Appendix to Iγ2a: knowledge and the thing known, the measure and the thing measured

Aristotle contradicts himself between Δ15 1021a26-b3 and Iota 1 1053a31-b3 (the latter reiterated at Iota 6 1057a7-12) on the nature of the relation between a measure and the thing measured, and between a cognition or cognitive power and its object. In Δ15 he says that the thing measured is not related per se to the measure, or the thing known to the knowledge, but rather that the measure is related per se to the thing measured, and the knowledge to the thing known. Thus these are examples of non-reciprocal relations (not just in the sense that X can be related to Y without Y being related to X in the same relation, but that X can be related to Y without Y being related to X by any correlative relation either), by contrast with numerical relations (being double of) and relations between active and passive powers. At first sight we might well think that the relation of a cognitive power to its object is the relation of a passive to an active power, and that therefore the object is what it is in relation to the cognition (it is essentially a power for producing that kind of cognition), just as the cognition is what it is in relation to the object. This is, notably, the view of the "Heracliteans" of the Theaetetus. But Aristotle is concerned here to reject the assimilation of the cognition-object relation to the passive-active relation, precisely to avoid the conclusion that cognition is of something essentially relative, and thereby to avoid the subjectivist conclusions of the "Heracliteans": he wants to safeguard the claim that cognition (whether intellectual or sensory) is of things purely as they are in themselves, of intrinsic attributes of things. When Aristotle speaks in a single breath of "the thing measured and the thing known" (1021a29), he surely has the Theaetetus, and more generally Protagoras, in mind. The word "measure" is notoriously associated with Protagoras, to describe a cognitive power or the possessor of that power. (When writers after Protagoras speak of a κριτήριον, they are deliberately introducing this word as an alternative expression for what Protagoras calls a μέτρον, apparently because they find "μέτρον" in this sense metaphorical and use "κριτήριον" to unpack the content of the metaphor. The earliest preserved uses of "κριτήριον" are Plato Republic IX 582a4-6 and Theaetetus 178b2-c7 and Aristotle Metaphysics K6 1062b36-1063a5,[1] and of these the Theaetetus and Metaphysics passages are discussing Protagoras, Plato saying that if man is the measure of things he has the κριτήριον of them in himself, Aristotle speaking of "τὸ αἰσθητήριον καὶ κριτήριον". "Κανών", attested for Democritus, may well also have been introduced as an alternative to Protagoras' "μέτρον".) So in Δ15 Aristotle is accepting Protagoras' description of a cognitive power as a measure, or like a measure, while trying to undercut the relativist consequences. He is not here much concerned with measures in the literal sense, but rather with cognition. In Iota 1, however, he is concerned with measures, and in this context he comes back to Protagoras, who "says that man is the measure of all things, as if [to say] that the knower or the sense-perceiver [is the measure]," since we call knowledge and sensation measures (1053a35-b3). But in fact, says Aristotle, "we call knowledge or sensation a measure of things [merely] because we know something through them, since [in fact] they are measured rather than [or more than] measuring. What happens to us is as if when something else measures us, we come to know how tall we are

[1]taking the use in Sextus' report of Gorgias On Not Being, AM VII,81, not to be Gorgias' own term, but perhaps it is: there it is a neutral term for cognitive powers, covering both the senses and thought, each of which judges some domain proper to it. I have not even found any uses in the sense of "lawcourt" before Plato and Aristotle (the earliest I have found is in Demades)

by the fact that the cubit-measure reaches up to a certain point on us" (1035a31-5).[2] Aristotle will presumably still say that sensation or knowledge is <u>of</u> something non-relative in the object, but now he will have to say that the thing measured is intrinsically related to the measure and the measure is not intrinsically related to the thing measured, the opposite of what he said in Δ15. In Iota 6 1057a7-12 he gives an argument to support the claim that knowledge is related to the thing known as a thing measured to the measure rather than as a measure to the thing measured: the argument evidently turns on some general property of relations between measures and what they measure, but the crucial bit of text (1057a10-11) is obscure and it is hard to say what the argument is (see below).

We can see different points of view from which it would seem attractive to say either that the measure is intrinsically related to the thing measured but the thing measured is not intrinsically related to the measure, or the other way around. The cubit is a measure of length, and length is something absolute rather than relational--the cubit is not merely a measure of the "cubited," and the thing measured will remain unchanged in itself if we measure it in spans instead of cubits, unlike Protagorean sense-objects, which alter when they are "measured" by a new perceiver. This may be how Aristotle is thinking in Δ15. On the other hand, if we think of the measure as something like a standard, it makes sense to say that being in conformity or not with that standard (e.g. being equal or unequal to the appropriate length for that kind of thing, or lying flat against a straightedge or curving away from it) is an intrinsic attribute of the thing measured, while for the standard to be "in conformity" or not with the thing is not an intrinsic attribute of the standard: so we could say that the measure is not intrinsically related to the measured thing, while the measured thing is intrinsically related to the measure. This latter way of thinking is more plausible if we think of the "measure" as something that the thing "ought" to be equal to, rather than as something that can be applied many times over to the thing, in order to determine what multiple of it the thing is--and these are the "measures" that Aristotle is mainly concerned with in Iota. But even here Aristotle makes the same point: "[it is] as if when something else measures us, we come to know how tall we are by the fact that the cubit-measure reaches up to a certain point on us [or, perhaps, that it can be applied to us a certain number of times]" (Iota 1 1053a33-5, as above, with footnote). When you compare yourself with a cubit-measure, you could be assuming that you know how tall you yourself are, and using the comparison to discover how big a cubit is.[3] This is, in effect, what Protagoras is recommending for sensation: sensation can only be a way of discovering what other things are like <u>in relation to you</u>. But, Aristotle is saying, we can also use the comparison to discover how tall we ourselves are, if we assume that we know how big a cubit is--we are more <u>familiar</u> with our own size, it is in Aristotle's term "better known to us," but a cubit-length is "better known by nature," or at least it would be if a cubit were given by nature, like the period of the rotation of the fixed stars. And, Aristotle is saying, this is what happens when we compare our cognitions with an external object, to discover whether our cognition matches the reality. But this external object is not, of course, a "measure" in the sense that it could be applied many times over, or that many copies of it together could match our cognition.

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[2]translation problems in the last sentence: ἄλλου might be masculine, "someone else measures us," and ἐπιβάλλειν transitive, "he applies the cubit-measure to us": so, for instance, Ross. Barnes' revision of Ross also takes ἐπὶ τοσοῦτον to mean that he applies it <u>so many times</u> to us, rather than that it comes <u>up to a certain height</u> on us. (it's not obvious to me that ἐπὶ τοσοῦτον can mean what Barnes takes it to mean.) this is connected with a textual issue, ἡμῶν EJ Ross, ἡμῖν A^bM Jaeger; if ἡμῶν is right then it can't really be taken Barnes' way.

[3]I, for instance, feel that I know how tall I am, about 5'10", but have only the vaguest idea how big a cubit is, so I would probably proceed in this way

It is interesting that Thomas Aquinas, in his commentary on the Metaphysics, consistently takes the "measure" to be a normative standard, so that the thing measured would be intrinsically related to the measure, and the measure would not be intrinsically related to the thing measured. In part this comes simply from trying to make different passages of Aristotle consistent with each other, but Thomas is also influenced by the doctrine (accepted from Augustine) of exemplar ideas in God, and by Wisdom of Solomon 11:21, where God "has disposed all things in measure and number and weight." Thus at In Metaphysica #1959, commenting on our passage of Iota 1, Thomas says that "if there is any knowledge which is the cause of the thing known, it must also be its measure, as the artisan's knowledge is the measure of the artifacts, since each artifact is perfect to the extent that it attains the likeness of the art; and this is how God's knowledge stands in relation to all things"; Thomas takes Aristotle to be criticizing Protagoras' view that all human cognition is like God's cognition in this respect. In commenting on Δ15 Thomas says that the visible or knowable is "related" to vision or knowledge only in that vision or knowledge is related to it, as the pillar is left or right of the man only in that the man is left or right of the pillar (thus there is no new accident in the thing when it comes to be known, just as there is no new accident in the pillar when the man moves to the right of it);[4] "and it is likewise with the image in relation to the exemplar, and the denarius by which the value of a purchase is given: in all these all the relatedness [tota ratio referendi] in both terms depends on just one of them. And therefore all things of this type are related as measurable and measure: for each thing is measured by that on which it depends" (#1027). So Thomas takes the knowledge and the image to be measured by the object and the exemplar, so that the measured thing will be intrinsically directed to the measure but not vice versa.[5] He thus reads into Δ15 the view from Iota that knowledge is related to the thing known as the thing measured to the measure, although Aristotle here plainly says the reverse.[6]

In Iota 6, where Aristotle discusses how the one and plurality are opposed (in one way as the indivisible and the divisible, in another way as measure and the thing measured) he comes back briefly to the comparison between the relation of knowledge to the thing known and the relation of the measure to the thing measured. The two relations are expressed similarly and appear similar but are not, "for knowledge would seem to be a measure, and the knowable [or known, ἐπιστητόν] the thing measured, but it turns out that every knowledge is knowable but not every knowable is knowledge [συμβαίνει δὲ ἐπιστήμην μὲν πᾶσαν ἐπιστητὸν εἶναι τὸ δὲ ἐπιστητὸν μὴ πᾶν ἐπιστήμην], because knowledge is in some way measured by the knowable" (1057a9-12).[7] This is clearly supposed to support the position of Iota 1 1053a31-b3 against that of Δ15, but it is not so clear what the argument is. The thought may be that if the measure and the thing measured are being compared in respect of some attribute F, the thing measured must derive its F-ness from the measure and not vice versa; the knowledge is derivatively intelligible because

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[4]the pillar example is not Aristotle's but becomes standard for distinguishing real from non-real relations; I'm not sure where it comes from. it is close to SVF II,403, from Simplicius In Categorias 165-6, but he doesn't actually give the pillar as his example

[5]the denarius must be the measure, so Thomas must think that the thing sold is intrinsically related to the denarius but not vice versa, although he's not explicit about this: money gives an objective standard for measuring the value of commodities--even though the commodity isn't dependent on the denarius

[6]Averroes in his commentary on Δ15 just tacitly suppresses all mention of measure and measured in his paraphrase, although he accurately quotes the text

[7]the only manuscript variation is that while EJ have ἐπιστήμην μὲν πᾶσαν ἐπιστητὸν, A^{b}M have the last word ἐπιστητὴν. Ross tries to take this as a sign of trouble in the transmission, but it is not: the β tradition is simply trying to impose gender agreement. the α text might be translated "every knowledge is something knowable"

the object is primarily intelligible (as at Λ9 1074b35-6), so the object must be the measure and the knowledge the thing measured. (De Anima III,4 429b22-430a9 raise the question whether knowledge [νοῦς] too will be intelligible and the object too will be knowing or knowledge; the answer is that the knowledge will indeed be intelligible but that the object will not be knowing or knowledge except where it is something immaterial, in which case it is indeed itself νοῦς. Perhaps in the context of Iota Aristotle would explain that by saying that the knowledge is measured by the object and not vice versa.) Or perhaps the thought is more specifically that knowledge is knowable because its object is knowable, and that things derive their knowability from their measures.[8] Thomas in his commentary, #2095, takes the εἶναι in a11 as existential, with the sense "if knowledge exists, the knowable also exists, but it is not the case that if the knowable exists, knowledge must also exists," but the Greek cannot bear this meaning, and indeed neither can the Latin translations. Ross suggests emending to "ἐπιστήμην μὲν πᾶσαν ἐπιστητοῦ εἶναι τὸ δὲ ἐπιστητὸν μὴ πᾶν πρὸς ἐπιστήμην", every knowledge is of a knowable but not every knowable is relative to a knowledge (and his paraphrase, AM II,297-8, shows that he hopes to take this almost as Thomas does), but I am not sure this yields plausible Greek (I think he would say simply that τὸ ἐπιστητόν is not πρὸς ἐπιστήμην, not that not every ἐπιστητόν is), and even if we accept it it does not give an argument for Aristotle's conclusion about which is the measure, since he is equally capable of saying that the measure is πρός the measured but not vice versa, or the reverse.

[8]Recall from Δ6, "that by which [as a] first [thing] we know, is the first measure of each genus" (1016b19-20, cited Iγ2a).