Ruby - Bug #7522

Non-core "Type()" Kernel methods return new objects

12/06/2012 06:17 AM - jballanc (Joshua Ballanco)

Status:	Closed		
Priority:	Normal		
Assignee:	matz (Yukihiro Matsumoto)		
Target version:			
ruby -v:	2.0.0-preview1	**Backport:**	2.3: UNKNOWN, 2.4: UNKNOWN, 2.5: UNKNOWN

Description

The methods Array(), String(), Float(), Integer(), Hash(), and Rational() all return their argument when the argument is already an instance of the type in question. For example:

```
a = []
a.equal? Array(a) #=> true
```

However, the similar methods Pathname(), BigDecimal(), and Complex() do not do this:

```
p = Pathname.new('/tmp')
p.equal? Pathname(p) #=> false
```

I had the impression that the "Type()" methods were intended as "safe" coercion methods. That is, if no type conversion is required, then the system is left unchanged (and no new objects are created). The attached patch fixes the three methods mentioned above to adhere to this same invariant.

Associated revisions

Revision 2e551356a7a6e74ba07283e000ff16f5d1ea6506 - 09/21/2019 11:10 PM - jeremyevans (Jeremy Evans)

Make Kernel#{Pathname,BigDecimal,Complex} return argument if given correct type

This is how Kernel#{Array,String,Float,Integer,Hash,Rational} work.
BigDecimal and Complex instances are always frozen, so this should
not cause backwards compatibility issues for those. Pathname
instances are not frozen, so potentially this could cause backwards
compatibility issues by not returning a new object.

Based on a patch from Joshua Ballanco, some minor changes by me.

Fixes [Bug #7522]

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History

#1 - 12/09/2012 12:15 PM - Anonymous

=begin
Your change to ext/bigdecimal/bigdecimal.c will cause a compiler warning:

```
compiling bigdecimal.c
bigdecimal.c: In function ‘BigDecimal_global_new’:
bigdecimal.c:2414: warning: ISO C90 forbids mixed declarations and code
```

You should move the declaration of (({pv})) above the your if statement, but leave the assignment where it is.
=end

#2 - 12/10/2012 04:24 AM - jballanc (Joshua Ballanco)

- File kernel_methods.diff added

Ah, thanks for that catch!

Updated patch is attached.

#3 - 01/25/2013 12:51 PM - ko1 (Koichi Sasada)

- Category set to core

- Assignee set to mame (Yusuke Endoh)

- Target version set to 2.0.0

I'm not sure who should take this issue.

#4 - 02/02/2013 12:04 PM - mame (Yusuke Endoh)

- Status changed from Open to Assigned

- Assignee changed from mame (Yusuke Endoh) to matz (Yukihiro Matsumoto)

- Target version changed from 2.0.0 to 2.6

Sorry but let me postpone this to the next minor.
I'm afraid if the existing code depends on the traditional behavior.
It should have been included in rc1, which is my fault. Sorry, blame me.

--
Yusuke Endoh mame@tsg.ne.jp

#5 - 02/03/2013 07:05 PM - jballanc (Joshua Ballanco)

No apology necessary. Thanks for the help!

#6 - 12/25/2017 06:15 PM - naruse (Yui NARUSE)

- Target version deleted (2.6)

#7 - 08/07/2019 04:14 PM - jeremyevans0 (Jeremy Evans)

- File kernel-pathname-bigdecimal-complex-return-arg-7522.patch added

This issue still exists in the master branch, and while it isn't a bug, I think we should make the change. This change should cause no issues for BigDecimal and Complex, since those instances are already frozen. It could potentially cause issues for Pathname, since Pathname instances are not frozen by default, but considering Kernel#{Hash,Array,String} already return the receiver, it makes sense for Kernel#Pathname to do so as well.

Attached is an updated patch that applies against the master branch.

#8 - 08/12/2019 12:15 AM - nobu (Nobuyoshi Nakada)

- Has duplicate Feature #16095: 2 Features: remove (simplify) 'new' keyword and Property Shorthand added

#9 - 08/12/2019 12:16 AM - nobu (Nobuyoshi Nakada)

- Has duplicate deleted (Feature #16095: 2 Features: remove (simplify) 'new' keyword and Property Shorthand)

#10 - 09/19/2019 08:00 AM - matz (Yukihiro Matsumoto)

Accepted.

Matz.

#11 - 09/21/2019 11:10 PM - jeremyevans (Jeremy Evans)

- Status changed from Assigned to Closed

Applied in changeset git|2e551356a7a6e74ba07283e000ff16f5d1ea6506.

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Files

kernel_methods.diff	2.97 KB	12/06/2012	jballanc (Joshua Ballanco)
kernel_methods.diff	3.05 KB	12/10/2012	jballanc (Joshua Ballanco)
kernel-pathname-bigdecimal-complex-return-arg-7522.patch	3.78 KB	08/07/2019	jeremyevans0 (Jeremy Evans)