All is Actual

The Troublesome Megarians: Θ 3-4

The Main Claims of Θ 3

* Some, including the Megarians, contend that only what is actual is in potentiality (1046a29).

    * (NANP): x is in potentiality (or has a capacity) at t ↔ x is in actuality (or is exercising that capacity) at t.

* NANP is absurd:

    * It entails that when one is not building one cannot build (1047a4).

    * It also implies or entails Protagoreanism (1047a6).

    * It entails that when something is not happening cannot happen (1047a10)

* To refute these contentions, it is necessary to distinguish potentialities from actualities, and indeed to insist that some things are in potentiality without being in actuality—that is, that NANP is false (1047a17)

Three Ways of Thinking about NANP

* NANP: x is in potentiality (or has a capacity) at t ↔ x is in actuality (or is exercising that capacity) at t.

* It's an *eliminativist* thesis: there is no distinction between actuality and potentiality.

    * This would be equivalent to *radical actualism*: there is only what is actual.

* It's an operational thesis: there is a distinction, it just that nothing is potential unless also actual.

    * This would be a thesis to the effect that the only potentiality is a manifested potentiality.

        * Cf. the Megarian thought nothing is other than it can be.

            * What is actual cannot be otherwise, with the result that $p \rightarrow \Box p$

* It's an attempt to link modality with time: all capacities are had synchronically.

    * (i) Only what possesses a capacity Δ can manifest Δ; (ii) all capacities are synchronic (that is, if at t* x has a Δ to ϕ at t** → t* = t**); further (iii) if x is not manifesting Δ at t, then x does not Δ have at t; so, every capacity Δ is actualised at the time it is possessed.

The Origins of NANP

* Little is known of the Megarians:

    * A Socratic sect, evidently influenced by Parmenides, founded by Eucleides in the 4th c. BC, succeeded by Eubilides; later influential on the development of Stoic logic.

    * They had an ethical orientation, like other Socratic Sects, but then also veered into dialectic, developing sharp attacks on Aristotle's theory of categories, truth, and especially his approach to the modalities.

    * Probably, though not certainly, their motivations were principally inspired by Parmenides, by their maintaining some version of the dictum that 'nothing is possible which is not true'.

    * A Parmenidean argument: (i) x can exist $\leftrightarrow$ x can be thought; (ii) non-being cannot be thought; so, (iii) non-being cannot be.

        * A Megarian extension: (i) what is in potentiality but is not in actuality is, trivially, not in actuality; (ii) what is not in actuality is not; (iii) what is not cannot be; hence, (iv) what is in potentiality but not in actuality cannot be; hence, (iv) NANP.

Three Aristotelian Responses

* NANP leads to intolerable results:

    * It entails that when one is not building one cannot build (1047a4).

    * It also implies or entails Protagoreanism (1047a6).

    * It entails that what is not happening cannot happen (1047a10)

Non-building Builders

* Aristotle first focuses on two-way powers:

    * For it is clear that there will not be a builder unless he is building (for being for a builder *is* being for the power to build [or: to be a builder is to be have the power to build], and similarly for the remaining crafts. If, then, it is impossible for one not having learnt or grasped to possess such crafts, and not to possess them when one has never lost them (for either by forgetting them or by suffering something or through time; for at any rate if the thing is not destroyed, it always is), whenever one stops, one will not possess the craft, how will one, having grasped, it build again straightaway?

    * δῆλον γὰρ ὅτι οὔτ' οἰκοδόμος ἔσται ἐὰν μὴ οἰκοδομῇ (τὸ γὰρ οἰκοδόμῳ εἶναι τὸ δυνατῷ εἶναί ἐστιν οἰκοδομεῖν), ὁμοίως δὲ καὶ ἐπὶ τῶν ἄλλων τεχνῶν. εἰ οὖν ἀδύνατον τὰς τοιαύτας ἔχειν τέχνας μὴ μαθόντα ποτὲ καὶ λαβόντα, καὶ μὴ ἔχειν μὴ ἀποβαλόντα ποτέ (ἢ γὰρ λήθῃ ἢ πάθει τινὶ ἢ χρόνῳ, οὐ γὰρ δὴ τοῦ γε πράγματος φθαρέντος ἀεὶ [γὰρ] ἔστιν), ὅταν παύσηται, οὐχ ἕξει τὴν τέχνην, πάλιν δ' εὐθὺς οἰκοδομήσει πῶς λαβών; (1046b33-1047a2)

The Argument

1. Being a builder and being able to build are intensionally the same.

2. If NANP, then one is a builder only when building.

3. If one is a builder only when building, then it is not possible: (a) to have learnt to be a builder (because then one would be in potentiality but not in actuality a builder); or (b) to fail to cease to be a builder when one ceases to build (because then one would become a builder in potentiality and not in actuality).

4. Neither (3a) nor (3b).

   * [In fact, one *must* learn to ply a craft if one is to be a craftsperson; and one remains a craftsperson once a craftsperson until such time, if ever, that one loses the craft ability.]

5. So, not NANP.

The Connection with Protagoreanism

* Aristotle next turns to one-way powers:

  * And inanimate entities will be similar: for neither cold nor hot nor sweet nor generally any object of perception will be among the class of things unperceived—so that it will turn out for these are asserting the argument of Protagoras.

  * καὶ τὰ ἄψυχα δὴ ὁμοίως· οὔτε γὰρ ψυχρὸν οὔτε θερμὸν οὔτε γλυκὺ οὔτε ὅλως αἰσθητὸν οὐθὲν ἔσται μὴ αἰσθανομένων· ὥστε τὸν Πρωταγόρου λόγον συμβήσεται λέγειν αὐτοῖς (1047a4-7)

The Argument

1. If NANP, no object of perception is potentially but not actually perceived.

2. If no object of perception is potentially but not actually perceived, to be an object of perception will be the same as to be actually perceived.

3. If to be an object of perception is the same as being actually perceived, then the doctrine of Protagoras will result.

4. [This is a bad thing.]

5. So, not NANP.

Why is this a bad thing?

* What is the 'argument' of Protagoras'?

    * Taking Plato's *Theaetetus* (151e-152c, 170a-172c, 177b-179c) as our source, it may be a variety of *subjectivism* rather than 'extreme relativism'.

    * Here subjectivism about an object of perception should be glossed:

        * ϕ is a perceptual quality (being hot, being cold) of some object of perception o $=_{df}$ o's being ϕ constitutively depends upon the perceptual activity of some perceiver.

            * This seems to imply:

                * There are no unperceived perceptual qualities; indeed, there can be no unperceived perceptual qualities. The phrase 'unperceived perceptual quality' is oxymoronic.

                * There is no further question, when o is perceived as being ϕ, as to whether o is ϕ; indeed there can be no further question, when o is perceived as being ϕ, as to whether o is ϕ.

                * Misperception is impossible. At the level of perceptual qualities, any appearance/reality distinction collapses.

An Extension to Privations

* Moreover, nothing will possess perception unless it is perceiving and operating (or actualizing). So, if what does not possess sight is blind, it being natural to it and when it is natural to it and it still is, the same people will be blind many times in a day. Same again for being deaf (1047a7-10).

* ἀλλὰ μὴν οὐδ᾽ αἴσθησιν ἕξει οὐδὲν ἂν μὴ αἰσθάνηται μηδ᾽ ἐνεργῇ. εἰ οὖν τυφλὸν τὸ μὴ ἔχον ὄψιν, πεφυκὸς δὲ καὶ ὅτε πέφυκε καὶ ἔτι ὄν, οἱ αὐτοὶ τυφλοὶ ἔσονται πολλάκις τῆς ἡμέρας, καὶ κωφοί.

Privations

* φ is a privation o's when (i) there is some ψ such that o's being ψ is its natural condition, and (ii) what it is to be φ is precisely to lack ψ.

    * So, while it is true that both Homer nor a sprouting magnolia tree lack sight, only Homer is blind.

* Armed with that, we have:

    * Given NANP, no one has perception without perceiving (for then then they would be potentially but not actually perceiving).

        * It seems to follow that when someone sighted ceases to perceive, they become blind—and not merely not-seeing—and so we all become blind many times a day.

        * Same again for being deaf, and indeed for all the sensory modalities.

Two General Strategies

* All of these arguments proceed apace. Two ways of thinking about them, not necessarily in competition with one another:

  * They are all basically appeal to some range of *phainomena* $\phi_1 \ldots \phi_n$, holding that that NANP ignores $\phi_1 \ldots \phi_n$ with the result that NANP is absurd (ἄτοπα, 1047b33).

  * They all show that NANP and its attendant rejection of a distinction between actuality and potentiality renders a full panoply of other distinctions inoperable, forcing us to say things that, while possible from a purely logical point of view, prove ever more extreme, even to the point of threatening the possibility of metaphysical realism.

    * The rejection of NANP will then be seen as licensing the science of being *qua* being, because if NANP is embraced, we will not be able to say of all beings, just in so far as they are beings, that they are modally enmeshed.

A Criterion of Possibility I

* This, as Ross notes (1924 vol. 2, 245), is not a *definition* of the possible:

* The possible is this: that by which, should the actuality of something said to have a capacity obtain, nothing impossible will be (1047a24-26)

    * ἔστι δὲ δυνατὸν τοῦτο ᾧ ἐὰν ὑπάρξῃ ἡ ἐνέργεια οὗ λέγεται ἔχειν τὴν δύναμιν, οὐθὲν ἔσται ἀδύνατον.

        * Some Δ is a possibility if Δ is that by which (if x is actually φ, where φ is the actuality corresponding to Δ, obtain → nothing impossible will occur)

A Criterion of Possibility II

* That is put rather obliquely, but consider Aristotle's illustration:

    * 'I mean, for instance, if it is possible to sit and [something] can sit, then should sitting belong to it, nothing impossible will be.'

    * λέγω δὲ οἷον, εἰ δυνατὸν καθῆσθαι καὶ ἐνδέχεται καθῆσθαι, τούτῳ ἐὰν ὑπάρξῃ τὸ καθῆσθαι, οὐδὲν ἔσται ἀδύνατον; *Met.* 1047a26-28

        * From another angle: assume that Δ is some possibility, then suppose that the actuality pertaining to Δ obtains. Then determine whether anything impossible results.

            * If not, then then Δ is vouchsafed as a possibility; if so, then the the possibility of Δ is refuted.

    * So, if we say that sitting is a possibility and Socrates can sit, then if we suppose that Socrates is actually sitting, we find that nothing impossible obtains.

    * On the other hand, if we say that there being a smallest number is a possibility and that n actually is the smallest number, then there will be no $n^* = 1/2n$ —though every number is divisible by two.

Two Notions of '*dunaton*' (δυνατόν)

* A thin modality:

    * *x* is *dunaton* $=_{df}$ *x* is possible

        * here: $x \rightarrow \Delta x$

* A thick modality:

    * *x* is *dunaton* $=_{df}$ *x* has a capacity, or *x* is able

        * here: $\sim(x \rightarrow \Delta x)$ (or at least, it's not obvious that $x \rightarrow \Delta x$)

            * We should probably not suppose, for example, from the fact that Roberta luckily hits the bullseye with her bow and arrow on the first go, that Roberta has the capacity to hit the bullseye with her bow and arrow.

* We are assuming a thin modality in Aristotle's criterion.

* Question: could the test be put to work for thick modalities?

Why this criterion?

* A conjecture:

  * One can imagine the following dialectic:

    * Tedious Megarian: 'NANP'

    * Aristotle: 'NANP leads to manifold absurdities; so, not NANP.

      * It follows that there are two modalities of being: actuality and potentiality.'

    * Tedious Megarian: 'Well, maybe, but not generally; you've shown bad results only in a small range of cases.'

    * Aristotle: 'It generalizes. Watch: here's a test.'

Other Assaults on our Distinction

* The opening of Θ 4 has divided commentators: is Aristotle speaking *in propria persona* or putting an objection into the mouth of his opponent?

  * Presumably the latter, the opponent now being, so to speak a child of the Troublesome Megarian. Call her the Tedious Megarian. She says:

    * Yes, we concede the arguments of Θ 3, and allow that there is at the potential as well as the actual.

      * Still, there is no further distinction to be made; in particular, one cannot further distinguish between the non-actual possible and the non-actual not-possible.

        * In effect, there is no modal distinction to be made between a cake which is not eaten (but has the capacity to be eaten) and a circle which is not squared (but does not and indeed cannot have that capacity).

        * So, the child of the Tedious Megarian holds: nothing is non-actual which cannot be; there are no impossible objects.

Impossibilities slip away?

* If what was discussed is possibility or what attends to it, it is manifest that it cannot be true to say *this is possible but will not be, with the result that in this way impossibilities slip away*. I mean for instance if someone —the one not considering what is impossible—were to say that is possible for the diagonal to be measured but never the less it will not be measured, because nothing prevents it being possible for something to be or come to be which neither is nor will be. But this is necessary on the basis of what has been laid down—that even if we were to assume that that which is not, but is possible, either is or has come to be, nothing will be impossible. That will result, to be sure, for the diagonal's being measured *is* impossible. For the false and the impossible are not the same: for though it is false that you are standing now, it is not impossible (1047b3-14)

* Εἰ δέ ἐστι τὸ εἰρημένον τὸ δυνατὸν ἢ ἀκολουθεῖ, φανερὸν ὅτι οὐκ ἐνδέχεται ἀληθὲς εἶναι τὸ εἰπεῖν ὅτι δυνατὸν μὲν τοδί, οὐκ ἔσται δέ, ὥστε τὰ ἀδύνατα εἶναι ταύτῃ διαφεύγειν· λέγω δὲ οἷον εἴ τις φαίη δυνατὸν τὴν διάμετρον μετρηθῆναι οὐ μέντοι μετρηθήσεσθαι—ὁ μὴ λογιζόμενος τὸ ἀδύνατον εἶναι—ὅτι οὐθὲν κωλύει δυνατόν τι ὂν εἶναι ἢ γενέσθαι μὴ εἶναι μηδ' ἔσεσθαι. ἀλλ' ἐκεῖνο ἀνάγκη ἐκ τῶν κειμένων, εἰ καὶ ὑποθοίμεθα εἶναι ἢ γεγονέναι ὃ οὐκ ἔστι μὲν δυνατὸν δέ, ὅτι οὐθὲν ἔσται ἀδύνατον· συμβήσεται ἔστι μὲν δυνατὸν δέ, ὅτι οὐθὲν ἔσται ἀδύνατον· συμβήσεται δέ γε, τὸ γὰρ μετρεῖσθαι ἀδύνατον. οὐ γὰρ δή ἐστι ταὐτὸ τὸ ψεῦδος καὶ τὸ ἀδύνατον· τὸ γάρ σε ἑστάναι νῦν ψεῦδος μέν, οὐκ ἀδύνατον δέ.

Aristotle's Opponent

* This partly depends upon our understanding of his opponent:

* Unconditional Opponent holds α: ($\lozenge$p & p will never be)

* Conditional Opponent comes in two flavours:

  * CO^1 holds: (i) α; and (ii) if $\alpha \rightarrow$ there is no impossible non-actual

  * CO^2 holds: (i) α; and (ii) if $\alpha \rightarrow$ everything non-actual is impossible

Aristotle's Response

* Assuming the Conditional Opponent:

    * It does not follow from our distinction between the actual and the potential that what never was, is, or will be is not possible.

        * That you have never visited Bath, England, and never will, does not mean that is impossible for you to do so.

            * Nor, in a temporally indexed way, can we infer from its being now false that you are standing that it is impossible for you to stand now.

    * Nor does it follow from our distinction between the actual and the potential that everything among what is potential but never actual can be.

    * The diagonal, being incommensurable to the side, cannot be measured against it.

Two Modal Difficulties

* At the same time it is also clear that if when A is it is necessary that B is, it also so that when A is possible it is necessary that B is possible; for if it is not necessary that it is possible, noting hinders its not being possible Let, then, A be possible. Then when A would be possible, were A assumed, nothing impossible would turn out to be the case; but then it is necessary that B is the case.

* ἅμα δὲ δῆλον καὶ ὅτι, εἰ τοῦ Α ὄντος ἀνάγκη τὸ Β εἶναι, καὶ δυνατοῦ ὄντος εἶναι τοῦ Α καὶ τὸ Β ἀνάγκη εἶναι δυνατόν· εἰ γὰρ μὴ ἀνάγκη Α καὶ τὸ Β ἀνάγκη εἶναι δυνατόν· εἰ γὰρ μὴ ἀνάγκη δυνατὸν εἶναι, οὐθὲν κωλύει μὴ εἶναι δυνατὸν εἶναι. ἔστω δὴ τὸ Α δυνατόν. οὐκοῦν ὅτε τὸ Α δυνατὸν εἴη εἶναι, εἰτεθείη τὸ Α, οὐθὲν ἀδύνατον εἶναι συνέβαινεν· τὸ δέ γε Β ἀνάγκη εἶναι. (1047b14-24)

Two Modal Contentions

* $\Box[(A \to B) \to (\Diamond A \to \Diamond B)]$

* $\Box[(\Diamond A \to \Diamond B) \to (A \to B)]$

Happy Illustrations

* $\Box[(A \rightarrow B) \rightarrow (\Diamond A \rightarrow \Diamond B)]$

  * Necessarily, if *it is raining* implies *the pavement is wet*, then *it is possible that it is raining* implies *that it is possible that the pavement is wet*.

* $\Box[(\Diamond A \rightarrow \Diamond B) \rightarrow (A \rightarrow B)]$

* Necessarily if *it is possible that it is raining* implies *that it is possible that the pavement is wet*, then *it is raining* implies *the pavement is wet*.

A Not so Happy Illustration

* □[(◇A→ ◇B) → (A → B)]

  * Necessarily, if *it is possible that my house is white* implies *that it is possible that my house is blue*, then *my house is white* implies *my house is blue*.

  * Or, as Makin rightly notes (90), we need not even advert to incompatibles. Consider:

    * Necessarily, if *it is possible that I role a die* implies *that it is possible that I roll a six*, then *I role a die* implies *I roll a six*.