrophic floods –

natural ‘cataclysms’, in fact. The easy assumption that Plato is envisaging ordinary waves on the beach²⁰ has hidden from view his actually rather pronounced allusions to the tsunami phenomenon. It should by now I hope be clear that Plato’s Socrates in fact sees his radical restructuring of society as facing a veritable tsunami of resistance. So cataclysmic is this tsunami’s third and final wave, popular abhorrence at the proposal of philosopher kings, that unless adequate counter-measures are put in place it threatens to submerge and drown Plato’s entire political agenda in a deluge of disbelief.²¹

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В известном пассаже из “Государства” Платона Сократ сравнивает три своих наиболее радикальных политических проекта и предполагаемую возмущенную реакцию на них с тремя волнами (τρικυμία). Самой большой и опасной должна оказаться третья “волна” – предложение, что править должны философы. Автор предполагает, что Сократ имеет в виду цунами – явление, неоднократно происходившее в Эгеиде в историческую эпоху. Хотя о цунами говорят как об одной гигантской волне, в сущности это последовательность волн, чаще всего три, и в греческой трагедии можно найти свидетельства того, что о тройной структуре цунами было известно.

²⁰ Or, for a variant, cf. J. Adam, *The Republic of Plato* (Cambridge 1902) I 274, ‘waves through which the argument must swim in safety’.

²¹ My thanks to Guido Bastianini, Robert Bittlestone, Peter Brown, James Diggle, Stephen Instone, Dmitri Panchenko, Giles Pearson, Souren Takhtajan and Alexander Verlinsky for helpful comments and suggestions.