

The Man From Mars Method

Topic: The introduction of a counterintuitive, but highly effective means of getting more realistic fleshtones and greenery: the use of extreme LAB curves to drive colors as far apart as possible, followed by a reduction in layer opacity.

Column first appeared: March 2005, *Electronic Publishing* magazine.

Source of this file: The author's draft as submitted to the magazine.

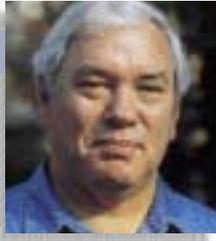
Author's comment: This method continues to be quite powerful and widely used. It also showed the simplicity of an overkill method—that is, trying something deliberately excessive, with the idea of adjusting layer opacity to taste afterward. Today, many people sharpen that way, for example.

This archive, to be released over several years, collects the columns that Dan Margulis wrote under the *Makeready* title between 1993 and 2006. In some cases the columns appear as written; in others the archive contains revised versions that appeared in later books.

Makeready in principle could cover anything related to graphic arts production, but it is best known for its contributions to Photoshop technique, particularly in the field of color correction. In its final years, the column was appearing in six different magazines worldwide (two in the United States).

Dan Margulis teaches small-group master classes in color correction. Information is available at <http://www.ledet.com/margulis>, which also has a selection of other articles and chapters from Dan's books, and more than two hundred edited threads from Dan's Applied Color Theory e-mail list.

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The man from Mars method

When images are dominated by a single color, they look too flat. Merely brightening it usually doesn't help. Here's a simple recipe that creates an explosion of color variation—but you have to be there to pick up the pieces.

Those who advocate using sledgehammers as flyswatters, Château Lafite Rothschild as the base for a jug of Sangria, or driving to the super-market in a tank, will be right at home with the two pictures on this page.

The original (I'll let you guess which one it is) represents one of the more troubling categories of image. It's professionally shot. It has a proper tonal range. But it's deadly dull, because there's no color variation to speak of. Image B puts some in.

If you had the digital file for A, and a copy of this printed page for reference, how would you create the man from Mars in B? To which you would probably respond, why on earth, or on any other planet, for that matter, would I want to?

The answers: B can be created from A in about 30 seconds. You have to use the LAB colorspace, though. And why make a man from Mars? Because if A and B are two layers and he's on top, we can reduce his opacity and get C, which is approximately what's wanted. If

you can't make B without the use of LAB, then you can't make C, either, which is why this column and the next will show how the trick is accomplished.

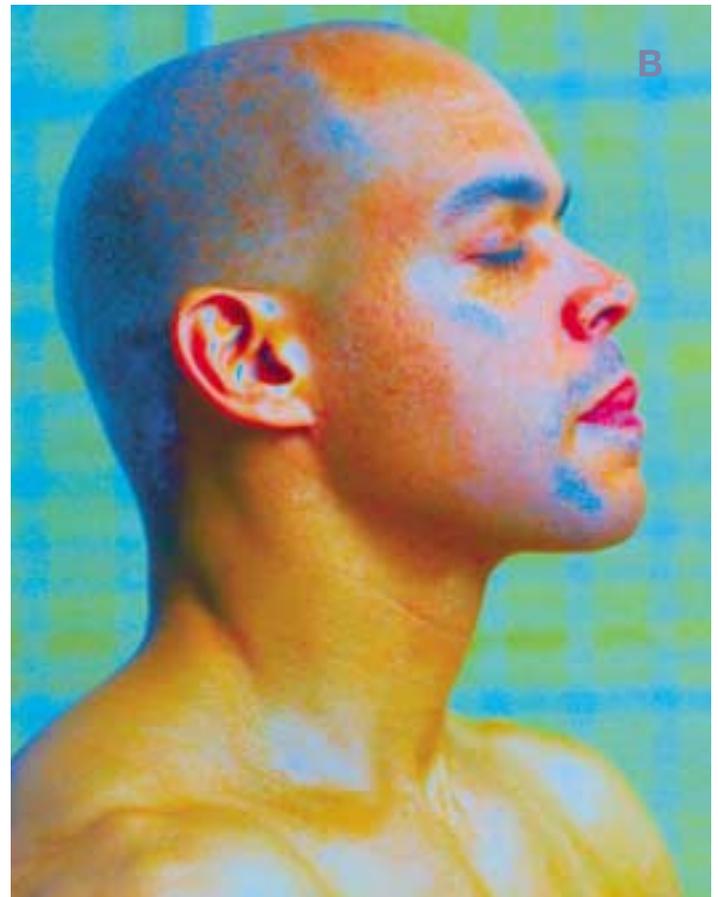
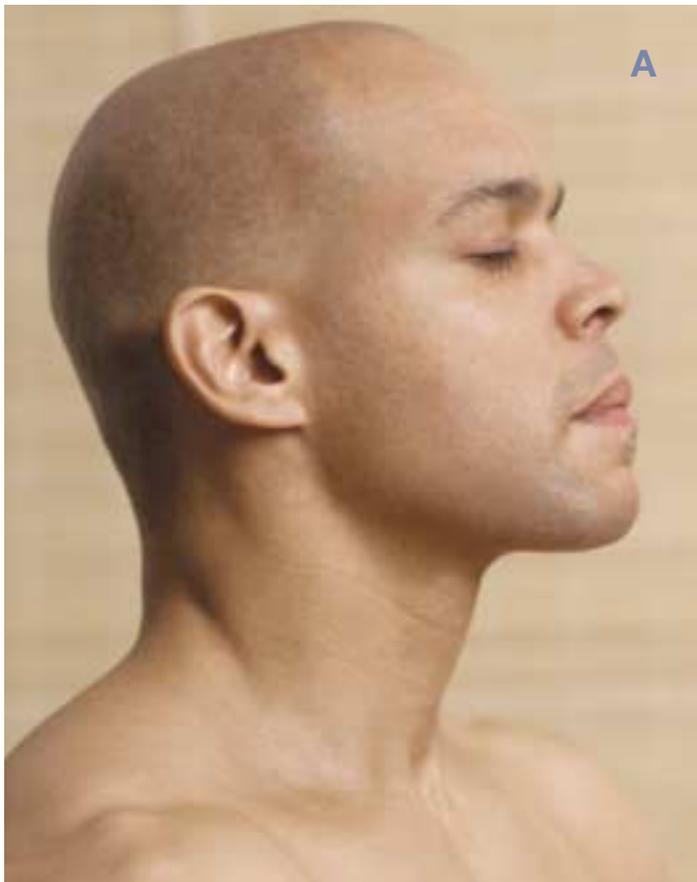
A recipe that cooks up an alien

LAB can drive similar colors in wildly different directions. The skin coloring in A is quite uniform, but in B some of it has become bright red and some bright blue. In RGB or CMYK, there's no way to accomplish this, as far as I know. We could make the picture brighter, duller, bluer, or redder, but not all four things at once.

The Man from Mars Method (hereinafter MMM) is appropriate for images where the subject has a limited color range—like this one. Here's the recipe:

1. Make a copy of the file and convert it to LAB (Mode: Lab color).
2. Add a curves adjustment layer (Layer: New Adjustment Layer>Curves).

[2a. The LAB curves illustrated in this column show darkness to the right. Check your own gradient bar be-



neath the curve grid. If you have darkness to the left, click inside the gradient to reverse it; otherwise you will have to move the curves from the top as opposed to from the bottom as illustrated here.]

3. The Lightness curve is now open. Move your cursor into the image, and locate a point that represents the typical color of the area in which you are trying to achieve variation. Command/Ctrl-click there, and a point magically appears on the curve to represent the value of where you clicked.

4. Without touching the new point, drag the lower left point of the curve approximately halfway as far to the right as the horizontal position of the new point.

5. Without clicking OK, switch to the A channel curve. Click another point into the curve as described above. It is not important that it be exactly the same point as in Step 3.

6. Drag the lower left point of the curve even farther to the right than in Step 4, until the top part of the grid shows a straight horizontal line rather than a curve.

7. Without clicking OK, switch to the B channel and repeat Steps 5 and 6.

8. Click OK, and now you have a man from Mars on the top layer. Open the Layers palette and adjust the opacity setting down from 100% to a more attractive, much lower value. (Image C used an opacity of 18%).

9. Flatten the file and send it to its final output space, either RGB or CMYK.

Simple as that. Now, let's discuss why it works, and how to avoid pitfalls.

Magenta, Green, Yellow, Blue

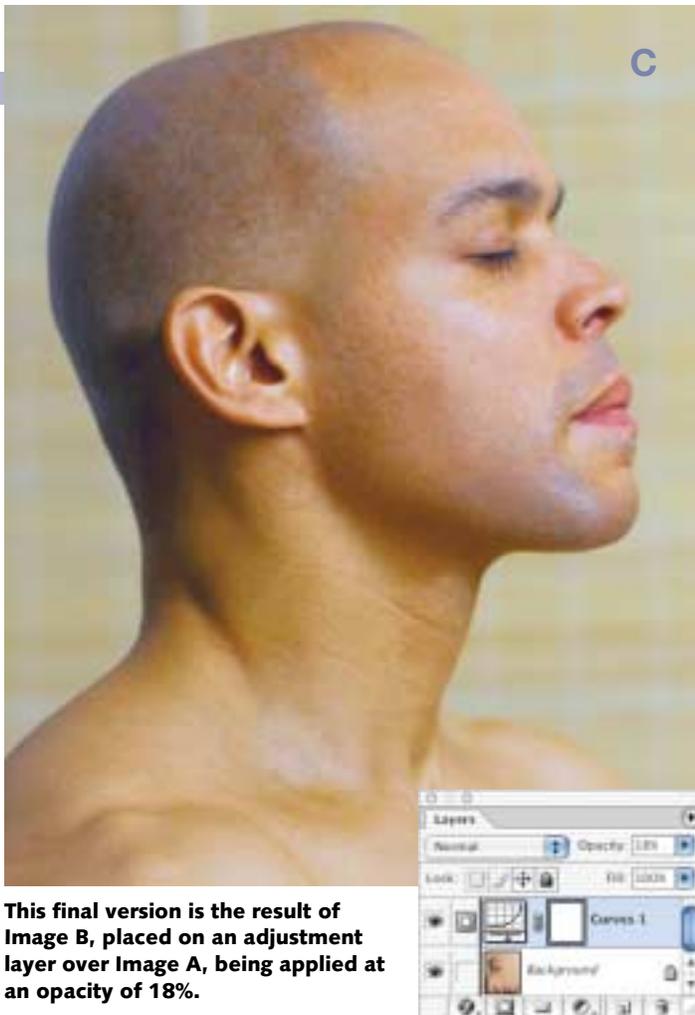
Steps 3 and 4 were actually omitted to get Image B. C would have looked better with those steps included, but I left them out so that we could see in purest form what the MMM does that can't be achieved elsewhere. The L channel governs contrast, not color. The boost in definition that Steps 3 and 4 would have provided by attacking it is also available in RGB or CMYK.

Instead, we'll move on, to Image D, which, being the floor of a rainforest on (what else?) a day with little sunshine, is quite dark. And, because it's so dark, color vanishes, and everything is dishwasher green rather than the lush greens characteristic of places that count their rain in the hundreds of inches per year. It's thus an ideal candidate for the MMM.

The only tricky part of the recipe is finding the right point to click on to establish the curves. It has to be a typical representative of the area we want to affect, not some very colorful, very light, or very dark portion thereof.

There's an easy way to check. The key channels in the MMM are the A and B. The A moves from magenta to green, the B from yellow to blue. The L is contrast only; helpful, but not crucial.

The idea behind the MMM is to separate the flat colors by



This final version is the result of Image B, placed on an adjustment layer over Image A, being applied at an opacity of 18%.

driving them to the extremes of the A and B channels. Hence, the extremely steep curves. We start with dull colors. Instead of wanting just brighter ones, we want varied ones: some green, some magenta, some yellow, some blue.

Reexamine Image B. The original was almost entirely brown. Now, though, the background is green. The lips are magenta. The shoulders are yellow, and parts of the face are blue. In short, this is a very good-looking man from Mars.

For the color-spreading effect to occur, objects have to be falling on both sides of the point we've clicked into the curves. In Image D, I chose some background leaves for my pivot point precisely because they were a relatively dull green. Still green, however: check where the point fell on the A and B curves. In the A, the point is above the center line: more green than magenta. In the B, it's below: more yellow than blue.

Image F, which has the key leaf area indicated, is the authentic man from Mars. The background has become blue, but there are many yellow areas. The foreground leaves have become much greener, but some of the moss is now magenta. And the original selection point hasn't changed at all, since its values are being locked by the pivot point on the curve.

Therefore, F is the authentic man from Mars. It meets the four-color requirement. When the layer opacity is reduced to 15%, the result is Image E.

Now, imagine what would have happened if I had chosen the wrong control point. Images F and G were produced with two very different points, as indicated by the register marks. To make G, I established the points by Command/Ctrl-click-



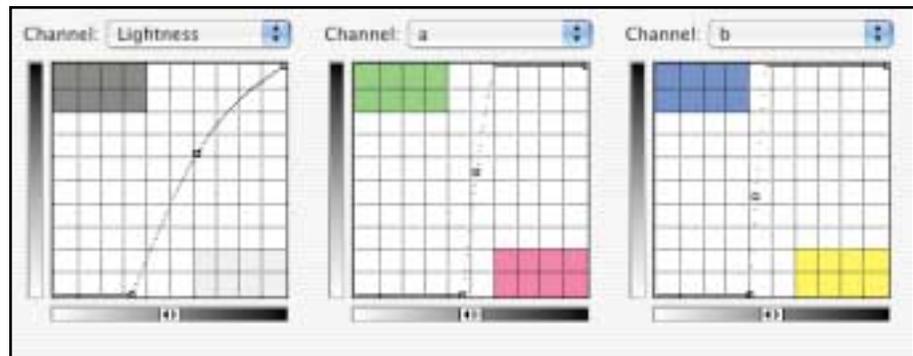
ing in the much greener foreground leaves about a third of the way down the picture.

On the A and B curves, the center point represents neutrality. G's points would be further away from it on the green and yellow sides respectively. They would prevent those leaves from getting any greener. But, inasmuch as they're already the greenest objects in D with the exception of a small area at top center, the points would also prevent just about anything in the image from getting greener. Almost nothing would get yellower, either. Everything about G has gotten more blue or more magenta or both. If we now reduce the opacity, the result won't look nearly as good as E.

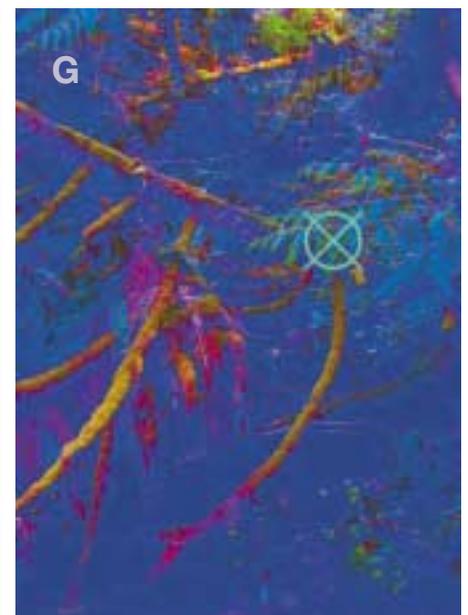
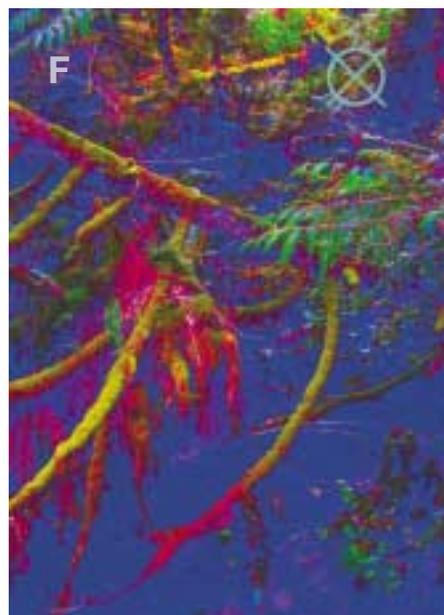
If you want to create an image with a purple cast like this one, you need neither the MMM nor LAB. Incorrect colors are very easily achieved in RGB or CMYK, as so many printing firms demonstrate daily.

The sun sets on the MMM

Anybody who first saw Venice when it was in its prime as a city-state, back in the 15th century, could be forgiven for thinking he had just arrived on Mars. That thought, coupled

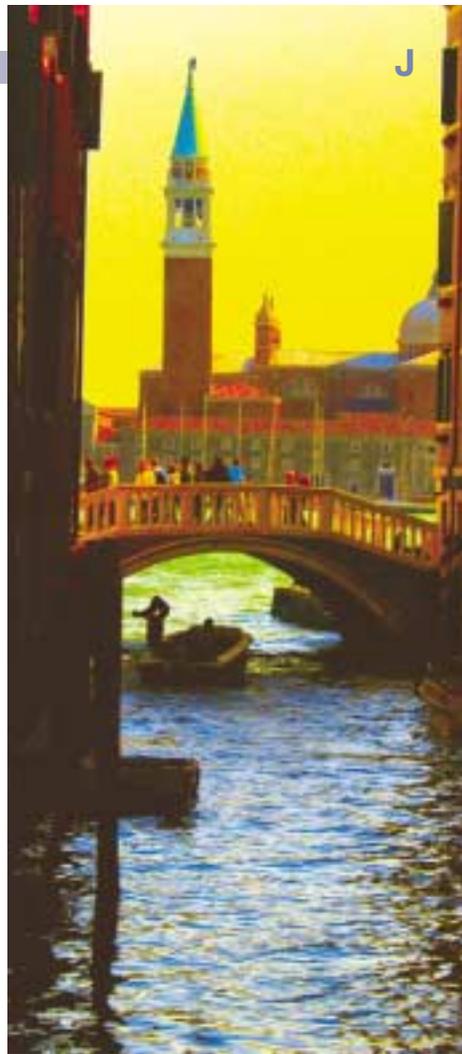


The choice of control point is critical. D is the original, and E the final version, created by applying F to D at 15% opacity. F, whose curves pivoted around the dull greens in the highlighted area, shows the desired color variation: greens, yellows, magentas and blues. When a greener point is chosen (G) the image gets too blue.

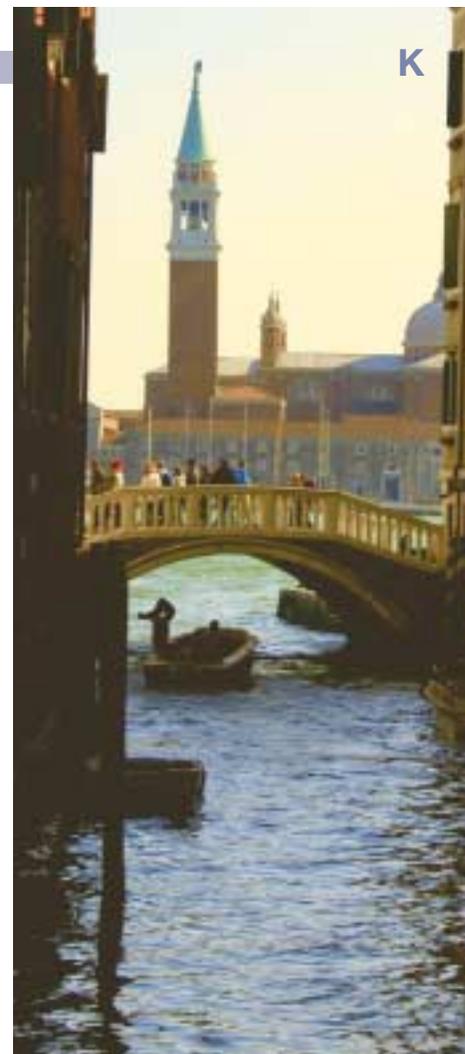




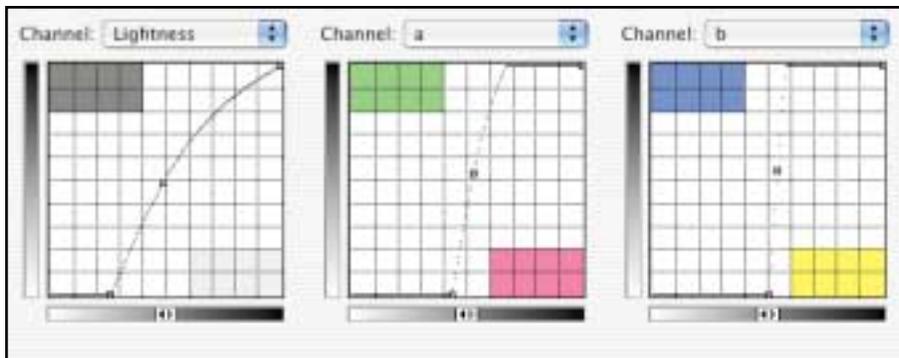
H



J



K



This time, the control points were taken from the water just in front of the bridge. Version J was created on an adjustment layer, and then applied to H at 22% opacity to produce version K.

sky? I'm rather fond of that relic of the yellow sky of J, because it suggests a golden-sunsetty kind of feel. If you disagree, it can easily be cut back—but we'll have to save that trick for next time.

with some exceedingly ratty-looking blues and a general lack of romantic feeling, makes H a good candidate for the MMM.

After establishing a curves adjustment layer, I chose my pivot points in the shadowy water just in front of the bridge. That area is neither as blue nor as light as the water at bottom center. It's neither as dark nor as desaturated as the water in the shadow at left.

Therefore, J has all the proper man-from-Mars attributes. The water has flecks of both yellow and blue. There's green water just behind the bridge. Parts of the roof are bright red, meaning that they're full of magenta and that the pivot points were correctly placed. As you might expect, they're both higher than the center line, as originally the water was more green than magenta, and more blue than yellow.

I used a 22% opacity to get K. What do you think of the

Image K is slightly higher contrast than H, the impact of the move in the detail-only L channel. But the real action is in that bluer water combined with the yellow sky; the green water playing off against the orange bridge. This drastic color shift is what makes the MMM so effective.

RGB and CMYK have a lot of power. If they didn't, nobody would use them. But they can't make dingy water bluer while simultaneously turning a sky that's almost the same color into something bright yellow. For that, you need a man from Mars.

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