on the semantics of ‘being’ in Japanese.

Lajos L. Brons (mail@lajosbrons.net)
Institute of Humanities and Social Sciences, Nihon University, Tokyo, Japan.

In an analysis of the semantics of the Japanese existential verbs aru and iru, Takashi Iida\(^2\) suggests a semantic distinction between locative, existential, and possessive sentences; essentially that both aru and iru have three homophones used in these three different kinds of sentences. Based on Iida’s examples, I will present an alternative analysis of aru/iru that does not suggest homophony in this short paper. Rather, I will argue that all (these) uses of “being” in Japanese can (and should) be understood as a relation between a ‘thing’ (in the broadest possible meaning of that term) and a collection.

The Japanese verbs aru and iru can be roughly translated as “to be” although their usage somewhat differs from “to be” in English (most obviously, they are not used as copulative verbs). Aside from etymology\(^3\) (and use as auxiliary verb and in other grammatical constructions such as de aru) these two words only differ in what kinds of beings can fill the appropriate argument slot: non-animates and animates respectively. Examples (1) through (6) come from the aforementioned paper by Takashi Iida. (1), (3), and (5) are about people (animates) and thus use iru; the other three are about non-animates and thus use aru.

(1) 太郎は公園にいる。
Tarō wa kōen ni iru.
[Tarō] [topic] [park] [locative] [to be]
Tarō is in the park.

(2) 大部分の本は学校にある。
Daibubun no hon wa gakkō ni aru.
[most] [connective] [book] [topic] [school] [loc.] [to be]
Most of the books are in the school.

---

1 Draft version: 1.1 (June 7, 2012). This short paper mostly coincides with a section of a working paper that is currently titled ‘Indirectly referring verb arguments’. That and other working papers are available at www.lajosbrons.net/wp.


3 The oldest known ancestors of aru and iru are found in Old-Japanese (Nara era). Aru was already ar-, meaning “to be”; iru stems from wor-, meaning “be sitting”. Their grammatical uses (as auxiliary verbs etc.) were already very similar to current forms.
ON THE SEMANTICS OF ‘BEING’ IN JAPANESE

(3) 笑った多くの学生がいる。
Waratta ōku no gakusei ga iru.
[laughing] [many] [connective] [student] [agent] [to be]
There are many students who laughed.

(4) 太郎が読んだ多くの本がある。
Tarō ga yonda ōku no hon ga aru.
[Tarō] [agent] [read] [past] [many] [connective] [book] [agent] [to be]
There are many books (that) Tarō has read.

(5) 花子は子供がいる。
Hanako wa kodomo ga iru.
[Hanako] [topic] [child] [agent] [to be]
Hanako has a child / children.

(6) 花子は勇気がある。
Hanako wa yūki ga aru.
[Hanako] [topic] [courage] [agent] [to be]
Hanako has courage.

Iida classifies these 6 examples into three groups: (1) and (2) express location; (3) and (4) express existence; and (5) and (6) express possession. These three groups are semantically distinct, and consequently, iru and aru have three homophones each. This analysis is wrong – I think – for three reasons. Firstly, there is no etymological support for homophony (rather in the contrary). Secondly, lacking etymological support, homophony is an acceptable explanation only if there is no non-homophonous alternative, while there is one, as I will show below. And thirdly, homophony can not explain some semantic differences between apparently very similar sentences. (This third point will be further explained below.)

The alternative interpretation that I will offer here analyzes all these sentences as a relation between a ‘thing’ and a collection. The locational form can be considered the paradigm case: aru/iru locates something somewhere. ‘Location’ should be understood very broadly, however, not just as spatial/physical location, but as some kind of collection, domain or context the something in question (the theme) is part of. Formally, this is a collection of ‘things’, and the relationship is one of ‘belonging to’ or ‘being part of’, which is somewhat similar to set membership. I will use the term “domain” for this collection, and the symbol ε to represent the two-place relation ‘belonging to’ or ‘being part of’. The ‘thing’ that is said to belong to or to be part of the domain, is the theme of the verb. Abbreviating domain as D and theme as t, then a formal analysis of the paradigmatic sentences (1) and (2) would be the following:

(1a) ∃t,D [ t=Tarō & D=park & ε(t,D) ]
(2a) ∃t,D [ t=most-of-the-books & D=school & ε(t,D) ]

Strictly speaking, this is incorrect, however. Neither the park nor the school are the domain. Rather, they identify the domain. The respective domains – keeping in mind that domains are collections of ‘things’ – are ‘things that are in the park’ and ‘things that are in the school’. Therefore, a more appropriate formalization would be:

(1b) ∃t,D [ t=Tarō & ID(D,park) & ε(t,D) ]
(2b) ∃t,D [ t=most-of-the-books & ID(D,school) & ε(t,D) ]
where the two-place relation ID represents domain identification: “ID(D,park)” means ‘the domain D is identified with the park’ or ‘the domain D is the collection of things that belong to or are in (some sense) part of the park’.

The indirect reference to the domain is even more obvious in case of the possessive sentences (5) and (6). The domain, the collection of things that the theme is placed in, is not Hanako herself, but Hanako’s, the ‘things’ that belong to or are (in some sense) part of Hanako:

(5a) \( \exists t,D \ [ t=\text{children} \land \text{ID}(D,\text{Hanako}) \land \varepsilon(t,D) ] \)

(6a) \( \exists t,D \ [ t=\text{courage} \land \text{ID}(D,\text{Hanako}) \land \varepsilon(t,D) ] \)

Despite the similarity in structure of (1)/(2) and (5)/(6) there are some important grammatical differences with regards to the particles used. The particle wa (は) is a topic marker. Its purpose is more or less to specify the context of the sentence. As topic marker, wa seems to be an obvious way to specify the domain in sentences with aru/iru, but that is not necessarily the case, as shown in (1) and (2).

<table>
<thead>
<tr>
<th>theme</th>
<th>(grammatical function)</th>
<th>domain identifier</th>
<th>(grammatical function)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Tarō</td>
<td>topic (wa)</td>
<td>park</td>
<td>locative (ni)</td>
</tr>
<tr>
<td>(2) most of the books</td>
<td>topic (wa)</td>
<td>school</td>
<td>locative (ni)</td>
</tr>
<tr>
<td>(5) child(ren)</td>
<td>agent (ga)</td>
<td>Hanako</td>
<td>topic (wa)</td>
</tr>
<tr>
<td>(6) courage</td>
<td>agent (ga)</td>
<td>Hanako</td>
<td>topic (wa)</td>
</tr>
</tbody>
</table>

In case of (1)/(2) the topic marker can be replaced with the agent marker ga without change of meaning: ‘Tarō’ and ‘most of the books’ are not necessarily topic. This is different in (5) and (6) where the theme takes the agent role in the sentence. Spatial/physical locations as in (1)/(2) are obligatorily marked with the locative particle ni, which cannot be replaced with wa (but wa can be added to it, resulting in ni-wa). For this reason, a locational domain is marked with ni, while a non-locational domain is marked with wa.

(3) and especially (4) are (slightly) more complicated, and in case of (4) that is partially caused by the sentence’s form. To understand the semantics of (4), it is useful to rewrite it as (4a), which means the same, and compare it to (7), which only differs in the specification of the books in question, underlined here:

(4a) 太郎が読んだ本が沢山ある。

Tarō ga yonda hon ga takusan aru.

(7) 赤い本が沢山ある。

Akai hon ga takusan aru.

There are many books (that) Tarō has read. There are many red books.
In (3) and (7) no context (domain) is specified, but this does not mean that these sentences should be understood as general existential claims. That is, they do not mean that there exist many laughing students and red books without any further qualification. Rather, (3) and (7) mean that there are many laughing students and red books in some spatial/physical locations or other kinds of contexts/domains that are salient in the context of the utterance (or writing) of these sentence. Hence, the domain argument is specified by the context of utterance here, formalized below as $\exists_x$, which can be read as ‘(given) the $x$ (in C)’:

(3a) $\exists_x \exists t,D \ [ t=\text{many-laughing-students} \ & \ \text{ID}(D,x) \ & \ \varepsilon(t,D) ]$

(7a) $\exists_x \exists t,D \ [ t=\text{red-books} \ & \ \text{ID}(D,x) \ & \ \varepsilon(t,D) ]$

This is different for (4/a), however. There seems to be no context/domain specified as in (3) and (7), but it also is not the case that there is some salient context that is left unmentioned. Hence, it seems to be the case that (4/a) asserts the unqualified existence of ‘many books (that) Tarō has read’. In other words, (4/a) seems to have only one semantic argument, the theme. However, if that would be the case, then the same would apply to (7), but that is not how (7) is normally understood.

A possible solution to explain the difference between (4/a) and (7) would be to claim that despite contrary appearance, (4/a) does specify a domain: it appears in the subclause ‘Tarō ga yonda’ (‘that Tarō has read’). The theme is ‘many books’, the domain is ‘(things) that Tarō has read’, which would mean that the domain is not an independent grammatical argument here, but a subclause of the agent (‘many books’). Such a construction requires a subclause: the grammatically near identical (7) qualifies the many books by an adjective (‘red’) only, and this is insufficient to be understood as the semantic domain argument. (That is, (7) is not normally understood as asserting that there are many books in the domain of red things; in other words, that there exist many red books.)

However, this ‘solution’ does not explain the effect of changing $\text{ga}$ into $\text{wa}$; that is, of replacing the agent marker with a topic marker. Sentence (7) means that there are many red books in some contextually salient location (domain), but (8) does not.

(8) 赤い本は沢山ある。

Akai hon wa takusan aru.

[red][book][topic][many][to be]

There are many red books.

Rather, (8) means that many red books exist. Here indeed, $\text{aru}$ seems to have only one argument. And importantly, changing $\text{ga}$ into $\text{wa}$ in sentence (4/a) does not change the meaning of that sentence. What is most problematic about this, is that it seems to be the case that for some sentences, changing the agent into a topic changes the number of semantic arguments of the verb: the usually two-place predicate becomes a one-place predicate. This is particularly
problematic for Iida’s approach according to which existential usage of aru/iru is always a one-place predicate. Within that framework the change from one-place predicate to two-place predicate by changing wa in (8) to ga in (7) is inexplicable.

(8) can be analyzed without assuming a one-place predicate version of aru, however. The domain argument does not disappear in (8), but becomes boundless: the domain of (8) is the actual universe U, or the actual world:

\[
(8a) \exists t, D \ [ t = \text{red-books} \land D = U \land \varepsilon(t, D)]
\]

and the same applies to (4/a):

\[
(4b) \exists t, D \ [ t = \text{books-that-Tarō-has-read} \land D = U \land \varepsilon(t, D)]
\]

Although (8a) and (4b) may be correct formalizations of (4/a) and (8) respectively, this does not tell us when and why the domain is the universe. Normally, if no domain is explicitly mentioned it defaults to what is contextually salient. The domain defaults to the universe instead in sentences of the form ‘X \text{ wa aru/iru}’ such as (8). This does not explain (4/a), however. What distinguishes (4/a) from (7)/(8) is specificity. If there is no explicit or contextually salient domain, and the theme is sufficiently specific, then the domain defaults to the universe. This, of course, raises the question what ‘sufficiently specific’ means, but that question was already more or less answered above in the first suggestion for a ‘solution’: the required level of specificity requires a subclause.

In summary then, (ignoring use as auxiliary verb and the construction de aru) the semantics and syntax of (grammatically correct use of) iru/aru, ‘being in Japanese’, can be represented by means of the following (complex) ‘rule’:

The verb iru/aru represents a two-place relation between a ‘thing’, the theme t, and a domain D to which the theme (somehow) belongs: \( \varepsilon(t, D) \), such that

the domain D

is either explicitly mentioned, and

is marked as locative (ni) iff it is spatial/physical location, or

is marked as topic (wa) otherwise;

or (if it is not explicitly mentioned) defaults to what is contextually salient;

or (if it is neither explicitly mentioned nor contextually salient) defaults to the universe iff either

the theme is marked as topic (wa), or

the theme is described by means of a subclause; and

the theme t

is either explicitly mentioned, and

marked as agent (ga), or

as topic (wa), but only if the domain is not marked as topic;

or (if it is not explicitly mentioned) defaults to what is contextually salient.