Figure 7.3 note: Clips, Auto Tone, and Shadows/Highlights

In the technical half of Chapter 7 I discussed how the S/H command can inadvertently make a range-setting decision that may not be to our liking. Beta reader Marco Olivotto has some differing views, presented below.

—D.M.

This is a minefield, I'm afraid. I've been working on this problem for a while, and here are my findings.

1) Comparing S/H to whatever Auto Tone does is not 100% fair. The comparison should be with Auto Contrast, which is different from Auto Tone faded to Luminosity.

2) One has to take into account that the Clips in S/H are not the default of Auto Tone / Contrast: these are set to 0.1. Moreover, even identical settings do NOT produce the same results (see point 4).

3) The interesting question is whether S/H with the Clips set to anything different than 0 applies S/H (unclipped) first and Auto Contrast later, or vice versa. It turns out that it works the second way. If you do that by hand in both fashions, Auto Tone first and S/H later gives you a better result as you state.

4) When both Amounts are set to 0 in S/H there is no way to change the Clips, which are disabled. If you click OK, the picture won't change no matter which values the Clips have. The only way to study the behavior of the Clips independently from S/H is this: set both Tonal Widths to 0, Color Correction to 0, Midtones to 0. This has no effect on shadows and highlights no matter how big the Amount and Radius are. Then, set the Clips to a desired value, e.g. 0.1. I've chosen 0.1 to see if the result matches Auto Contrast with the same settings. It gets close, but it's not a perfect match. I've done a few experiments: take this with a pinch of salt, but in order to imitate a S/H with Clips set to 0.1 and Tonal Widths set to 0, you need to go Auto Contrast with Clips set to 0.03 approximately.

5) All this to say that the Clips in S/H and those in Auto-Whatever do not coincide: the algorithm is different. But, for sure, S/H comes first and *then* goes Auto Contrast. If the adjustment did the opposite, results would be better: the Navajo Dome photograph is a good example for this.

6) As long as you combine the two things properly, they work. Example: if you run S/H with Clips set to 0 and then Auto Contrast with Clips set to 0.03, this is virtually indistinguishable from S/H with Clips set to 0.1. Dilemma: if you do the opposite, that is run Auto Contrast first and S/H with Clips set to 0 after, same parameters, the result is better. But it is clear why Adobe decided it should be the opposite: in the perspective of Auto Contrast, the luminosity stretch should come later, to be maximized. If they do it before they obtain some sort of full range image, and S/H has more stuff to bite - which accounts for a better redistribution of luminosity; but at the same time the extreme points in the image may get a bit too light (shadows) or too dark (highlights).

This is not purely academic, but has a ramification in my opinion. Very shortly: the flattest an image is when you run MMM, the more likely it is that the MMM Luminosity layer will posterize. That's one of the most serious issues with MMM, in my opinion. It would be better, in this respect, to enter MMM with a good global contrast simply on the observation that the same selection performed in a flat version of the file and a good one will cause less of a luminosity stretch in the second case. In this sense, it would be marginally better to have the endpoints set properly when entering MMM. The stress is on marginally", of course. Very marginally, at times..