

# Self Extended Module as Toplevel Object

*(Pollution Free Object) Feature #6609*

Defining methods on toplevel pollutes Object class and thus all objects. This is bad practice, so why allow it? In addition, toplevel object does not provide usual methods expected of a namespace.

| CURRENTLY  | PROPOSAL   |
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| <pre>self.class #=&gt; Object  def foo; end Object.private_instance_methods(false) #=&gt; [:foo]  define_method(:foo){} NoMethodError: undefined method 'define_method' ...  Foo = 10 const_defined?(:Foo) NoMethodError: undefined method `const_defined?' ...</pre> <p>Many more examples, almost all Module methods can't be used.</p>    | <p>Solve both issues in one go by making toplevel object a self extended module instead of current instance of Object which delegates (only a little) to Object class.</p> <pre>module Main   extend self   # toplevel evaluates as if here end  self.class #=&gt; Module  Module is <u>real</u> namespace.</pre>  |
| <b>ISSUES</b> <ul style="list-style-type: none"><li>• Toplevel methods pollute all objects, which is useless and can potentially cause bugs with meta-programming. e.g. <code>private_methods.include?()</code>.</li><li>• Does not act like other namespaces. Can't define dynamic methods, lookup constants, use callbacks, etc.</li></ul> | <b>BENEFITS</b> <ul style="list-style-type: none"><li>• Toplevel freedom! Create DSLs which can be evaluated at toplevel without concern over use of <code>`def`</code>.</li><li>• Access to Main from anywhere is easy. <code>`Main.binding`</code> instead of <code>`TOPLEVEL_BINDING`</code>.</li><li>• No one can use bad practice any more.</li></ul> |