Definitions in Ibn Sīnā’s *Jadal*
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Two sides of logic, from Aristotle to today:

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Ibn Sīnā

Things are moved from unknown to known by:

- *tasawwur* (concept formation):
  
  \[
  \text{aš-šay’u al-mawṣūlu ‘ilā at-tasawwuri ... fa-minhu ḥaddun fa-minhu rasm...}
  \text{wā-nahwahu}
  \]

  ‘What conveys to *tasawwur* is ... definition and description and the like.’

- *tasdiq* (rational assent)
  
  Conveyed by syllogism, induction and the like.

  (*Īsrārī I.3*)
5.
Ibn Sīnā examines definitions chiefly in:

1. Šifa': Burhān (Posterior Analytics)
2. Šifa': Jadāl (Topics)
3. The Easterners
4. Risāla fi al-hudūd (Treatise on Definitions)
5. ′Īsārāt (Pointers)

Not doublets. In Šifa' Ibn Sīnā puts into Burhān questions about discovery of definitions, and into Jadāl questions about correctness of definitions.

6.
In Jadāl Ibn Sīnā devotes Chapter VI (forty-nine pages) to definitions. This chapter chiefly consists of about sixty-five 'places'. The correspondence with Aristotle's Topics VI is very close, in the places discussed, and in the examples given, and in the order of discussion.
As in Aristotle, the main points of discussion are:
- Use of genus, species and differentiae in definitions.
- Definitions of things that are compound (either in name or in substance).
- Definitions of relations.

7.
We will look at:
(a) How Ibn Sīnā uses his source.
(b) How Ibn Sīnā deviates from his source.
(c) Ibn Sīnā's later thoughts on the same topics.

8.
(a) Ibn Sīnā's use of his source
Ibn Sīnā shows no evidence of depending on any source except Topics VI (though at Extract 5 he implies that the principles explained in his Chapter VI are standard for logic books).
The chapter mentions no other commentators or their views.
It maintains a fiction that reader is engaged in a dispute ('If he says ...'), though the points made are all about assessment of definitions in general.
The closing remarks (Extract 5) forget the connection with debate.
Aristotle notes that definitions can be improved by discussion, and makes an analogy with improvement of laws by debate in the assembly. Read literally, Ibn Sīnā says that definitions are improved, and old ones abrogated, by the Šarīʿa.

Burton, *The Sources of Islamic Law: Islamic Theories of Abrogation* p. 18:

By naskh, the ʿuşūlis understood in the most general terms a revelatory process by which certain divine decisions, enacted at a given date, had been overtaken and superseded by other divine decisions enacted at a later date.

Aristotle says briefly that individuals are identified not directly but by way of some quality that they have. (Maybe he overlooks identification by map reference.) Ibn Sīnā gives a much fuller account of what it is to identify an individual.

Throughout, he regards identifying an individual as the extreme case of identifying a class of things; so Aristotle’s conclusion is Ibn Sīnā’s starting point.
Ibn Sīnā’s second solution needs some background (not all of which is clear in Ibn Sīnā).

A parametrised disposition is what today we call a binary relation, but expressed as a property of the first argument:

- father of Zayd
- father of x
- neighbour of so-and-so

Here ‘Zayd’, ‘x’ etc. are the parameter.

Also Ibn Sīnā limits himself (why?) to questions about the ‘whatness and thingness’ of an individual.

For example in answer to the question ‘What thing is Zayd?’, Ibn Sīnā accepts the answer ‘He is rational’, but only in the sense in which it is completely uninformative.

Clearly we are miles away from any kind of debate, except between hardened metaphysicians.

Extract 2 (251.8–252.10)

Aristotle discusses situations where it is hard to avoid defining something in terms of something else no better understood.

He slips from

(i) definition of a quality in terms of its opposite, to
(ii) definition of a relation in terms of its converse.

Ibn Sīnā rightly separates (i) from (ii). Extract 2 deals only with (ii).

Ibn Sīnā presents two solutions.

The first is what Ibn Sīnā takes to be Aristotle’s own solution: You can regard either relation as prior, because knowledge of both comes simultaneously.

An existential disposition is a property that we can explicate with ‘There is . . .’ or ‘some’.

- father = male who has some child
- neighbour = person who has someone living next door
- odd = number such that some number is exactly halfway between it and 1

Ibn Sīnā’s question is about existential dispositions, not parametrised ones.

It’s unclear to me that this is true of Aristotle too.
On any reasonable notion of priority, a parametrised disposition is prior to the existential disposition got from quantifying out the parameter. Thus ‘father of’ is prior to ‘father’.
This observation throws Aristotle’s problem back to the parametrised disposition. How can ‘father of’ be prior to ‘son of’, or vice versa?

Ibn Sinā solves the problem as follows.
(1) Take the existential disposition, and remove the quantifier so as to replace it by a parametrised disposition.
(2) Define the parametrised disposition in terms of more fundamental notions.
(3) Restore the existential quantifier in the appropriate place.
This defines the relation without any mention of its converse.

Ibn Sinā uses the example ‘neighbour’.
This is a weird example to use.
The relation ‘x is a neighbour of y’ is a symmetric relation, so that the relation is its own converse. Hence the question of priority vanishes.

(1) Go from ‘neighbour’ to ‘person who is neighbour to such-and-such a person’ (cf. Ibn Sinā’s ‘second person’).
(2) ‘Neighbour to such-and-such a person’ means ‘person living in a house which is next door to a house in which such-and-such a person lives’.
(3) Quantify out the such-and-such person:
   person living in a house which is next door to a house in which some other person lives.
(c) Extract 6 from 'Išārat ii.11

The extract covers the same ground as Extract 2.

In spite of Ibn Sīnā’s efforts to make the 'Išārat esoteric, this explanation is much clearer than the one in Extract 2. This is partly because Ibn Sīnā concentrates on the essentials, and partly because he chooses a more sensible example (father rather than neighbour).

But the substance is the same as in Jadal.