
Subject: Undefined variables in structures

Posted by [Joost Aan de Brugh](#) on Wed, 10 Sep 2008 09:16:24 GMT

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Hello all,

What is the most plausible way to undefine variables in a structure.
Sometimes, you need undefined variables to put into optional arguments
if the procedure checks with `N_Elements(..) ne 0`.

For example:

```
plot,...,color=fsc_color(colorname,filename=consts.COLOR_FILENAME),...
```

If I do not want to use an own color file, I need to undefine
`consts.COLOR_FILENAME`. Note that `""` as filename is an error.

Several attempts

1

```
if consts.COLOR_FILENAME eq "" then void =  
Temporary(consts.COLOR_FILENAME)  
; does not work in a struct. consts.COLOR_FILENAME remains ""
```

2

```
temp_color_filename = consts.COLOR_FILENAME  
if consts.COLOR_FILENAME eq "" then void =  
Temporary(temp_color_filename)  
plot,...,color=fsc_color(color,filename=temp_color_filename) ,...  
; Not the way to go. Makes the code messy, especially when more  
variables have to be undefined this way
```

3

```
if consts.COLOR_FILENAME eq "" then  
plot,...,color=fsc_color(color),... else  
plot,...,color=fsc_color(color,filename=consts.COLOR_FILENAME)  
; Not the way to go. Will create a huge if-then-else pyramid when  
using several optional arguments.
```

4

```
plot,...,color=fsc_color(color,filename=consts.COLOR_FILENAME eq ""?  
undefined:consts.COLOR_FILENAME),...  
; No pyramid because of the ? : construction But this is very hacky,  
because I am using a nonsense name (undefined).
```

5 ; The way I now just thought of.

Make it a pointer and during startup

```
if *consts.COLOR_FILENAME eq "" then void =  
Temporary(*consts.COLOR_FILENAME)
```

and then simply

```
plot,...,color=fsc_color(color,filename=*consts.COLOR_FILENAME)
```

; This does work. I can dereference the pointer, because it is a valid pointer to an undefined heap variable. It is still a little bit tricky, but the least evil of these possibilities (in my opinion).

Are there people with more experience with these kinds of constructions and know a better way to do this.

(Actually, I was already formulation this question before I thought about the pointer)

Subject: Re: Undefined variables in structures

Posted by [Jeremy Bailin](#) on Thu, 11 Sep 2008 15:28:38 GMT

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On Sep 10, 5:16 am, Joost Aan de Brugh <joost...@gmail.com> wrote:

```
> Hello all,
>
> What is the most plausible way to undefine variables in a structure.
> Sometimes, you need undefined variables to put into optional arguments
> if the procedure checks with N_Elements(..) ne 0.
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> For example:
> plot,...,color=fsc_color(colurname,filename=consts.COLOR_FILENAME),...
> If I do not want to use an own color file, I need to undefine
> consts.COLOR_FILENAME. Note that "" as filename is an error.
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> Several attempts
> 1
> if consts.COLOR_FILENAME eq "" then void =
> Temporary(consts.COLOR_FILENAME)
> ; does not work in a struct. consts.COLOR_FILENAME remains ""
>
> 2
> temp_color_filename = consts.COLOR_FILENAME
> if consts.COLOR_FILENAME eq "" then void =
> Temporary(temp_color_filename)
> plot,...,color=fsc_color(color,filename=temp_color_filename) ,...
> ; Not the way to go. Makes the code messy, especially when more
> variables have to be undefined this way
>
> 3
> if consts.COLOR_FILENAME eq "" then
> plot,...,color=fsc_color(color),... else
> plot,...,color=fsc_color(color,filename=consts.COLOR_FILENAME)
> ; Not the way to go. Will create a huge if-then-else pyramid when
> using several optional arguments.
>
> 4
```

```

> plot,...,color=fsc_color(color,filename=consts.COLOR_FILENAME eq ""?
> undefined:consts.COLOR_FILENAME),...
> ; No pyramid because of the ? : construction But this is very hacky,
> because I am using a nonsense name (undefined).
>
> 5 ; The way I now just thought of.
> Make it a pointer and during startup
> if *consts.COLOR_FILENAME eq "" then void =
> Temporary(*consts.COLOR_FILENAME)
> and then simply
> plot,...,color=fsc_color(color,filename=*consts.COLOR_FILENAME)
> ; This does work. I can dereference the pointer, because it is a valid
> pointer to an undefined heap variable. It is still a little bit
> tricky, but the least evil of these possibilities (in my opinion).
>
> Are there people with more experience with these kinds of
> constructions and know a better way to do this.
> (Actually, I was already formulation this question before I thought
> about the pointer)

```

For just one variable, option 5 is probably the way to go. If you'll have lots of possible options that you give one function or procedure, though, you might want to consider using AUGMENT_INHERITED_KEYWORD in JBIU:

http://web.astroconst.org/jbiu/jbiu-doc/misc/augment_inherited_keyword.html

-Jeremy.
