Speaker's knowledge
in Al-Sīrāfī (*Šarḥ*) and Ibn Sīnā

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We are comparing the views of two scholars writing in Arabic,
not too far apart in date,
about questions in the semantics of natural languages.

Al-Sīrāfī famously attacked Aristotelian logicians in a majlis
in AD 932. This shouldn't be read as antipathy to logic,
since Ibn Sīnā also attacked the Aristotelian logic tradition for
very similar reasons. Namely
(1) the Aristotelian logicians gave uncritical support
(تعصّب) to everything said by Aristotle, and
(2) they tried to do natural language logic without paying
attention to what people do in fact say.

In fact, granting their different agendas, Al-Sīrāfī and Ibn
Sīnā share many views.
We will explore here their common interest in the related
notions of نكرة, معروف and فائدة.

Because of their backgrounds they sometimes use different
vocabulary.
They share فائدة with pretty much the same meaning.
But for (semantic) معروف and منكّر, Ibn Sīnā usually says
معيّن and غير معيّن.

A. **How can an equality be informative?**

Today we tend to think of this as a logicians' issue,
thanks to Gottlob Frege's article of 1892
which asked how it can be informative to be told that

The morning star is the evening star.

But in fact it was Al-Sīrāfī and not Ibn Sīnā who asked Frege's
question:

Al-Sīrāfī i.307:

إن قال قائل: إذا كان الاسم والخبر جميعا معروفين، فما الفائدة؟

"Suppose someone were to say: When both the *ism* and the *khabar* are known, how can the sentence be informative?"

This is about topic-comment (اسم and خبر) sentences.
Al-Sīrāfī intends '(semantically) known' rather than '(syntactically) definite', since otherwise the question doesn't make sense.
So the question asked is: If the topic and the comment are both individuals known to the interlocutor, how could the interlocutor get further information by being told that they are the same individual?

Al-Sīrāfī's answer:

The topic and the comment can be known separately (منفرد) or in combination (مركّب). You can know Zayd through having heard about him, and you can know my brother through having met him. But it is still new information to be told that Zayd and my brother are the same person.

Presumably مركّب here means that we have two criteria for identifying the same individual,
and we know that they both identify the same individual.

If this is right, then Al-Sīrāfī's position must be that the speaker has مركّب knowledge of the individual,

but the interlocutor may have no better than منفرد knowledge.
The statement conveys information by raising the interlocutor's knowledge to مركّب.

This is an insightful notion. Does Al-Sīrāfī explore it further?

Nothing similar is found in Ibn Sīnā.
But for Ibn Sīnā the only question about *conveying* information is whether the speaker succeeds in conveying his مراد and the interlocutor succeeds in picking it up.

For example *Safsaṭa* 77.6:

كان للمجيب أن يتعنّت عليه، فيقول: « ما أردت؟ »

In any case, for Ibn Sīnā the speaker himself can gain new information by deducing a statement from other statements.
So gaining new information and receiving information from a speaker are separate issues.

B. How can a statement about an indefinite topic be unambiguous?

Al-Sīrāfī i.305:

> People dislike having a [semantically] indefinite topic (مبتدأ) because of the obscurity/ambiguity (لبس).

However, it does occur. Note *Sūratu l-ḥujurāt* 49.12:

إنّ بعض الظنّ إثم 'Suspicion is in some cases a sin.'

Al-Sīrāfī's statement is problematic because in practice a sentence with semantically indefinite topic need not be obscure or ambiguous at all.

But Al-Sīrāfī is signalling (like many other Arabic linguists) that in usage a topic is supposed to specify— unambiguously for both speaker and listener— what known entity the statement is about. A semantically indefinite topic can't do that.

So our question B becomes more than just theoretical.

The issue arose in logic in a different way. The 9th century Baghdad translators of Aristotle needed an Arabic form to represent Aristotle's subject-predicate sentences, e.g.

> Every B is an A.
> Some B is an A.

They chose topic-comment form, sometimes translating Aristotle's 'subject' as مبتدأ and his 'predicate' as خبر.

For 'some B' they wrote بعض الباء. In initial position the بعض is syntactically definite, being in *'iḍāfa* with الباء. But semantically it's at the extreme end of indefiniteness. So we have a conflict.

In practice the logicians, including Ibn Sīnā, accepted this usage and said some things that don't seem very convincing Arabic:

(*Qiyās* 120.6) بعض الناس حيوان.
(*Qiyās* 501.8) بعض الأبيض ثلج.

But writing less formally, Ibn Sīnā tends to recast the sentences:

(*Qiyas* 209.2) المتحرّكات بعضها ناس.

(*Qiyas* 483.5) العلم موجود في كلّ كيفيّة.

(*Burhan* 140.14) من الحيوان ما هو سابح.

(He explicitly says that the second sentence is to be read as existentially quantified.)

In all these cases the subject term minus the quantifier becomes the topic, both syntactically and semantically definite. The existential quantifier moves into the comment.

Typically for him, Ibn Sīnā complicates the issue by pointing out another dimension of indeterminacy:
How many items does the indefinite description imply?
In English compare 'one', 'some', 'a few', 'a number' etc.

Thus (*Mašriqiyyūn* 68.15) if we say

Every human breathes at some time.

we will be understood as meaning not 'at least once', but 'continually but at irregular times'. He calls this indefinite set of times منتشر, maybe 'widely scattered'.

This distinction between indefinites is not helpful in logic, but it is noted in the modern linguistic literature.
We have not yet found it in Al-Sīrāfī.

Both Al-Sīrāfī and Ibn Sīnā suggest a kind of resolution of the problem of semantically indefinite topics.
The speaker may have some completely definite entity in mind, but hide this fact under an indefinite.

An example of Al-Sīrāfī (indefinite, but not a topic) shows that the fact could be revealed by an anaphora:

(i.306.2) مررت برجل وكلّمته.

By contrast some of Ibn Sīnā's paraphrases for بعض phrases won't support anaphora:

(*Qiyas* 151.12) ليس كلّ أبيض حيوان.

(*Qiyas* 526.9) ليس كلّ علم طبّ.

Instead Ibn Sīnā makes the point by distinguishing cases where the speaker can replace the indefinite description by a concrete identification that makes the item معيّن, and those where he can't.

For example 'eclipse of the moon' (الكسوف للقمر) can be defined in terms of the relative positions of sun, moon and earth. So the indefinite 'At some times' in

At some times the moon is eclipsed.

can be removed altogether by feeding the definition into the sentence. For Ibn Sīnā this kind of replacement is typical of scientific progress.

But 'so-and-so breathes' (النفَس للإنسان) is at an undefined time; nobody can predict such things.

We note also a brief mention of بعض as topic in Al-Sīrāfī, though we are not sure of its implications.
At ii.344.2ff Al-Sīrāfī cites a remark of Mubarrad,
that نصف has to be reckoned definite,
because it is put in *'iḍafa* like بعض and كلّ.

Al-Sīrāfī disagrees at least with Mubarrad's reason.
We can say

The goods consist of two halves, one of which is made up of long-necked bottles.

but we can't say anything like that with كلّ or بعض.

Concluding remarks:

Putting together the examples from Al-Sīrāfī and those from Ibn Sīnā reveals a wide and subtle variety of syntactic forms that Arabic uses for expressing semantic indefiniteness.

Curiously there are linguistic issues raised by Ibn Sīnā and not by Al-Sīrāfī, and conversely logical issues raised by Al-Sīrāfī and not by Ibn Sīnā.

In short, the two writers are better taken مركّب than منفرد.