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Subject: Re: Philosophical Scaling Question  
Posted by [Paolo Grigis](#) on Mon, 04 Dec 2006 16:48:04 GMT  
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Well, as I see it, you are scaling the wrong quantity:  
it is not the \*values\* of r,g,b that should be scaled,  
but their \*indices\*... try:

```
ind=bindgen(256)
TVLCT, r[LogScl(ind)], g[LogScl(ind)], b[LogScl(ind)]
```

instead.

Ciao,  
Paolo

David Fanning wrote:

```
> Folks,
>
> With no answers to my weekend questions about logarithmic
> color bars I'm flying blind this morning. And I seem to be
> running into theoretical difficulties. Can anyone help?
>
> Suppose I had a color table (color table 33 comes to mind)
> where each color vector had a min of 0 and a max of 255.
>
> IDL> Loadct, 33, /Silent
> IDL> TVLCT, r, g, b, /Get
> IDL> MinMax, r
>    0 255
> IDL> MinMax, g
>    0 255
> IDL> MinMax, b
>    0 255
>
> And suppose I also have an image that is scaled in
> the same way:
>
> IDL> image = Loaddata(7)
> IDL> MinMax, image
>    0 255
>
> And finally, suppose I have a way to scale such data
> sets in a logametric way, say a function LOGSCL.
>
> IDL> .compile LOGSCL
> Compiled module: LOGSCL.
>
```

> My hypothesis is that there are two ways to display this  
> data "logarithmically". I can leave the color table vectors  
> alone, and scale the image data. Or, I can leave the image  
> alone and scale the color vectors. Either way should result  
> in exactly the same display.  
>  
> The problem is, it doesn't. :-(  
>  
> Window, XSize=400, YSize=350, 0  
> Loadct, 33, /Silent  
> TVImage, image  
>  
> Window, XSize=400, YSize=350, 1  
> Loadct, 33, /Silent  
> TVImage, LogScl(image)  
>  
> Window, XSize=400, YSize=350, 2  
> Loadct, 33, /Silent  
> TVLCT, r, g, b, /Get  
> TVLCT, LogScl(r), LogScl(g), LogScl(b)  
> TVImage, image  
>  
> Does anyone have a good idea for why not?  
>  
> Cheers,  
>  
> David  
>  
> P.S. And please don't tell me there is something wrong  
> with LOGSCL, as this is \*not\* the answer I want to  
> hear. :-(  
>

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