# Keyword argument oddities

**Case 1:** If a method takes a single argument, and the method is called with a keyword splat, the method receives the passed object, not the result of calling #to_hash on the object:

```ruby
# kw1.rb
def m(a) a end
o = Object.new
def o.to_hash() puts "to_hash"; { a: 1 } end
p m(**o)
```

```bash
$ ruby -v kw1.rb
ruby 2.1.2p95 (2014-05-08 revision 45877) [x86_64-darwin13.0]
to_hash
#<Object:0x007fdee188ab90>
```

Would someone please explain why the result of #to_hash in not passed to the method?

**Case 2:** If the method takes a keyword argument, #to_hash is called at the send site and at the receiver:

```ruby
# kw2.rb
def mk(a:) a end
o = Object.new
def o.to_hash() puts "to_hash"; { a: 1 } end
p mk(**o)
```

```bash
$ ruby -v kw2.rb
ruby 2.1.2p95 (2014-05-08 revision 45877) [x86_64-darwin13.0]
to_hash
to_hash
to_hash
1
```

Would someone please explain why #to_hash is called at both the send site and at the receiver?

### Related issues:

- Related to Ruby master - Feature #14183: "Real" keyword argument
  - Closed
- Has duplicate Ruby master - Bug #9954: Unexpected Hash Modification and Segme...
  - Closed
  - 06/18/2014

### Associated revisions

- **Revision 140929d6** - 06/03/2014 07:08 PM - nobu (Nobuyoshi Nakada)
  - vm.c: return the result hash
    - vm.c (core_hash_merge_kwd): should return the result hash, which may be converted from and differ from the given argument.
      - [ruby-core:62921] [Bug #9898]

- **Revision 46342** - 06/03/2014 07:08 PM - nobu (Nobuyoshi Nakada)
  - vm.c: return the result hash
    - vm.c (core_hash_merge_kwd): should return the result hash, which may be converted from and differ from the given argument.
      - [ruby-core:62921] [Bug #9898]
Revision 46342 - 06/03/2014 07:08 PM - nobu (Nobuyoshi Nakada)

vm.c: return the result hash

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Revision 370e83b7 - 06/29/2014 06:22 PM - nagachika (Tomoyuki Chikanaga)

merge revision(s) r46342: [Backport #9954]

* vm.c (core_hash_merge_kwd): should return the result hash, which may be converted from and differ from the given argument. [ruby-core:62921] [Bug #9898]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/branches/ruby_2_1@46619 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

Revision 46619 - 06/29/2014 06:22 PM - nagachika (Tomoyuki Chikanaga)

merge revision(s) r46342: [Backport #9954]

* vm.c (core_hash_merge_kwd): should return the result hash, which may be converted from and differ from the given argument. [ruby-core:62921] [Bug #9898]

History

#1 - 06/03/2014 07:07 PM - nobu (Nobuyoshi Nakada)

- Description updated
- Backport changed from 2.0.0: UNKNOWN, 2.1: UNKNOWN to 2.0.0: DONTNEED, 2.1: REQUIRED

#2 - 06/03/2014 07:08 PM - nobu (Nobuyoshi Nakada)

- Status changed from Open to Closed
- % Done changed from 0 to 100

Applied in changeset r46342.

vm.c: return the result hash

- vm.c (core_hash_merge_kwd): should return the result hash, which may be converted from and differ from the given argument. [ruby-core:62921] [Bug #9898]

#3 - 06/19/2014 03:04 AM - nobu (Nobuyoshi Nakada)
Has duplicate Bug #9954: Unexpected Hash Modification and Segmentation Fault with Named Arguments added

#4 - 07/24/2014 11:51 AM - nagachika (Tomoyuki Chikanaga)
- Backport changed from 2.0.0: DONTNEED, 2.1: REQUIRED to 2.0.0: DONTNEED, 2.1: DONE

Backported into ruby_2_1 at r46619.

#5 - 12/14/2017 07:23 AM - hsbt (Hiroshi SHIBATA)
- Related to Feature #14183: "Real" keyword argument added