Ruby master - Bug #12907

rb_respond_to() return value is incorrect

11/07/2016 04:24 AM - ohler (Peter Ohler)

Status: Closed
Priority: Normal
Assignee: nagachika (Tomoyuki Chikanaga)
Target version: ruby -v:
  2.3.0-3
Backport: 2.1: UNKNOWN, 2.2: UNKNOWN, 2.3: UNKNOWN

Description
As of Ruby 2.3.0 rb_respond_to incorrectly reports non-zero for methods that are not supported. This occurs with subclasses of BasicObject. This occurs with Oj when but should occur with other C code. A simple sample that demonstrates the failure in below. It works fine on all versions of Ruby until 2.3.0.

```
require 'oj'

class A < BasicObject
  def initialize(data)
    @data = data
  end
end

a = A.new("xyz")

json = Oj.dump(a, mode: :compat, use_to_json: true)
#=> NoMethodError: undefined method `to_hash' for #<A:0x007fae03de1dc8>
```

In the C code the rb_respond_to() function is called to determine if an instance of A responds to "to_hash". 1 is returned in Ruby 2.3.x while previous versions correctly returned 0.

History

#1 - 12/20/2016 09:43 AM - eugene (Eugene Pimenov)
- ruby -v changed from 2.3.0, 2.3.1 to 2.3.0-3

We did hit this bug on our system and did a deep dive in it yesterday.

The code to reproduce the issue is:

```
rb_respond_to(rb_eval_string("BasicObject.new"), rb_intern("anythinghere"))
```

It always returns 1 (TRUE) in ruby 2.3.x. It's caused by [the following line]. Because respond_to method doesn't exist in BasicObject. The correct code was reverted in [r55869] because it breaks ActiveSupport 4.1.

As far as I can tell the issue is fixed in trunk and 2.4.x betas.

#2 - 12/21/2016 06:07 AM - shyouhei (Shyouhei Urabe)
- Assignee set to nagachika (Tomoyuki Chikanaga)
- Status changed from Open to Assigned

Chikanaga-san please handle this because it seems 2.3 only.

#3 - 07/25/2019 06:20 PM - jeremyevans0 (Jeremy Evans)
- Status changed from Assigned to Closed