### Description

This makes the `*` operator operate more similarly to the `+` and `-` operators. The binary versions of `+` and `-` call methods named `+` and `-`, while the unary versions call methods named `+@` and `-@`. The binary `*` operator calls the method named `*`, but the unary `*` operator calls the method `to_a` currently, and used to call `to_ary` in 1.8.6 (and at some point may have called `to_splat`).

I think this makes for more consistent behavior, and hopefully it isn't just a foolish consistency. I brought up this idea as a question in Shugo Maeda's presentation at RubyKaigi 2009, and discussed it with Matz at Lone Star Ruby Conf 2009, and he thought the idea had merit.

Here's a basic example how this would look:

```ruby
class MultiplePersonality
  def *@
    [self, [self, self]]
  end
end

mp = MultiplePersonality.new
p1, mp2 = *mp
```

This comes with a patch that appears to work from my simple testing, but this is my first time working with the internal Ruby code, so I apologize in advance if it doesn't do things correctly.

The patch modifies `parse.y` so the above is no longer a syntax error. It adds a `USTAR` token to the parser to represent that `*` token. It modifies the splatting to call `*@` instead of `to_a`. Also, for backwards compatibility, it adds `*@` to `BasicObject`, and has it call `to_a` if it responds to `to_a`. This allows code that defines `to_a` and expects that the unary `*` operator will call `to_a` to still work.

This patch is mostly for consistency, but it also allows the programmer to make `to_a` return one thing, and the unary `*` operator return something else. I can think of the following use case:

```ruby
# Represents an abstract set of rows in the database
class Dataset
  def to_a
    retrieve_database_rows
  end
  def *@
    [self]
  end
dataset = Dataset.new

# Explicitly asking for an array means I want
# an array of database rows represented by the
# dataset.
rows = dataset.to_a

# If the dataset had any rows, I want to debug print
# each row separately. However, if it did not have
# any rows, I want to debug print the dataset itself.
p(*((rows.empty? ? dataset : rows))
```

I'd like to thank Eleanor McHugh for helping me find the key part of Ruby that needed to be modified to support this (in `vm_insnhelper.c`).

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**Status:** Rejected

**Priority:** Normal

**Assignee:** matz (Yukihiro Matsumoto)

**Target version:** 3.0
History

#1 - 09/19/2009 06:08 AM - marcandre (Marc-Andre Lafortune)
- Category set to core
- Assignee set to matz (Yukihiro Matsumoto)

#2 - 03/22/2010 11:00 AM - mame (Yusuke Endoh)
- Target version set to 3.0

Hi,

This makes the * operator operate more similarly to the + and - operators.

Interesting. It may be useful to simplify the semantics of multiple assignment which is considered as one of most complex part of Ruby.

But it is very primitive part of Ruby semantics.
I think that such a spec change must not be included in 1.9.x.

So I set the target of this ticket to 2.0.

--
Yusuke Endoh mame@tsg.ne.jp

#3 - 03/24/2010 10:16 PM - yugui (Yuki Sonoda)

On Sun, Aug 30, 2009 at 2:53 PM, Jeremy Evans redmine@ruby-lang.org wrote:

I think this makes for more consistent behavior, and hopefully it isn't just a foolish consistency. I brought up this idea as a question in Shugo Maeda's presentation at RubyKaigi 2009, and discussed it with Matz at Lone Star Ruby Conf 2009, and he thought the idea had merit.

+1

Interesting. But it is so large change for the language feature to add to 1.9.2. I do not include this feature in 1.9.2.
But I also think it can be added to 1.9.x. What do you think, matz?
Do you want add it to ruby 1.9.x?

-- Yuki Sonoda (Yugui)

#4 - 09/14/2010 04:19 PM - shyouhei (Shyouhei Urabe)
- Status changed from Open to Assigned

#5 - 10/18/2011 09:16 AM - naruse (Yui NARUSE)
- Project changed from Ruby master to CommonRuby
- Category deleted (core)
- Target version deleted (3.0)

#6 - 10/23/2011 05:21 PM - naruse (Yui NARUSE)
- Project changed from CommonRuby to Ruby master

#7 - 11/20/2012 08:51 PM - mame (Yusuke Endoh)
#8 - 10/22/2017 12:29 AM - mame (Yusuke Endoh)
- Status changed from Assigned to Rejected

I'm closing this ticket since the discussion has been stalled completely.

I still think this is an interesting proposal. If you (or anyone else) are interested in this feature, please create a new ticket. It would be good to reimplement it for trunk, and to investigate its merit on real-world applications and the compatibility problem.

Files

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<td>08/30/2009</td>
<td>jeremye (Jeremy Evans)</td>
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