Aristotle on Paradigm

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1) *Paradigm in Pythagoreans*

There are at least two discussions about Pythagoreans in Aristotle's works that can be related to paradigm, both in Book A of *Metaphysics*. In the first, Aristotle says that for Pythagoreans all the things are modeled after numbers (τὰ μὲν ἄλλα τοῖς ἀριθμοῖς ἐφαίνετο τὴν φύσιν ἀφωμοιῶσθαι πᾶσιν). (Met.,[1] A, 985b32-33) In the second, Aristotle tells us that Pythagoreans take 'the first subject of which a given term would be predicable (ᾧ πρώτῳ ὑπάρξειεν ὁ λεχθεὶς ὅρος)' as the substance of the thing. His example is double and two: since two is the first thing of which double is predicated, double will be the substance of two. (Met., A, 987a22-25)

2) *Forms as paradigms*

Some of the critiques of platonic Forms in Aristotle's works are paradigm-oriented: they attack Plato's theory on the basis that Platonians considered Forms as paradigms. The core of all Aristotle's objections is that calling Forms paradigms is a mere poetical strategy and does not have any real effect. (Met., 991a20-22; M, 1079b24-26) We can recognize four reasons for Aristotle's objections of forms as paradigms:

a) To consider something as the paradigm of another thing to which it is like does not have any ontological effect: 'For what it is that works, looking to the ideas?

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[1] Abbreviations used in this paper:

Met.	*Metaphysics*
PrA.	*Prior Analytics*
PsA.	*Posterior Analytics*

Anything can either be, or become, like another without being copied from it, so that whether Socrates exists or not a man might come to be like Socrates.' (Met., A, 991a22-26; M, 1079b26-29) Therefore, paradigms are ontologically unnecessary: 'It is quite unnecessary to set up a form as a paradigm … the begetter is adequate to the making of the product and the causing of the form in the matter.' (Met., Z, 1034a2-5) Don't these cases imply that Aristotle did have more the ontological necessity of paradigm in thought instead of its epistemological necessity?

b) To consider Forms as paradigms means that a thing must have several paradigms; e.g. animal and too-footed and man will be paradigms of the same thing. (Met., A, 991a27-29; M, 1079b31-33)

c) The theory that Forms are paradigms not only of sensible things but also of themselves makes the same thing both a paradigm and a copy (ἐικών). (Met., A, 991a29-b1; M, 1079b33-35)

3) *Reasoning by paradigm*

Aristotle compares the arguments using paradigms to his own theory of syllogism:

'We have an 'example' (παράδειγμα) when the major term is proved to belong to the middle by means of a term which resembles the third. It ought to be known that the middle belongs to the third term, and that the first belongs to that which resembles the third. For example, let A be evil, B making war against neighbors, C Athenians against Thebans, D Thebans against Phocians. If then we wish to prove that to fight against Thebans is an evil, we must assume that to fight against neighbors is an evil. Evidence of this is obtained from similar cases, e.g. that the war against the Phocians was an evil to Thebans. …Now it is clear that B belongs to C and to D (for both are cases of making war upon one's neighbors) and that A belongs to D (for the war against the Phocians did not turn out well for the Thebans); but that A belongs to B will be proved through D.' (PsA., B, 24, 66b38-69a11)

An 'example' can also be made by several similar cases. (PrA., B, 24, 69a11-13)

Aristotle notes (PrA., B, 24, 69a13-24) that reasoning by paradigm is 'neither like reasoning from part to whole nor like reasoning from whole to part but is rather a reasoning from part to part, when both particulars are subordinate to the same term, and one of them is known.' And it differs from induction in two ways:

a) While induction uses all the particular cases to prove that the major term belongs to the middle, reasoning by paradigm does not draw its proof from all the particular cases.

b) While induction does not apply the syllogistic conclusion to the minor term, reasoning by paradigm does make this application. (PrA., B, 24, 69a13-24)