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MASTERING

Digital Nude Photography

The Serious Photographer's Guide to High-Quality Digital Nude Photography

Roderick Macdonald

Mastering Digital Nude Photography:

The Serious Photographer's Guide to High-Quality Digital Nude Photography

Roderick Macdonald

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Dedication

For Pippa, my lioness on the prowl, without whose ceaseless, inexhaustible, and loving attention and care this book wouldn't exist.

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Paula Rosales and Art Schmehling from GretagMacBeth provided valuable information.

The Cambridge and Norwich Munches provided many wonderful models for my photography and, as always, gave me much to reflect on concerning our often ambiguous and mysterious relationships with our own sexuality, bodies, and desires—relationships which, I believe, underpin (consciously or not) the work of every photographer of the nude.

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Introduction

Why do photography of the nude?

The human body is a unique photographic subject. Photography of the nude can be powerful, controversial, and transgressive, revealing in public spaces such as galleries, books, and on the Internet a totality of ourselves that is usually only shown to those with whom we are most intimate. We see ourselves reflected in images of the naked body. We see in images such as Figures 1 and 2 human beauty; but we also perceive our transience and mortality. In viewing these images, with their representations of innocence and knowingness, we experience both desire and fear, attraction and anxiety, curiosity and embarrassment, reverence and amusement.

Figure 1 Human beauty.

Figure 2 The body as landscape.

Nude photography is now more popular than ever before. Digital photographic technology combines with the Internet to make it easy for photographers to create nude images discreetly (without the need to send film out for processing) and then choose how widely they wish to disseminate them. In many countries this rapidly growing interest in the nude coincides with, and derives from, social movements such as gay liberation, which by challenging laws and taboos around different forms of sexuality also engendered much broader artistic freedoms.

Who is this book for?

The book is aimed at the intermediate or advanced photographer who's looking to improve the quality and range of his or her photography. That means, typically, that you're a photographer who has already made a serious start developing your skills in photography. You're willing to invest a certain amount of money, but much more importantly, a considerable amount of *time*, developing your art and skills. The book contains ideas and techniques that will challenge and develop your creativity and encourage you to expand your boundaries; see Figure 3.

Figure 3 The body in a landscape.

The book's also written on the assumption that you have s*omething to say* about the human body, about beauty, and about photography itself. I don't mean that you have a "philosophy of photography" that you can set out in words. (I envy you if you do!) But if you're serious enough about photography of the nude to have bought this book, then you'll have a strong visual imagination and curiosity that impel and shape the images you create, and a direction (or number of directions) in which you want your work to develop; see Figure 4.

Figure 4 An unusual view of a different subject.

Most photographers of the nude (and, it's a safe bet, readers of this book) are male, and the models they prefer to work with are young, attractive, and female. But a look around the wider scene reveals a wide and widening range of themes, as in the stunning classic male nudes of Robert Mapplethorpe, for example, or the nude images created by women photographers like Kattaryna Breaux, Tee A. Corinne, or Grace Lau, who often use models who challenge the viewer through their different appearances (older, larger, physically disabled, pierced, tattooed…) or are photographed as participants in unconventional lifestyles. I hope that *Mastering Digital Nude Photography* will encourage you to explore some of these approaches.

What's in the book?

What styles of nude photography will you find in this book? All the labels we apply to different types of photography are imprecise and have very overlapping boundaries, so what follows is only a broad-brush description of what the book deals with.

You won't find pornography in the book—at least not in the terms that the publishers and I understand the word. This isn't a moral judgment; it's just that there isn't much art, visual creativity, or imagination in the vast bulk of pornography. (That's not to say that there isn't a small number of photographers working today who can construct, from the explicit, genitally focused "language" of conventional pornography, images of extraordinary confrontational power and beauty.)

Styles of Photography

You'll find (but not in great numbers) glamour images. *Glamour* is almost as hard to define as pornography. To me it refers to a style of photography that uses the model's expression and pose combined with a very frontal style of lighting to stimulate and appeal to the viewer's fantasy of the model being (or very nearly being) sexually available; see Figure 5.

The book includes methods and approaches to erotic nude photography. Without defining pornography and glamour, it's hard to define *erotic*. I take the word to refer to images that may again be intended to stimulate a fantasy of the model's availability, but are less explicit and visually more subtle than either porn or glamour; see Figure 6.

Figure 5 A glamour-style shot.

Figure 6 Oil, water, the shot framing, and the positioning of the model's hands combine to make an erotic image.

The book also deals with *bodyscapes*: images of parts of the body seen in an abstract way that depersonalize them and invite the viewer to concentrate on form, pattern, and texture. The word *bodyscape* is coined in imitation of *landscape*, and bodyscapes often suggest or seem to refer to forms of landscape: the body seen as a formation of hills and valleys. Bodyscapes could be seen as a specific form of art nude; see Figure 7.

Art nude is the style which occupies most of the book. I'd define *art nude* as the approach to photography which, of all types of nude photography, is most concerned with the image as a whole; that is, with *everything* within the frame, not just with the naked human figure(s) within the frame. Art nude aims at sensuality rather than sexuality, at moving its audience, rather than arousing them. As part of that aim, art nude images are often monochrome rather than color. Removing color from the image is one of the ways of depersonalizing and making it less about the specific model and more about the body in general. Art nude is often elusive: It may be about the play of light on the body, with the body itself indistinct and receding from the image. See Figure 8.

Moving in another direction, the book also contains a number of *fetish* images, such as Figure 9. Fetish moves us into the underbelly of "deviant" sexuality and sensuality: areas where fantasies about taking or yielding power are enacted and expressed. This theme is one which, like many photographers, I find increasingly interesting.

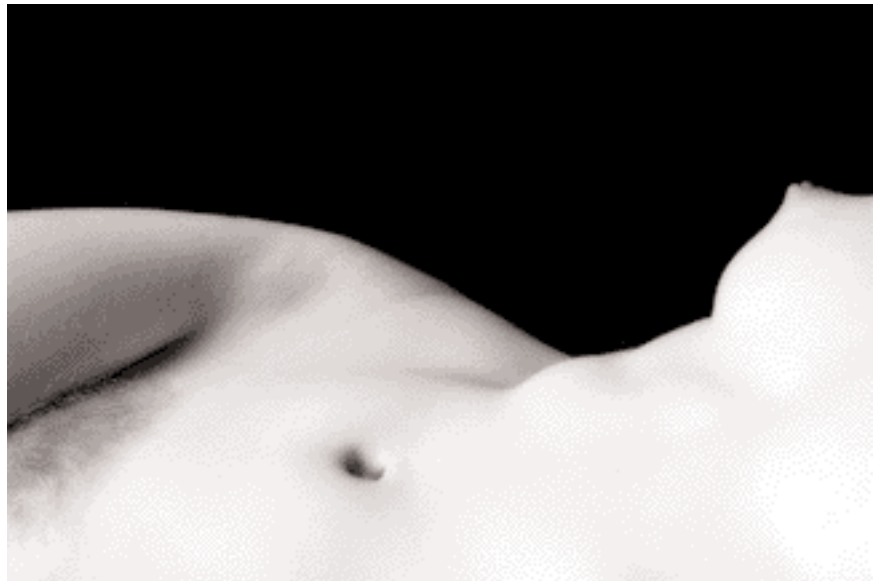

Figure 7 Careful lighting and framing are key elements in bodyscapes.

Figure 8 Art nude.

Figure 9 The wrist restraints and outstretched hands convey clearly the essence of the image, but the oblique lighting adds a great deal to its impact.

At the opposite extreme, perhaps, is what I'm tempted to call the *documentary* nude. This deals in a more objective way with themes such as age, disability, pregnancy, and so on. Objectivity doesn't exclude sensuality, but the aim here, certainly with age and disability, is to confront the viewer with subjects for nude photography that are usually excluded or assumed to be unattractive. It can't be said too often that beautiful and powerful *images* don't require conventionally beautiful *subjects*; see Figure 10.

It's a cliché of all the visual arts that the partially concealed or implicit nude can be more evocative and moving than the more overt and explicit. Across these themes, we'll also see and discuss images which are only partially nude, such as Figure 11.

Figure 10 A study in the textures of skin, hair, and nails.

Figure 11 A playful example of partial nudity.

Influences

There are many good, and a few great, photographers working today and showing their images on the Internet. Their work provides a vast, readily available, and free repertoire of ideas and ways of looking at the world and the body, and of techniques for realizing those ideas. It makes sense to learn from them!

At the same time, and without starting a grand debate about the relationship between photography and other, longer-established visual art forms such as painting, I think photographers can also learn from the great artists of the past. It's not a matter of imitating them (though it can be instructive, and usually frustrating, to try). It's more a matter of experimenting with their themes, ideas, or sometimes just poses, to see what photographic equivalent you can find; see Figure 12. My own favorite artist, from this point of view, is the nineteenth-century French painter Gustave Courbet, many of whose works are found in the Musée d'Orsay in Paris. Courbet renders skin and flesh in ways that make his nudes utterly real, not in a photographic sense, but in the combination of sensuality, solidity, and vulnerability with which he embodies them. The beautiful nude drawings and etchings of English illustrator, sculptor, and typographer Eric Gill have also influenced me profoundly, although I'd find it hard to point to many of my photographs in which that influence is explicit.

Figure 12 Influences—visual.

Influences don't have to be visual. There's a poem, for example, by French poet Baudelaire, in which he describes his lover coming to him wearing nothing but her "clashing jewels"; and that verbal image has provided a theme which I'm still pursuing; see Figure 13. The intense, moving, and visually evocative eroticism of the *Song of Songs* in the Old Testament has also been an inspiration.

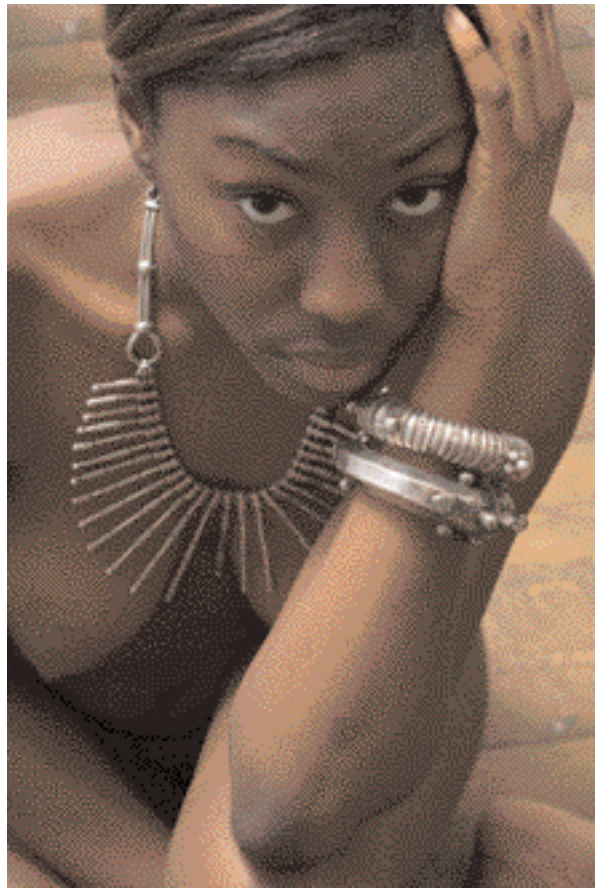

Figure 13 Influences—literary.

Assumptions

Once you've found your theme or idea there are, broadly speaking, two steps in digital photography: creating the image in the camera and then manipulating it on the computer. In each step the creative processes are mediated and shaped by a whole range of technologies. I've made some assumptions about the level of equipment you're likely to use. It's not essential, in order to benefit from the book, that you're equipped to that level: It just provides a baseline. So, for example, I assume that you own a digital SLR camera that

- Accepts interchangeable lenses
- Has a hotshoe or other method of syncing flash heads
- Displays a histogram of the image after (and possibly before) you've shot it
- Shows highlights and overexposed areas in an image after you've shot it
- Can produce RAW picture files

I assume also that you have a computer with sufficient processing power, RAM, storage, and backup to cope with 16-bit picture files which, as you add layers and masks, may grow to more than 100MB per file (but will usually be reduced in size before you save them). And finally I've assumed that, as well as shooting on location, you may work from a home studio with good available light as well as perhaps two or three flash heads, and also have access to a more fully equipped professional studio for some shoots.

Most of the techniques of digital image manipulation shown here aren't difficult to grasp. However, many of the methods described in detail deliberately avoid the automated ways of, for example, selecting an area available in most image-editing applications, in favor of slightly slower but safer and more precise manual methods. These methods give you much more control over the process of manipulation, as well as the capacity to more easily backtrack when things go wrong. See Figure 14.

Most people would argue that creativity, vision, and imagination can't be taught: There's a view that these are instinctive, intuitive elements in human nature, often arising from emotional processes and impulses we may be aware of but have little conscious control over. Nonetheless, the expertise needed to turn that vision or idea into a form that can be communicated to your audience often can be defined and described. What I've tried to do in *Mastering Digital Nude Photography* is present different ways of working that I hope will trigger new ideas for images in you, the book's reader, and provide the means to achieve them. Experimentation is the best way forward, always accepting that some experiments will be unsuccessful! The low running costs of digital photography encourage us to be adventurous during the shoot; and with safe working methods in picture editing and manipulation you can be confident that if you decide to abandon an experimental edit, your original image remains unscathed, and any useful versions of it you created along the way can also be saved.

Chapter Outline

The book is divided into five sections: equipment and software; models; lighting; shooting; and postproduction.

Equipment and Software

In terms of technologies available to the man in the street, the history of digital *photography* is considerably shorter than that of digital *image manipulation*. Photoshop when it originally appeared was, for most photographers,

a tool for manipulating images shot on film and then scanned into the computer. One of the factors which makes this book timely is that digital photography has, by now, clearly caught up.

The book doesn't, by the way, cover scanners: My impression (and the publisher's) is that—particularly with the advent of affordable digital SLRs—the days of the scanner are numbered, at least as far as the serious amateur photographer is concerned. Every photographer of my acquaintance who was film-based two years ago when I wrote *Digital Nude Photography* now shoots principally or entirely with a digital camera.

The range of digital cameras available changes so rapidly that it isn't helpful to write about specific models: By the time you read this, many of the cameras currently on the market as I'm writing will have been superseded. (Not all "improvements" to cameras are convincing. The Nikon D70, for example, did away with the D100's tapped shutter button to which a cable release could be attached, and replaced it with an infrared remote control which is slower to use and less reliable.) But it's still possible to discuss what features are desirable in a camera (and which aren't worth paying money for), and what lenses should form the basis of the digital nude photographer's kit. We'll take a look at anti-shake technologies, both those built into lenses and those incorporated into the camera's imaging chip. The merits of working with RAW images are discussed here also, as are issues to consider when buying lights, computer systems, and tripods.

Unlike camera models, image-editing software remains relatively constant. It may be subject to ongoing development, but significant features rarely disappear from an application when a new version is produced. The book is focused on Adobe Photoshop CS2, which is the application most photographers use. (A quick survey I carried out recently revealed that while some of the photographers I spoke to use other applications as well as Photoshop, every one of them uses Photoshop.) Later versions of Photoshop may well contain valuable additional features, but it's unlikely that any technique described here will be unavailable in the future.

A word on computer platforms: My background is in managing media production and design and print, so it's perhaps not surprising that I prefer using Apple Macintosh computers. Photoshop runs under both Mac and Windows operating systems, so while the figures throughout the book illustrate Photoshop techniques on the Mac, exactly the same results can be achieved on a Windows machine. Indeed, my approach to explaining how to get the best out of Photoshop has been shaped by several years' experience teaching courses on this truly amazing piece of software, in a lab equipped with Windows machines.

The same applies to screen and printer calibration software and equipment. We'll look in detail at what's involved in calibrating your system, and shine some light on what often seems like a rather murky and elusive area of imaging technology. What works on Macs also works under Windows.

With computers as with cameras, models change frequently, so here too the discussion will be about desirable features and configurations, rather than specific machines.

Two final observations about equipment generally. I'm not obsessed with technology: I don't own, or hanker after, the very latest camera body, lens, computer, or whatever. I now shoot with a Nikon D70 with a D100 for backup, but when I wrote the predecessor to this book, *Digital Nude Photography*, I shot most of it with a Nikon 5700—a pretty basic camera which doesn't even have interchangeable lenses. And the 5700 could do one or two tricks that I can't do with my "better" cameras. For example, its rotating monitor screen lets me shoot easily from very high or low angles; and its fish-eye "lens" was an attachment which fitted over its zoom lens and allowed me to zoom into the center of the fish-eye image, creating some very interesting results. When I bought my Apple G5, I bought the cheapest (read: slowest) one I could find. For almost every task I require it to do, it still thinks faster than I can! What matters much more than all the latest bells and whistles is the photographer's eye.

In the same way, it happens that I use Nikon cameras. The university I worked for used Nikon cameras for teaching and production, so it made sense at that time to stick with the same brand for myself, in order to have access to the expertise of my colleagues in deciding which equipment to purchase (and borrow lenses occasionally). The result is that I'm embarrassingly ignorant about other camera makes; but I certainly wouldn't argue that Nikon cameras are in any way better than other brands—they're just what I'm used to. And of course, having a range of Nikon lenses makes it more expensive to change to a different manufacturer, so I guess I'm (happily) locked in.

Models

Without the model, there can be no images. Of all the aspects of photography of the nude which inspire me and push me to try out different ideas and methods, the experience of working with models of all kinds, in different combinations and situations, is one of the most powerful and challenging. The choice of model is a key element, and it's determined by the kind of photographer each of us wishes to be and the kind of photographs we wish to produce. The possible range is considerable: Models can be male, female, young, old, able bodied, disabled, of different ethnicities…. They may be stunningly beautiful or handsome, or their looks may be average. We

may shoot them singly or in pairs or more, combine female and male, or work with just one gender at a time. Some themes may be achievable only with that one special model whose unique look is integral to your vision; other ideas may be less specific; see Figures 14 and 15.

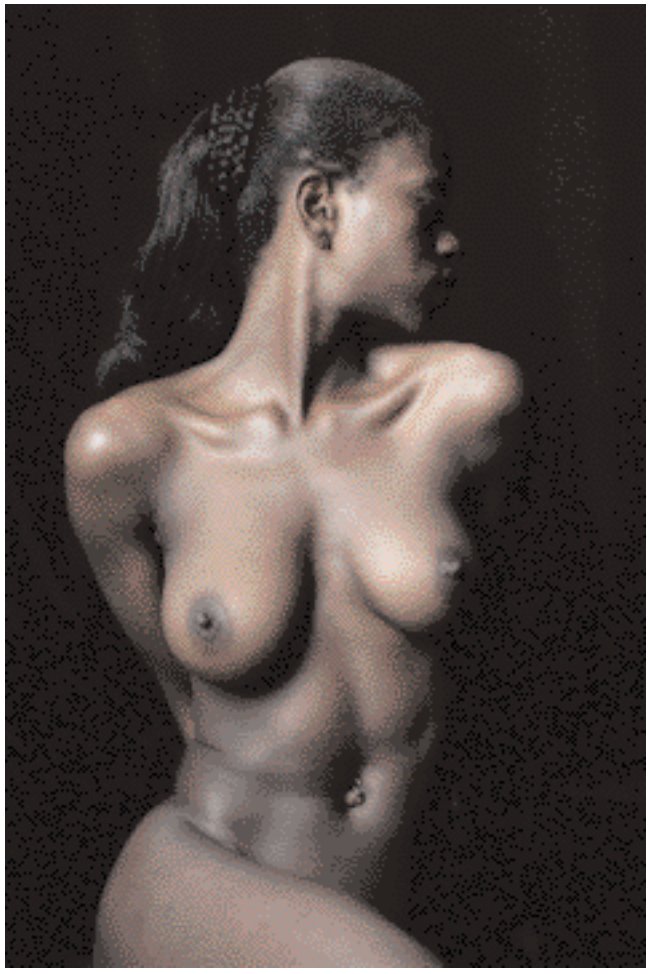

Figure 14 A very special look: This image derives much of its impact from the play of light across Martha's shoulders and throat. No other model I've worked with has quite this look.

Figure 15 Another unique look: Zoey's exotic hairstyles and makeup are the focal element in this image.

I hope you'll find the range of models I use stimulating; or you may decide that your own tastes are different. The most important point to consider here is that beautiful models don't automatically guarantee beautiful, original, eye-catching *photographs*. It's not difficult to light your beautiful model, from the front with flattering light from a huge softbox and from behind with a little hair light: it'll work every time, in the sense that it will convey to viewers how beautiful your model is. But the resulting images may have very little individuality about them: They may be images anyone could have taken. The goal here is to develop skills and techniques through which you can find and communicate unique ways of seeing.

Lighting

Without light there can be no photography; see Figure 16. This section considers the importance of light, and of shadow and darkness, in determining the impact and quality of every image we create. We then look in detail at the use of available light, by which I mean both the natural light we work with when shooting outdoors, and the daylight that passes through windows into the interiors of buildings. Available light brings to indoor photography an unbeatable subtlety, delicacy, and natural appearance, as well as problems (and opportunities) in balancing light and shade. In addition we'll look at high-power continuous light sources, on-camera flash, and studio flash systems, as well as the panoply of softboxes, reflectors, and other lighting peripherals.

Figure 16 Window light.

One of the greatest benefits of digital cameras is the capacity to display histograms and highlights, thus making it very much easier to get the lighting for each shot exactly the way you want it and technically perfect as well, exploiting the full tonal range of the camera.

Here I need to indicate that the book doesn't cover the use of flash meters. I've found that working with a meter slows everything down too far and impedes the concentration and connection between model and photographer, which is essential to the whole process. I work with the histogram and highlight displays on the camera's monitor screen, which with a little experience and practice have shown themselves to be very reliable indicators of what I've captured.

Again, I find studying the work of other photographers, as well as other visual artists who create images of the nude, particularly useful where lighting is concerned. Often noticing a subtle difference between what I'm used to doing and what I see another photographer achieving is enough to stimulate new experiments and methods and create a different look in my work. And it isn't always the great masters who provide this challenge. One of my favorite web sites is www.photosig.com, whose contributors are photographers of every level of skill and imagination, shooting every conceivable subject. It's unusual for a week to go by on Sig without my seeing at least one picture that makes me ask, "How did they do that?" and start moving lights around in my studio.

The Shoot

This is the culmination of the first part of the process of creating an image. Here, camera, lights, location, model, and lighting come together. The variables are almost infinite! You can position the camera and lights anywhere around the model in the space you've chosen; you can select any combination of aperture and shutter speed and any focal length; your model can move into any one of a thousand different poses; and you can choose the expression you want her or him to adopt. In this chapter we'll look at ways of handling these possibilities and making the best selection.

Some approaches to the nude are site specific: They make use of the trees in the woods, the pebbles on the beach, a library filled with old, leather-bound books, the old wooden stairwell in a building.… Other styles have simpler requirements which are easiest met in the studio: a plain dark background or a bright white one.

This section deals with the use of "real" locations, as well as the possibilities (and limitations) of two different types of studios; see Figure 17. Many photographers create a home studio by adapting part of their domestic living space to their creative needs, and this section considers ways of doing this. It also looks at a typical professional studio for hire and discusses the pros and cons of using it.

Figure 17 A natural location.

Postproduction

The more I look at my own work and that of other photographers, the more crucial this aspect of photographic creativity seems to be. It covers the whole range of processes we put images through after the shutter clicks: from tidying the image, fixing skin blemishes and making the verticals vertical, through manipulation of color, tone, and grain, to the transplanting of the model into a different environment. We'll also look in some detail at Photoshop's RAW-file interface and at Photoshop's powerful but not widely understood ways of creating and manipulating strong black-and-white images from color originals.

The old cliché of the digital darkroom severely understates the power of the computer and, most importantly, the freedom it gives (with negligible running costs) to take risks and experiment, far beyond what was feasible or affordable in a real darkroom. At the same time, we can be confident, if we've adopted safe and systematic working practices, that however much we experiment, nothing will be lost or damaged and that original files can be safely retrieved and reused. Linked to this is the certainty that every print we make from a given file will be identical.

Printing itself is covered in *Mastering Digital Printing, Second Edition*, by Harald Johnson; it is recommended for its very detailed and clear coverage of nearly every aspect of digital printing.

About the Author

I'm Australian born and based in Cambridge, England. I retired at the end of 2004, after a career in a university managing media production and media training. Over the years I've designed courses in and taught Photoshop to hundreds of undergraduate students and written detailed training manuals for Photoshop and other media applications such as Media100 and AfterEffects.

My first experience with nude photography was in the late '70s, shooting 35mm b/w (mostly Pan F) with an Olympus OM2. This interest was rekindled in 2001 when I bought my first digital camera. My favorite styles of nude imagery come within the broad headings of art nude and fetish. I work mostly from my home studio with intense bursts of outdoor location shooting every summer (as far as the English climate allows).

Figure 18 The author, photographed by Sheena Belham.

Bibliography

The following titles provide detailed guidance:

Busch, David D. *Mastering Digital Photography*. Course Technology PTR.
Busch, David D. *Mastering Digital SLR Photography*. Course Technology PTR.

The following titles give very detailed examples of lighting layouts and setups:

Ashford, Rod. *Lighting for Nude Photography*. RotoVision.
Ashford, Rod. *Lighting the Nude*. RotoVision. Compiled by Roger Hicks, Frances Schultz, Alex Larg, and Jane Wood.

Photoshop has generated a publishing industry of its own. Three of the best and most useful titles follow:

Evening, Martin. *Adobe Photoshop for Photographers*. Focal Press.
Fraser, Bruce. *Real World Camera Raw with Adobe Photoshop CS2*. Peachpit Press.
McLelland, Deke and Laurie Ullrich Fuller. *Photoshop CS2 Bible* John Wiley & Sons.

On digital printing, the following title is a thorough guide to equipment and techniques:

Johnson, Harald. *Mastering Digital Printing, 2nd edition*. Course Technology PTR.

The following web site provides p-to-date information and thorough reviews of new cameras.

www.dpreview.com

You can envision the whole photographic production process as a series of steps, each of which moves the photographer closer to the ultimate realization of his goal for each image. Step one might be to light the scene, for example, step two to pose the model, step three to take the photograph, step four to edit it, and so on. Beyond the model's crucial participation and the photographer's creative vision, imagination, and skills, success in achieving this goal depends on a chain of equipment, from the camera through the computer and its software, to the printer, all working together to deliver that realization. See Figures 1.1 and 1.2 for examples of where these things might take you. In this chapter you'll consider options for each element in the chain, including color management and the technology that helps to achieve consistency in the appearance of your images, across the whole process. And because the security of your digital photographs is as important as the images themselves, you look at the reasons for backing up and archiving, and then at the technologies you need to keep your work safe.

Figure 1.1 What the photographer thinks about: setting, pose, expression, gaze, adornments, lighting…

Figure 1.2 …depth of field, camera angle, field of view, contrast, crop, cleanup, catchlights, layers, masks, filters… .

Sixteen Bits of RAW

When considering how to achieve the best technical quality for the images you're going to produce, there are two aspects: which camera settings to choose and (anticipating a little) which bit-depth to use in postproduction.

Cheap and mid-range digital cameras usually store images as JPEG files, and JPEG is also usually the out-of-the-box setting for digital SLRs. JPEG is a lossy form of compression: Some of the data captured by the camera's imaging sensor is actually thrown away before the picture is saved to a file. That data can't be retrieved. JPEG compression can be applied at different levels, keeping more or less of the original data, and most cameras offer two or three levels for you to choose from. In its own terms the JPEG algorithm is pretty smart, and it's surprising how much data can be lost without the picture becoming visibly ragged. To illustrate this, look at a detail from Figure 1.3.

Figure 1.3 The whole image.

Figures 1.4 through 1.6 show an enlarged section of the model's right eye, shot with a JPEG compression ratio of 6:1, 10:1, and 24:1 respectively. The increasing loss of color information, as the ratios go up, is unmistakeable. For comparison, Figure 1.7 shows the same area when shot RAW.

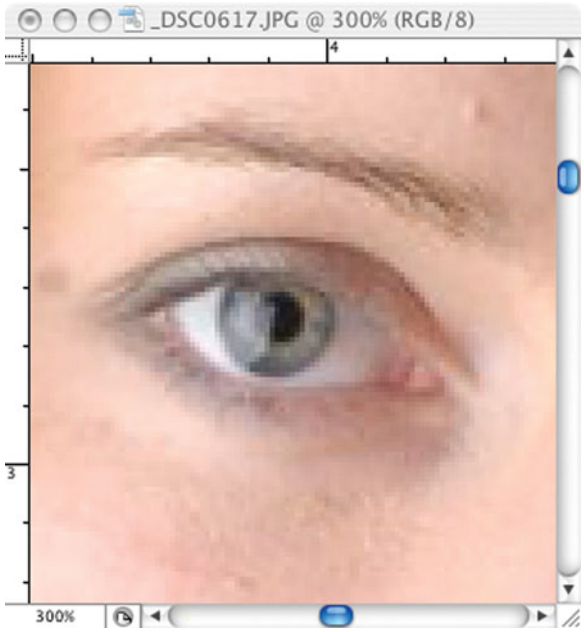

Figure 1.4 High-resolution JPEG

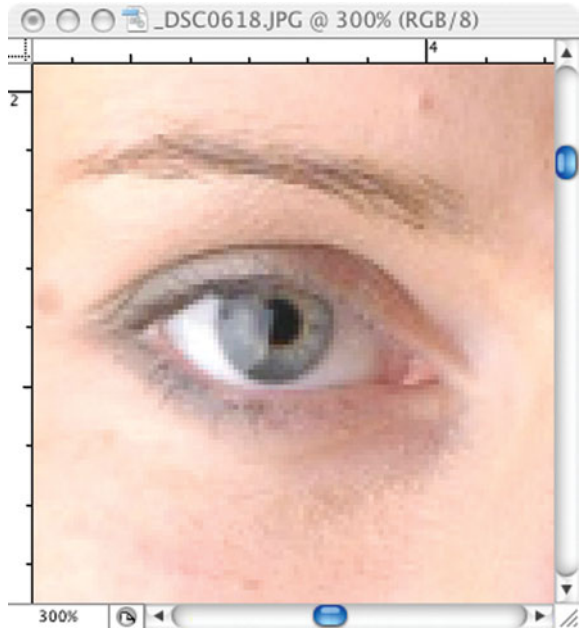

Figure 1.5 Medium-resolution JPEG.

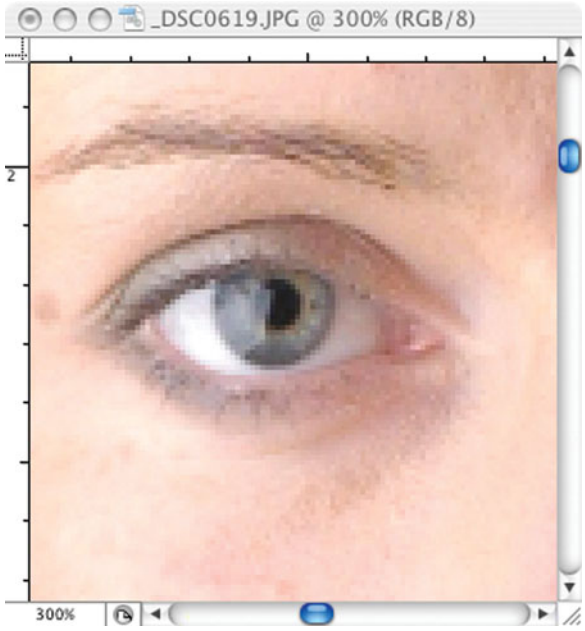

Figure 1.6 Low-resolution JPEG.

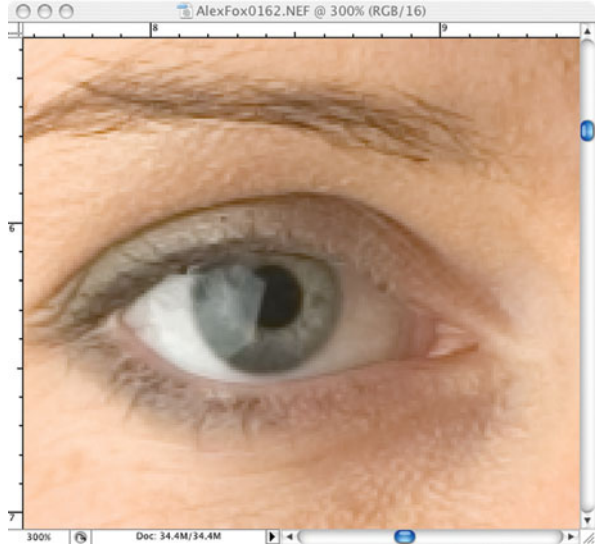

Figure 1.7 The RAW image shows no loss of information.

Initially, the main justification for JPEG compression was to enable picture files to be transmitted over slow networks and to save storage space on small hard drives. JPEG has also, of course, become the only full-color file format for displaying images on the Internet, so much of what we shoot is likely to end up as a JPEG for that purpose. And it has to be said that images which don't require major work in postproduction can look surprisingly good when saved and displayed or even printed from medium- to high-quality JPEG files.

There are limitations, however. JPEG allocates 8 bits to each of the three channels of an RGB image, thus allowing 256 different shades of each color. This creates a palette of 16.7 million color definitions (256 × 256 × 256), which seems like quite a lot! However, most current digital cameras allocate 12 bits to each channel (4,096 shades of each color), so saving the image as a JPEG (a process performed by the camera's software) inevitably results in the irretrievable loss of a significant amount of that original data. The data is weeded out according to the camera's own rules. Those rules will be pretty good, but if they're not ideal for the kind of photography you do, there's nothing you can do to change them.

Just like our eyes, sensing devices such as camera chips can't always handle the full dynamic range of light, from glaring sunshine to dark shade, that may be present in a scene. We work round this in a variety of ways, such as bracketing exposures to find a "least-worst" solution. But JPEG compression adds an extra difficulty, because it works less effectively on dark areas than light ones, with dark areas of an image likely to become noisy and grainy. Unlike the grain of traditional film, digital grain is too irregular to have much aesthetic value, and it's almost impossible to remove it from the image. This constrains our options when we come to edit, or makes us spend extra time cleaning up dark areas.

There are other problems in postproduction with JPEG compression. The JPEG algorithm handles data in blocks of 8 × 8 pixels, and is notoriously bad at coping with images which have been repeatedly cropped by only one or two pixels, as Figures 1.8 and 1.9 demonstrate. More generally, it's not good at handling gentle color gradations. Lossy compression may also cause problems printing images at large sizes.

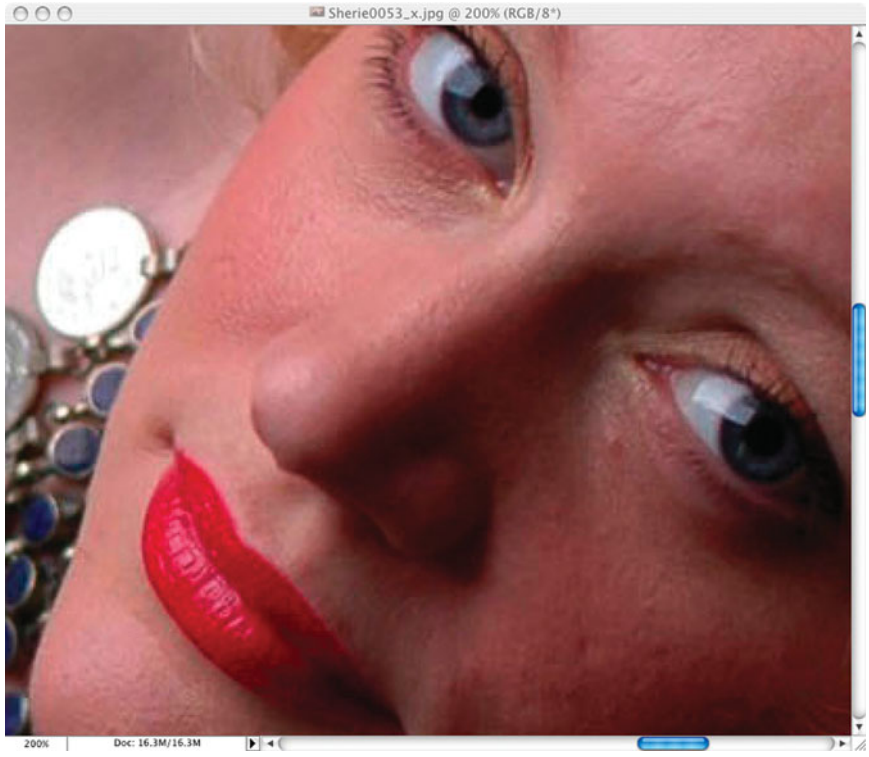

Figure 1.8 A JPEG as saved by the camera, at 200-percent enlargement.

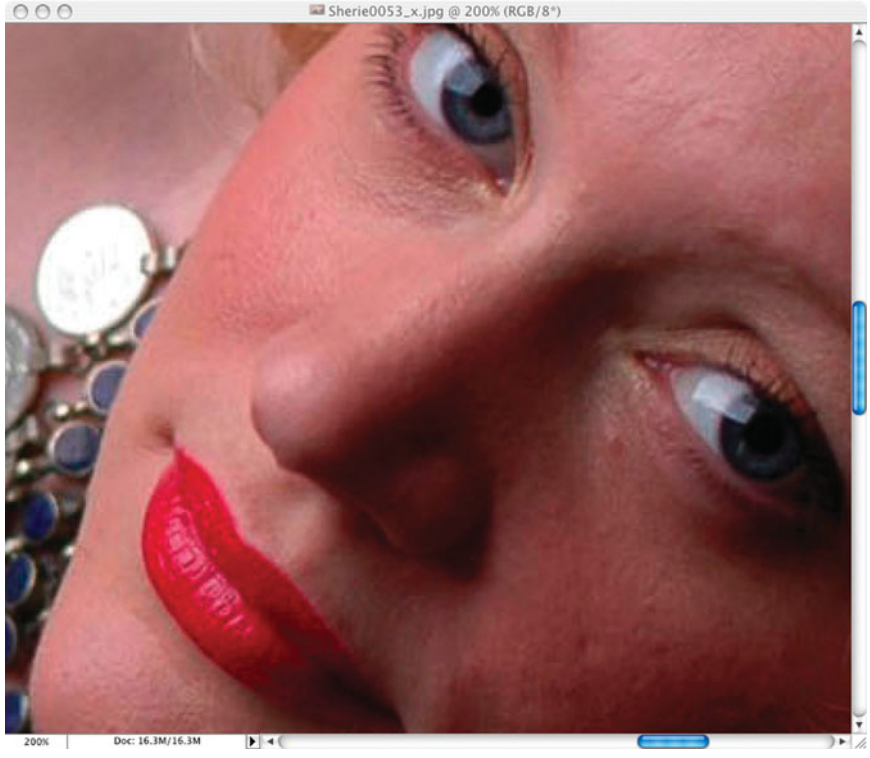

Figure 1.9 The result of repeatedly cropping a few pixels off the image: Artifacts are noticeable, particularly along the jaw line and around the eyes.

In an age of storage cards with capacities of 1GB or more, the need to conserve space in saving files in the camera is less pressing than it was. And in an age of very large and cheap mass storage, the need to constrain the size of files which have been through postproduction has also declined, if not vanished. This is why shooting pictures in RAW format, and editing them as 16-bit files, has become the preferred way to work. Using RAW avoids the limitations and weaknesses of JPEG, and also provides more powerful postproduction tools. Because getting the best results depends both on using RAW to shoot and edit, and on editing in 16-bit mode, we'll look at both processes now, but RAW editing is covered in detail in Chapter 5.

To sum it all up, then: Shooting RAW has a number of advantages over JPEG, both technical and creative, particularly for the photographer who intends his work to be seen as prints. RAW images are cleaner than JPEGs. Dark areas in particular are less noisy, and will also show subtler tonal variation. Photoshop's Raw interface provides powerful tools which are more effective than those in the main menu for optimising the image's dynamic range without losing any data. There's also a simple eye-dropper tool for setting the white balance. These aren't just technical considerations: RAW offers you greater freedom to *interpret* the image, to give it the mood and feeeling you're striving for. That's what makes the extra effort required so worthwhile, and is the real reason for shooting RAW.

Understanding Camera Raw

A Camera Raw file is essentially what its name suggests: It's a file containing, in unprocessed form, *all* the data captured by the camera's imaging sensor. Because each sensor element only registers the intensity of light on a gray scale, but not its color, the RAW file also contains information about how the data from each sensor element should be interpreted (as red, green, or blue) along with metadata such as the camera make and model, the white balance setting, and so on.

To encode the different levels of light as data, each camera model may have its own algorithm to assign and store a numerical value to the light which passes through the lens and falls on each separate sensor element. The algorithm your camera uses may be different even from those used by other camera models from the same manufacturer. Any picture-editing software has to be capable, when you open the file, of displaying the image in accordance with the algorithm with which the image was shot. You can pretty much rely on any recent version of Photoshop to include plug-ins to handle RAW files from camera models current at the time it was released, and plug-ins for newer camera models appear promptly on Adobe's web sites.

RAW files are larger than JPEGs. Typically the highest-quality JPEG from a Nikon D70 is stored at around 2.2MB for a 2,000 × 3,008 pixel image; a RAW file for the same size image is around 4.9MB.

The JPEG version has to be produced by the camera, because that's what's displayed on the camera monitor. However, some cameras offer the possibility of saving each image twice: once as a RAW file and once as a medium-quality JPEG (on the D70, about 750KB per image). If you regularly give your model a CD of pictures from the shoot, the JPEGs can be quite useful as a means of doing so quickly and easily, without having to process all the RAW files. But it does call for some care if you want to rename all the files. In Figure 1.10, note the matching pairs of .jpg and .nef files (.nef is Nikon's file extension for RAW files). I've used iView MediaPro to batch rename all the files from the shoot so that matching images still have the same number.

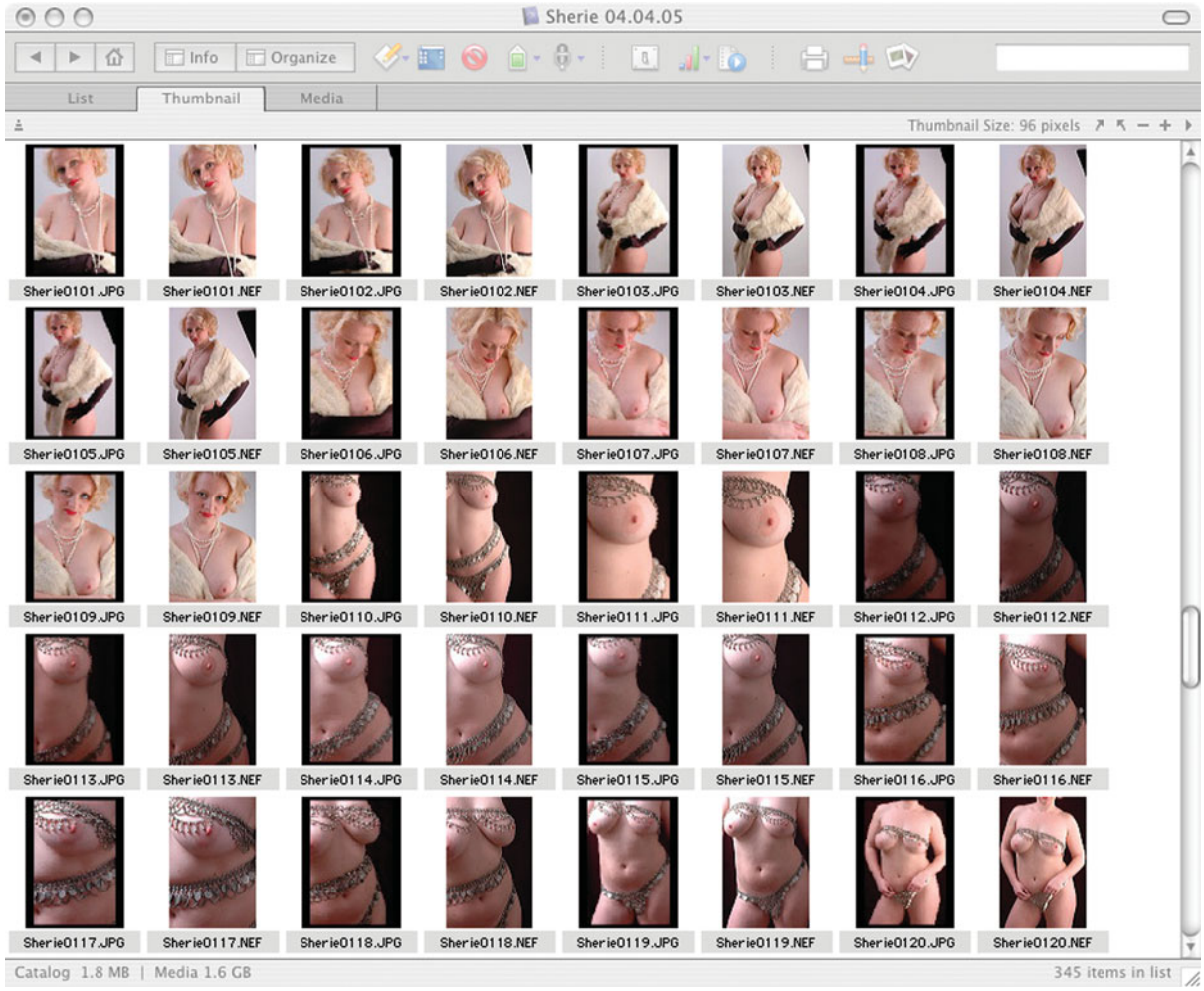

Figure 1.10 Part of a catalog generated by iView Media Pro.

Camera Raw is also sometimes referred to as digital negative. Because RAW files contain more data, without compression, they offer much more latitude than JPEGs. It's possible to alter the exposure in either direction by as much as a stop or more, in very small increments, as well as easily make fine adjustments to the white balance, black level (shadows), brightness, and contrast. In addition, the Raw interface works nondestructively: You can always reinstate the RAW image back to its camera settings, and you can't in any case permanently alter the RAW data. These are the reasons RAW is becoming the preferred format for many photographers.

A note on jargon: *Camera Raw* is the name given in Photoshop to RAW files produced by the camera, as described here. But among Photoshop's file formats, in the Save As menu, you'll find *Photoshop Raw*. This is completely different! If it has a place in your workflow it's likely to be at the end of post-production, not the beginning. The use of Photoshop Raw is outside the scope of this book, and from now on I'll refer to Camera Raw simply as *Raw*.

Photoshop's way of handling RAW files is to open them with a different interface from the normal one; see Figure 1.11. You manipulate the RAW file using the controls provided, and when you click OK, the RAW file is processed to take account of the changes you've made and opens into the standard Photoshop interface.

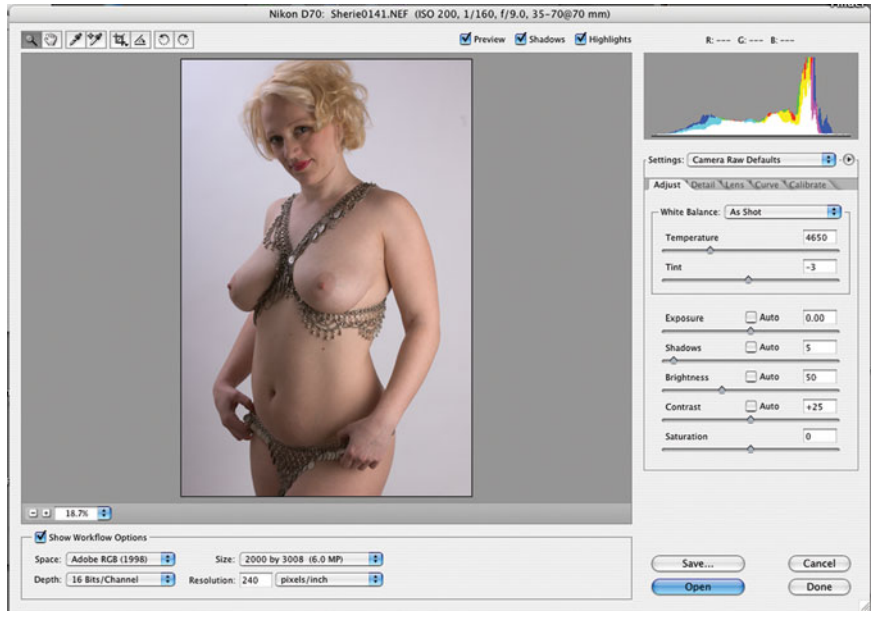

Figure 1.11 The Camera Raw interface. The histogram indictes that the dynamic range of this image can be expanded at both ends. Note the eyedropper tool (top left) used to set the white point, and the metadata following the filename.

Getting Flexibility from 16 Bit

As we've seen, JPEG images use 8 bits per channel, which allows over 16 million colors. Photoshop allows you to work at 16 bits per channel, which allows over 35 trillion colors. This isn't the overkill it seems. Working in 16-bit mode means that you can use all the 12 bits per channel created by your camera (with some headroom). Photoshop editing is destructive: When you use a tool such as Curves or Levels, you're throwing data away. That's why, for example, you often see those vertical white stripes in the Levels histogram; see Figure 1.12. They're the representation of places in the image where the tonal range has been stretched, so that the image actually contains no data at that level. Repeated manipulation of levels will open wider gaps until there's visible posterization. The more you wish to manipulate the image's tonal range, and edit and re-edit using Photoshop's destructive tools, the more advantage you get from the extra flexibility those 16 bits provide: fewer and smaller gaps in the histogram, and overall more robustness to withstand your most radical and adventurous creative impulses.

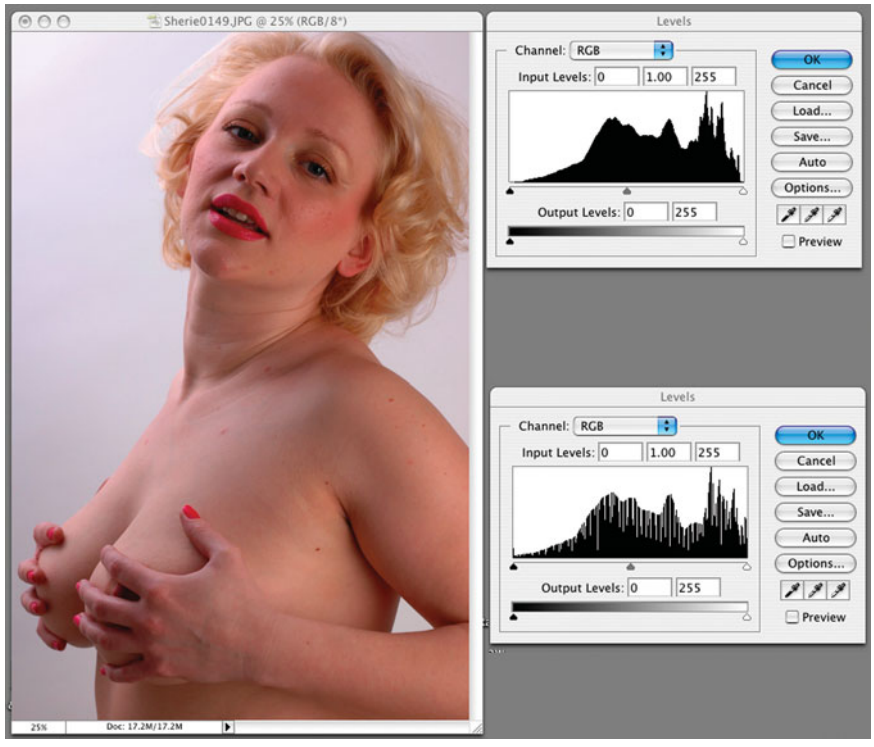

Figure 1.12 The effect of adjusting levels using normal Photoshop tools. The image now uses the full dynamic range available, but gaps have opened up in the histogram, showing that some tonal levels have been lost.

Shooting with Camera Raw

Once you've set your camera to RAW or RAW + JPEG, there are two important steps to follow. The first is to include some reference for the white balance with each lighting setup, and the other is consistently to make use of the histogram and highlight displays to check that you have the optimum exposure. Because of the *linear* way the picture data is constructed in digital photography, this means exposing for the highlights.

Consider a camera which has a dynamic range of six stops and records the image using 12 bits per channel. Of the 4,096 possible levels the camera can record in each channel, half (2,048) are allocated to the brightest stop; half again (1,024) to the next brightest stop; and so on down to the darkest stop, for which only 64 levels are available. This is a linear process, inherent in the technology of sensors; but it isn't at all the way the human eye responds to light! When we open an image in the Photoshop Raw window, a complex series of conversions are carried to make the linear data match the way we see the world. The more use you make of the greater range of levels at the bright end (checking with the histogram and highlight display to avoid overexposure), the more effective that match will be.

To keep control over white balance, we need a reliable reference, such as the widely used GretagMacbeth 24-square ColorChecker Chart shown in Figure 1.13. The bottom row of squares (white to black) is used to set the white balance, and the color squares can be used for very precise color adjustments.

Figure 1.13 The GretagMacbeth ColorChecker Chart.

To use the chart, set up the lighting as you want it for the scene, then position the chart in the scene, and shoot it, as in Figure 1.14. It doesn't have to fill the scene, but it's important that it's evenly lit and that nothing else in the scene is shadowing it or reflecting color onto it. When you come to edit your pictures, that shot becomes a reference, and the settings you chose for it can be applied to other shots done with the same lighting conditions. Figures 1.14 and 1.15, for example, show the chart and an image from the set, as shot.

Figure 1.14 Shooting the chart before correction.

Figure 1.15 The real image shot under the same lighting conditions.

Compare those images with 1.16 and 1.17, where Photoshop Raw has been used on the chart to correct the white balance, and the same correction has then been applied to the real image.

Figure 1.16 The chart, corrected in Photoshop Raw.

Figure 1.17 The correction applied to the image.

One final note of caution: To get the best out of shooting RAW, we need to expose the highlights as fully as possible. However, completely *overexposed* areas can't be retrieved: If there's no detail in any channel in an area because every sensor has recorded absolute white (RGB 255, 255, 255), Photoshop's Raw interface has nothing with which to work. It may be possible convincingly to fill in small overexposed areas in Photoshop using the Clone tool—a shoulder, for example, or the upper slope of a breast—but beyond that, any overexposed areas in the image will remain. This means that, even with the highlight indicator and histogram to help you, you may still want to bracket your exposures to be certain of getting the most successful exposure. It's helpful also to know exactly what the highlight indicator on your camera is telling you. On Nikon digital SLRs, for example, the highlight display indicates everything above and including 96 percent of maximum correct exposure, so an image which has no flashing highlights is slightly underexposed. It's a question of getting used to the camera's displays and what they're telling you.

Camera Considerations

In this section you look at some of the factors to consider in choosing the camera that's right for you. As always, don't expect recommendations of specific camera models, but a more generalized discussion that touches on major considerations. The largest camera format you look at is the digital SLR (single lens reflex)—the approximate equivalent to the 35mm camera. Large-format digital cameras and backs are coming onto the market all the time, but they're outside the scope of this book.

The discussion here is relatively brief. If you want to find out more about the innards of your digital camera, either the excellent general introduction to digital photography in this series, *Mastering Digital Photography,* or, for digital SLR owners, *Mastering Digital SLR Photography*, both by David D. Busch (Course PTR), will more than satisfy your curiosity. Many magazines are also devoted to digital photography; but my favorite source for reliable and up-to-date information about the digital camera market has to be www.dpreview.com. This wonderful web site also contains invaluable general information about digital imaging, discussions from users about different camera models, and a detailed and clearly written glossary, together with links to other equally useful informational sites.

I'll be concentrating on aspects of choosing and using a camera that are particularly relevant to photography of the nude, but digital cameras are all-rounders, packed with features which may not help with nude photography but may be very useful for other types of photography in which you're also interested. An example is the ability to shoot bursts of images: I've rarely needed that for a nude shoot, but if I were also interested in shooting, say, motor-bike races or football games, capacity to shoot continuously would certainly be a major consideration for me in choosing a camera. In the same way, the 105mm micro lens I use to shoot extreme close-ups (see Figure 1.18) as part of nude and flower photography (see Figure 1.19) is also a wonderful lens for landscape (see Figure 1.20), and that's a consideration which influenced my decision to buy it.

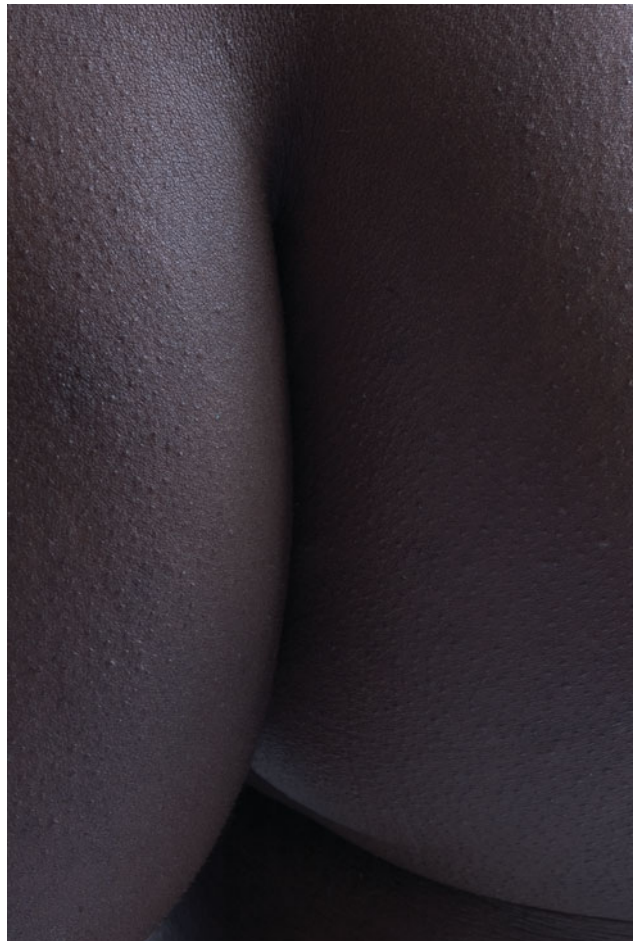

Figure 1.18 The 105mm lens, with its field of view equivalent to about 160mm on a 35mm camera, is ideal for detailed bodyscape shots, but but being a telephoto lens needs to be stopped down (f/22 here) to give decent depth of field. This in turn requires more light than a wider lens which doesn't have to be stopped down so far to give the same depth of field.

Figure 1.19 The 105mm lens also works equally well for flower photography. A detail (not without erotic meaning!) of a calla lily, taken with the same lens stopped down to f/36, and lit using flash.

Figure 1.20 At the opposite extreme, the 105mm lens also provides just the right amount of compression for landscape photography, such as this image of the hills near Gualdo, a tiny village in the Marche district of northern Italy.

Prints Versus the Internet

You'll notice that in this chapter I often discuss how your choice of camera, lens, or whatever impacts the quality of prints you can produce. This is because *print quality* is a better and more significant test of how your system works (and of how you go about editing your pictures) than is your system's capacity to produce images for the Internet. Computer monitors are a relatively low-resolution form of display. Digital prints, on the other hand, whether produced as machine prints by your local photographic store or via your computer printer, require much more data, and thus make more demands of your equipment and software at every stage.

If you only ever show your work online, then this argument may not have much impact on what equipment you decide to buy or how you work. But it's also unfortunately the case that you have little control over how your Internet audience sees your images, because you can never be sure that their monitors are properly calibrated, or adequately sharp, or are being viewed with appropriate ambient lighting. Equally, of course, when selling a print you have no control over the environment in which it's exhibited, but at least when displaying it, you have the chance of ensuring that your work is seen at its best. For all of these reasons I still think of the print, rather than any onscreen representation, as being the *real* version of the photographs I take.

Sensors

Let me start by taking a brief overview of how digital cameras form images, because it's relevant to this book's discussion about shooting RAW and provides some indication of the limits of digital cameras.

Camera sensors consist of an array of light-sensitive elements, each of which contributes one pixel to the complete image. The sensor sits behind the lens, which converges light from the scene you're shooting onto the sensor, just as in a film camera it converges light onto the film. So a camera which produces a 3,008 × 2,000 pixel image has a sensor containing that many elements. The physical size of the sensor affects the quality of the image—the bigger the sensor is, the better—and also determines the multiplier, which tells you the lens' actual field of view (the area you can see through the lens) when compared to the *field of view* of the same lens on a 35mm camera.

In our shorthand way of referring to these things, we often talk or read about the focal length of the lens of a digital SLR being 1.5 times that of the same lens on a 35mm camera. But the lens' focal length is a function of the lens' design and structure, not of the camera body it's attached to. It's the field of view which changes.

For example: The dimensions of a 35mm frame are 36 × 24mm. A typical digital SLR sensor might measure 23.7 × 15.6mm (Nikon D70), 22.2 × 14.8mm (Canon Rebel XT), or 17.3 × 13.00mm (Olympus E300). When you attach a lens designed for a 35mm SLR to a digital SLR, the image formed by the lens isn't scaled down to the size of the sensor; it is in effect *cropped* to the dimensions of the sensor. (To put it another way, the sensor, being smaller than a 35mm frame, isn't big enough to take the whole image created by the lens.) The result, as the examples in Figure 1.21 and 1.22 indicate, is to narrow the field of view, so the image appears to have been shot with a lens with a longer focal length. For the cameras mentioned earlier, the field of view multipliers are about 1.5 (36/23.7), 1.6 (36/22.2), and 2.1 (36/17.3), respectively. The effect of narrowing the field of view is to make the subject appear closer.

Figure 1.21 A (simulated) 35mm image. The image occupies the whole of the 36 × 24mm frame.

Figure 1.22 The same image taken on a digital SLR (Nikon D70), with the 35mm frame superimposed. The scale hasn't changed (the model's the same size), but the smaller size of the sensor (23.7 × 15.6mm) results in a cropped image.

The difference in the sensors' physical sizes also explains why your SLR really produces better images than the camera on a mobile phone—and, of course, difference in lens quality may have something to do with it as well! Small sensors containing very large numbers of elements don't always deliver the results you might hope for: See, for example, the discussion of blooming later in this section. Note also that because there isn't (yet) a standard size for sensors, the multiplier for SLR lenses varies from maker to maker, and that non-SLR digital cameras may have *much* smaller sensors than SLRs.

However, the way the sensor forms the image isn't that simple. The sensor records grayscale information only: intensity of light, but not color. (On a digital SLR, with typically a 12-bit sensor, this means that each element can record 4,096 different levels of gray.) This means that filters have to be applied to the sensor elements, making them sensitive to either red, green, or blue light. Because our eyes are more sensitive to green light, twice as many elements have green filters overlaid on them as either red or blue. It's possible to construct the whole of the spectrum of visible light out of red, green, and blue light (that's essentially how our eyes view the world), so once the RGB filters have been applied, we should have full-color images.

Alas, we're still not out of the woods! If we could see the result of the imaging process at this stage, after applying the filters, we'd see that the image as a whole is made up out of sequences, rather like a mosaic, of pixels of each separate color (alternating rows of red, green, red, green, and blue, green, blue, green…). This is sometimes called a *Bayer pattern*. No part of the image is in full color, because an element which has a filter over it to make it sensitive to, say, blue light is incapable of recording how much red or green light is present at that specific location. The camera has to provide the missing information, by looking at red and green elements adjacent to that blue element, averaging out their values, and using the results as the red and green values at the location of the blue element; it does the same for the other colors as well. This process is called *de-mosaicing*. These approximated values are one of the main reasons digital cameras have problems with sharpness. Note in Figure 1.23 that there are two green sensors for every red or blue one. This means that the green channel is less prone to noise than the red and blue ones, because less of its content has to be calculated (extrapolated) from adjacent red and blue elements.

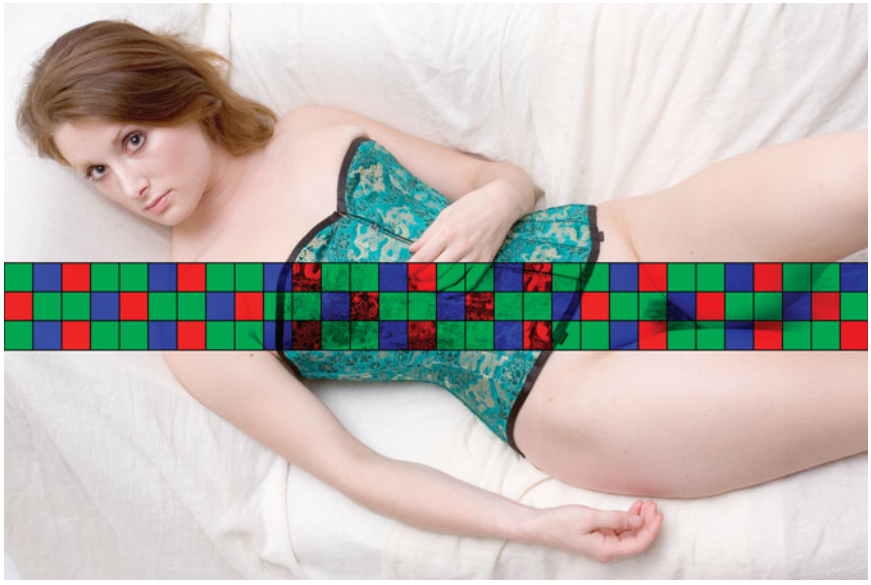

Figure 1.23 The pattern of filters laid over the grayscale sensor is shown (on a very exaggerated scale: each square here is 100 × 100 pixels) across the center of this image.

So the image is actually significantly constructed out of data which, rather than being directly derived from the light falling onto the sensor, has been calculated by the camera's software. In addition, sensors are prone to a phenomenon known as *blooming*, whereby an element hit by more light than it's capable of storing allows some of that extra light to spill over into adjacent elements, resulting in a fringing effect, similar in appearance to the chromatic aberrations produced by some budget lenses. This is illustrated in Figures 1.24 through 1.27 (Remember that when I talk about light here, I'm actually referring to the voltages by which the light is represented in each element: A high voltage in one element can raise the voltage in adjacent ones.) The smaller the sensor (or the more elements a sensor of a given size contains), the more blooming will occur, because the elements are physically packed in more densely.

Figure 1.24 The brightest part of the background is slightly overexposed.

Figure 1.25 Typical purple blooming is visible here along the edge of the background paper lit most strongly by the studio strobe.

Figure 1.26 Working outdoors with bright sunlight.

Figure 1.27 Here the blooming in the foliage creates a yellow-green fringe. There is no information at all in the white areas within the fringing.

This description of the way the image is formed applies to most makes of camera. Some cameras, however, use a different technology. The Foveon sensor, employed by Sigma in its digital SLRs, employs a three-layered sensor with filters, which can store "real" (not interpolated) values for red, green, and blue at every position in the array. This means that less data processing is necessary to generate the whole image, but Foveon sensors (see Figure 1.28) have other drawbacks in terms of production cost, speed, low light sensitivity, and color accuracy, which mean that in practice their benefits over Bayer pattern type devices are not as great as might first appear. It's not clear whether either technology will win out over the other, or whether different camera manufacturers will continue to use both. For your purposes, neither technology has an edge over the other: Both work fine.

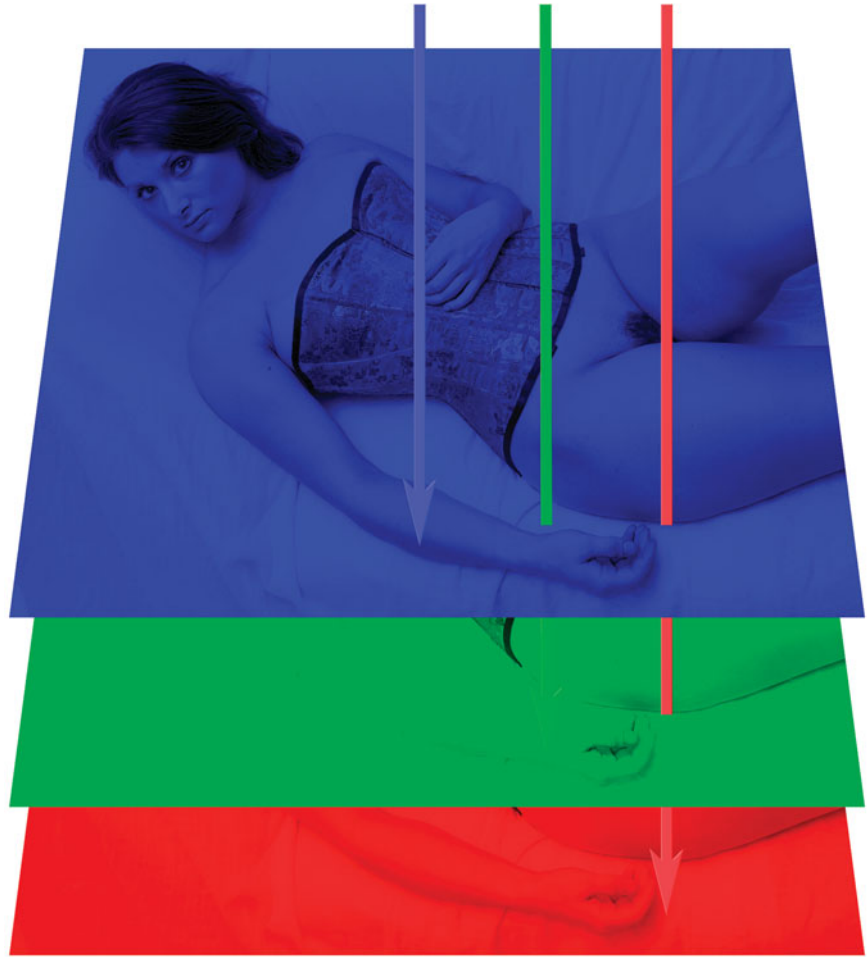

Figure 1.28 This schematic diagram shows Foveon technology's three-layer sensor. Each of the top two layers is capable of recording one color and allowing light of the other color(s) to pass through to the layer(s) beneath.

So, having said all that, what about image size? How much does it really matter? Is it worth trading up from a 4-megapixel (MP) camera to a 6MP camera? From a 6MP camera to an 8MP camera? I think that the greatest advantage to be gained from bigger images is the capacity to crop them hard, and still have enough information left to be able to display the results at an adequate scale either on the Internet, or, more significantly, as prints.

To take a rather extreme example: Assume that the largest size you'd want to display an image on the Internet is 800 pixels. In the case of an image in portrait orientation, you could crop away more than three quarters of a 6MP (3,000 × 2,000 pixel) file, and still have a crisp, clear image for Internet display. On the other hand, you would be in some difficulty if you wanted to make a 10 × 6.6 print (see Figures 1.29 through 1.31) from that same small area of the image. In the more likely situation, where you've cropped maybe a couple of hundred pixels of each side of an image, it should still print beautifully at 10 × 6.6. Indeed, if your printer has good interpolation capability, you should be able to print such an image much larger than 10 × 6.6.

Figure 1.29

A full 3,008 × 2,000 pixel image will print comfortably at 10 × 6.6 or larger.

Figure 1.30 An 800-pixel-high section from the same image. It doesn't look too bad at this size, but…

Figure 1.31 …this is what the image looks like, if you try to print it at 10 × 8. Loss of image quality is clearly visible in the corset's edges, lacing, and eyelet.

It's possible to print images very satisfactorily up to 4' high from slightly cropped images, for example on Epson and HP large format printers. And it goes without saying that the way to avoid having to attempt extreme crops is to shoot carefully and thoroughly, covering every possible angle and framing your subject appropriately, as Figure 1.32 demonstrates!

Figure 1.32 Do as I say, not as I do! There's a lot of empty space in this image (about 13 percent of its height), as the possible crop lines indicate. I don't think the extra space adds anything to the image. The crop limits the maximum size at which the image will print cleanly.

If you've ever done your own printing from 35mm negatives, you'll recognize the similarities between the old and the new technologies here. Even a full 35mm frame will only print so big (depending on the film speed, the quality of your camera and enlarger lenses, and so on) before the result looks too soft or grainy to be acceptable. And the more you crop the image, the sooner you reach the system's limitations.

Probably because I've used 6MP cameras for a few years now, I feel entirely happy with that image size. I get images which are sharp enough, or, if they're not, can easily and safely be sharpened using Photoshop's Unsharp Mask command. With the Nikon 5700 (5MP) I used before that, I occasionally felt that I was pushing its limits, and getting less than satisfactory prints from cropped images. However, that may have been due to the less sharp lens on that camera, as much as to the file being too small to print at the size I was aiming for. In the end, my decision to upgrade was driven much more by frustration with the lack of fast, easy manual controls on the camera (see "Wish Lists" later in this chapter), than by profound dissatisfaction with image quality or size.

In mid-2006, several 6MP cameras on the market are still in the prosumer category, and more recent models are 8MP or more. If I were choosing a camera today, I think I'd be more influenced by other operational features than by pixel count in choosing between 6MP and 8MP models; and if I were buying a camera kit complete with lens, I'd also be influenced by the quality of the lens that was included in the kit (see the discussion of lenses next in this chapter). Having said that, though, I don't think I'd be tempted by a camera with an image size of less than 5MP for photography of the nude.

Lenses

In mid-2006, the market is still dominated by lenses designed to be used with both 35mm and digital SLRs, with small numbers of models designed exclusively for digital SLRs just beginning to appear. Digital-only lenses are designed and built to cover only the field of view of the sensor used by that camera manufacturer in their digital SLRs. Such lenses can be made smaller and lighter (and, hopefully, cheaper) than 35mm lenses.

I've assumed in this section that your preference is for zoom lenses, rather than for fixed focal-length lenses. The main reasons for this are budgetary. Fixed focal-length lenses are often faster, but they're relatively more expensive, and it takes two just to cover both ends of the range of a zoom lens, to say nothing of all the focal lengths in between. On the other hand, some special lenses, notably fish-eye and other very wide-angle lenses, are only made as fixed focal length.

The zoom lenses included in camera kits are typically around 18–55mm (Canon Rebel XT) to 18–70mm (Nikon D70). Taking into account the multipliers for each camera (see "Sensors" in this chapter), this gives a real maximum field of view equivalent to 88mm (55 × 1.6) and 105mm (70 × 1.5), respectively. As is often pointed out, you get more close-up for your money on digital SLRs, but at the same time you get less wide angle: 48mm and 52.5mm respectively, neither of which really counts as wide angle at all, if you're looking to use the lens to make your images visibly bend.

A note on 35mm equivalence: In the longer term it's possible that the market in digital cameras will simplify itself, and one sensor size will emerge for digital SLRs as a widely accepted standard, analogous to 35mm in film; but there are no indications that this will happen any time soon. So, even if you've never used a 35mm camera, these digital lenses' ratings in terms of 35mm equivalence are still significant, as they've become the accepted way of comparing the range of one lens with that of another.

Here, your choice of technology impacts on your aesthetic. The field of view you choose to work with plays a significant part in giving each of your images its look. It's not the only factor, but it's an important one. It seems to me that it makes good sense to choose, as your main lens, one that suits most of your needs so you don't have to change lenses too often or invest too much in several different lenses. I've found that I like to work with a certain amount of spatial compression in my shots. It adds a feeling of strength and power to the body and gives me the look I prefer. (It also allows me to work at a distance from the model, which can be a reassuring comfort factor for inexperienced nude models.) Although a field of view equivalen to 105mm on a 35mm camera can give rather too much compression for some portrait shots, it's become my default setting for nude images. At certain angles the compression created by this field of view produces an almost distorting effect on the limbs, which in itself can be very effective in conveying a sense of erotic power and presence. The result is that I work predominantly with the 35–70mm zoom lens set to 70mm, moving backward and forward in relation to the model to alter the frame, rather than using the zoom to reframe.

Fortunately my studio is just deep enough, front to back, to allow me to frame a single standing model full length with my lens set to 70mm. Unfortunately, the ceiling isn't high enough to let me do the same thing overhead with a model lying on the floor—let alone the chaise lounge! I can produce some pleasing overhead images, and frame the model fully, with the lens zoomed to its widest setting, but they often seem to me to lack that sense of the model's almost physical presence in the image that I get with lens at 70mm. And with more than one model (see Figure 1.33), the whole question becomes more complicated.

Figure 1.33 Working with three models in a confined space presents a stimulating challenge.

Stepping up to longer focal-length lenses, I find the 105mm lens invaluable for bodyscapes and outdoors for landscape work (with or without nude model) as described earlier. You can see my 105mm lens in use in Figure 1.34. My least useful purchase has been a 100–200mm zoom lens—unusable without a tripod, not sharp enough, and exhibits too much compression.

Figure 1.34 Landscape with nude, shot with the 105mm lens.

It's with shorter focal-length lenses that the possibilities for nude photography open up. Probably the most famous exponent of the wide-angle classic nude is the British photographer Bill Brandt, who produced a stunning series of black and white images in the 1950s, which exploited the power of wide-angle lenses to bend and distort objects in the foreground. The visual means Brandt explored then have become more commonplace, but there's still scope to explore them. Here, however, you encounter the downside of the "field of view multiplier" phenomenon that is peculiar to digital cameras. A (relatively inexpensive) wide-angle zoom is likely to have a minimum focal length of about 18mm—a field of view equivalent to 24mm or 35mm camera. That isn't very wide: It allows only moderate distortion. My favorite wide-angle lens is the far-from-inexpensive 12–24mm (the 35mm film equivalent of around 18mm at the widest), which really does make it possible to bend the world out of shape. See Figure 1.35. I'm lucky enough to be able to borrow one occasionally, but much as I love it, I'm not sure I'd ever buy one because I wouldn't use it often enough to justify it. But even if you can't borrow lenses that you can't justify buying, rental stores will rent you what you're looking for.

Figure 1.35 Working with the 12mm lens.

The same applies to fish-eye lenses. Like very ultra-angle lenses, these can be tricky to work with: All sorts of unexpected elements from your location are likely to find their way into the circular edge of the image, including your feet. Fish-eye images have an unmistakable look (see Figure 1.36), and it's always a challenge to come up with a new and different way of using them.

Figure 1.36 Working with the fish-eye lens.

Stabilizing the Image

Working with a 70mm lens, I regard anything slower than 1/50 second as a long exposure which needs the camera to be held in a steady position. This avoids camera shake caused by my hands being fractionally unsteady, or even by my breathing. This means that when shooting interior nudes by window light, I use a tripod frequently. There are other ways of steadying images, however, and we'll look at those as well.

Tripods

The technology of tripods may not be as spectacular as that of cameras or computers, but it includes a wide range of designs, in a pretty competitive marketplace with new products and gimmicks arriving frequently. A good tripod should make it easy (or at least no more difficult) for you to work. This suggests that as well as holding the camera steady, the tripod legs and the head need to be easily, rapidly, and precisely adjustable; and they need to stay put after you've adjusted them, without sagging or twisting.

Now you start to run up against some practical problems. To be comfortably portable, a tripod needs to be light. To work effectively, it needs to be heavy, both to ensure stability, and because accurately adjustable head mechanisms are not, by their nature, lightweight. Weight is less of a problem in the studio (see Figure 1.37), because you never have to move the tripod very far, but it does become a real issue on location, where you have lots of other equipment as well as the tripod to manage. And it's surprising how little breeze it takes to make a fully extended lightweight tripod sway gently, with a bulky camera and lens attached, with unfortunate effects on your sunset shoot. This is an area where lightweight components such as carbon-fiber legs and magnesium heads may seem attractive, but may not be helpful unless you also use a stone bag—a small bag filled with anything heavy and hung from below the tripod head to help keep it steady.

Good tripods aren't cheap. I work with a fairly heavy Manfrotto tripod, which is indeed a nuisance to lug up a mountain, but does its job properly when I get there. Usefully, the head can be easily unmounted from the column, which makes the whole thing easier to pack. The legs have quick-release locks, and the column can be mounted horizontally, as well as vertically, which can make it easier to achieve some close-up shots. When the tripod's completely extended, I need to stand on a short ladder to get my eye up to the viewfinder.

Figure 1.37 Last of the evening light: 1/25 second at f/3.5.

But the real reason for choosing this tripod is its friction head. The head has three rotary controls to let you adjust its position continuously and precisely in three planes: pan, vertical tilt, and lateral tilt. As you turn each knob, the head moves in that plane. Each control also has a clutch mechanism, which lets you disengage the control and move the head freely in that plane, to make large adjustments rapidly. Once you have the camera positioned, it stays exactly where you set it, without requiring a locking mechanism. The head also has a mounting plate and quick-release mechanism, so that you can get the camera off the tripod quickly if you want to scout around for different shooting positions. It's an impressive combination of ease, speed, and precision. Compared to conventional three-axis heads with locking mechanisms, this friction system may be fractionally slower, but it's much more precise.

Ball-and-socket heads are also worth considering, particularly models that have a clutch mechanism operated by a pistol grip, rather than just a locking screw, to lock the ball in the right position. Such heads are fast to adjust, even to extreme angles. However, they are tougher to position precisely; when the clutch is engaged, the head can move freely on all three axes, whereas on a friction head you can adjust each axis separately without impacting the other two.

Image-Stabilizing Lenses

Nikon calls stabilizing lenses *Vibration Reduction (VR)* lenses; Canon describes them as *Image Stabilizing (IS)* lenses. In each case the additional technology installed in the lens is designed to detect and counteract camera shake, by making minute counter-movements of the lens elements. Thus, you can produce sharp images, without a tripod, at slower shutter speeds than would otherwise be possible: at 1/15 sec rather than 1/60, say. The most useful for your purposes from Nikon is a 24–120mm f3.5–5.6 zoom; Canon's range includes a 17–85mm f4–5.6 zoom and a 28–135mm f3.5–5.6 zoom. (Note that at present there is a price to pay for the stabilization technology; the lenses are relatively slow.) Both manufacturers also make a range of telephoto lenses with image stabilization incorporated. Nikon has also incorporated VR technology in their Coolpix 8800, a sign of things to come in high-end compact cameras. Panasonic, with a depth of experience in stabilizing video images, now also incorporates stabilization in their still cameras.

Stabilizing Sensors

Konica Minolta has taken a different approach. Their Maxxum 7D has a "body-integral anti-shake system." Rather than moving the lens elements to compensate for camera shake, it moves the sensor in the camera body. One immediate advantage is that the photographer incurs the additional cost of incorporating the stabilization system once only, rather than having to pay for it in every lens.

Light and Lighting

Photography of the nude is essentially about observing and experimenting with light falling on the human body. Understanding and using appropriate light sources for their different emotional effects (and rejecting inappropriate ones) is therefore a key part of the process. In this section you look at some possible light sources; in Chapter 3 you look at how those sources can best be used.

When I talk about hard light or soft light, I'm really describing the *shadows* cast by a particular light source. Soft shadows have blurred, indistinct edges (so it's hard to tell exactly where the shadow begins) and, in a correct exposure, aren't solid black even at their deepest point (so you can still see color and detail). Figure 1.38 is an example of soft light. Hard shadows have sharp, distinct edges and may drop to complete black, with no visible detail, at their deepest point. Figure 1.39 shows a hard light example. And the real world provides combinations and blends of these two extremes; see Figure 1.40.

Figure 1.38 Soft light, here coming from the viewer's left, softly molds the model's shape.

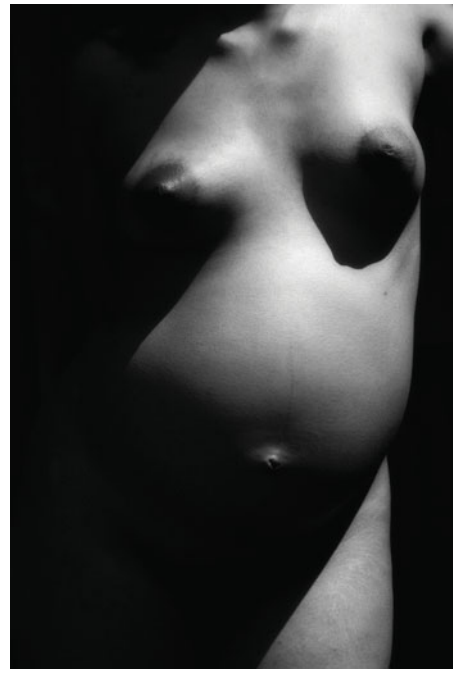

Figure 1.39 Hard light creates a forceful contrast with the model's pregnant curves.

Figure 1.40 Working outdoors, light shining through my oak tree is hard, soft, and everything in between.

Daylight

Daylight can be anything from the glare of the summer sun overhead at noon to the soft, lingering, golden rays of sunset on a hazy winter day. In terms of equipment, the simplest aids for working with daylight are a polarizing filter and a collapsible reflector about 4' in diameter. The polarizing filter helps you hold the color in the sky or in water without blowout (losing highlight detail) and the reflector permits you to lighten shadows. Figures 1.41 and 1.42 show shots with and without a polarizer. Figures 1.43 and 1.44 show work done with and without a reflector.

Figure 1.41 Shot without a polarizer.

Figure 1.42 Shot with a polarizer.

Figure 1.43 Working outdoors without a reflector. Note the relatively flat look of the skintones.

Figure 1.44 Compare the same setting, but with a reflector bouncing some sunlight back into the shot.

Working indoors with window light, you're less likely to need a polarizer, but a big reflector is an important item of equipment. One common type is made of fabric, measures 6 × 6', is white on one side and gold on the other, and can be attached to a lightweight, self-supporting frame that is collapsible for storage. The gold side reflects warmer light back into the scene and works particularly well for images that are going to be converted into black and white. Figure 1.45 reveals the gold side of a reflector.

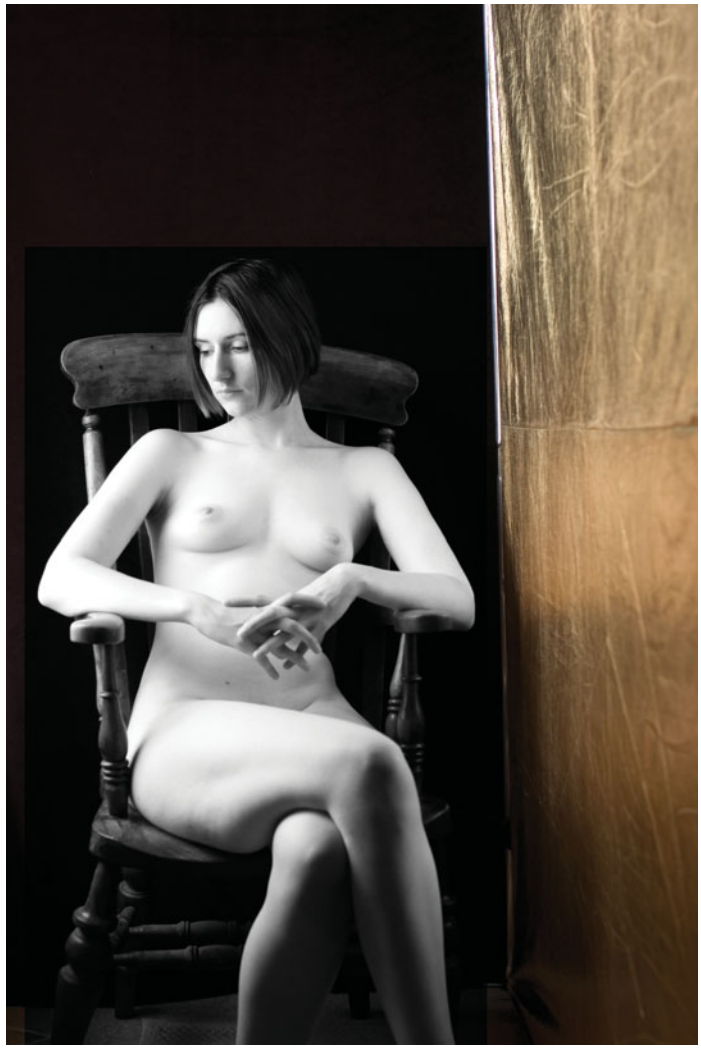

Figure 1.45 Use a large reflector to bounce window light back into the image.

Built-in Flash

Most digital SLRs have rather low-powered built-in flash units, perhaps because more powerful flash units would be too bulky and would quickly drain the camera's battery. Possibly also the makers realize that a photographer who's invested that much in a camera will also have other light sources at his disposal, and is unlikely to make much use of the built-in facility. Flash units located next to the lens are prone to generating red eye in subjects looking directly at the camera, but even if your camera has some form of red-eye reduction built in there's still a problem: The flash is located so close to the lens that its light is always frontal, harsh, and unflattering, its overall look flat and uninspiring. See Figure 1.46.

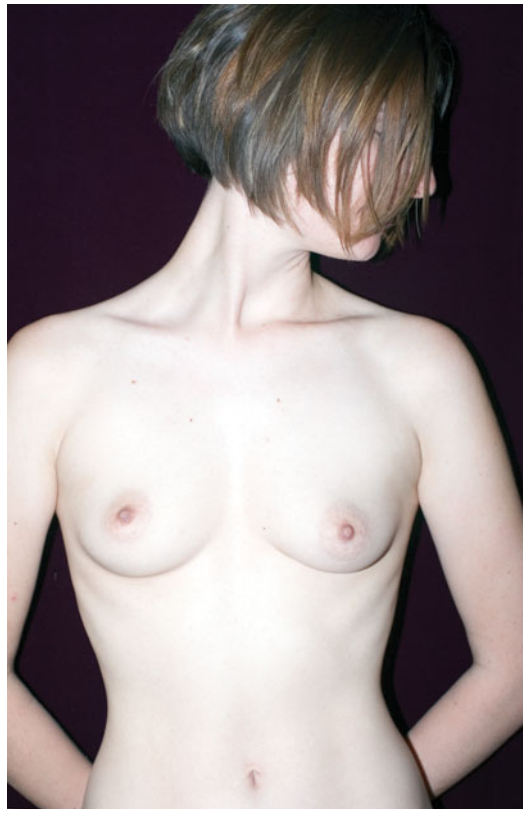

Figure 1.46 Built-in flash has little to recommend it.

On-Camera Flash Units

High-specification, dedicated, on-camera flash units are more flexible in use: They offer impressive levels of synergy with the camera, responding and adjusting their outputs automatically as you vary zoom or aperture. They also generally have a manual mode in which the output can be varied by 0.3 stops.

When you use on-camera flash as your principal or only light source, the extra distance between the flashgun and the lens, by comparison with the built-in unit, makes red eye less of a problem, but it doesn't do much to overcome the problem of the light's directional quality. Strong frontal lighting minimizes the shadows on the subject and thus plays down the form and contours of the body (while at the same time possibly creating very large shadows in the background). However, the on-camera unit comes into its own in other ways. It doesn't offer a convincing alternative to studio-type flash heads (see the later section), but when unavailable, or there isn't enough space (or a power source) to deploy them, on-camera flash can produce very satisfactory results

Some units include a Fill option, which senses the ambient light levels in the scene and varies the flash output to ensure that the subject is well lit, without taking away the feel of the ambient lighting. You can achieve the same results with a certain amount of trial and error by manually adjusting the output. This is an instance where the ability to check your results shot by shot as you work (and without running up a huge bill for film and processing) is particularly helpful. And because on-camera flash units are battery powered and very portable, they provide a source of fill-in light outdoors (see Figure 1.47) as well as indoors.

Figure 1.47 On-camera strobe used as a fill light in a location shoot helps to create this high-key rendition of skin tone. Note the fairly hard-edged shadows, noticeable on the model's calves.

High-key images contain predominantly lighter tones, with most of the rest of the image occupying the mid range. A high-key image should also contain small areas of black, without which it will look flat and insipid.

On-camera units also work well indoors as bounce light sources, where the flash is angled upwards and reflects off the ceiling, which acts as a large diffuser/reflector. (The ceiling needs to be white, or very close to white.) Too high a ceiling may not bounce enough light back into the scene; too low a ceiling may not diffuse the light widely enough. The unit's sensors may only work when the flash head is pointing straight forward, so getting the output level right when using the flash in bounce mode may again require a certain amount of trial and error. This can also be a very effective way of using the flash as a fill source, while preserving the feel of the natural light on the scene. See Figure 1.48.

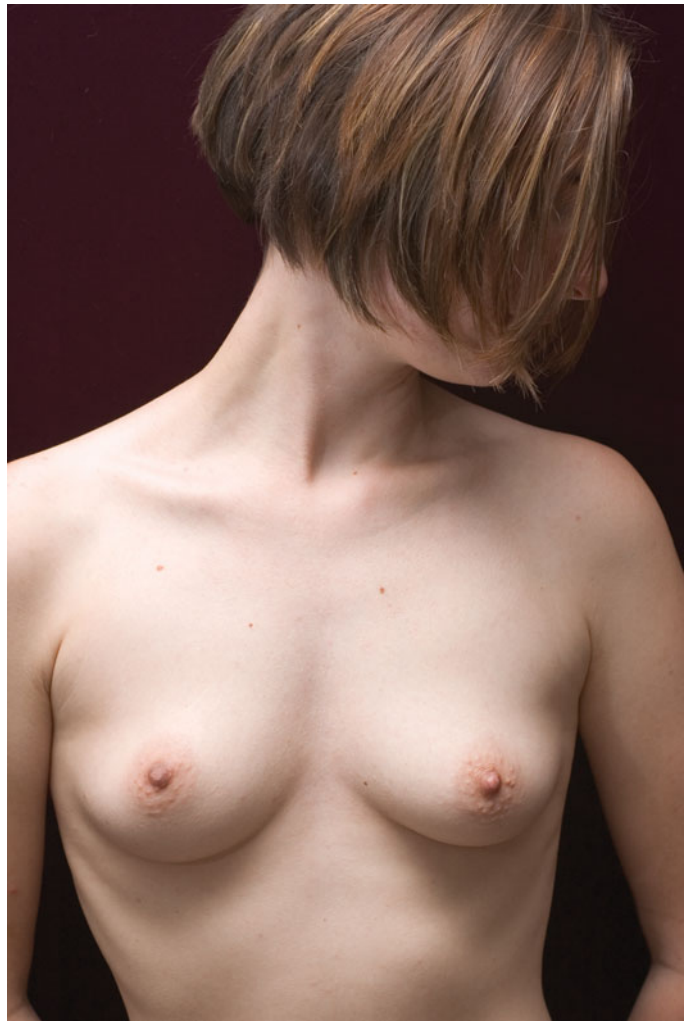

Figure 1.48 On-camera strobe bounced off the ceiling.

Finally, one of the most useful adjuncts to an on-camera flash unit is an extension cable, which allows you to position the flash unit away from the camera. The extension cable should connect to your camera's hotshoe at one end, and the other end should be another hotshoe (tapped underneath so that you can attach it to your tripod) to which the flash unit is attached. Even if the cable only allows you to move the flash three or four feet away from the camera, it will give you scope to experiment and discover different effects. See Figure 1.49.

Figure 1.49 Shot with the on-camera strobe head set to one side. A striking look, resulting from the position of the head and the hard-edged lighting it produces.

Continuous Lighting

Continuous lighting harks back to the days before flash units were widely available. Originally, continuous light sources were high-wattage tungsten lamps like those used in Hollywood movie lighting, but today they're more likely to be color-balanced fluorescent sources: either a single high-wattage lamp or possibly an array of lower-powered lamps, enclosed within a diffusion unit to prevent multiple shadows. Such lamps last much longer than tungsten, and run much cooler as well.

The main use I make of continuous lighting is to shoot slow-motion images. With the right combination of positioning of the light source and aperture, it's possible to get down to a slow shutter speed (around 1/4 sec). This captures the blur of movement very effectively, as you can see in Figure 1.50.

Figure 1.50 Motion blur using a continuous lighting source.

Ordinary domestic lighting sources are well worth experimenting with also. Because small, portable domestic sources such as reading lamps tend to be low powered (compared to "real" photographic lights) and only light small areas, it can be difficult to get light levels high enough to avoid unintentional blur with them and to get their illumination to spread wide enough, but at the same time they are very atmospheric. See Figure 1.51. Figure 1.52 shows that candles also work well.

Figure 1.51 A classic of modern industrial design, the elegant design of this Tizio lamp contributes to the image.

Figure 1.52 A simple setup using candles.

Also in the category of continuous lighting, I should mention blacklight (ultraviolet light). More often encountered as part of the "clubbing" scene, blacklight works with ultraviolet-sensitive body paint to produce the startling results shown in Figure 1.53.

Figure 1.53 Ultraviolet-sensitive body paint.

Flash Heads

In the past few years flash heads have become increasingly sophisticated, as well as smaller and lighter. The most important development has been the introduction of continuously variable flashes, whose output can typically be reduced to as little as 1/32 of full power, making it possible to work with shallower depths of field. Flash heads are designed to accept a range of attachments, such as barn doors, brollies, snoots, and softboxes. You look at the uses of each, and the different types of light they produce, in more detail in Chapter 3, but it's worth making a brief comment on softboxes now.

Softbox light mimics cloudy sunlight or north light, and is both flattering and sensual. A good softbox is an essential tool for most styles of nude photography. But because of the way they're designed (with a series of diffusers located in front of internal reflective surfaces) lights equipped with softboxes suffer from a sharp fall-off in power as you move them farther away from your subject. Unfortunately, most flash kits seem to include only minimal attachments: one brolly, for example, one snoot, and one too-small (maybe only 2 × 2') softbox. The most valuable additional investment you can make for your lighting kit is a very large softbox that you can work with close to the model: 4 × 3' isn't excessive, and 6 × 6' or 6 × 3' is even better. See Figure 1.54.

Figure 1.54 Softboxes: the bigger the better!

How many flash heads? You can buy kits of two heads or three heads, all of the same power or of different outputs (for example, a kit of three 500W heads, or two 500W and one 250W head). The more powerful heads cost more than the lower-powered ones, and as a general rule three heads in a kit cost less per head than buying them separately, or even buying a two-head kit, then adding one more head later. It might seem to make sense to go for a three-head kit if you can afford one. However, it's surprising what you can achieve with just one head and a big reflector placed opposite it on the other side of the model; and there are even ways, as you'll see, of producing near shadowless high-key lighting with a single powerful head on the camera side and a smaller one to add a little backlight. A three-head kit could therefore turn out to be a bit of a luxury; the money might be better invested in a two-head kit and, yes, a very large softbox!

Wish Lists

Leaving aside the question of image size, then, what other features are valuable in a camera for the photographer of the nude? Because the market in digital cameras at every level is so competitive, many features that were confined to high-end models a couple of years ago are now more widely incorporated. Even so, it's hard to imagine getting very far without these things:

- *Complete manual control over the camera, with a clear, easily readable display of the main camera settings in the viewfinder.* Controlling depth of field is essential in nude photography, so you need to be able to manipulate aperture and shutter speed as you work, without having to take your eye from the viewfinder to read data. It's helpful also to have separate aperture and exposure controls, whether thumbwheels or some other form such as up-and-down buttons, positioned so they lie easily under your hands when you have the camera up to your eye, in either landscape or portrait orientation. It's much less useful to have these settings only accessible via a menu, or both on the same control.
- *The ability to switch the camera's color space between sRGB IEC-61966-2.1 and Adobe RGB (1998).* The color space you choose determines how the camera handles the enormous range of colors in the world—a range that is much wider than the camera can reproduce. I'll deal with this in more detail later in this chapter in "Color Management," but it's very useful to be able to set the camera to use a color profile best suited to the Internet or print, depending on the destination of your images.

- *A histogram display in the camera monitor.* This enables you to assess the shot's exposure after you've taken it. Some non-SLR cameras also give a histogram display of the scene before you shoot it, which can be useful if you're working with available light or other continuous light sources, but it doesn't help if you're using flash.

  Not all cameras display the histogram full-size in the monitor: Some tuck it into one corner of the display, which makes it harder to read. The histogram displays the image's grayscale values, from black on the left to white on the right. The higher the histogram at any point, the larger the areas in the picture at that level of gray. Watching the right side lets you check that the image isn't blowing out. Watching the left side lets you see whether the image goes all the way down to black: in other words, whether you're using the full dynamic range of the imaging sensor. When the histogram is displayed over the image, there's no connection between any point on the histogram and the part of the image which lies behind it: To see exactly where your image is overexposed, the histogram needs to be used in conjunction with a highlight display.

- *A highlight display.* Typically this makes bright areas of the image, which are either fully exposed or overexposed, flash black and white. This lets you adjust exposure to keep the image within the dynamic range your camera can handle, and also lets you check whether the distribution of light in the image is what you thought it was. As you'll see, if you're shooting RAW, it's important to get the exposure as bright as possible, without allowing key areas of the image to blow out. With time and experience it's easy to get the knack of using the highlight display to set the exposure accurately and quickly to achieve this. Figures 1.55 and 1.56 exhibit the highlight's effectiveness.

- *Depth of field preview.* A stop-down button that lets you preview the shot's depth of field as you compose it.

- *Facility to record RAW files.* After the detailed discussion of RAW earlier in the chapter, this won't be a surprise. Not all cameras offer RAW, so it's worth checking.

Figure 1.55 Well, this looks like it might be a little overexposed.

Figure 1.56 Ouch! As well as confirming that the image is overexposed, the highlight display shows you exactly where the overexposed areas are, suggesting that the lights need to be repositioned.

On the other hand, my personal list of camera features the nude photographer can probably manage without would include the following:

- *Backlight and highlight settings, together with the range of settings for night shot, sporting action, portrait.* On many cameras these things are available on one of the main control dials. Although these settings are meant to help you handle unusual lighting or depth-of-field conditions, they seem to deal with only rather small deviations from normal conditions, and are often inadequate for the more adventurous lighting

setups for which you may be aiming. I've also found that to be the case with the Automatic setting on most of the cameras I've used: Auto settings seem to handle only moderate lighting conditions without typically blowing out the highlights. Unless your nude photography involves a lot of quick, spontaneous shooting from the hip, you're likely to need more control than Auto offers.

- *Direct exposure on the computer by connecting the camera to the computer with a USB or FireWire cable.* With this you use the camera maker's proprietary software to set exposure, aperture, and the like, and to fire the shutter. Photography of the nude depends on a combination of spontaneity and thoughtful reflection. I've found that shooting directly onto the computer in the studio kills the spontaneity, without any compensating benefits. It's true that you don't have to worry about filling up your camera storage cards, but cards are cheap. You can always buy an extra one or two, and taking a few minutes to put a new card in the camera and start downloading the one you've just filled up will give your model a well-deserved break. The whole setup is pretty unwieldy, as well, with even more cables trailing round the studio than usual.
- *A black-and-white setting.* Cameras that have this facility may produce black-and-white images which are slightly less noisy than the results you get by shooting in color and using basic methods such as Photoshop's Image > Adjustments > Desaturate to create a monochrome version; see Figures 1.57 and 1.58. But in opting to shoot in black and white, you give up the possibility of using the image in color, either natural or manipulated; and Photoshop has much more powerful tools than Desaturate, which give you extensive control over the whole look of your black-and-white work. Those tools work by beginning with a color image.
- *Video facilities.* The day will doubtless come when one imaging device can both take good photographs and shoot high-quality video (with high-quality audio). We still seem to be some considerable distance from it in 2006.

Figure 1.57 Taken with the camera set to black and white, the image uses the full dynamic range available, but still has a rather flat look.

Figure 1.58 Black and white from color, using Image > Calculations to give the image a more dramatic look.

How Many Cameras?

If you've never had a camera fail in the middle of a shoot, you may never have seriously considered buying a second camera body as a spare. If you've had that alarming experience, I'd guess you may have a spare body already. Even as a serious amateur, the loss of time, productivity, satisfaction, and if you're paying your model, money, caused by your camera ceasing abruptly to work really make it worthwhile to consider having a spare. Like other forms of insurance, you hope not to need to use it, but it's reassuring that it's there.

It has to be acknowledged that once you start thinking in these terms, it's hard to know where to stop. What about spare lenses? Spare flash heads? Spare tripods? Is one spare camera body enough? Maybe I really need two spare bodies, as some books recommend? Should they all be the same model?

It's a question of risk assessment, and thus partly depends on how and where you work. I've been through the experience of having a camera body fail mid-shoot, so I now have a spare. (I've also learned that in the event of a camera failure it will take at least two weeks to ship the camera to a repair agent; have the faults assessed and an estimate given for repair; arrange payment; get the repairs carried out; and have the camera shipped back—a long period to rent a replacement camera!) On the other hand, I've never had a lens or a flash head fail, so I don't keep spares of those.

I've had flash tubes wear out, of course, and after the occasion on which my friendly local professional camera store, which *always* carries spare tubes, had run out and took 10 days to get one, I certainly keep spare tubes, expensive though they are, and modeling lamps.

On the day my Nikon D100 failed mid-shoot, the only replacement immediately available was a reasonably high-spec, consumer-level digital camera with a noninterchangeable lens. It wasn't difficult to learn to operate its basic controls, but working with it was very limiting, because its lens didn't have the same range as the set of lenses I had with the D100. It makes sense therefore, I concluded, to have a spare camera whose functionality is at the same level (or very close to it) as your principal camera, and uses the same lenses and preferably the same storage cards and batteries.

Computers

Compared to even a couple of years ago, the power of computers has risen and the costs fallen, to the extent that it's almost true to say that whatever computer you buy today will work fine for carrying out photographic manipulation. A few principles are worth keeping in mind, however, if you're choosing new equipment.

As already mentioned, coming from a background in media production and still working in that field, I use Apple Macintosh computers. But good Windows-based computers are just as good for photographic work, and indeed third-party Photoshop filter creators often release new filters for Windows first, and produce the Mac versions later (if indeed they get around to doing so at all).

Desktop Versus Laptop

The main features to look for in choosing a computer are the same, whether you're thinking about a desktop machine or a laptop. You'll need a fast machine, with a big screen, and lots of memory and storage. Processor speed is desirable when you want to apply certain Photoshop effects; the big screen (or the combination of two smaller ones) is useful when you need lots of Photoshop windows open at the same time; lots of memory lets you make use of all Photoshop's facilities on large multilayered files without waiting while the computer swaps components in and out of memory; lots of storage enables you to hold large numbers of large files where they're immediately available.

Current laptops are certainly powerful enough to use for picture editing. The main drawback in working exclusively on a laptop is the relatively small screen size and the difficulty of ensuring accurate color on the screen. A fast laptop with a larger (15"+) external screen attached (and able to support a resolution of at least 1,280 × 1,024 pixels) can be very effective. It can be a sensible solution if you do a lot of location work and want a laptop to download your cards to as you shoot. The only drawbacks may be that a laptop that is your only computer and leads a rugged life may not be the best place to store your precious and irreplaceable files. This leads us neatly into storage and backup.

Storage and Backup

There should be a variant of Parkinson's law which says that files expand to fill the storage space available for them. Digital image files can be large, particularly if they're RAW files, and/or multilayered, and/or 16 bit—anything up to 100MB or more. This means that if you produce images in any quantity (and most digital photographers do), your storage requirements are likely to fairly rapidly exceed the single hard drive that was installed in your computer when you bought it. Additional drives can be added externally or internally. Many photographers now favor external FireWire drives because they're cheap, adequately fast, come in very large sizes, are easy to daisy chain, and if your computer breaks down, can easily be transferred to another computer. FireWire drives in the 250–500GB range cost as little as 80 cents per gigabyte—an astonishingly low price compared to even a

couple of years ago. Photographers have benefited here from the much tougher demands made of hard drives by other creative fields such as video editing and games design, which require even larger capacity and higher speeds than do photographers. Single FireWire drives are currently available in sizes up to 2TB.

Your storage requirements also depend on the approach you take when you review your images at the end of a shoot: whether you keep every picture you take or ruthlessly select only the best one or two from each set and dump the rest. If you've been the ruthless type so far, cheap mass storage gives you an opportunity to reconsider your approach, by making it easier and cheaper for you to hold more images. This offers the creative benefit of avoiding snap judgments about what to keep and what to reject. This in turn means that as you become more skilled at picture editing and manipulation, you can revisit and make use of shots that might once have been too difficult or time consuming to put right.

One way or the other, however, it's important to address the question of how to back up and archive your work. Computer professionals talk about the need to take precautions against "catastrophic" data loss, and the word is no exaggeration. On the day your only camera breaks down, all you lose is the rest of the work you were going to do that day and any shoots you have to cancel until you can get a replacement camera. When your computer's hard drive fails, you may well lose everything on it, which could represent years of work.

Traditionally, *backing up* means copying files that are still *active*—for example they're from today's shoot, you're working on them, need to refer to them, or are planning to work on them in the near future. They are usually on some medium which is physically separate from the originals (*not* just copying a file or folder onto the same hard drive). Thus you have two identical copies of every file: the one you work on (stored on your *working* hard drive) and the backup copy. Systematic backing up is intended to minimize two broad areas of risk. One is, as you've seen, failure of the hard drive on which the images are stored. The other area covers loss of data as a result of external events such as fire, flood, or theft.

Backup is *dynamic* and needs to be done regularly—every night, for example. If my computer's internal hard drive fails right now, I'll lose everything I've written today, but everything I wrote up to midnight last night has been copied onto an external drive, from which I can retrieve it. (In practice it's very unlikely that my computer will fail as I'm typing this: Hard drive failures, which are the most common form of computer failure, most frequently occur on startup, not while the computer's running. Otherwise

you'd spend more time backing up than working!) And if I'm away from my house for any length of time, I can secure that external drive in a fireproof safe or in some other secure location. Regular backups help guard against another category of incident: the occasion when you accidentally throw away a file or edit it in some way that you regret but can't reverse. Of course this shouldn't happen, because of the safe working practices we all take care to adopt, but it does! How often should you back up? Again, it's a matter of assessing the risks attached to the way you work, but a safe answer to the question is once a day, or just before you switch your computer off, whichever happens sooner. Many backup applications allow you to schedule backups regularly—overnight when your computer's not in use, for example.

Because a busy day's shooting and editing can generate gigabytes of material, backup systems should be speedy. The best way to achieve this is to use fast storage devices, together with software which tracks accurately the files that have been added or altered since the last backup, and copies only those. Typically such devices will be external hard drives, rather than rewritable media such as CD-RW (not really large enough if you're shooting RAW) or DVD±RW. Most hard drive manufacturers include basic but effective backup software with their products, such as Lacie's Backup Software. More sophisticated applications are available from other companies, such as EMC Dantz' Retrospect for both Mac and Windows.

The advent of cheap mass storage has implications also for archiving. Traditionally, *archiving* means copying files—files you're not currently working on, don't need for immediate reference, and don't intend to work on in the foreseeable future—onto another storage medium and then deleting them from your working hard drive. If you choose to work in this way, DVD±R, or DVD±RW are effective media, particularly as the next few years will see significant increases in its capacity, to 8GB and beyond, which will make it even more suitable. And just as you've been careful to keep two copies of every active file—the working and backup copies—it makes good sense to make two copies, on two separate DVDs, of everything you archive.

However, this approach to archiving is based on an industrial and commercial model, where it's assumed that you really do finish with some of the material you store on your computer. In the case of a company, for example, a decision might be taken to archive sales records from three or four years ago, which the company needs to keep secure, but will rarely need to refer to. And there's also an underlying assumption, in this model, that the material you choose to archive is so bulky that it's just too expensive to store all online.

Neither of these assumptions seems to me necessarily to apply to the way photographers work. Photographs are never "finished" in the sense that the company's sales records are finished. Many photographers regularly revisit

old work—maybe to reprint a successful picture; to rework a favorite image; to make another attempt at fashioning out of a reluctant file the image which the inner eye insists is in there somewhere; or even just to steal a background out of one image to use in another. At the same time, as you've seen, the cost of holding a very large number of images online has fallen steeply. Installing, say, two 400GB hard drives on your system—one for working files, one for backup—makes it possible to hold a very large number of images (about 70,000 3,008 × 2,000 pixel RAW files, for example) online, with backups. And the more files you can hold backed up, the less you need an archive and the easier it is to access any image you need.

Whether or not you opt for the traditional approach to archiving, it can't be emphasized too much that backing up and archiving need to be done meticulously, and with whatever frequency keeps all your work secure. It's also important to check your backup sets regularly: Copy a couple of folders from your backup drive to your working drive (without overwriting the working copies of the folders!) and verify that all the files that should be in each folder are there. Then open a few files at random, use Save As to make copies of them, and manipulate them in Photoshop to verify that they're complete and correct. Figure 1.59 shows this type of comparison.

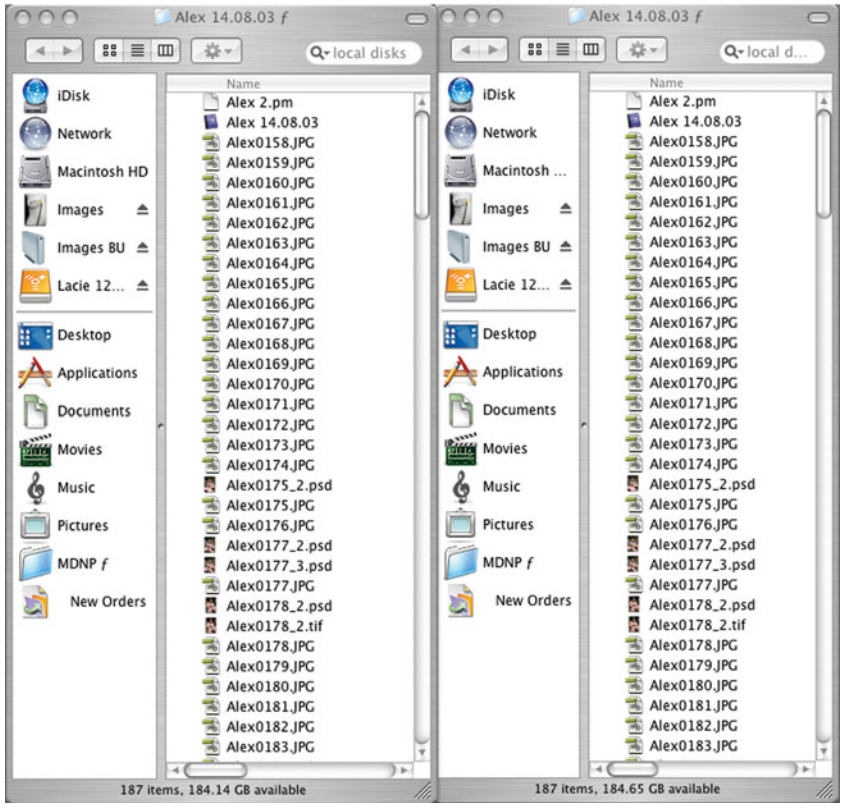

Figure 1.59 Compare active (left) and backed-up (right) files. Note that the number of items shown at the bottom of each window is the same—a useful quick check.

Monitors

The opportunity to choose between CRT (traditional tube) screens and LCD/TFT (flat panel) screens is rapidly disappearing, as manufacturers cease production of CRTs. This is a shame, because dollar for dollar, few LCD screens can yet match the quality of CRT screens in terms of color accuracy (particularly black reproduction) and viewing angle. There are no agreed criteria among manufacturers for specifying or quantifying color accuracy, which seems to be of less concern to them than parameters such as contrast ratio and refresh times.

The LCD market is very dynamic, with frequent improvements and developments in the main LCD technologies. (It's by no means easy to know exactly what's in the box when you buy an LCD monitor, as vendors may switch between these technologies without going out of their way to announce that they've done so.) The most important advice here has to be, go look: Assess the monitors you're choosing between by displaying several images you're familiar with. It's worth noting that as well as the familiar issue of inadequate horizontal viewing angles, some LCDs may also have narrow *vertical* viewing angles. If you're not positioned with your eyeline perpendicular to the very center of the screen, you may see some darkening or fading of colors at the top or bottom, as well as to one side or the other.

After all those cautions, however, there's some consensus that 17" (and larger) LCD screens from Apple, Formac, Ilyama, LG, NEC, Philips, Samsung, and Sony can be calibrated to give excellent and stable color rendition, preferably when connected via their DVI inputs, which provide much better results than their analog inputs. These preferred screens are expensive. Smaller and cheaper screens (including most laptop screens) can be less accurate and less stable in terms of color rendition. Two web sites that contain very detailed discussions and comparisons of different LCD screens (without always reaching the same conclusions) are www.xbitlabs.com and www.behardware.com.

In Place of the Mouse

I've used a graphics tablet for many years. Initially I bought it because of the risk of developing RSI (repetitive strain injury) from using a mouse all day while on a nonlinear video editing system. However, I quickly found that the graphics tablet and stylus were also much better suited than a mouse for still picture manipulation, which often calls for very cramped and repetitive hand movements. This applies in particular to any editing process involving repeated brush- or pencil-like actions (such as painting out layer masks or erasing areas of an image), where the stylus is faster and more precise than a

mouse. (This also applies to other applications such as word processors and spreadsheets, as much as to Photoshop.) I also edit pictures occasionally on my laptop using a mouse, and I've no doubt that by comparison the graphics tablet provides a real gain, not only in comfort and safety, but also in throughput. Using a single screen, the tablet doesn't need to be huge: the 6 × 8" size works fine. You may decide that a larger tablet (9 × 12", for example) is preferable if you're working with two screens, in order to have a each screen mapped onto reasonably large tablet area.

Printers

New printers appear every day, often at give-away prices for standard 8.5 × 11" sizes. The printers themselves are cheap because the manufacturers make their money on consumables: ink and paper. It's difficult to calculate the cost of an "average" print (and the cost of ownership for a printer) because there can be so much variation between one image and the next, as Figures 1.60 through 1.62 indicate.

Figure 1.60 Not much ink is required to print this very high-key image.

Figure 1.61 This low-key standing nude consumes much more ink.

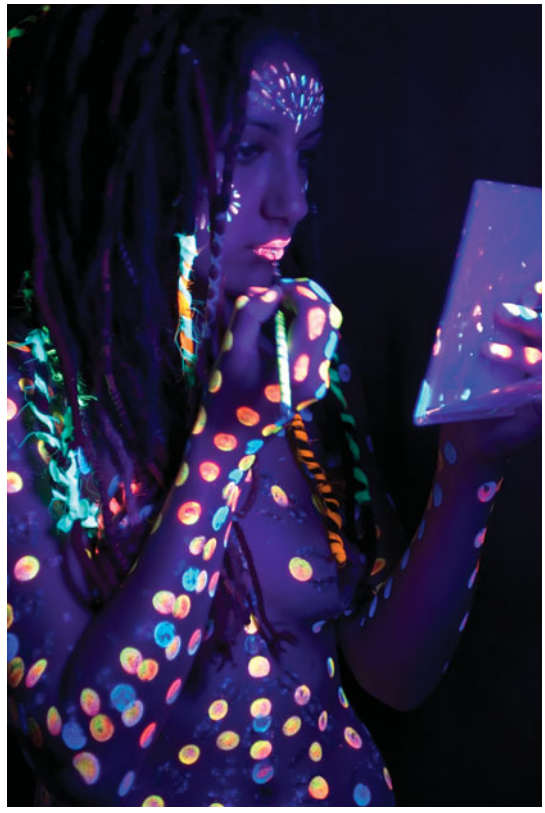

Figure 1.62 Different again! The varied nature of photography of the nude makes it difficult to work out how much it costs to produce an average print.

As you've seen, the basic technology of inkjet printers uses four inks: cyan, magenta, yellow, and black. (Black's added because the blacks produced by simply combining cyan, magenta and yellow in full strength lack punch.) This simple model is gradually being supplanted by printers which seek to extend the gamut and achieve more accuracy by splitting the four basic colors—for example, by using magenta and light magenta, or cyan and light cyan. Some printers also offer light-gray and gloss-optimizer cartridges.

In addition, third-party makers of inks and papers offer products to compete with those offered by the printer manufacturers. Ilford Galerie Classic Pearl paper, for example, is cheaper than Epson Premium Semigloss (and also slightly thinner, at 240g/m^2 as opposed to 251g/m^2) but looks at least as good. In terms of calibration, both papers appear to have exactly the same profile. A number of companies such as Lyson (www.lyson.com) specialize in wide-gamut inks, which enable you to print a wider range of colors than the printer manufacturer's inks will. Gamut means the range of colors the inks can reproduce. (A note of caution here: Don't confuse these products with cheap third-party inkjet cartridges from your local computer store: Wide-gamut inks from companies like Lyson are intended to be better, not cheaper.)

High-quality black-and-white printing has always been difficult to achieve on inkjet printers, because of the likelihood of color casts caused by the blending of three or more colors to produce black. A number of different methods of overcoming this problem are emerging. Some printers now use eight colors, including three blacks: black, light black, and light-light black, which are claimed to produce exhibition-quality monochrome images.

Piezography (www.piezography.com) produces sets of monochromatic inks which split the grayscale across four or more intensities, or *dilutions*, ranging from light gray through to black, replacing the color cartridges in the printer. These ink sets provide wider and subtler gradations of the grayscale than you can get with conventional CMYK inks, approaching (or it's claimed, exceeding) the dynamic range of traditional silver halide printing papers. The manufacturer also offers different tonal sets, such as cool and warm blacks.

Another approach is that of Lyson, whose Small Gamut inks enable you to subtly vary the hue of monochrome images from a precisely neutral grayscale to warmer and cooler tones. Lyson and Piezography inks produce similar results, but Lyson's approach does offer the advantage of producing a range of monochrome tones from a single set of inks. Figures 1.63 through 1.65 show the different effects.

Figure 1.63 A cooler black, using Lyson's Small Gamut system.

Figure 1.64 Neutral black.

Figure 1.65 A warmer, sepia effect.

However, it's impossible to remove and replace sets of monochrome and color inks in one printer without a lot of waste, so the best solution is to have two printers. If you do a lot of printing, some printers can be fitted with ink tanks, rather than cartridges, which need less frequent replacement and cost less per print. Not all printers are adaptable to third-party inks and continuous ink-feed systems. Epson is currently the maker for whose printers (some of them, at least) the most varied range of third-party inks is available. Larger printers are also becoming very much more affordable, with sizes up to 24" wide from HP, listing at around $1,900.

Finally, printer manufacturers demonstrate their products using files which have been carefully optimized to show each printer at its best. So when it comes to choosing a printer, once more the advice is, go look. Run a couple of your own files through the printers you're thinking about buying.

Unless you're intending to produce a large quantity of prints, in which case buying a large-format printer will work out cheapest in the long run, it may be worth approaching local studios to find one which has large-format printers with spare capacity, on which they're willing to print your work. This works out cheaper than using print shops.

Color Management

So now you've bought your camera, your computer, your monitor, and your printer. You've connected your system and it's working. What happens when you download an image from the camera, edit it, and print it?

The Problem

Cameras, monitors and printers all interpret colors differently. When the photo in Figure 1.66 was taken, the camera's software converted the light waves reflecting off the model's skin to a set of red, green, and blue values (in the middle of the box the values are R:204, G:193, B:191). A different camera using different software might have come up with slightly different values. When I display the image onscreen, my computer's software projects red, green, and blue light onto the screen in the proportions specified by those RGB values, to produce the "same" color. It can't be guaranteed that the color I see onscreen will match the color of the model's skin. (Again, a different monitor might make the image look different.) Finally, if I print the image, my printer converts those RGB values to specify how much of its four inks (cyan, magenta, yellow, and black) are needed to produce the "same" color. (In this case the values are C:18%, M:22%, Y:19%, K:0%.) See Figures 1.67 and 1.68 for RGB and CMYK exhibits. There's no certainty that the colors on the print will exactly match those onscreen, and it goes without saying that if I print the image on a different printer (or even use the same printer, but different paper) the result will look different again.

Figure 1.66 We judge the quality of color in an image mostly by the accuracy of the skintones.

Essentially the inconsistency between input, monitor, and output occurs because of the different technologies involved. That is, the color I've been describing is *device dependent*. Sensors in cameras reacting to light waves behave differently from streams of electrons in monitors, which in turn aren't the same as ink droplets in a printer. In particular there's a difference between the monitor, which creates color *additively*, and the printer, which makes colors *subtractively*. Monitors produce color by combining (adding) red, green, and blue *light* in different quantities to produce a range of colors. By contrast, every dot of color created by the printer combines cyan, magenta, yellow, and black *ink* in such a way that all colors of the visible spectrum except the one that is to be seen at that location are absorbed (subtracted); only the desired color is reflected. (This is the way we experience most color in the world. A leaf appears green, for example, because it absorbs the wavelengths of all other parts of the visible spectrum and only reflects light waves from the green range of the spectrum.)

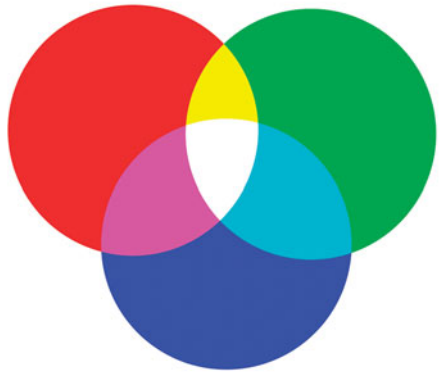

Figure 1.67 Transmitted light: Red, green, and blue added together produce white.

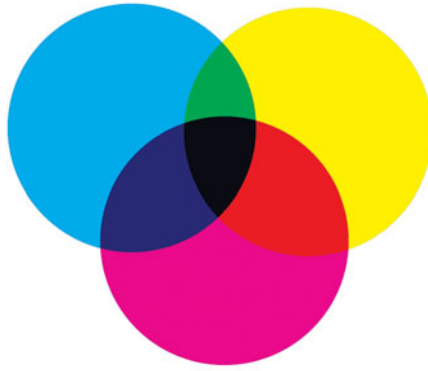

Figure 1.68 Reflected light: The combination of cyan, magenta, and yellow inks produces black.

There's a further aspect to this inconsistency. No imaging system available can record or reproduce more than a small part of the complete visible spectrum. However, the range of colors (the *gamut*) RGB systems can see is generally wider than the gamut of CMYK. At the same time, CYMK can handle some colors RGB can't. So when you print an image, something needs to be done to fit the wider gamut of RGB into the narrower boundaries of CMYK.

The Solution

You can solve the problem in one of two ways. In a very simple system, in which you shoot under constant lighting conditions and always use the same camera, monitor, editing software, printer, and paper, you can improve your results by tweaking your monitor and printer settings by trial and error, until you get satisfactory output from the printer (output which looks the same as what you see onscreen and in the original scene). However, this approach places a lot of reliance on your subjective judgment of what looks right, and can be time consuming and frustrating. It also needs redoing whenever any component of your system changes.

A more reliable and long-term solution can be obtained through color management. Color management works by using, as a reference, a standard color space (a set of colors) that isn't related to any specific device (*device independent*). The colors produced by any device can be transformed into the standard color space; once that transformation is done, the standardized colors can be transformed again according to the requirements of any other device. (Once all your equipment is correctly set up and calibrated, these transformations happen automatically.) The preferred standard color space is Adobe RGB (1998) if you make prints of your work; see Figure 1.69. If you only display images onscreen, then sRGB IEC-61966-2.1 may be preferable (see Figure 1.70), but note that you generally get better results if you switch an image's color space from Adobe 1998 to sRGB, than the other way round. As well as setting your camera to work in whichever space you've chosen, you should also set Photoshop to the same working space.

Figure 1.69 The two color spaces do look very different. This test chart was shot with the camera set to Adobe RGB (1998) and viewed with Photoshop set to the same profile.

Figure 1.70 Here's the same image with its profile reassigned to sRGB IEC-61966-2.1.

How are these transformations carried out? A *profile* needs to be created for your monitor and another for your printer. (You can't create a profile for your camera, because you can't alter its software, but the camera's software should allow you to set it up to use a predefined color space.) To profile a monitor you use a *colorimeter* (an optical instrument that measures the relative intensities of reflected or emitted red, green, and blue light) with appropriate software. The software generates a series of colors on the monitor, and the colorimeter is positioned against the monitor to measure the colors and check whether what the monitor thinks is red, for example, is the same as the red of the standard color space. If it isn't, you adjust the monitor settings until it is, using the onscreen readout from the colorimeter to tell you when you've got it right; and the same with green, blue, and a range of gray points. In other words, this method does objectively (and therefore much more reliably) what you'd do by eye if you didn't have the colorimeter, with the other great advantage that the software remembers the settings you create and saves them into a file—the profile for your monitor. If you use more than one monitor, you need to profile each one, which you can see being done in Figure 1.71.

Figure 1.71 Using an Eye-One colorimeter to profile a CRT monitor.

To create a profile for your printer, print the color test chart included in your color-management software. All of the color values on this chart are known and defined within the standard color space. You then run the colorimeter (shown in Figure 1.72) over your print of the color chart (let the print dry first) to measure the *actual* colors produced by the combination of printer, inks, and paper you're currently working with. The software uses the colorimeter readings to build up a table of equivalent values—a list of the adjustments to be made to the colors the printer produces, to ensure that they all look as close as possible to the corresponding colors on the original chart. (This table is often referred to as a LUT, or look-up table.) If you use different printers, papers, or inks, repeat the process for each combination. Again, each profile produced in this way is saved and applied when you're printing with that particular setup.

Figure 1.72 Using the colorimeter to calibrate a printer.

You can now see how color management fits the disparate elements of your system together, assuring you of color consistency and ensuring that you can trust what you see:

- You've set the camera to work within your chosen color space. When you do that, the camera tags every image. The *tag* is an instruction to your picture-editing software to open the picture file into the same color space within which it was shot.
- You've profiled the monitor so you can be confident that the colors it displays are correct for that color space.
- You've profiled your chosen combination of printer, ink, and paper, so that the colors you see in prints match the colors on the monitor.

Color management utilities aren't exactly cheap. For example, the entry-level Eye-One kit from GretagMacbeth lists at around $1,100. (Most of that is cost of the colorimeter.) It seems a lot to pay for equipment you may only need to use four or five times a year. But in most big cities, a growing number of color-management companies will come to your studio and calibrate and profile your system for you. Indeed it's possible to get your printer profiled by printing a color-management company's printer calibration chart and posting the print to them. They will calibrate the print and email you the resulting profile, which you can install on your system.

This is also the right moment to give some thought to the working environment in which you edit your pictures. There's little point in calibrating your monitor and your printer if the light in your workspace varies significantly from one time of day to another, or throughout the year. Workspaces for editing pictures need to be rather bland and as consistent as possible: no vividly colored surfaces, no bright lights casting shadows over the monitor, no direct sunlight. If possible, illuminate the room with daylight-value fluorescent tubes, with diffusers, or daylight-value incandescent lamps. Some monitor manufacturers provide hoods for their screens to prevent light spilling onto them from above or from either side.

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Why deal with models, in detail, in a book which claims to deal with *advanced* nude photography? At this level, doesn't every photographer know everything about models? Not necessarily. Every conversation I have with models about their experiences with photographers at every skill and experience level suggests that many photographers still treat models with less than the respect, sensitivity, and clear, truthful communication to which they're entitled. See Figures 2.1 through 2.3. So, on the one hand this section is written mainly for photographers who may be well versed in other types of work, but are relatively new to working with models, and with nude models in particular; and on the other hand I hope that it may also prove thought provoking to experienced photographers of the nude as well.

Figure 2.1 A careful start to the model's first nude shoot, including a nice cup of tea.

Figure 2.2 Easing into the shoot: a set with the model wearing her own lingerie.

Figure 2.3 Posing nude, with a little jewelry.

Modeling seems to appeal to many women, as well as quite a few men. Modeling web sites add dozens of new entrants to their membership every week. Many, perhaps most, of these will drop out after no more than a couple of shoots; but there's still no shortage of models to choose from. In the U.S., variations in community standards from state to state or district to district over issues such as pornography seem to be reflected in the local availability of models. For example, you'll probably find more models willing to pose nude in New York City than you will in the Bible belt. This occurs to a more significant extent than in other countries such as the U.K. In what follows I've assumed that you live, or at least do your photography, in an area where models are available. See Figures 2.4 through 2.6.

Figure 2.4 Even in the U.K., where distances between towns aren't enormous, it's very helpful to be able to work with models who live locally. Caz is one such model…

Figure 2.5 …as is Eliz…

Figure 2.6 …and Emily, seen here preparing for a body-paint shoot.

Choosing a Model

Photographers often come to photography of the nude with a notion already formed of the look they want their model to have. It may be an idealized, perfect, unattainable image; maybe it's based on the film stars of your youth, or a favorite painting, or your first crush. Or it might be nothing more than a liking for models who are, for example, curvy and voluptuous, or models who are slender and more boyish in appearance. Your preferences may focus on color and length of hair, and so on; see Figures 2.7 through 2.9.

Figure 2.7 Catya was one of the first models I worked with. Looking at her…

Figure 2.8 …at KO, and…

Figure 2.9 …at Red Lilly, two other models I worked with then, it's clear that at the time I must have had a penchant for long hair!

For your first nude shoots, there's nothing wrong with encouraging your visual imagination by seeking out and working with a model who approximates to the appearance of your ideal woman or man. But over time, most photographers seek to broaden the range of models they work with, motivated by the desire to test out their growing skills and to develop a diverse portfolio. And perhaps there's also a feeling that somewhere out there is the perfect model for you, if only you can find her. I did, once. Sadly, she then started full time at college and gave up modeling. Back to the drawing board…. (There are some noteworthy exceptions to this principle of working with diverse models. The great American photographer William Stieglitz [1864–1946] photographed his lover [later wife], the artist Georgia O'Keeffe, over a period of about 20 years, producing some stunning nude images. Throughout most of that period, she was his only nude model.)

Nude models don't have to be outstandingly beautiful, or physically perfect, or sexy, or only just 18 years old (although in most countries they must be at least 18). Nude photography is about creating beauty *in the image*, and that doesn't just mean taking a photograph of a perfect model. Powerful and moving images can also be made from imperfect bodies and from the marks which time and experience leave. Indeed, models who are stunningly beautiful may make life too easy for the photographer, letting him get away with paying less attention to all those other things which make up a great image: lighting, location, depth of field, camera angle, and so on. See Figures 2.10 through 2.12.

Figure 2.10 Disability combined with confidence in front of the camera can produce original and powerful images.

Figure 2.11 Some models have such grace and beauty that it seems the photographer has only to press the shutter.

Figure 2.12 The marks of life and experience.

On top of all that, beauty can, as we know, be in the eye of the beholder: The models I find lovely may not appeal to you, and vice versa. I'm fascinated by tattoos and piercings, as Figure 22.13 shows, but they don't appeal to every photographer.

Figure 2.13 The background is unconventional for a model with such a distinctively urban appearance, and it heightens the viewer's attention.

As you work with more models you'll become increasingly aware of the factors, other than the model's appearance, which can make a vital difference between a good shoot and a mediocre one. It's a question of whether you click with the model. This is an experience which is as hard to predict as it is to define. But you'll quickly find, with models as with everyone else you meet, that you get on better with some than others. Maybe you share a sense of humor or a love of cats! You feel relaxed as you work with her, and more able to focus on getting every shot right. A bond of trust quickly develops between you. And as you develop your own photographic style, you'll also find that some models seem to have an almost intuitive grasp of what you're trying to do. They'll offer suggestions for poses, costumes, and setups (and won't be offended if you politely decline their ideas), and during the shoot will move quickly and smoothly from one pose to the next. This capacity to work effectively with you is at least as valuable a quality in a model as the most stunning beauty. These are the models you'll want to work with again and again; see Figures 2.14 through 2.16.

Figure 2.14 Gradually I started to work with models with very different looks.

Figure 2.15 I always look for people I feel comfortable with.

Figure 2.16 And I look for people who feel comfortable with me.

Working with such models will be a pleasurable experience for you and the model. It's also a productive process: You'll take more photos, and of better quality, in a given period of time. And as your experience grows, your capacity to put models at their ease and get the best out of them will also improve.

It also has to be said, by way of warning, that feeling 100 percent in sync with a model as you work is no guarantee that the results will be wonderful! And you may also encounter models you find it hard to work with, but with whom you still make great images. It's a good idea, then, to work with different models in order to diversify your work. Some photographic ideas and projects may call for a specific attribute necessary for the way you've visualized the shoot: a particular coloring, build, or height, for example. See Figure 2.17. On the other hand, a model's look when you see it in her portfolio may suggest a particular image or approach; see Figures 2.18 and 2.19.

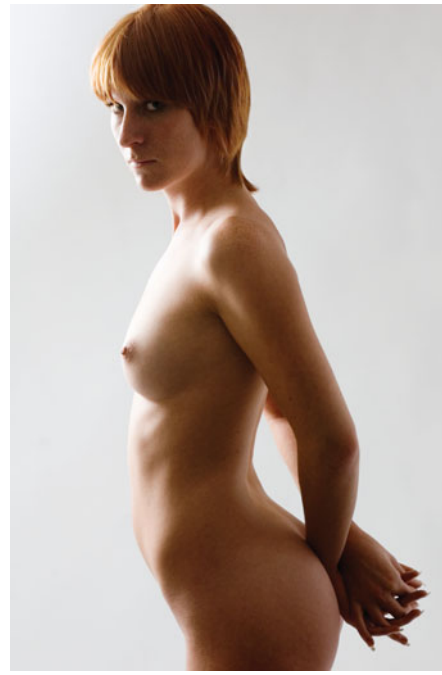


Figure 2.17 Much of this image's impact comes from the model's skin and hair coloring.

Figure 2.18 The model's long, braided hair prompted this dynamic image, with its outdoor setting.

Figure 2.19 The lighting pays tribute to the model's figure, lips, and collarbones.

Because nude photography is located on one of the borders where art meets sex, it's likely, particularly when you're first shooting nudes, that you're interested in working with a model who fits your own sexuality: straight photographers usually choose models of the opposite sex, gay photographers choose models of the same sex, and so on. (This is a broad generalization, I admit!) And of course there are other possibilities: male-female couples, female-female pairs, male-male pairs, and so on. (In my experience, most female models are willing to work with another female model; few straight male models can be persuaded into working with another male.)

Broadening your boundaries, for example, by working with two or more models leads to fascinating challenges, both technical and creative; see Figure 2.20. It's generally a good idea to combine models only after you've worked successfully with each of them individually. Figure 2.21 shows a photo taken in my home studio, which has a ceiling height of 10' 6". I wanted to achieve this shot without using a very wide-angle lens, which would make the models look obviously distorted. I ended up at the top of a ladder, my back pressed flat against the ceiling, using a focal length of 21mm. I'm quite pleased with the shot, with its relaxed sensuality, but more headroom would have enabled me to let Naomi (upper left) stretch her legs a little more.

Figure 2.20 The models are partners in real life, and that enables them to be more relaxed with each other than they might have been if they'd only just met for the first time.

Figure 2.21 An unusual problem.

Outside the occasions such as those I've mentioned, when your idea for the shoot requires a model with a specific look, I think it's sensible to approach the quest for a new model without too many preconceptions about what she should look like. My only preference is for models whose faces are expressive—in particular for models whose gaze into the camera doesn't suggest passivity or weakness, but instead challenges the viewer or even suggests indifference to his presence; see Figures 2.22 and 2.23. But questions such as the model's build—voluptuous, slender, tall, short—or hair—light, dark, long, short—or ethnicity now seem less important.

Figure 2.22 There are a several elements at work in this image, but its starting point was the model's rather fierce gaze, which can be discerned even behind the dark glasses.

Figure 2.23 Another image from the Three Graces shoot. What makes the image work for me is Naomi's poised, direct, unconcerned gaze at the viewer.

Finding Your First Model

Let's stay with the perspective and needs of the photographer experienced in other areas of photography but just starting to shoot nudes. Broadly speaking there are two ways to find models. There are models who advertise their services, on a scale from amateur to professional, usually on the Internet; and models you find for yourself, from among friends and acquaintances (including recommendations from other photographers and models), who may never have posed nude before. (I'm excluding "real-world" modeling agencies of the traditional kind, because their role in providing nude models seems to have been almost entirely taken over by the online modeling sites.) Over time these categories may become blended: Some of the models you find online will become good friends, and some of the friends you introduce to modeling may sign up on modeling web sites.

For the photographer just getting started in nude photography, there's something of a vicious circle at work here. The distinctive nature of nude photography—the naked model exposed to the gaze and control of the clothed photographer—is unlike anything most of us encounter elsewhere in our lives, and it can be edgy, and, from the model's point of view in particular, risky. Most models are properly cautious, and will require evidence from you to establish your bona fides. They understandably want to know that you're safe to work with, as well as competent. The best form of evidence, and the one most models will ask for, is recommendations from models you've worked with in the past; but this is only possible when you've already done a number of nude shoots.

So how can you book a model for your first nude shoot if you don't yet have the evidence and references to demonstrate that you're trustworthy? There are a couple of ways out of this dilemma.

Demonstrate competence, which you can do by building up a portfolio of clothed shots, if you don't already have one: fashion and portraits like those in Figures 2.24 through 2.26, for example. All three of these images demonstrate qualities that are as relevant to photography of the nude as they are to portraiture. Good portrait shots say a lot for your ability to make your models feel relaxed, and for your capacity to empathize with them.

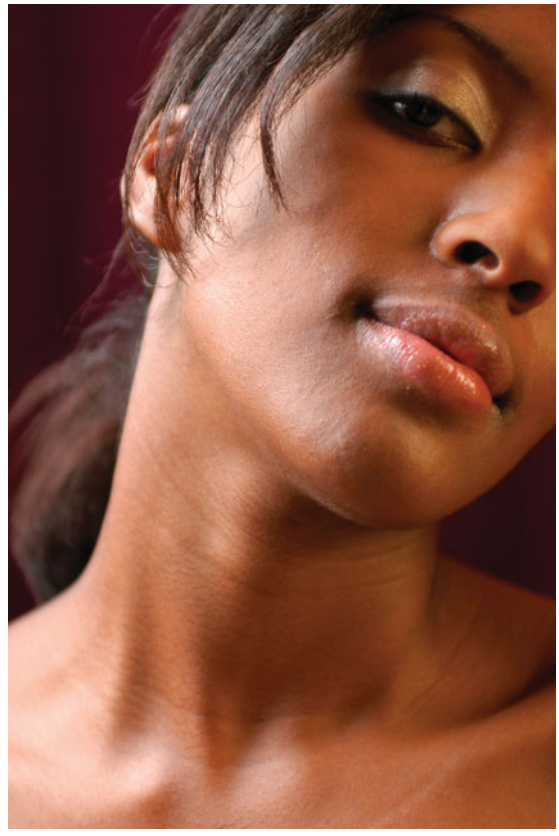


Figure 2.24 Unusual framing makes a striking image.

Figure 2.25 This playfully quizzical look suggests a good working relationship between model and photographer.

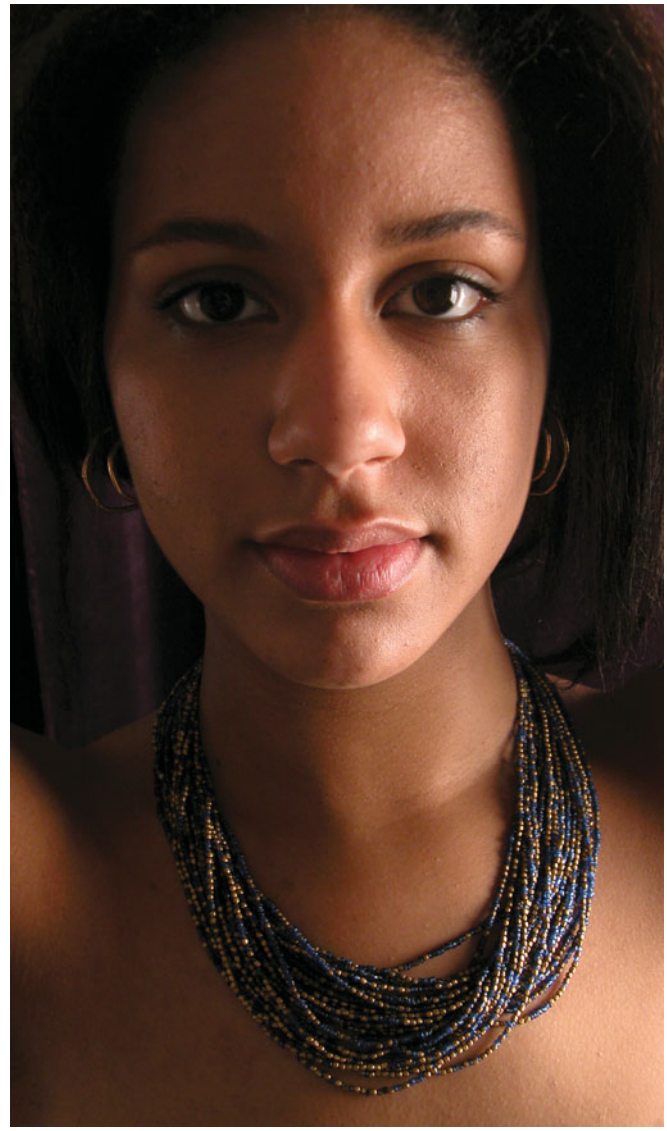


Figure 2.26 A gaze whose ambiguity challenges the viewer.

In this context, fashion doesn't mean models on the catwalk! It's more a question of inviting models to bring along some of their favorite garments to be photographed in. This is a safer form of modeling (and should be cheaper, if you're hiring a model) than working nude, and you should have little trouble in finding models who are sympathetic to the fact that you're just getting started and are happy to work with you at this level; see Figures 2.27 and 2.28.

Figure 2.27 A casual look, carefully achieved.

Figure 2.28 Your clothed shots don't all have to be decorous—a little raunchiness does no harm at all!

If these shoots go well, the models should also be willing to act as references for you, if you ask them at the end of the shoot. It's also often suggested that taking part in group nude or glamour shoots, as organized by some modeling web sites, local photography clubs, and studios, will let you develop a portfolio, thus demonstrating competence. This may be true if the shoot isn't too crowded and you have the confidence to make full use of the time you're allocated with the model(s). One photographer described his first group nude shoot as "…like the opening day of trout season and combat photography rolled into one." It's also unlikely that the models taking part in a group shoot will get to know you well enough to be able or willing to give you a reference.

A brief word on organizing portfolios, applying equally to prints and to collections of your work on web sites. When preparing to show work to a general audience, I'm convinced that the golden rule is "less is more." Your 10 best images will have more impact on the viewer when they're seen by themselves, than if surrounded by another 20 mediocre images—particularly if those 20 images include some which are similar to the 10 best. But when you're trying to interest a prospective model in working with you, there's something to be said for showing her not just the best image of a set, but also perhaps two others from that set which you judge to be nearly as good. This gives the model an idea of how you think visually and of how you run your shoots. See Figures 2.29through 2.31.

Figure 2.29 Something about the hair flopped over the model's eye made this my favorite image from this shoot.

Figure 2.30 This runs it a close second…

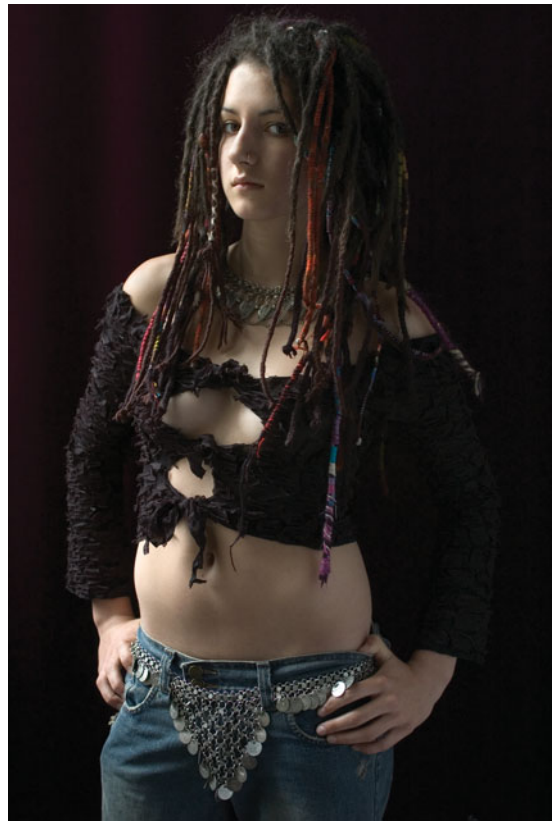


Figure 2.31 …as does this.

Another alternative is to seek out models who don't require references. Usually such models will insist on bringing a chaperone at least to their first shoot with you (a requirement which I believe is entirely reasonable under any circumstances), or will want to work in a professional studio where they won't be completely alone with you. Or you can seek models from among friends and acquaintances, as described later in this chapter (again, encouraging them to bring a chaperone).

This raises another question: If you're a beginner at nude photography, are you better off working with an experienced model or a novice? The obvious answer might appear that you'll learn more and get better results if you work with an experienced model, but I don't think this is necessarily the case. If you have some reasonably clear ideas for a shoot, you won't find it difficult to explain them to a novice model, who may well prove more flexible and adaptable. And because you're working in digital, you can see the results of your efforts and adjust them as you work, thus climbing the learning curve quite rapidly; see Figures 2.32 through 2.34.

Figure 2.32 These three images are from Toria's first nude shoot.

Figure 2.33 Prior to this she had done a small number of fashion shoots.

Figure 2.34 Her strong presence makes itself felt in every image.

Against that, it's argued that working with experienced models allows you to leave the posing to the model and concentrate on the photography. An experienced model will also know what angles and poses don't work so well with his or her particular body shape and face. This can certainly work, but the downside is that you're likely to end up with images which look the same as other photographers' work, because the poses the model gives you are those he or she learned that other photographers prefer. So if you do decide to go for experienced models, it's not a bad idea to let them know that you will be setting the poses—while still drawing on their awareness of what poses and angles don't work—and not just relying on a standard repertoire; see Figures 2.35 and 2.36. Experienced models will also be much less likely to alter in midshoot the level to which they're willing to work; see "Modeling Levels" later in this chapter.

Figure 2.35 Working with two experienced models and drawing their knowledge and feel for how they work best together.

Figure 2.36 In these examples, as well as shifting the camera angle, I'm asking them to try different hand and arm positions.

Partners, Friends, Acquaintances, and Strangers

Let's digress briefly from the processes of working with models you find on the Internet to those closer to home.

The dynamic between photographer and model is very different from that between partners such as husband and wife. Switching between the different roles isn't always easy for either partner: It works in some relationships but creates huge strains in others. If you do decide to try using your partner as a model, probably the best advice is not to persist if the experience proves difficult or stressful for either of you in your first attempts: Those stresses are unlikely to dissipate however earnestly and openly you try to talk them through. On the other hand, if it works for you both, you join a long tradition of artists and photographers, from Rembrandt and Rubens to Stieglitz, Weston and many of our contemporaries, whose life partner has also become photographic subject and muse; see Figure 2.37.

Figure 2.37 Working with one's partner (seen here on the right), along with other models, can be a very creative and challenging experience.

Recruiting friends, acquaintances, and even strangers often turns out easier than one might expect. It does need an approach which is totally nonthreatening, and a willingness to accept rejection cheerfully. At least six of the models in this book are people I first met at parties or in pubs, coffee bars, or other public places. Again, it's easier to do when you've developed a repertoire of images to show potential models.

Here's what often works for me:

- I always carry business cards, which are simple but good design, inexpensive, listing my name, phone number, and web site URL, and identifying me as a photographer.
- I always have with me my Palm handheld computer, with its multimedia card loaded with about a hundred varied images most, but not all, nude.
- I'm very careful always to approach a potential model in an environment where she can feel safe, and will hopefully be willing to have a conversation with me because she knows that help is close if she needs it: perhaps while she's with friends or in a café whose staff are nearby.
- Many of the people I've approached to model for me had something about their appearance when I first saw them which suggested that they were extroverted and confident in their appearance; see Figures 2.38 through 2.40. Many of them turned out to have modeling experience already.
- I watch my body language and keep a respectful distance.

Figure 2.38 When I first introduced myself to Zoey in a coffee shop in London, everything about her suggested confidence in herself and in her appearance.

Figure 2.39 I was struck by Nichola's short-cropped blond hair and tough look, and wasn't surprised that she had previous modeling experience. For this shoot she brought with her a friend, also a model.

Figure 2.40 I met Alex when she was modeling in a catwalk show I'd been commissioned to photograph. (The picture shown here is not from that shoot!)

If you're finding models from among friends and acquaintances, you'll still need to follow the steps set out in "On First Contacting a Model," although you'll probably be able to do so in conversation with your potential model, rather than via email.

Models on the Internet

On the Internet you'll find general modeling sites that register models for every type of work from kids' fashions to adult modeling; more focused sites that specialize in specific types of work; and models' personal web sites. Many photographers also provide links from their web sites to those of the models they've worked with.

Let's deal with the modeling web sites first. OneModelPlace (OMP, www.onemodelplace.com) is the biggest, and I'll use it as an example, but there are many other smaller sites with similar features. Searching online for a phrase like *photographic modeling* will give you plenty to explore. For photographers, most sites require subscription; models can often sign up for free. For example, you can browse OMP free of charge, but you can't use any of its powerful facilities for searching for and contacting models in your area without becoming a paid member; see Figure 2.41. Signing up with a couple of modeling sites and joining in the forum discussions will give you the chance to make contact with other photographers in your area, as well as see what models are available. Subscriptions are usually available at different levels, offering, for example, space for different numbers of images, restricted or unlimited use of the site's email facilities, and so on.

Figure 2.41 My portfolio on OneModelPlace.

You'll notice that nearly all modeling web sites provide scope for the model to give vital statistics and color of hair and eyes. Few impose requirements or provide advice for a new model on what kinds of pictures would best give photographers a good idea of their overall look. The result is that, while advertising themselves as available for nude work, some models, even experienced ones, just put up a series of headshots or other clothed shots. Even if you share my view that an expressive face is essential in a good model, that is less than helpful! There's a suggestion on how to put this situation right, in the section "On First Contacting a Model."

On the other hand, where a model has provided a good range of images, study them closely, looking for the model within the image. If the photographs are high quality, that also says something about the model's own standards. Figure 2.42 shows quality work by about a dozen different photographers (a recommendation in itself) and portrays the model, Imogen1979, in many different guises. This demonstrates her versatility and her thoughtfulness in organizing her portfolio—both indications of her professionalism. Most web sites provide scope for models to link their images to the photographers who took them (assuming the photographers are also members of that web site) so you can also move from the model's portfolio to a photographer's if, for example, you want to ask the photographer to comment on the experience working with the model.

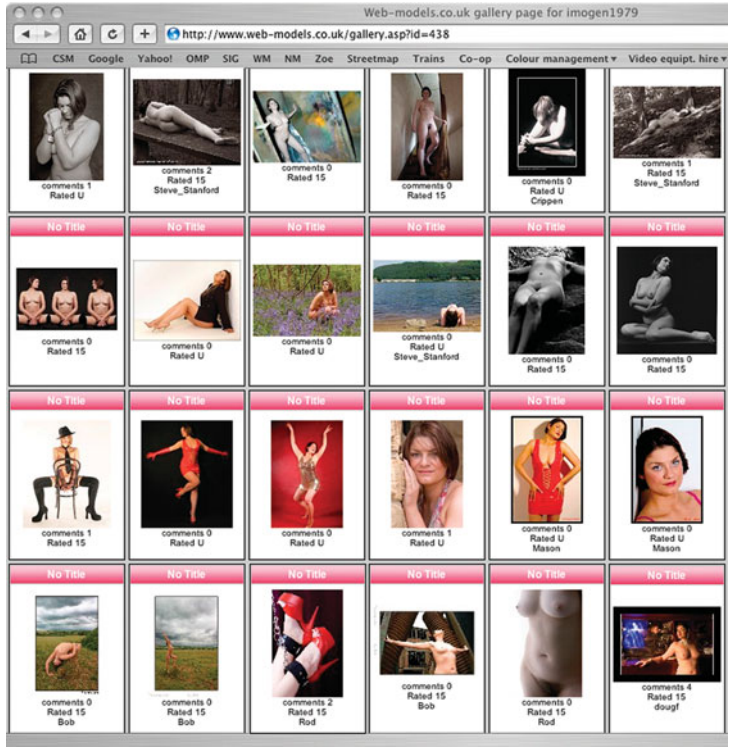


Figure 2.42 Part of model Imogen1979's portfolio on the excellent U.K. web site www.web-models.co.uk.

Some sites also include a reference-check system, whereby models can make comments on their experiences of working with specific photographers, and vice versa. These are located in models-only and photographers-only areas of the site. There isn't usually any process of verification that the comments are accurate, nor is there any legitimate way of finding out what comments have been made about you. Even so, the systems don't seem to be abused, so they can provide helpful observations on models you may be considering working with, as well as motivating photographers to pay careful attention to their behavior during the shoot!

Modeling Levels

You'll discover that the different levels to which models work are classified according to a terminology which varies from web site to web site, and is rarely defined by the sites themselves. Some terms are pretty clear, others less so, but they're usually listed in ascending order of exposure and cost, if the model charges for services. Modeling levels specify what's expected of the model in terms of how much of the body the photographer expects to be revealed; the levels don't define the aesthetic properties of the resulting images. If you're in any doubt, it's always better (if initially a little embarrassing) to spell out beforehand to the models what you're asking them to do; don't leave it until you're about to start shooting! See Figure 2.43.

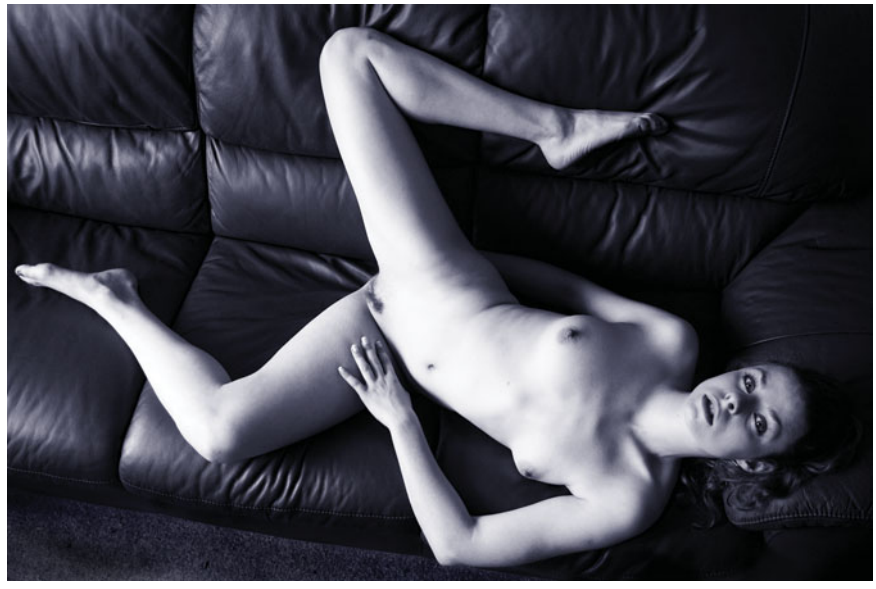


Figure 2.43 The position and angle of the camera are critical here, both for the composition of the image and for the photographer's commitment to the model to shoot within her limits.

As you read the descriptions which follow, you'll see that they're less than totally precise. However careful you are in agreeing on levels with a model before the shoot, it's always possible that differences of opinion about the level of a specific shot will occur during the shoot. It's also possible that inexperienced models will change their minds, midshoot, about what level they're comfortable with. Ways of dealing with these situations are discussed in "Disagreements During the Shoot."

Implied topless, for example, means a female model's upper body will be unclothed, but her nipples are concealed, perhaps by a garment, or by her hands or hair; or the shot may be taken from the back. See Figures 2.44 and 2.45.

Figure 2.44 Implied topless: a frontal shot.

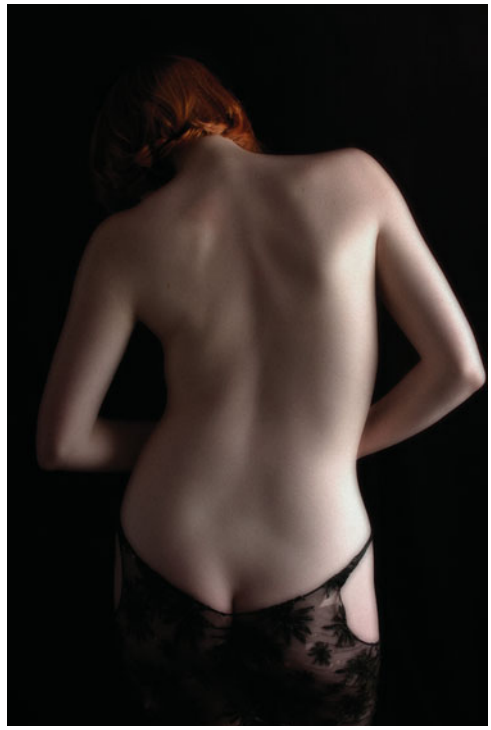


Figure 2.45 Implied topless: a back view.

Topless describes shots where the nipples are visible, possibly through transparent or wet garments; see Figure 2.46.

Figure 2.4 A topless image using a see-through garment.

Art(istic) nude or *figure nude* means the model is naked, but posed in such a way that the pubic area is concealed, either by her hands, by the way the body is angled towards the camera, or by the way the shot is lit. See Figure 2.47.

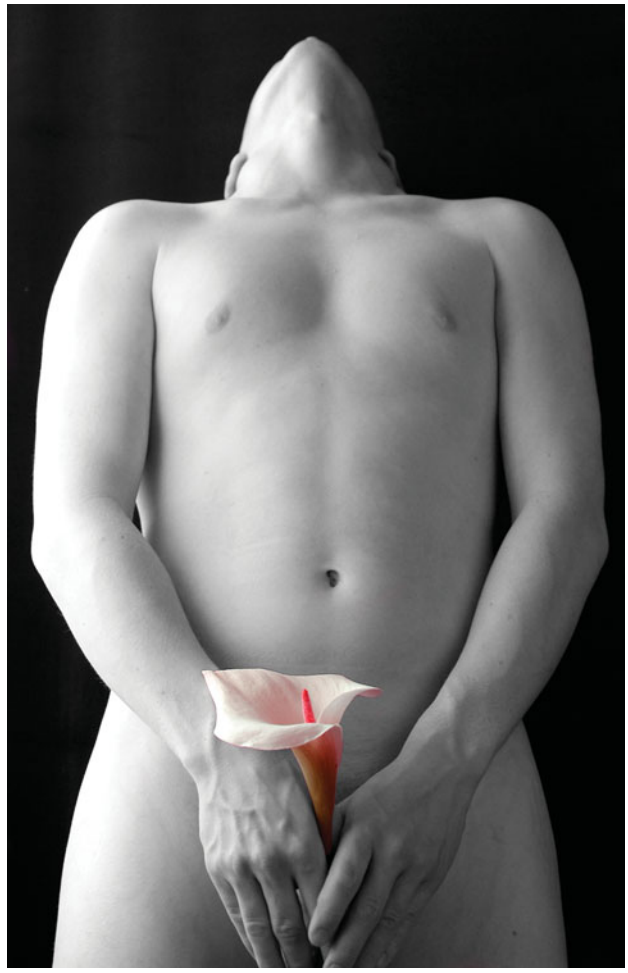


Figure 2.47 Artistic nude using a male model (and a carefully positioned lily)!

Implied nude may mean the same thing, but may mean that the model's nipples are covered as well; see Figure 2.48.

Figure 2.48 Implied nude constructed by using shadows and the model's hands.

Plain *nude* means that the pubic area can be shown; see Figure 2.49.

Figure 2.49 A nude shot.

Erotic nude covers images which show erotic activity, real or simulated, but doesn't necessarily involve more exposure than nude; see Figure 2.50.

Figure 2.50 I'd classify this as an erotic nude shot, both aesthetically and in terms of the physical contact it requires from the models.

Adult nude and its many subdivisions takes us into the regions of pornography. *Fetish* refers to the use of fetish clothing—latex, leather, PVC, and so on—together possibly with elements of fantasy or bondage, which could involve any level of nudity, or none at all. Whereas there's a clear line, so to speak, sloping up from implied topless to adult nude, fetish refers to a different aspect of imagery. Not all models, even those who do adult nude, are interested in doing fetish work. See Figures 2.51 and 2.52.

Figure 2.51 With its focus on the erotic kick of very high-heeled boots, I'd classify this as a fetish image.

Figure 2.52 With its inverted lighting and exaggerated "Come here, slave!" expression, this image comes close to satirizing what it represents.

Why are levels of nude modeling defined in such detail? Two reasons. First, if you're hiring a model, the higher (the more explicit) the level you want to shoot, the more you can expect to pay. Second, if you engage a model to work to her highest level, one of the worst mistakes you can make is to try to talk her into working to an even higher level. Many models identify this as one of the most off-putting and annoying things a photographer can do. (Note also that, unless you explicitly negotiate a different arrangement beforehand, you should expect to pay for the whole of the shoot at the rate which applies to the highest level work you've agreed with the model. In other words, if you book a model to do two-and-a-half hours of clothed portraits, and half an hour of topless, the model will expect to be paid for three hours at her topless rate. See Figures 2.53 through 2.55.)

Figure 2.53 If you shoot this…

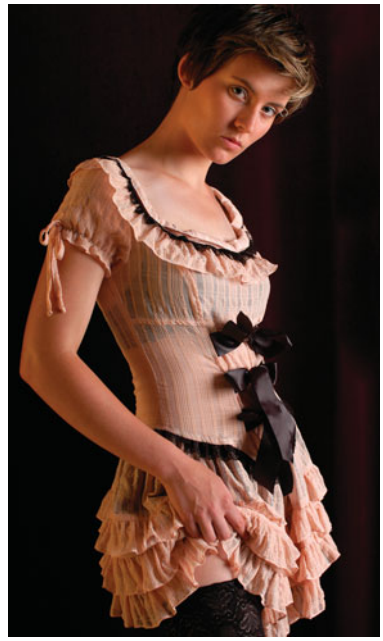


Figure 2.54 …and this…

Figure 2.55 …in the same shoot as this, you should expect to pay for the whole shoot at the highest applicable rate (in this case, the rate for a topless shoot).

Ethical behavior and self-interest often go together in photography of the nude. Every model sets the maximum level after much thought: That level represents the extent to which they are prepared to reveal themselves to the photographer's gaze and lens, and to allow their image to live, virtually forever, on the Internet. A photographer who tries and succeeds in pushing and manipulating a model to work beyond this limit is very likely to be rewarded with images in which the model's look clearly conveys some discomfort. Such images make unappealing viewing. Doing the right thing, and sticking within limits clearly spelled out before the shoot begins, also gives you the best pictures; see Figures 2.56 and 2.57.

Figure 2.56 More of a snapshot than a serious image, his shows the mood which should prevail in a carefully prepared and well-run shoot, with the models comfortable with each other, with the camera, and with the photographer.

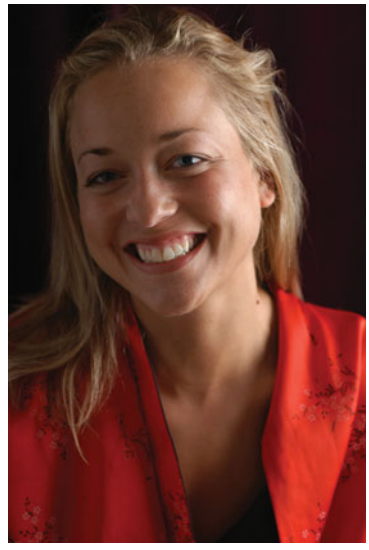


Figure 2.57 A good friend, who'd modeled for other photographers and artists, looking very relaxed at the beginning of our first shoot together.

Paperwork: Payment and Releases

In this section I'm assuming that you're not yet at a stage in your work as a photographer of the nude where you can charge models for photographing them.

Not all models seek monetary payment. Models just making a start in the business, for example, will often be willing to pose for you in exchange for some edited prints, or possibly a CD of the images from the shoot. The same applies to models who wish to update or expand their portfolios. The model is giving her time in exchange for prints or a CD, so these arrangements are often referred to as *TFP/PFT* (time for prints/prints for time) and *TFCD* (time for CD). See Figure 2.58. TFP is appropriate for a model who maintains a portfolio of prints to show to prospective photographers; TFCD is for a model who uses a web site to get business, but doesn't bother with a portfolio. When reaching a TFP agreement with a model, it's important to specify how many prints you will give. Five or six prints for each hour of the shoot is a fairly common figure. Equally, with TFCD, you'll want to specify how many images you're prepared to edit for the model to use.

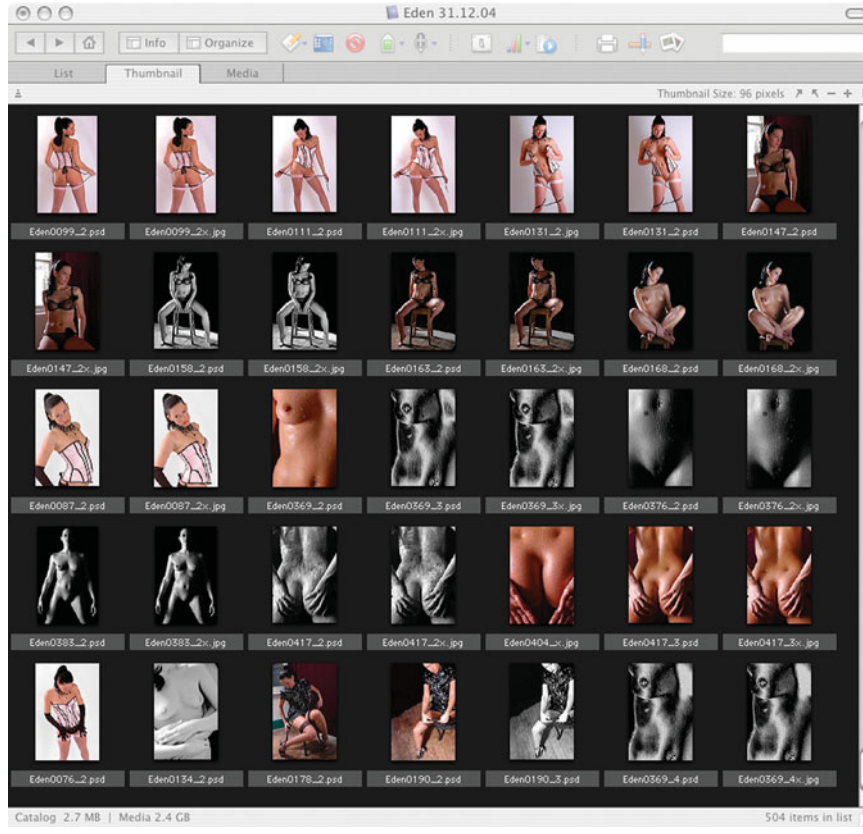


Figure 2.58 Edited images for Eden, a British model now living in Florida. I made .psd files, which are full size for printing and which I hold, and a small .jpg file of each image for Eden to use on her web site if she wishes.

TFP and TFCD seem like good arrangements for the photographer: The only costs, apart from the model's traveling expenses, might appear to be the CD or paper and ink to make the prints, plus postage. However, time is also money, as the saying goes, and one should never underestimate how long it can take to prepare images for printing. For example, if you've agreed to give the model six images of her choice for each hour of the shoot, after a three-hour shoot, she is entitled to 18 images. If each of these takes 10 minutes to edit (and that's a low estimate), that's three hours' work; see Figures 2.59 and 2.60. If we assume that perhaps six of them are images you would have edited for your own portfolio, you've still spent a couple of hours editing work just for the model. That's why some keen photographers decide, after starting off doing TFP/TFCD, that they'd prefer to pay the model for the shoot and work only on the prints they want for their own portfolio.

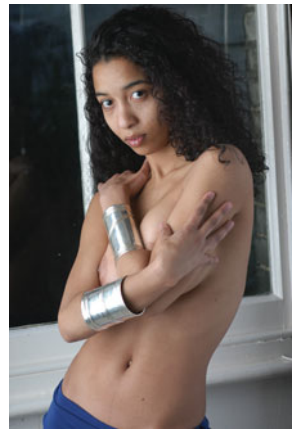


Figure 2.59 The photograph as shot.

Figure 2.60 The same image after editing. Among other things, I've rotated it a few degrees, which then necessitated cloning in a small section of the skirt and the model's abdomen to fill in the gaps created by the rotation. It all takes time!

You'll also find models who choose to work free for some photographers, whose style of work they like and want to include in their portfolio, while working for pay with others. When you encounter a model who offers the possibility of both TFP/TFCD and paid work, it's likely that, while payment may be negotiable, the assumption is that nude work will be paid. Negotiations over payment may cover not just the hourly rate, but also other possibilities such as a part-pay, part-TFP agreement, where you pay half the rate the model's asking, and contribute, say, three prints for each hour of the shoot. It's also common practice to pay the model's traveling expenses on TFP/TFCD shoots, as well as on paid shoots.

If you're looking to sell some of your work, another arrangement you can make with the model is profit share. This means that the model works for you for free, you both use the resulting images to build up your portfolios, and split the profits from any images you or the model sell.

The possible variations within the broad TFP/TFCD/payment/profit-share framework are numerous. So before you start to negotiate with a model, you need to be clear in your own mind exactly what combination of different types of payment you want to offer. Many photographers codify this in a standard form letter which they send out to prospective models, in addition to requiring the model to sign a release.

For example, it's common practice with TFP and even paid shoots to provide the model with a CD of either all the images from the shoot (usually reduced to measure 600–650 pixels on the longer side) or only those you judge the best. (Selecting the images which strike you as the best takes time, and in any case may exclude images which may not be superb photographs, but still show the model well. This is why some photographers just put the whole shoot onto the CD.) Without this it's hard for the model to choose which images they want printed for TFP, and in any case it allows the images to be included in their web portfolio, if you've agreed that; see Figure 2.61. If you have a web site, an alternative method of letting the model browse the images is, again, to reduce them in size but to load them onto your web site, on a discrete page not accessible from your web site proper, and to email the URL for that page to the model.

Figure 2.61 An image chosen by Florida-based British model Eden for use on her web site.

You may choose to adopt any or all of these policies. There's no obligation, for example, to allow a model you've paid to use the images on a web site or anywhere else; but it seems to be a fairly common practice to allow this, on condition that the images are credited. What's important is to spell out to the model, as your negotiations develop, just what you're offering and then to stick to it, in a timely manner. For example, the CD should be on its way to the model no later than the day after the shoot. (Keep a good supply of CD-sized padded envelopes and postage stamps!) If you're doing TFP/TFCD, once you've received the model's list of the images she wants, you should take no more than two weeks to deliver them. "He never sent me the prints I was promised!" is another common complaint from models.

If you've agreed to allow the model to mount some images from the shoot on a web site, experience indicates that it's *essential* to include in your model release a clear statement to the effect that the model must tell you the reference numbers of all the pictures to be used, and must then wait for you to check them before adding them to her web site; see Figure 2.62. Put this in writing, explain beforehand, and remind the model again at the end of the shoot. I'm not sure why many models lose track of this and rush to mount the unedited images on their web sites: Perhaps it's the excitement and pleasure of having a CD full of the wonderful images you've created of them. Imposing this condition gives you the chance to make any necessary alterations to the images: adjusting color balance or levels, for example; or rotating the picture to get the verticals and horizontals to look right; or, of course, removing blemishes from the model's skin.

Figure 2.62 Two edited pictures from a location shoot with Jessie, as they appear on her web site.

Another form of payment is clothes for prints. This can work for nude models as well! Nude shoots, more often than not, include sets of the model partly undressed or wearing fetish garments, corsets, boots, and the like. The photographer provides garments for the model to wear during the shoot, and at the end of the shoot the model gets to keep them. This might seem to be the same thing as paying the model a standard modeling fee and requiring her to provide the wardrobe. In fact, models who offer this arrangement often do so because they're less interested in earning a lot of money through modeling than in building up a wild collection of clothes, and will be happy to work for the equivalent of a much lower hourly rate than normal; see Figure 2.63.

Figure 2.63 Naomi was happy to do a time-for-clothes deal with me, which included this spectacular corset and some red boots.

So how much is a normal rate? That depends very much on your location, what level you want the model to work at, and how experienced, well-known, and in-demand the model is. Ask a few models in your area what they charge for, say, art nude, and you may be surprised at the variations in their rates. This is where your negotiating skills may enable you to strike a better deal with the model than is initially offered.

Whatever financial arrangement you reach with the model, if you intend to publish the images (for example, by putting them on a web site), the model must agree to sign a model release. A model release is a contract between you and the model. In exchange for a consideration, the model agrees to allow you to make the use of the photographs you take of her in whatever ways the release specifies. The consideration will be either payment, prints, or a CD, or a combination of these. (In most U.S. states a contract is only valid if some compensation is provided in exchange for the service rendered: That compensation, the "consideration," need be no more than a dollar or a single print.)

Typically a model release will permit you and your heirs to publish the images

- Anywhere: In any publication, in any medium, in any country. I know one photographer whose release includes the phrase "in the universe." The release should also be future-proofed by specifying media "now or hereafter known."
- In any form: You can manipulate the image, or distort it, or collage it with other images.
- For any purpose: You can use the images for advertising or editorial purposes, or include them in an exhibition of your work.
- Forever.

The best way to find suitable wording for a model release is to search online for "model release" and look for examples which are clearly worded and thorough in their coverage. You may want to have a lawyer friend look the release over before you use it. These can form the basis for your own versions. I use three: one each for TFP, TFCD, and pay. The core paragraphs are the same in each, the only difference being in the statement of the consideration the model agrees to accept in each case. You may also, on occasions, need to produce releases tailored to the needs of a particular model. Two of the models who appear in this book, for example, agreed to be photographed on the condition that the images were only to be used for print publications, and could not appear on the Internet. I can see their reasoning: Once you upload anything onto the Internet, you lose all control over it; see Figure 2.64.

Figure 2.64 Some models will be happy for you to show their images as prints or in publications, but may have reservations about living forever on the Internet.

In addition to stipulations regarding usage and copyright, don't forget to include in your release a requirement for the model to check with you before uploading images into the Internet, as described earlier. If you share my (old-fashioned) view that the print is the only true form of an image, and are therefore particularly concerned to control the quality of every print made of your work, you may also want to stipulate that the model is not to make any prints from the CD you've sent her. You don't, realistically, have any way of preventing her from doing this, even if you add a big copyright statement right across each image on her CD, so I usually indicate to paid models that if they decide after the shoot that they want just two or three prints, I'll be happy to do them for them. It's better to get along than go to war.

Some models will ask you to pay an extra fee to have them sign the model release. This is largely a question of how the model structures her fees: She may charge less per hour and charge for the release separately; or she may charge more per hour, but include the release within that rate. At the end of the day what will concern you is the total fee you pay the model, so it's important that you check during your negotiations how the model handles this. It's important to show the model release to the model before the shoot, so she knows what she's committing herself to, but it should only be signed at the end of the shoot, when the model can be reasonably certain that she's happy with the way she's been photographed.

A note on age: In different countries, the age at which it's lawful for a model to be photographed in sexually explicit poses varies. In the U.S., the age is 18. Having said that, there's no law in the U.S. which forbids the models under the age of 18 from being photographed nude, providing the resulting images aren't sexually explicit. The difficulty, however, which confronts any photographer who's contemplating shooting nude images of an under-18 model is that the photographer's judgment of what constitutes an image that's not sexually explicit may turn out to differ very significantly from the views of local police and courts. All the models in this book were 18 or over when I photographed them, with the exception of the clothed portrait of Sheena. The only sensible policy, if you're working in the field of nude photography of any kind, is to stick to models who are over the age of 18.

Arranging the Shoot

This is where clear and precise communication is essential. With a model you've found on the Internet, her published details should have given you a good indication of what her working levels are. If you're not sure that the shoot you have in mind is clearly within her range of styles, it's essential you describe what you have in mind, and confirm that she's happy with that. It's impossible to exaggerate the importance of this part of the process. Close to the top of the list of models' pet hates is being pushed or cajoled during the shoot to work at a higher level than was initially agreed.

Avoiding Conflict

Let's return to the business of finding models on the Internet. In the three or four years I've been seriously involved in photography of the nude, this process has grown noticeably more complicated and time consuming. As society in the U.K. and the U.S. becomes more risk aware and risk averse, models become more careful in their dealings with photographers who want to book them. Keep in mind, when you're negotiating with a model, that her caution isn't a reflection of her attitude to you personally, but derives from her previous experiences. Most models will have encountered one or two unsavory characters in their careers who proclaim themselves to be photographers, along with genuine photographers who just don't understand that models are entitled to be treated with respect. While I was working on this chapter, I invited some models to contribute their best/worst horror stories about experiences with photographers. They'd make a book in themselves! I've included a few here, not because I think that otherwise you may say or do things like this, but just as examples of how some "photographers'" behavior impacts models; see Figure 2.65.

Figure 2.65 The confident and relaxed expression which give this simple image its charm are shaped as much by the communication between the photographer and the model in the run-up to the shoot as they are by the shoot itself.

In all negotiations with you, a model will be looking for assurance that none of these problems will occur, and also watching for any indications that they may:

- Unsurprisingly, the most common sources of offense have to do with sex: requests for or offers of sexual favors from photographers; comments on or questions about the model's sexual life or sexuality. This can start before the shoot. One novice photographer asked in a web forum recently why he got no replies to his emails to models. He included a sample of those emails, which typically began "Wow, you're really hot and fanciable! Would you like to do a shoot with me?" It says a lot for the patience and good humor of models that several gently explained to him in the forum that perhaps that wasn't the best approach to take!
- Comments on the model's appearance run a close second: "Your butt's too big and your boobs are too small!" was one photographer's notion of how to break the ice with a new model.
- Trying to push the model beyond the agreed limits.
- Derogatory comments about other models: "If he says that about other models to me, what's he going to say about me to other models and photographers?"

- This one surprised me, but more than one model made the comment: "A lot of photographers grunt when they press the shutter, almost like some kind of sexual satisfaction."
- Objectification of the model: The model expects to be treated like a person, not an object. As one model wrote (I hope, for the sake of photographers everywhere, with some exaggeration), "98 percent of the time, photographers make me feel like some piece of moving meat."

Most of these stories don't really have an upside. But in a scene worthy of one of Charles Dickens' most eccentric characters, a photographer recently greeted a model friend of mine at the door when she arrived for their second shoot together, got down on one knee, and proposed marriage. "So what did you do?" I asked. "I turned round and walked right out the door, of course!" Sadly, the photographer in question seems proud of this bizarre behavior, and has boasted about it to other models.

"Can I Bring a Chaperone?"

This is a topic guaranteed to start a vigorous debate in any forum of photographers and models. My own views are quite simple, given the unpleasant experiences with photographers most models have gone through. If a model asks to bring a chaperone, I agree. On a paid shoot she brings the chaperone at her own expense; on a TFP/TFCD shoot I may agree to contribute to the cost of the chaperone's travel, depending on the distance. If she asks for the chaperone to be in the studio with us during the shoot, I agree. If the chaperone starts to intervene in the shoot in any way, I ask them politely, but very firmly, not to. So far I've never had a problem or a difficult experience with a chaperone. And chaperones can be useful for making tea, holding reflectors, entertaining the cats, and so on.

The most common difficulty you may encounter is when the chaperone is the model's partner, and the model is relatively inexperienced and/or the chaperone hasn't been to many (or any) nude shoots with her. Partners who aren't used to being chaperones can become overly protective or possessive when they see their beloved standing naked in front of the photographer. This is why it's a good idea in these circumstances to make sure in your negotiations with the model that she understands that she has to guarantee that the chaperone will behave correctly.

On the other hand, it's not unknown for a chaperone to become a model; see Figures 2.66 through 2.68.

Figure 2.66 When Emzy came to do her first shoot with me, she brought her friend Caz with her as chaperone.

Figure 2.67 I was fascinated by Caz's unique look and invited her to pose for me, which she did, both with Emzy and without.

Figure 2.68 Caz by herself.

Other participants in a shoot may become curious and ask if they can join in; see Figures 2.69 and 2.70.

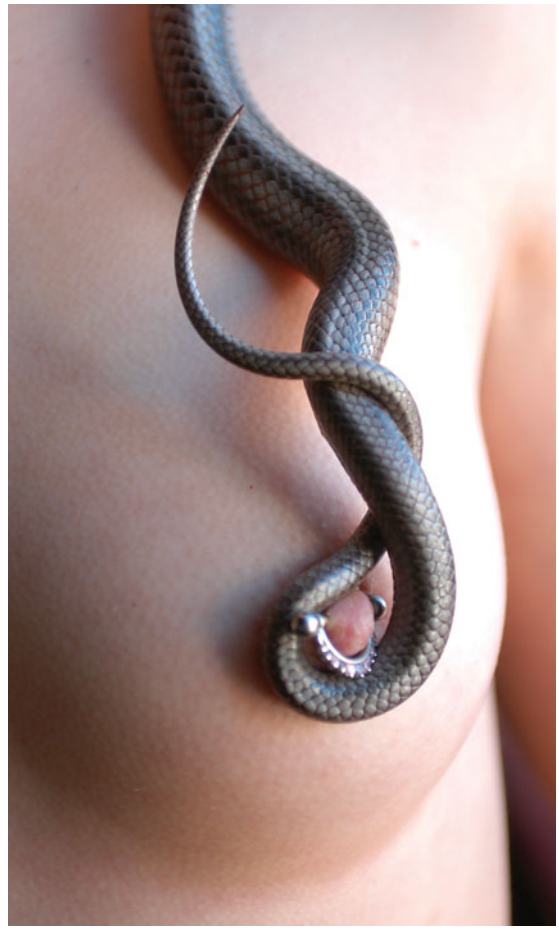


Figure 2.69 When I arranged to shoot Naomi with a snake, her friend, Belladonna, an experienced snake-handler, had to be there as well.

Figure 2.70 As the shoot progressed, Belladonna became increasingly intrigued and joined in.

On First Contacting a Model

So far we've focused on what you're looking for in a model; but what will a model be looking for in a photographer? How can you sell yourself successfully to a model you haven't worked with before?

Again, we're looking at this from the perspective of a photographer making a start in photography of the nude, but with at least a modest portfolio of portrait and fashion shots. (That seems to be the least you need.) These days the process of engaging a model is usually email-based, but it's also possible (and at some stages preferable) to carry out these negotiations using a chat service like MSN Messenger or AIM. Don't expect the model to give you her phone number until you've established your credentials.

An initial message from you to a prospective model is likely to include:

- Your name.
- Your location. The name of the town you live in, rather than your full postal address, is all that's necessary at this stage.
- Your email address. If you're contacting the model through a web site, some will automatically disclose your own email address, whereas others will enable a model only to reply internally through that web site. In the latter case, if she only has free membership of the web site, the number of emails that can be sent each day may be limited, so if you give out your own email address you'll both be able to communicate more easily and effectively.
- Your ID on MSN Messenger, AIM, or whichever chat service you use.
- Your experience, including any web sites where examples of your work can be seen; failing that, an offer to email her samples of your work. Mention that you can provide her with contact details of models you've worked with, but don't include them at this stage.
- The level of work you're hoping to shoot with the model. It can't be too strongly emphasized how important it is to be clear and explicit about this. It's better all around to be turned down by a model at this early stage than to run into difficulties during the shoot. And be aware of the importance of discussing different themes as well as levels. Models arrive at the shoot mentally prepared for the work you've negotiated with them. A model who's expecting to do a straight nude shoot may not be happy if, partway through the shoot, you spring a proposal to do some bondage or fetish shots (even if she is to be partially clothed in them).

- The location of the shoot: in your home studio, in a commercial studio, outdoors, and so on.
- The duration of the shoot. Don't forget to mention the coffee and chocolate biscuits that will be made available during the breaks.
- The method of payment proposed or request for details of the model's fee for a shoot of the duration and level specified. If I'm proposing a TFP/TFCD shoot, I always invite the model to bring along a selection of garments (no more than three or four changes) she'd like to be photographed in. It won't take me long to shoot them, and that way she can be certain of getting a broad range of images for her portfolio.
- If you have a specific date in mind for the shoot, mention that. It's better, however, to suggest a range of dates. Most part-time models are only available weekends or evenings.
- Mention that if she wishes to bring a chaperone, she's welcome to do so.
- If you have household pets, mention them, just in case the model has an allergy.
- If the model's web site includes only headshots, and the rest of her details convince you that you'd like to work with her, it's reasonable to want to see some full-length shots of her. (This may seem unlikely to happen, but some headshots can be very alluring; see Figure 2.71.) Many a photographer has come to grief here! At this early stage it may not be a good idea ask her to email you nude images of herself, which may lead her to suspect that you're a pervert, rather than a serious photographer. You could tell her that, while you like what you've seen in the headshots, it would be helpful to see her full length, and ask her if she has another web site with a wider range of images on it. Failing that, full-length, clothed images should still give you an idea of the model's overall proportions.

If the model replies to your email, she may have a list of further questions for you. If she doesn't reply within a few days, there's no harm in emailing her again. Messages do disappear in cyberspace, particularly if you or the model use a mass, free email service. If she doesn't reply to a second email within a few days, you should probably take that as a less-than-polite way of indicating that she is not interested in working with you.

As well as dealing with any questions, your next email is the right moment to send a copy of the appropriate model release, and to invite her to confirm agreement with its conditions, as well as checking that your proposals about the number of prints for TFP, use of images off the CD, and so on, are acceptable. If she wants to bring a chaperone, it's reasonable to ask whether

Figure 2.71 It didn't take more than a headshot like this to persuade me that Amber would be a very interesting model to work with.

the chaperone has attended other shoots with the model before; see Figure 2.72. If the chaperone is the model's partner, and her responses to these questions give you any concern that the chaperone may impede the shoot, it's perfectly reasonable to express your concerns, maybe by asking whether your model is confident that her partner will be comfortable watching her work. These issues are easier to deal with in online chat, rather than by email. This is also the moment to give the model your address and phone number (preferably landline), as well as the address and number of the studio, if you're using one. Finally, you can email again, setting out everything you've agreed to in writing.

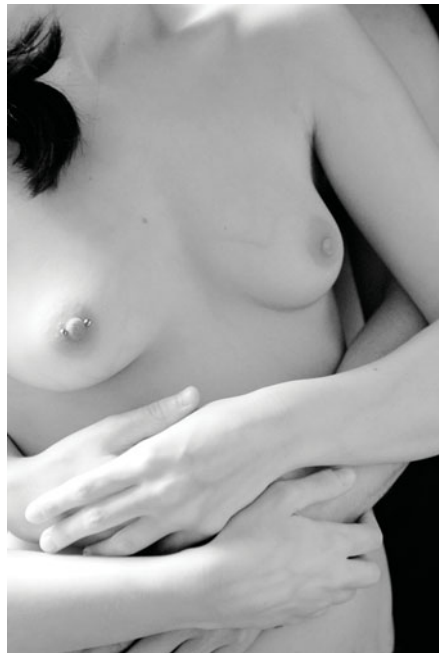


Figure 2.72 An impromptu appearance by the model's boyfriend/chaperone (or at least his arms).

If the model asks to be put in touch with models you've worked with, make sure that those models are happy for you to give out their phone numbers or email addresses. Some models are happy to give you a blanket permission to pass their details to potential models whenever you need to; others may want you to check with them each time.

Welcoming the Model to the Shoot

We'll assume that your shoot is going to be a mixture of nude and clothed or partially clothed images, and we'll also consider the steps you might want to follow with a relatively inexperienced model you're working with for the first time. Not all of these steps will be necessary or appropriate with a model who's more experienced, or one you've worked with previously.

The model will need somewhere to change (both when she arrives and leaves, and between sets) and, of course, somewhere to do her makeup. Some models are happy to change in the studio, while others will request a separate space. As the shoot progresses and they feel more relaxed with you, many models who've started off changing in a different room will decide that they're happy to change in the studio, which is helpful because it saves time and maintains concentration and focus. You also need to provide a robe (a nice, photogenic one—not a tatty one!) for the model to wear after she's first undressed, and for her to slip into during lulls in the shoot; see Figure 2.73.

Figure 2.73 No need to wrap up! Toria relaxes between sets during her first shoot. She's talking to her partner and fellow model Trevor, whose bejeaned legs can be seen on the right side of the picture.

For makeup, I have a well-lit dressing table with a large mirror in a separate room. Some models will gratefully make use of this, but many prefer to use their own hand mirror or the mirror in a makeup box, while perched on a stool in the studio. I also keep in the studio an illuminated double-sided mirror, one side of which is curved to provide magnification, which is useful for doing or touching-up eye makeup in particular, and capable of providing photo opportunities in its own right; see Figure 2.74.

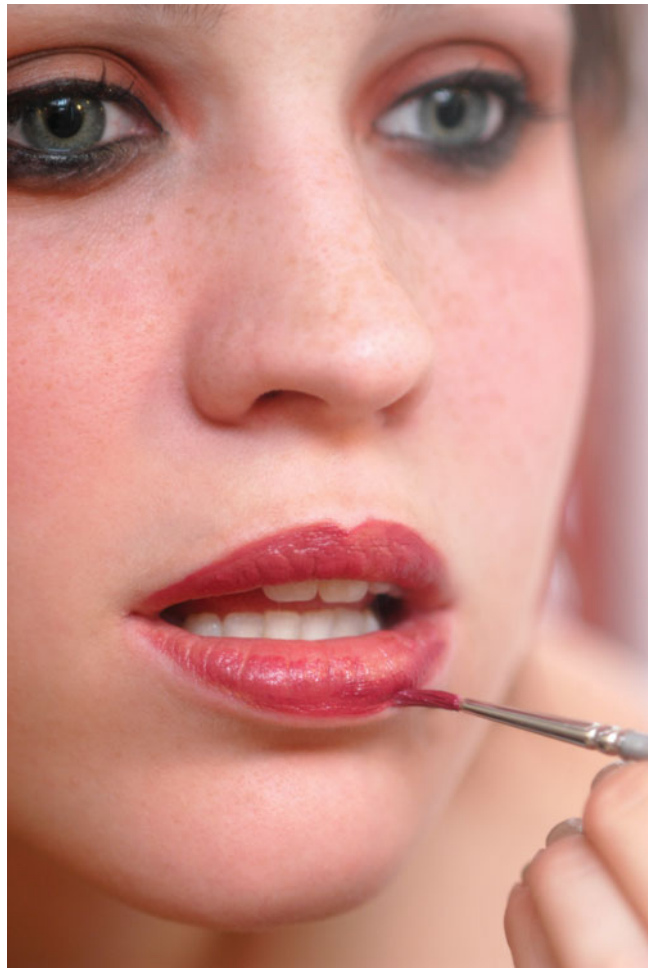


Figure 2.74 The process of putting on makeup has its own sensual appeal.

I always ask the model to change into a robe the moment she arrives. This provides time for any marks left on her skin by her clothes (bra straps, waistbands, and the like) to fade. This rarely works completely. However carefully the model's chosen loose garments to wear to the shoot, there's always clean-up work to do in Photoshop. So you can leave her to get into the robe in private, while you're busy in the kitchen making her a cup of tea.

Makeup and Other Adornments

Makeup plays a less significant role in artistic photography of the nude than it does in fashion or glamour photography. Unless you're planning some elaborate body decoration, makeup for photography of the nude works best when it's subtle, giving the model's face a natural look. Most models are happy to apply their own makeup, and you can discuss with them the look you want. You can check the first images of the shoot on the back of the camera and ask the model to tone down any part of the makeup which seems overemphasized. In particular, makeup that's been heavily applied to cover minor skin blemishes may be more time consuming to fix in Photoshop than the blemish would have been if left untouched. The same applies even more to tattoos covered with makeup. Many models will offer to cover their tattoos, but it's hard to do perfectly, and is slow work. Assuming it's a small tattoo, you can quickly fix it in Photoshop.

If you're looking for a more elaborate look, you can bring in a makeup artist (mua) to do the model's makeup and hair, possibly negotiating payment for the work in prints or publicity shoots for the mua. In the photo shown in Figures 2.75 through 2.77 I worked with Jay, a local mua, to create quite dramatic faces for two models. It was an interesting experiment. Images of the models' heads and torsos worked quite well, but in full-length shots the gap between the elaborate facial makeup and the unadorned bodies was too great to make sense. It's instructive to compare Figure 2.77 with Figure 2.81.

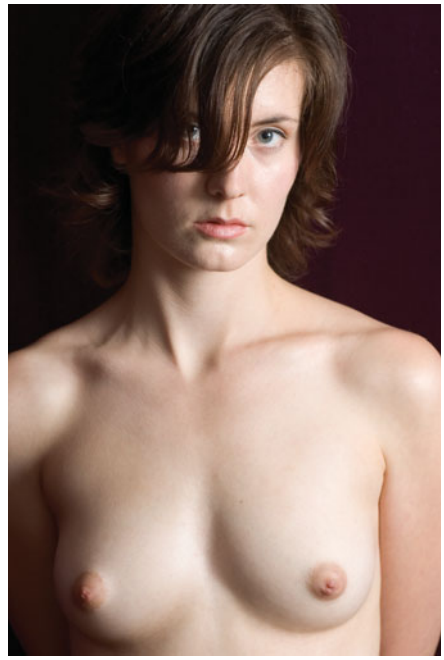


Figure 2.75 Alex given a natural look by mua Jay.

Figure 2.76 Dramatic eyes and burnished skin.

Figure 2.77 Makeup loses its impact in full-length shots.

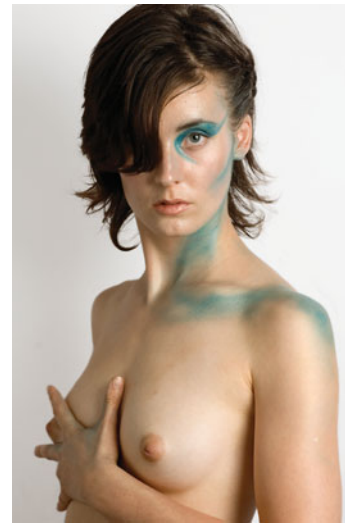


Figure 2.78 Different makeup…

One of the most striking aspects of this shoot was the way her makeup spoke to Alex and inspired different moods and expressions, as Figures 2.78 and 2.79 illustrate.

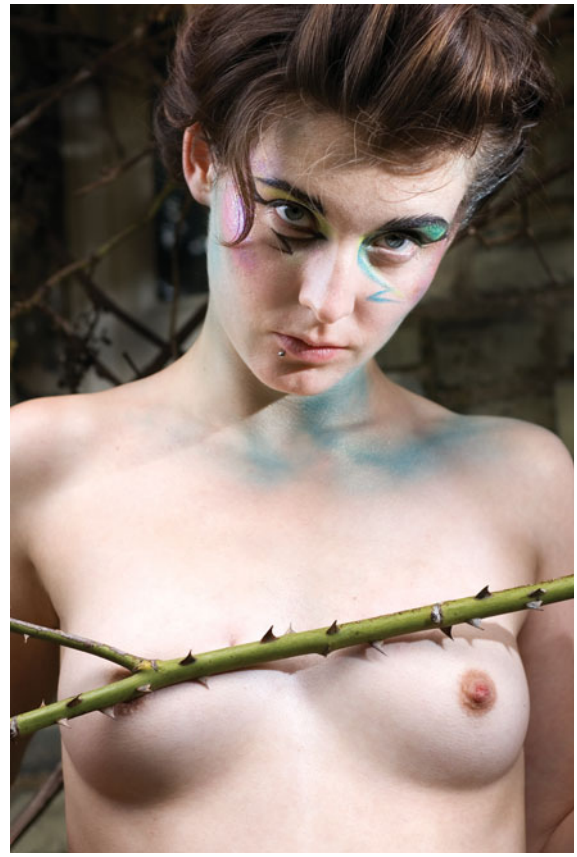


Figure 2.79 …different moods.

Body painting extends the possibilities of makeup; see Figures 2.80 and 2.81.

Figure 2.80 Belladonna decorated with daylight paint.

Figure 2.81 Emily and Belladonna in complementary color schemes.

I work with international body painter Mike Pilkington who, as well as using conventional daylight paints, specializes in blacklight work, using paints which respond to ultraviolet light; see Figures 2.82 and 2.83.

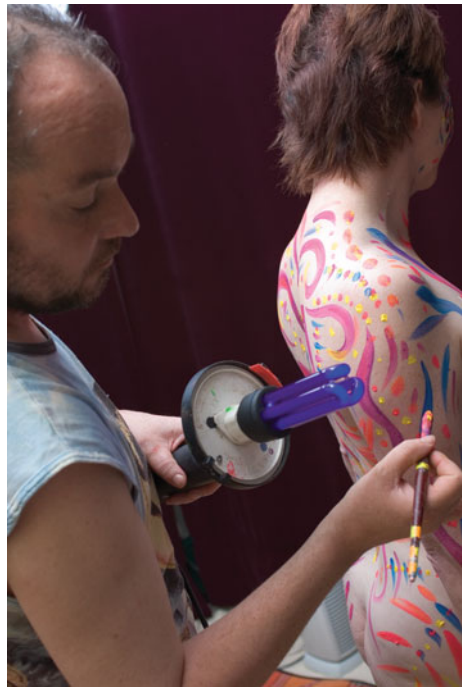
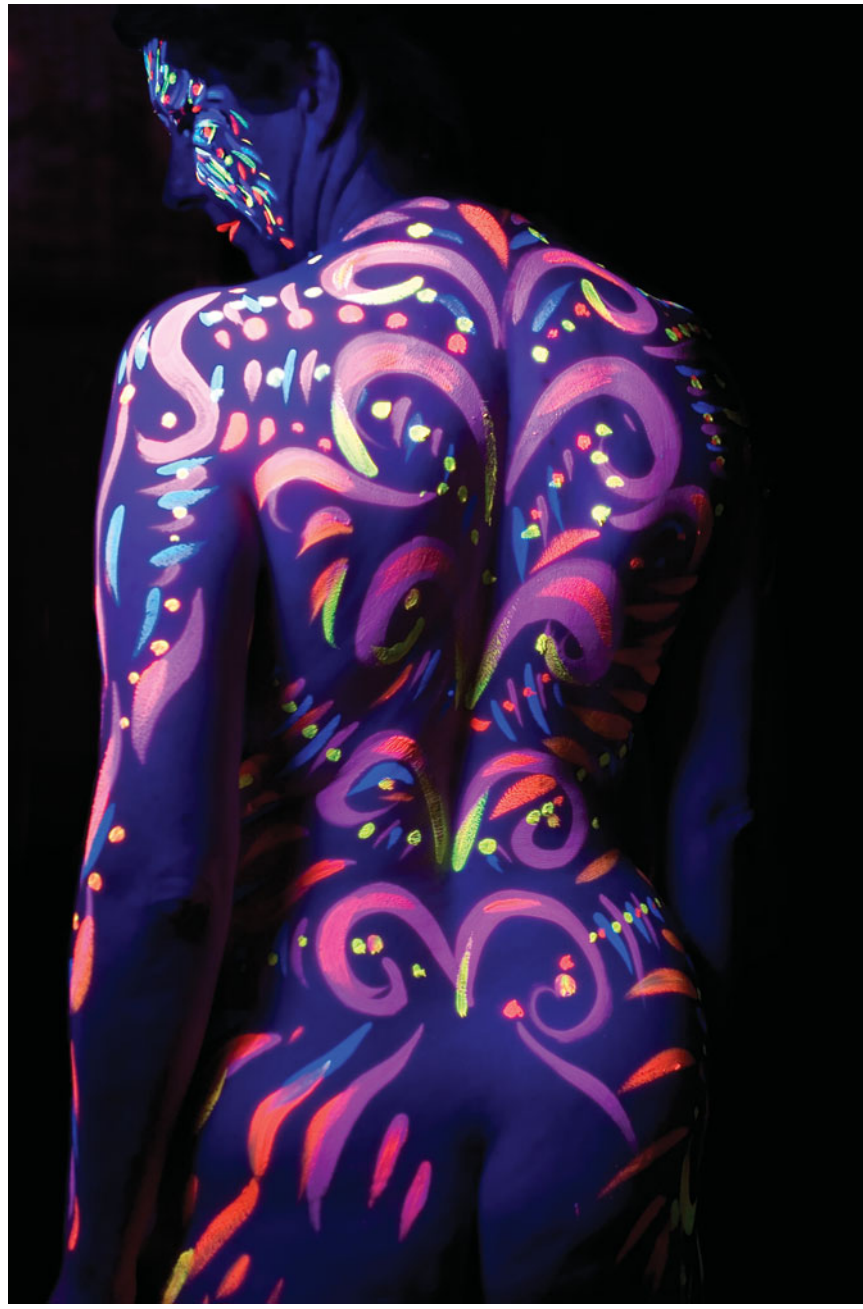


Figure 2.82 Mike Pilkington at work.

Figure 2.83 The results.



In one of the shoots from which these images are taken we also tried out a beautiful Venetian mask belonging to one of the models, another form of adornment, which worked surprisingly well with Mike's blacklight designs. See Figure 2.84.

Body paint shoots are slow work: A full cover of the kind you see in these photographs takes a couple of hours at least to do. Blacklight photography calls for powerful UV light sources: We used big UV cannons with outputs of up to 4kw on these shoots, balancing them for some shots against daylight. In Figure 2.85 the base layers of bronze and gold paint are daylight sensitive, and the other colors (as well as model Zoey's hair extensions) are UV sensitive. Even with big UV sources, typical exposures for blacklight images are 1/10–1/15 second.

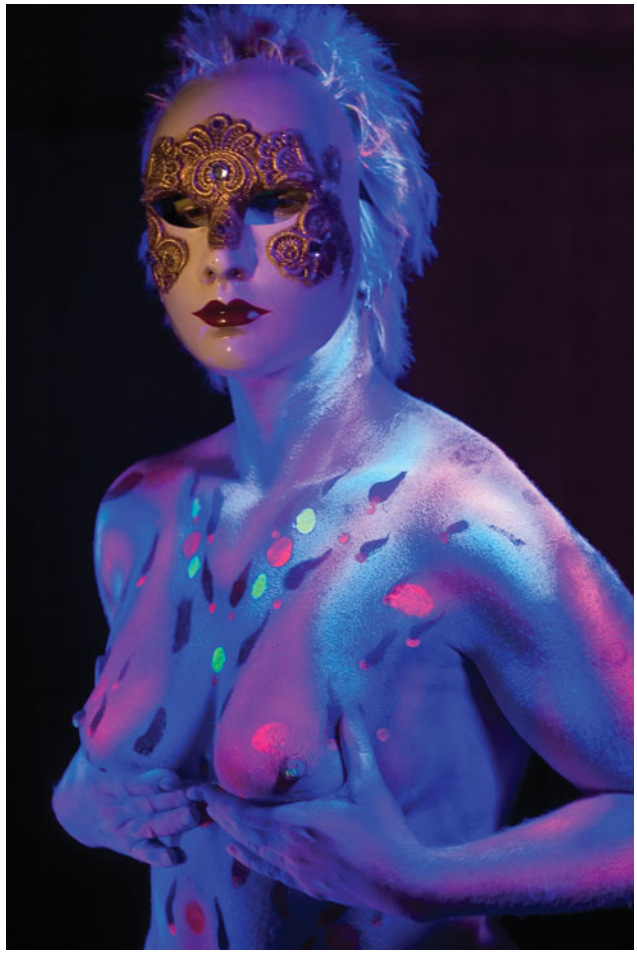


Figure 2.84 An unlikely but successful combination of elements.

Figure 2.85 Mixing daylight and UV light.

In a more lighthearted vein, there's a long tradition of the use of food in photography of the nude. A little experimentation with sprinkles and coconut butter (other adhesives such as honey proved too shiny) produced the images in Figures 2.86 and 2.87.

Figure 2.86 Say "Aaaah!"

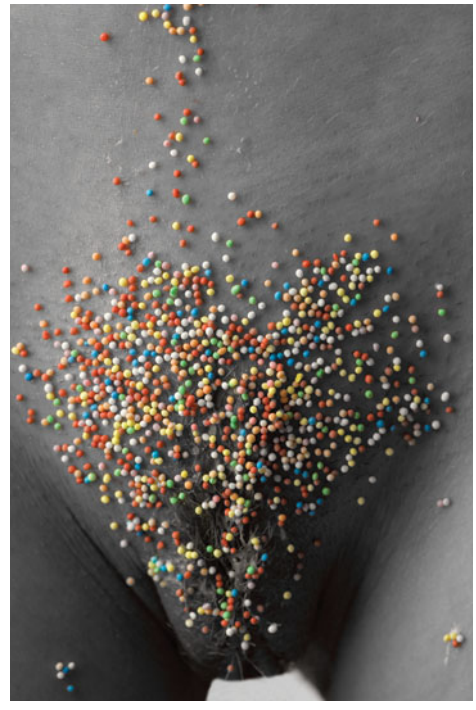


Figure 2.87 Adding a little color.

Working with More Than One Model

Multiple nudes always seem to tell a story, however indirectly. Perhaps it's because our instinct is to try to understand or invent the relationship between the figures when we see them together in the same frame. It's natural to think of those figures as characters in a narrative of some kind, and I'll often refer to them as characters rather than as models. The poses you plan will create those characters. What fantasy, for example, might we embroider around these three women in Figure 2.88, two of whom fix us so boldly with their gaze?

Figure 2.88 As we gaze at them, they gaze back at us.

Setting and pose can suggest the story as much as physical contact between the models, as in Figure 2.89, where just the proximity of the models encourages the viewer to imagine what these two women are doing together in this green summer setting.

Figure 2.89 Passion flowers.

The same holds true even in as formal an image as Figure 2.90, where the elegant interlocking of the models' hips and waists on the rumpled bedsheet suggests an intimacy beyond what's visible. Where have they come from? Where are they going? Much of the pleasure of viewing these images comes from their ambiguity, from the fact that each one suggests a different story to every viewer.

Directing your first shoot with more than one model can be an intimidating experience, as well as an exhilarating one. Preparation is vital, particularly to ensure that the levels you're proposing to work to are understood and agreed. You will have given thought to the height and build of your models, as well as to their previous experience with you and with each other, selecting people who you hope will fit together in every way.

With all this carefully done, there's still that heart-stopping moment when you ask the models to remove their robes and take up the first pose. Even more than with a single model, it makes sense to begin gently, perhaps with relaxed poses such as Figure 2.91. This shot is from early in the shoot, which also produced Figures 2.93 and 2.94, both of which called for much more intimacy.

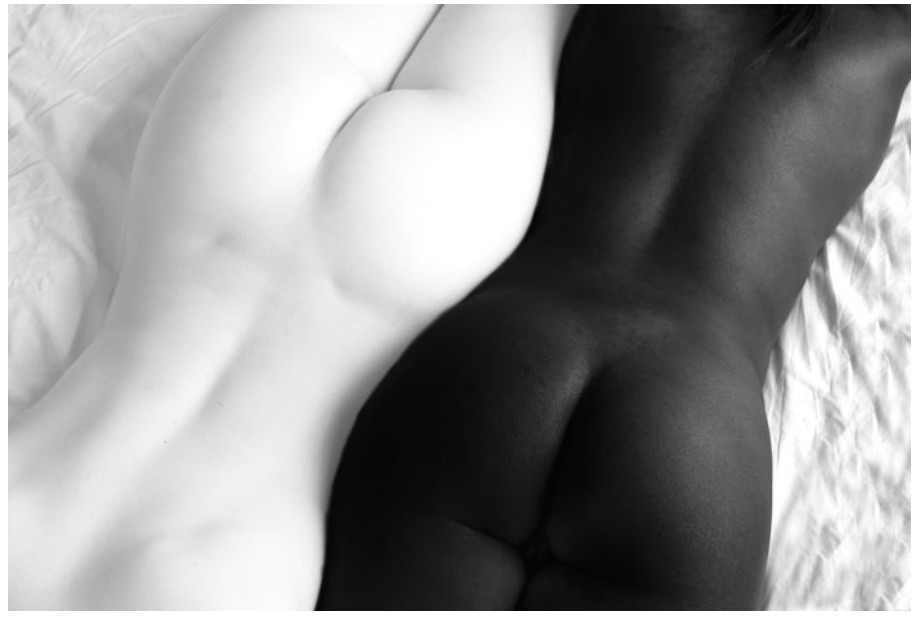


Figure 2.90 Every picture contains a story.

Figure 2.91 Beginning simply.

As you work, try to keep your instructions and guidance as clear as you can. For example, get into the habit of beginning every instruction with the name of the model it applies to, thus avoiding both models—or just the wrong model—trying to carry out the instruction. More than in a single model shoot, you'll need to refer to parts of the model's anatomy: "Opal, can you move your hand closer to Natlialie's breast?" and so forth. It's a somewhat unusual situation, but don't let it fluster you: Choose the level of language you feel comfortable with and use it. And be prepared for a lot of laughter, some of it nervous, as the models begin to touch and hold each other; most of it directed (affectionately, you hope) at you. Keep in mind also that few models have formal training as actors. For them to express convincingly powerful feelings such as sexual desire depends partly on how well the photographer can direct them, and partly on the rapport between them. All modeling is acting, but working with another model can make much greater demands than working solo.

Setting a pose is, as always, a matter of giving clear instructions, bearing in mind that simple factors such as differences in height between your models may make some poses impossible or clumsy; so you'll need to be able to improvise. Think safety, too: For example, if you're suggesting a pose where one model is taking the other's weight, make sure everything else is as ready as it can be before you put the models in position, and be ready to let them break from the pose before it becomes too much for them.

Lighting may need to be more frontal than you're used to, particularly for standing poses, to avoid one model shadowing the other, but can still be oblique enough to pick out musculature and create a pleasing shadowplay. In Figure 2.92 the positions of the models have been cheated slightly: Gemma is closer to the camera than Warner, and thus can be sure of being properly lit.

Figure 2.92 Ensuring that both models are in the light.

A shoot with two models offers rich possibilities for bodyscapes. Simple curves offer symmetries, as in Figure 2.93.

Bright lighting can create an intricate interplay between shadows and limbs; see Figure 2.94. In Figure 2.95, subdued lighting molds itself around the models, making the viewer work to read the image.

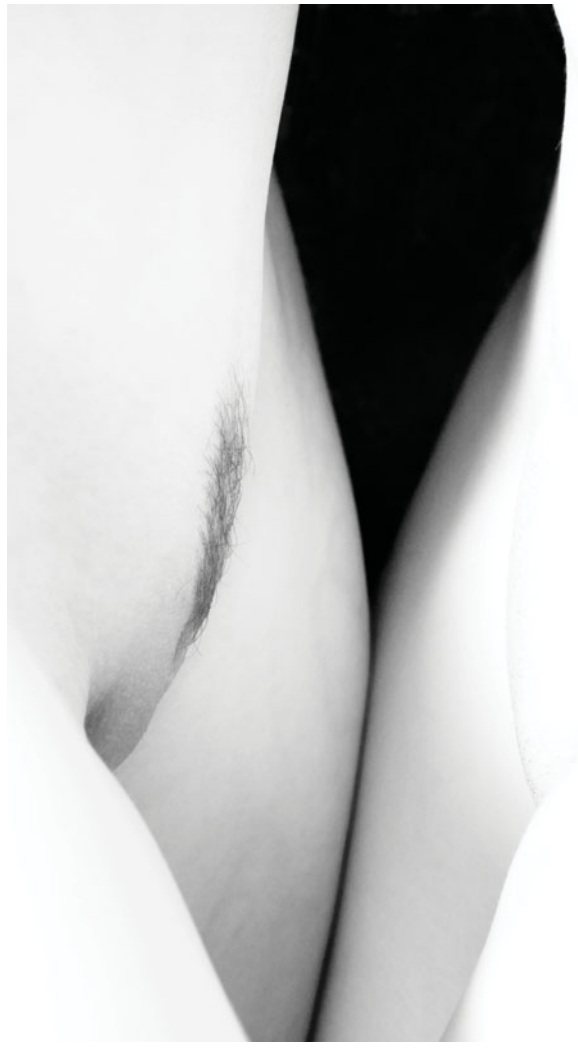


Figure 2.93 Matching shapes.

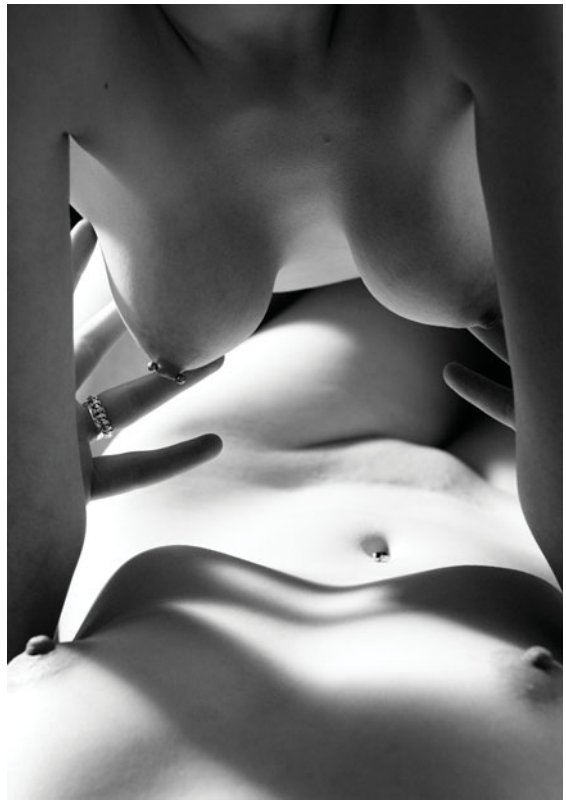


Figure 2.94 Delicate lighting matches the delicacy of touch.

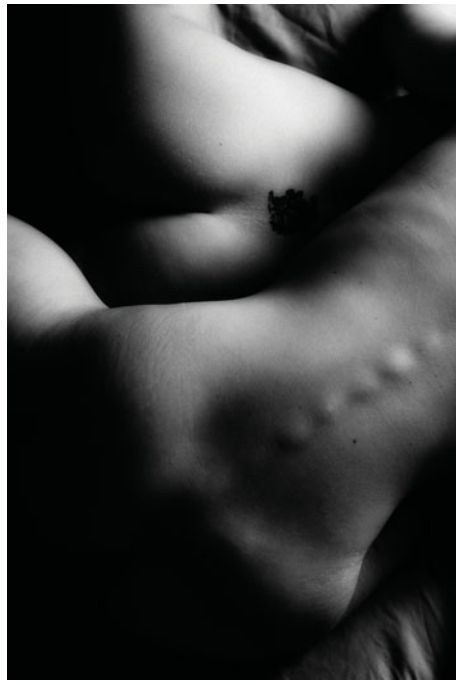


Figure 2.95 Low lighting creates powerful shapes out of the models' backs.

The great theme for a double nude, however, is surely the embrace, a pose which can suggest, among other things, tenderness, passion, domination, submission, energy, or rest. In Figure 2.96, for example, the low camera angle and the relative positions of the two models convey (to me) a sense of strength and security as she rests in his arms. Two elements make this image: the sense of strength in the man's arms, set parallel and firmly wrapped round the woman, and the feeling of trust conveyed by the position of the woman's head and her closed eyes.

Figure 2.96 Safely held.

In that example the image came out pretty much as I'd planned it to (once I realized, during the shoot, the importance of the position of her head). In Figure 2.97 there's an interesting interplay between his gesture and her expression which I wasn't really aware of at the time: Is he embracing her or restraining her? Is she consoling him or rejecting him?

Figure 2.97 What is she feeling?

I like using masks in photography of the nude because they reverse the normal order of things: The face is concealed and the body displayed. Models Gemma and Warner pretty much created this image when they started playing with the masks during a break. The image carries the disruption of convention a step further by showing Gemma wearing a mask which represents the Green Man, a pre-Christian embodiment of the (male) potency of nature. In Figure 2.98 it's seen next to a Venetian carnival mask, whose appearance is rather asexual. The result is an uneasy combination of sexual ambiguity, secrecy, and challenge to the viewer.

Figure 2.98 Ambiguity and concealment.

Sleeping lovers is hardly a novel theme, but in Figure 2.99 I wanted to emphasize the beauty of the male form, with Warner lying in Gemma's tender, almost maternal embrace. The oblique lighting, from a single brolly beyond and to the left of the scene, accentuates the arrangement of the models' limbs.

Figure 2.99 Tranquility and safety.

Figures 2.100 and 2.101 are similar in many ways. In both images much of the emotion we sense between the characters comes from the positioning of their hands. The difference is in Eliz's gaze, directed at the viewer in one image, but entirely private and inaccessible to us in the other. One image might suggest that we're voyeurs, snooping on lovers who are unaware of our presence. In the other it seems that Eliz is watching us, but her gaze and expression are ambivalent: She may be staring at the viewer or she may still be withdrawn into her own emotions and sensations.

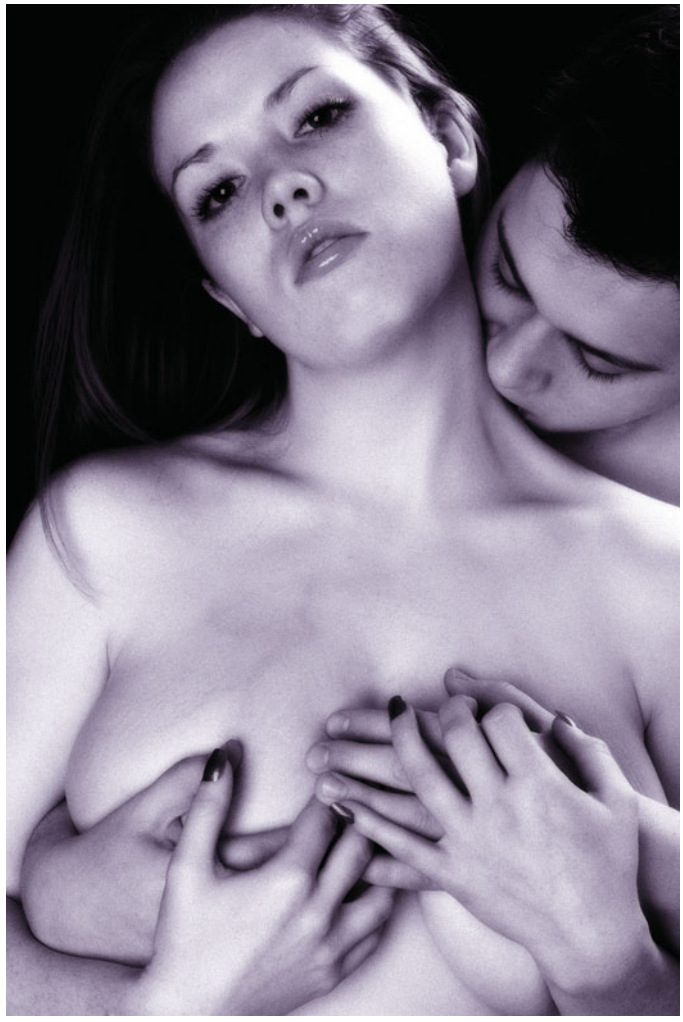


Figure 2.100 The ambiguity of the character's gaze.

Figure 2.101 Both characters absorbed in the moment.

In Figure 2.102 emotion is conveyed by gesture, as one character reaches down to kiss another's outstretched hand.

Figure 2.102 A touching gesture.

In Figure 2.103 the curve of Gemma's back, the fall of her hair, and her straddling position all bring energy to the image.

Figure 2.103 The lighting adds to the intimacy of the scene.

The final, disconcerting image in this sequence defies reduction to a single narrative and leaves the viewer with a tantalizing glimpse of the world these characters inhabit. What has prompted one of them to turn her gaze toward us? Why is the other looking—deliberately, we might feel—away from us, one hand resting so casually on her lover's waist? See Figure 2.104.

Figure 2.104 More questions than answers.

The Human Landscape

This isn't about a pose as such, but about a style or approach to photography, which we've already touched on earlier in this chapter. It refers to nudes in which the face, and thus the identity, of the model is kept from the viewer, in order to focus the viewer's attention on the more formal qualities of the image or the human body, such as shape, contour, texture, and line. One of the greatest exponents of this style was the American photographer Imogen Cunningham (1883–1976) in, for example, the series Triangles and Two Sisters. Images may be cropped in tightly to a detail of the body, or they may simply be shot from behind, as in Figure 2.105, a pose whose physical instability seems to suggest both strength and vulnerability.

Figure 2.105 An anonymous back view.

In the starkly lit Figure 2.106 the model's hair is wrapped round her head in a way that directs our attention to a whole series of contrasts and similarities between hair, skin (and even the veins beneath the skin), and rock. The technique for monochrome conversion used here adds to the impact by emphasizing the flecks of grit adhering to the model's skin, making her seem at once part of the landscape yet distinct from it.

Figure 2.106 Figure in a landscape.

In the next example, Figure 2.107, the silver belts and dark background emphasize the curves of the model's torso.

Figure 2.107 Strong positive and negative shapes within the frame.

One way of finding interesting bodyscapes is to set a simple pose and then, working close to the model, use the camera to conduct a grid search so to speak, working systematically across and down the model to find shapes within the frame that are worth exploring and developing. In Figure 2.108, for example, the first version didn't include the arms and hands; I owe this image to model Natalie, who moved into this graceful pose while I was still trying to work out how to improve the original idea.

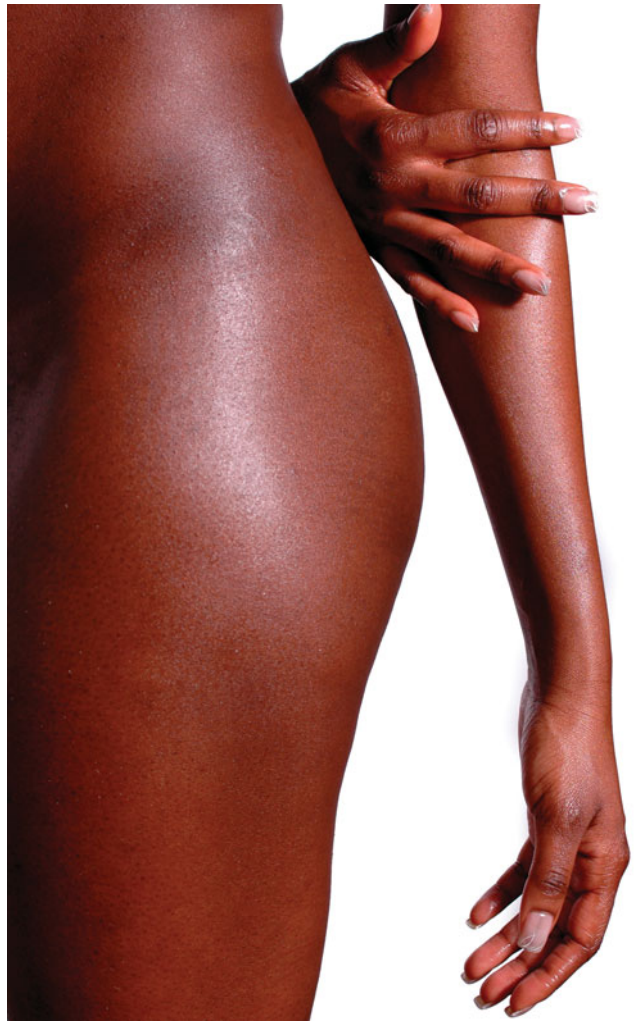


Figure 2.108 A graceful pose heightened by careful framing.

Striking images can be made from unusual arrangements of limbs (as in Figure 2.109), from a careful framing combined with a treatment in postproduction which reduces the image almost to a line drawing (as in Figure 2.110), or to a very simple but still erotically charged shape (as in Figure 2.111).

Figure 2.109 The model's rings provide a focal point.

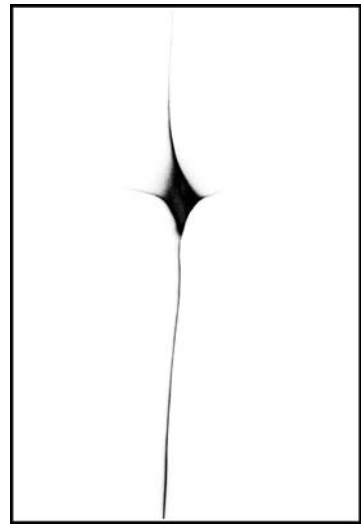


Figure 2.110 A minimal image such as this needs the black keyline to mark its borders.

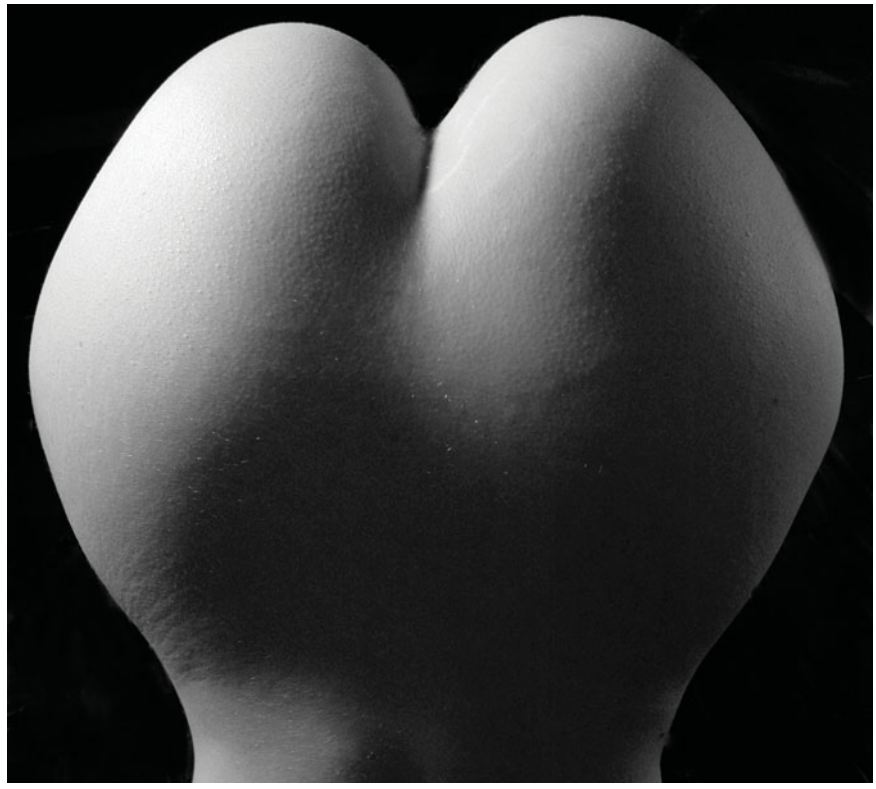


Figure 2.111 An unusual framing for a familiar theme.

A more extreme camera angle, combined with very shallow depth of field, can turn the familiar into a picture puzzle, as in Figure 2.112.

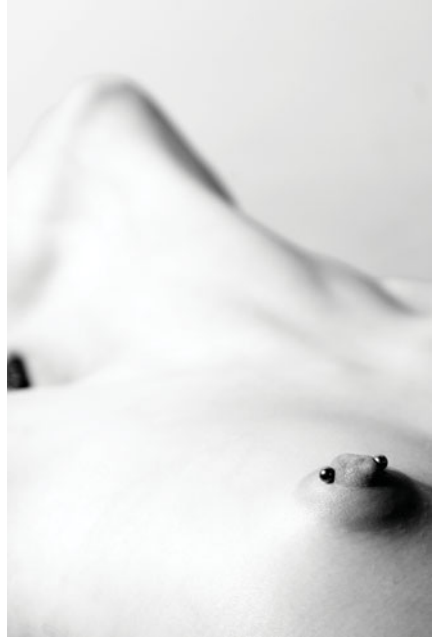


Figure 2.112 The intention here is to engage viewers by challenging them to read the image.

Figures 2.113 and 2.114 come from a continuing project on body piercing. I'm interested in the practice and processes of body modification and the culture that surrounds them. The first image is a detail of a corset piercing—a self-explanatory description. The treatment of the image goes some way toward abstraction, simplifying but not removing skin textures, and emphasizing the richly colored ribbons and their shadows. The second holds the skin textures and juxtaposes the corset piercing with a real corset.

Figure 2.113 The corset piercing and its lacings.

Figure 2.114 Juxtaposition.

A tight frame and shallow depth of field produce a psychedelic human landscape in this image from a body-paint shoot; see Figure 2.115.

Figure 2.115 Dazzling UV colors.

Disagreements During the Shoot

Not every disagreement comes about because you've somehow managed to shoot the model showing "too much." You may shoot at an angle where the model knows from previous shoots that she finds the results unattractive. It may be, for example, that if you ask her to arch her back, her ribcage becomes very noticeable, and she's uncomfortable with that. But sometimes the level of the shot is the issue. You may be using shadows, rather than the placing of the model's hands, to keep a shot within the realm of artistic nude, rather than nude, and the model may be concerned that, however artfully you control the shadows, the shot is too revealing.

Either way, because you're shooting digital, you have the opportunity to show the model, during the shoot, any shots which you feel may be problematic for her. I'd always recommend doing this. It's only photography, after all, and it's more important, in my view, to treat the model right than to sneak shots which she won't be happy with.

After discussion and reflection, the model may agree that the shot's okay; or you may agree to crop the shot, or perhaps burn the shadows in deeper, or just delete it. The results of your negotiations with the model will depend on how strongly each of you feels about the shot in question; what's essential is that, whatever you agree, you keep your word to the model.

A different situation can arise with less-experienced models, however carefully both you and she consider and discuss the shoot beforehand. A model who's agreed with you to work to a higher level than she's used to may get cold feet as the shoot progresses and decide that she's no longer willing to work at that level. Indeed it's not unknown for a model to feel uncomfortable, on the day, with levels she usually works to without difficulty. Frustrating though this is, I don't think it does much good to anyone for you to insist that the model stick to what was originally agreed: Unhappy models don't make good images. If you're paying the model you should certainly feel entitled to renegotiate for a lower fee; if it's a TFP shoot, you may want to give her a smaller number of photographs than was originally agreed. One way or the other, you may well decide not to work with that model again, and if you found the model on a web site which includes a Model Reference Check system, you may want to add an objective and factual comment about her.

It's often said that photography is all about lighting. Certainly few things determine the emotional and sensual qualities of an image more than the lighting you bring to bear on it. Light can be hard or soft, high contrast or low contrast. The light source can be on, next to, or opposite the camera; it may be high up or low down. Light may be bounced back into the scene by a carefully positioned reflector or soaked up by dark drapes. The choices you make influence the feeling of the final image.

Your aim in lighting the model may be to achieve anything from a natural look to something much more dramatic. *Natural* here refers to a style of lighting that doesn't draw attention to itself, but recreates the feeling of a space which is pleasantly lit by daylight. In Figure 3.1 the main light source clearly is the daylight streaming through the window, but there's also a reflector close to the camera softening the shadows in the foreground. So even here the photographer has to construct the natural look. Although you can no longer see where the light is coming from in Figure 3.2, it has that same natural quality. (Ways of achieving that natural look using artificial light sources are described later in the chapter.)

In dealing with light sources other than available light, we'll concentrate mostly on the use of studio flash (strobe) lighting. Modern flash units of the monobloc type, which have all their electronics built into the flash head (from manufacturers such as Bowens and Elinchrom) are the most convenient design to use. Most units have variable output on both the flash tube and the modeling light, so you can adjust the intensity of the flash rather than having to change the position of the lights or adjust the lens aperture. Flash kits containing one, two, or three heads, along with stands, cables, and attachments, are available. In a small studio, 500-watt heads are powerful enough for most purposes, and while at times three heads might be useful, two heads and a couple of reflectors work very well.

Figure 3.1 Window light balanced with a reflector.

Figure 3.2 The natural look.

Shadow

In Figures 3.3 and 3.4, on the other hand, your attention is immediately drawn to a very forceful (and far from natural) interplay between light and shade. This has been created by choosing a hard-edged light source (in these examples, a Bowens 65º Maxilite reflector). In Figure 3.3 the shadows form deep pools within which textural details are still just visible; and the barn doors shape the light away from the model's face, guiding the viewer's attention to her torso and limbs. Figure 3.4 uses the same lighting setup with a different pose, but the image has been grained in postproduction using a digital filter called Monday Morning from Nikon Color Efex Pro. This softens the edges of the shadows slightly, but at the same time increases the contrast in the image.

Figure 3.3 Using a hard-edged light source.

This chapter surveys some different light sources and the different lighting styles they make possible. In general what distinguishes one type of light source from another is the quality of the shadows they cast, in particular the edges of the shadows and their *density*. Shadows from an on-camera flash unit, for example, usually have hard edges and may be so dense that all detail is lost in their darkest areas, as Figure 3.5 demonstrates; diffuse light may produce faint shadows whose edges are so soft that they can scarcely be identified, as in Figure 3.6, where summer foliage spreading across the window which lights the scene produces a softly variegated effect.

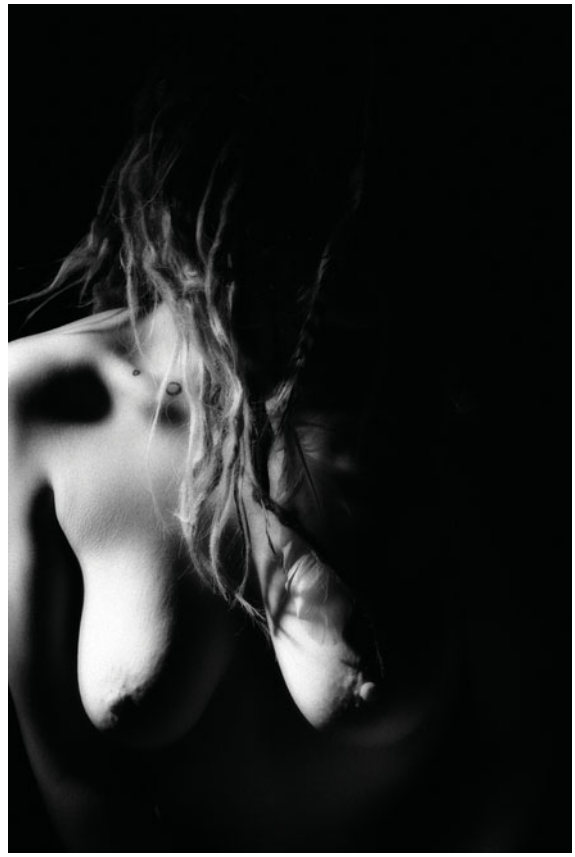


Figure 3.4 The same light source after manipulation in Photoshop.

Figure 3.5 Hard-edged shadows, containing little or no detail.

Figure 3.6 Scattered light and shade.

Another important consideration is the *position* of the shadow in relation to the model. Harsh background shadows which surround the model are distracting. In Figure 3.7, for example, even with a relatively dark background to reduce their impact, the shape and pattern of the shadows that surround the model make the image look messy and ill composed; it draws attention to the fact that this isn't natural lighting, but has been rather crudely set up by the photographer. This is the result of choosing an inappropriate reflector for the flash head. Positioning the model right against the background is always likely to produce close shadows, but soft-edged, more diffuse shadows, such as a softbox (described later in this chapter) produces, are part of the natural look of a scene, as Figure 3.8 demonstrates.

Figure 3.7 Even the most beautiful model will struggle to be seen against hard-edged shadows like these.

Figure 3.8 The model is still close to the background, but the shadows look natural.

On the other hand it's possible to come up with an image in which the shadow is as important as the model. In Figure 3.9 the light source is positioned low to project the shadow more strongly, and the rough surface of the wall adds its own contrast to the texture of the model's skin.

Other shadow effects are possible using a light source below the model. In Figure 3.10 the main light source is a window located a couple of feet below the landing on which the model is posed. The surreal and rather sinister look of the image is heightened by the fact that the shadows look slightly off kilter because they're being cast upward.

Figure 3.9 Projecting a shadow.

Figure 3.10 The window, which is the main light source, is slightly below the model.

Ugly shadows can also be cast onto the model. In Figure 3.11 the model's left arm and the straps and buckles create an incoherent set of shadows which, as well as being unattractive in themselves, conceal the delicate groove of her spine. Slightly repositioning the model, as in Figure 3.12, improves the image by reducing the shadows and simplifying the relationships between them.

Figure 3.11 The shadows add confusion to the image.

Figure 3.12 A better-arranged version.

Experimentation

As with so many other aspects of digital photography, it pays to experiment and take risks with lighting. Not every shot will be a winner, but you'll develop your repertoire of skills and methods. If, for example, you light your model with a softbox from the side as your principle or only light, asking the model to move toward you in small steps will produce different images shot by shot as she passes the center line of the softbox and the shadows that the light casts move across her. See Figures 3.13 through 3.15.

Figure 3.13 At the center of the softbox.

Figure 3.14 Moving toward the camera.

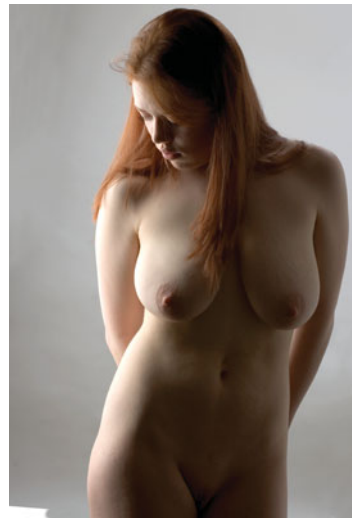


Figure 3.15 Almost at the edge of the softbox.

Another experimental approach is to keep the model in one position, and vary the relative power of the lights in front of and behind her. In Figures 3.16 through 3.18 I've set up a softbox in front of and level with the model's head, and to the photographer's left, with a backlight behind and above the model's left shoulder. In Figure 3.16 the camera-side light is dominant. In Figure 3.17, as the back light is made relatively stronger, a more interesting pattern of light and shade emerges on the model's hips and the central line of her belly. In Figure 3.18 that process continues.

Figure 3.16 Lit predominantly from the front.

Figure 3.17 Increasing the backlight in relation to the camera-side light.

Figure 3.18 Increasing the backlight further.

What makes an image well lit? It could be argued that technically a shot's well lit when the light varies in intensity from the maximum the camera can handle down to black; in other words, a well-lit shot is one which exploits the full tonal range of the camera. Creatively, it could be argued that a picture is well lit when the scene achieves the photographer's intended effect—or to make the strongest impression on the viewer. Linking the technical with the aesthetic, we could say that an image is well lit when it shows a full dynamic range, and the different light levels are all in the right places.

In Figure 3.19, for example, the full dynamic range has been used, but most of the highlights are in the background, and there isn't enough light on the model. She isn't backlit in a dramatic way or turned into a silhouette: there just isn't enough light on her because she's too far forward and her body's angled away from the light. Moving the light round, as in Figure 3.20, provides a better balance, and puts the light where the image needs it to be.

Figure 3.19 The right amount of light, but not in the right places.

Figure 3.20 With the lighting corrected.

And of course there are always exceptions to the rules. For example, an image may contain either solid blacks with no detail in them, or blown-out highlights (or both), but may still work better than an image which follows only the technical rules. The histograms for such images are characteristically piled up at one end or the other (or both) with relatively little data in the center.

Figure 3.21 is an example of *contre-jour* lighting (literally *against daylight*): shooting directly into the main light source, which in this case actually is daylight. There's a large, six-foot square, gold reflector near the camera. (This reflector is white on one side and gold on the other. The gold side bounces more light back than the white side does, but adds a distinct warm tone to a color image. I was confident that this shot would end up monochrome, so chose to use the gold side.)

By moving the reflector backwards and forwards and adjusting the aperture and shutter speed, I found a way of capturing the scene which retains the highlights on model Naomi's left thigh and breasts, while at the same time holding the shadow detail around the legs of the chair and the skirting board, and drawing attention to the extraordinary shoes Naomi's wearing. As well as the window itself, the texture of the floorboards under the chair is blown out, but these seem to me to be natural elements which contribute a great deal to the light, bright, summer mood of the scene overall.

Figure 3.21 Contre-jour lighting, supported by a reflector close to the camera.

Photoshop

There are lots of occasions, then, when it makes sense to push lighting to the extreme in this way. On the other hand, an image whose dynamic range is restricted (one whose histogram doesn't reach all the way from one side to the other) will look flat and lacking in impact. That's where Photoshop comes in.

Figure 3.22 is an example of a picture whose tonal range is narrower than it needs to be. As the inset histogram shows, the image has no blacks in it. It's an image whose delicacy matches the intimacy of its subject, shot with available light from a north-facing window. However, we can improve what the camera captured by adjusting the exposure in Photoshop's Camera Raw interface. Doing so produces Figure 3.23, where the histogram demonstrates that we're now using the full dynamic range. Increasing the shadow value in Photoshop Camera Raw tends to make colors stronger, as well as extending the tonal range; I've slightly reduced the Saturation of the image to compensate for that. The corrected image has lost none of its original qualities, but has gained an additional intensity.

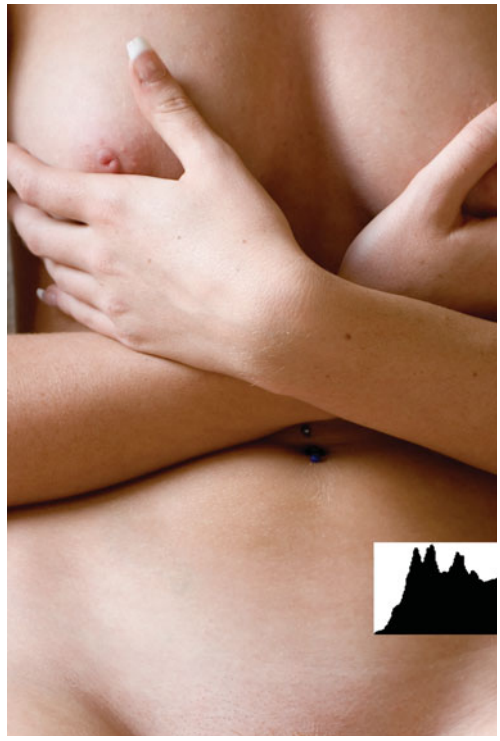


Figure 3.22 The image as shot.

Figure 3.23 After extending the dynamic range.

This demonstrates a significant aspect of the digital era in photography: Many elements of the final appearance, which were once mainly dependent on lighting, can now be easily and seamlessly manipulated on the computer. Photoshop contains a number of powerful methods of manipulating a shot's lighting: Not just the Render > Lighting Effects filters, but simpler methods such as adjustment layers and blend modes, the Levels settings and Brightness and Contrast controls or, as here, Camera Raw facility are all invaluable. Taken all together, these processes are more powerful and flexible than even the most sophisticated traditional darkroom. You will have in mind, as you light a shot, the possible ways of manipulating and improving its lighting which programs such as Photoshop make available. Except where indicated otherwise, all the images in this chapter have gone through at least minimal manipulation. On the other hand, Photoshop can't *create* a lighting state, so craft and skill of photographic lighting remain as important as they've ever been.

Positioning Lights

Intensity of light and shade is one key element in determining the impact of an image; the *position* of the light is another. If you light your model from the front you'll see her clearly, with few or no concealing shadows between her and the viewer. The image's power will depend on how the model's framed and posed. If you've chosen a light source which creates only faint, soft-edged shadows around her, there will be nothing to diminish the viewer's pleasure in looking at the model. Figures 3.24 and 3.25 illustrate two versions of frontal lighting. Note that, as the shadows indicate, the main light source is positioned at an angle of around 45° to the camera, which ensures that even with minimal shadows the light still molds the model's curves.

Figure 3.24 Frontal lighting with a dark background.

Figure 3.25 A high-key image, frontally lit.

On the other hand, if you light your model obliquely—let's say with the light source set at around 90º (or more) to the camera—you'll create a richer, more complex and intriguing blend of light and shade that molds limbs and curves. The body is made more three-dimensional by lighting at this angle. Perhaps the pleasure in viewing such photographs stems as much from the image *as an image*, as it does from the image as a photograph of an attractive model. Figures 3.26 and 3.27 illustrate the different qualities of oblique lighting, using the same models as in the previous two images.

Figure 3.26 The model's form is molded by oblique lighting.

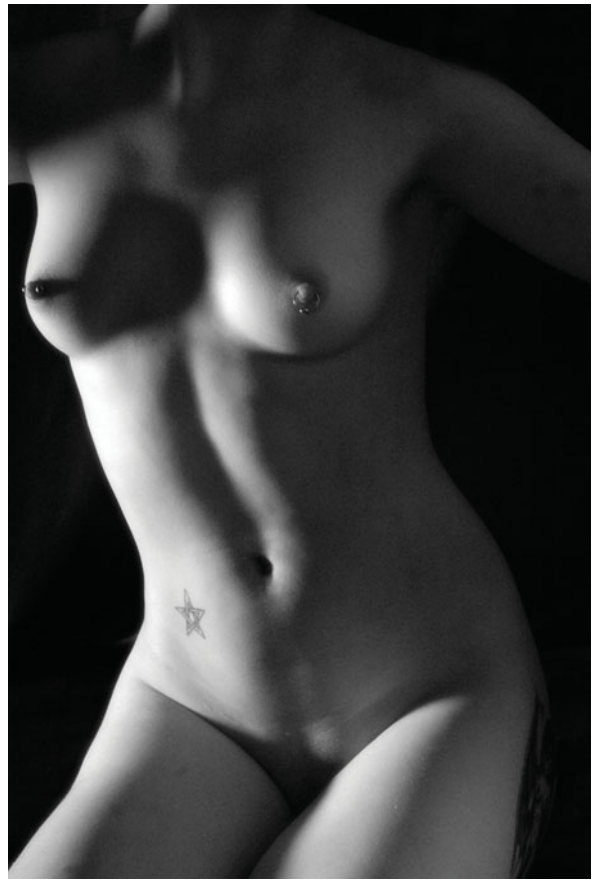


Figure 3.27 A subtle interplay of light and shade.

This solidity of form changes in interesting ways as the angle between camera and light source opens up, until you reach the *contre-jour* shot, as in Figures 3.28 and 3.21. Adding a little Photoshop work can produce a powerfully graphic image, with all the intermediate grayscale values of the original expressed as either black or white; see Figure 3.29.

Figure 3.28 The dramatic look of *contre-jour* lighting.

Figure 3.29 A purely black-and-white image.

Backlight

Backlight is light aimed at the model from behind; backlight faces the camera. At a low level, its purpose is to add a small amount of light around the model's head and shoulders to make her appearance more three dimensional, and also to separate her from the background. As the ratio of backlight to camera-side lighting increases, you move closer, again, to *contre-jour* lighting. Backlit images can be elusive and tantalizing, concealing as much as they reveal, as Figures 3.30 and 3.31 demonstrate.

This concealment also creates a deeper sense of intimacy, of a private experience shared with the viewer. Figures 3.32 and 3.33 are two versions of a familiar scene. Figure 3.32 conveys the parents' love for their child and each other, but it achieves that effect mainly through the pose and the parent's expressions: The lighting doesn't contribute in any significant way. Figure 3.33 similarly draws part of its impact from the inclined angle of the mother's head and the baby's gaze toward the camera, but the greater feeling of tenderness in this image comes from the way mother and child seem to be protected, cocooned almost, by the light and shade which wraps around them.

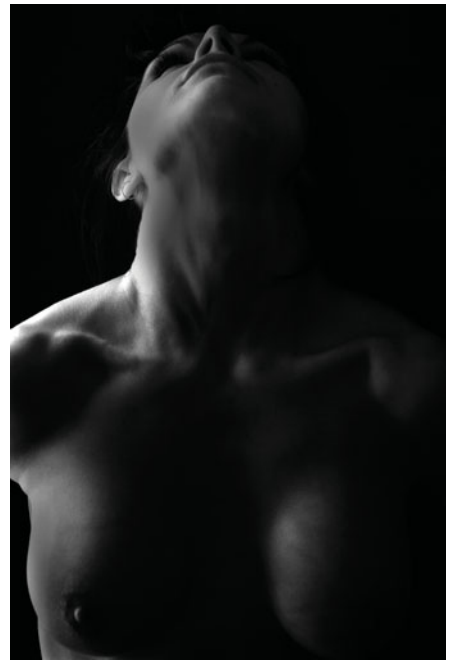


Figure 3.30 The body in near silhouette.

Figure 3.31 A backlight positioned high sculpts the model's body.

Figure 3.32 A moment of deep affection.

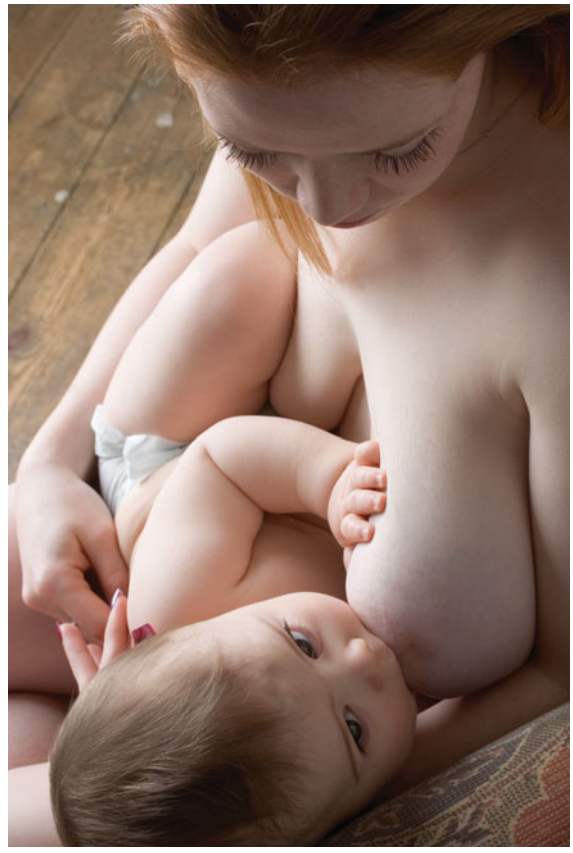


Figure 3.33 Here the lighting contributes to the emotion of the image.

Backlighting works well with double nudes because the subtle interplay of light and shade it creates adds to the erotic sense of bodies and emotions fusing and uniting that such images imply. In Figure 3.34 the principle light is a white brolly on the left, behind model Ginga Pixy; the hairlight which outlines model Eliz on the right is softened with a couple of layers of diffusion material, and shaped with barn doors. The angled pose allows the light from the brolly to catch the models' eyes, which are as shot, with no enhancement in Photoshop.

Figure 3.34 A single gaze from two models.

Depending on the environment you're working in, you may need to use a camera-side light to balance the backlight, or you may find that a carefully positioned reflector is sufficient, as in Figure 3.35. In Figure 3.36, similarly lit, the tangle of limbs and their shadows forms a picture-puzzle which gradually resolves itself.

Figure 3.35 A reflector prevents the foreground shadows from filling in.

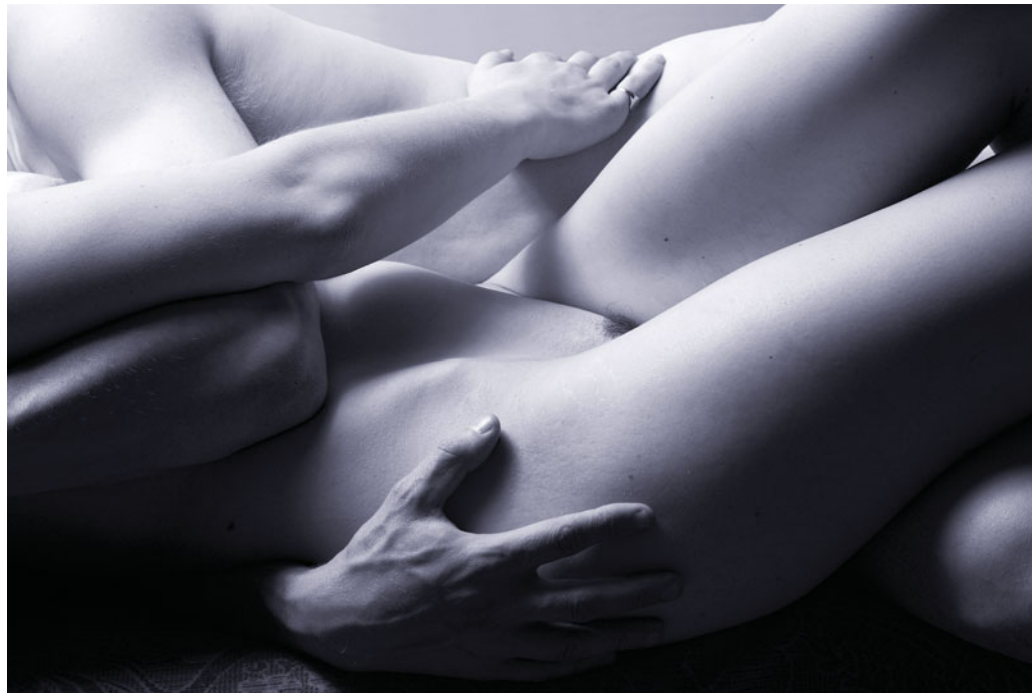


Figure 3.36 A pattern of limbs and shadows.

Figures 3.37 and 3.38 depict moments of passionate intensity. Figure 3.38 has been manipulated in Photoshop to give it the feeling less of a photograph than a nineteenth-century lithograph, but its essence is the steeply angled, fairly hard-edged backlighting which creates a vivid, almost tangible sensuality.

Figure 3.37 Tenderness conveyed by low-key backlighting.

Figure 3.38 Sensation emphasized by lighting.

Continuous Light

Continuous light sources deserve a mention also. There's a growing range of well-designed cold light sources, based on fluorescent luminaires, such as the Bowens 9Lite, which uses a 3 × 3 array of coiled fluorescents behind a sheet of diffusion material to create a reasonably soft light source. Few sources of this kind are as powerful or as flexible as modern flash heads (the 9Lite is approximately equivalent to a 1kw tungsten source), and their main application in photography of the nude is to let you shoot motion-blur images, where slow shutter speeds are essential.

In Figure 3.39 I've relied on the Bowens 9Lite as the main light source, but I've positioned a flash head, set to its lowest power output and with a double thickness of diffusion material in front of it, behind and to the right of the model. This makes it possible to freeze some elements of the image, even with a shutter speed (after a series of tests) of 1/6 second (at f/7.1). In this case the flash has frozen model Eliz's hands as she spins toward the camera, while the slow shutter speed captures the trail of the highlight from her ring, as well as the spectacular swirl of her hair.

Figure 3.39 Motion blur lit by a continuous light source.

Incidentally, the opposite effect is achieved by using flash, which stops the movement of the model's head and torso while retaining some blur in her hair. In Figure 3.40, the lighting is carefully balanced, with a backlight lighting up the hair without casting shadows over the model's face.

Figure 3.40 Frozen movement.

Shadowless Light

It's not easy to produce totally shadowless lighting. In a large, well-equipped studio, the usual approach is to position the subject 10' or so in front of the background, light the subject with soft light sources, and blast a lot of light onto the background to swamp any shadows. Lighting-equipment manufacturers produce translucent igloos for doing product shots for advertising, which really do enable shadow-free lighting; and one manufacturer—Lastolite—has recently produced one large enough to pose a model inside.

Completely shadowless lighting isn't necessarily desirable in photography of the nude. Shadows add character, orientation, and three-dimensionality to the image: They ground the model so she doesn't appear to be drifting in a featureless void. This can be seen in Figure 3.41.

In my own studio I've found that simpler methods can be quite effective in producing bounce lighting, in which shadows are reduced to a minimum. My studio has a low ceiling (just over 10' high), which is usually a source of

Figure 3.41 Just enough shadow to give the image orientation.

irritation; but it makes it easy to set up a flash head with a set of barn doors, aim it at the ceiling from a height of about 7', and get an even coverage of light over an area about 10 × 10' at floor level. The light should be aimed at a point on the ceiling midway between the light and the subject, and t he angles of the barn doors can be adjusted to ensure that no light spills directly onto the subject.

To make this setup work effectively it helps to have as many white walls as possible, so I roll down the white paper background to cover one draped wall, and place my 6 × 6' white reflector in front of the other one. The result is very clear lighting, which has the natural and perhaps slightly characterless feel of a brightly and evenly lit room. Shadows are reduced to a minimum because the white ceiling acts as a massive diffuser, scattering and bouncing light in all directions, and the white walls surrounding the scene increase that effect. In Figure 3.42 the vivid red of the sofa helps make the image more punchy. Shadowless lighting also creates a luminous setting for black models, as in Figure 3.43.

Figure 3.42 The red sofa adds impact to the shot.

Figure 3.43 Shadowless lighting emphasizes delicate skin tones.

Candles

It's not difficult to include candle light in an image, as in Figure 3.44, where the position of the candles creates the impression that they're the light source for the photograph. In fact, a flash head on the right, with its beam narrowed by barn doors and softened with diffusion material, is providing 99 percent of the light in the shot. Note that because the shot is very low key, the candlesticks don't cast the telltale shadows that would reveal the existence of the real light source.

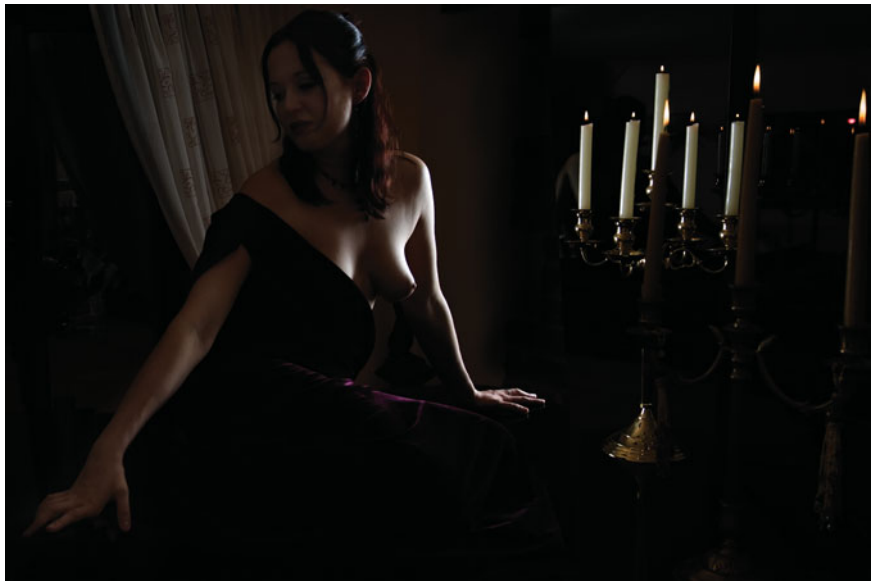


Figure 3.44 Creating the impression of candle light.

That works well enough, in its context. But genuine candle light has a uniquely soft, caressing, intimate look, and repays the perseverance needed to get it to work. Candles are open flames, so safety measures are appropriate: To capture the images in Figures 3.45 and 3.46, we worked in a clear space in the middle of the studio floor, away from all drapes and free from drafts, exercising great care when moving either the candles or the model.

For these images we worked with 10 candles, all but one of them out of shot. In Figure 3.45 the other candles are stacked up on the steps of a ladder to the right, and in Figure 3.46, seven of them are arranged in front of the model, with two behind her. This is the image I like best from the shoot: The one visible candle makes a convincing source for all the light in the image, and the model's hand curled round the candle integrates it into the shot.

Figure 3.45 Lit by a stack of candles out of shot to the right.

Figure 3.46 Light in front of and behind the model.

After some trial and error moving the candles around, the best exposure was found to be 1/6 sec at f/2.8. I didn't try to color balance the camera to the candles, but left its white balance set to Auto. I did shoot a ColorChecker chart, but the "correct" color looked so uninteresting that in the end I adjusted the color temperature by eye in Photoshop's Camera Raw plug-in, settling for something closer to the very red temperature of the picture as

shot, rather than to the more accurate color produced by following the ColorChecker. Figure 3.47 demonstrates the range of colors. You can also see here the green hotspots produced by the candle flames' refracting inside the lens. Apart from removing those and resetting the color temperature, the only other tweaks I made to the image were to brighten the whites of the model's eyes slightly.

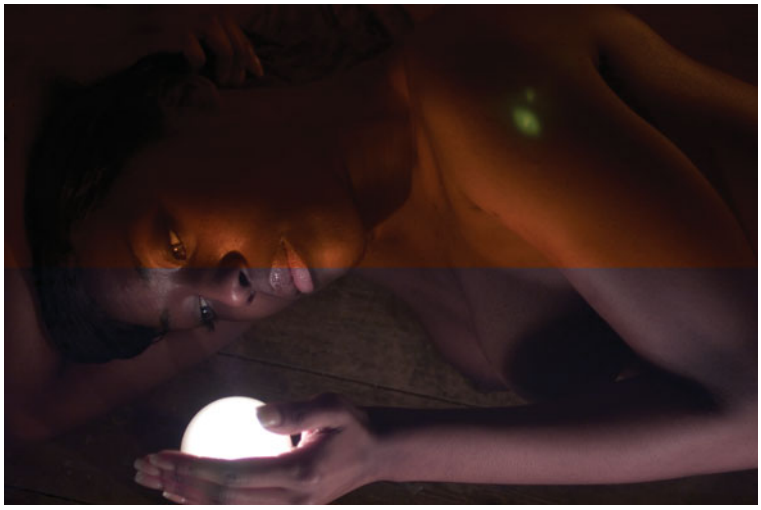


Figure 3.47 The color of the image as shot (top), and after using the ColorChecker to white balance (bottom).

Attachments

Attachments come in various forms.

Softboxes

Out of the box, flash kits are likely to contain, among other attachments, a small softbox. The softbox provides a diffuse light source which, ideally, has the same brightness at every point, although in reality the output of even well-designed softboxes does fall off at the edges. When you use the softbox for frontal lighting its shadows are so soft edged that it's hard to tell where they start, and even in their darkest areas retain detail.

The softbox is an important tool for many kinds of photography of the nude, and it's worthwhile buying the largest size (6 × 3' isn't excessive) you can afford. Small softboxes may be easier to work with when lighting a model from directly overhead, as in Figure 3.59 later in this chapter, but for more conventional angles, bigger softboxes are better. It gives the light I prefer for most of the studio photographs I take.

To create the even lighting which it achieves better than any other lighting device, the softbox should be aimed at the center of the scene, with its face parallel to the subject. In Figure 3.48, the softbox is positioned high, and is angled downward, creating a visible falling off of light toward the bottom of the frame. The image doesn't look badly lit, but in this position the softbox doesn't provide the even lighting I was aiming for. When the softbox is adjusted to the correct orientation and position, which in the case of a standing pose such as this means being positioned vertically and aimed at the model's waist, the lighting is even from top to bottom, as can be seen in Figure 3.49. In both images a white reflector on the viewer's right lifts the darker areas.

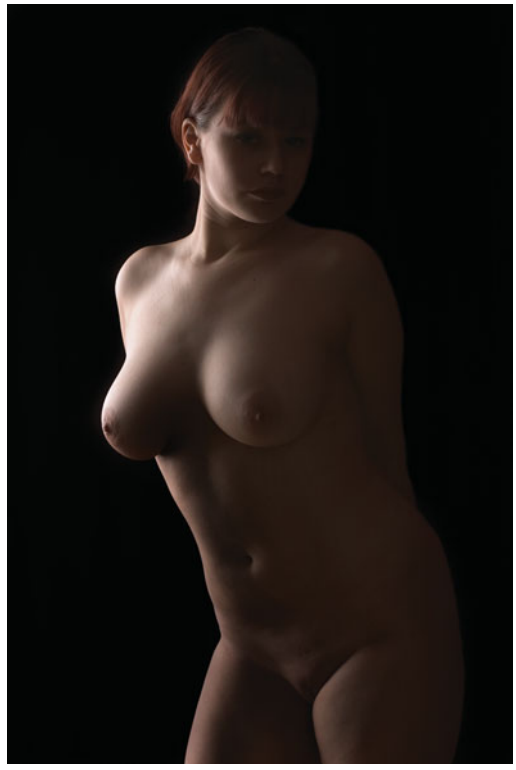


Figure 3.48 When the softbox is level with the model's head, the light falls away.

Figure 3.49 The model evenly lit.

Figure 3.50 shows a typical setup. (The cat isn't essential for the lighting to work!) Note the vertical alignment of the softbox, which is also slightly behind the model. By moving her a little closer to the reflector on the right or to the softbox, I can control the balance of direct and bounced light across her: A few inches makes a big difference. I can also angle the reflector around toward me. A leg supports it when it's not leaning against the wall.

Figure 3.50 Typical setup using the softbox.

It's instructive to compare softbox light and shadows with north light. At its best, the softbox provides a very satisfactory equivalent, as Figures 3.51 and 3.52 demonstrate. Figure 3.51 is lit from the window above the model's right shoulder, with light-colored walls all around providing some fill. Figure 3.52 is lit by a softbox on your right, with fill from the white background paper and a small amount of additional light on the model's hair.

Positioned obliquely to the subject, the softbox also provides great illumination to show textural details in skin. In the first of these examples (see Figure 3.53), the lighting creates a compelling and moving image out of the model's stretch marks—a telling demonstration of the difference between conventional ideas of beauty and what makes a beautiful photograph. In the second (see Figure 3.54), the different textures of skin, hair, and nails (in this case, the model is a man in his late forties) are vividly reproduced. The softbox also works effectively in bringing out the sensuality of smooth skin, as in Figure 3.55.

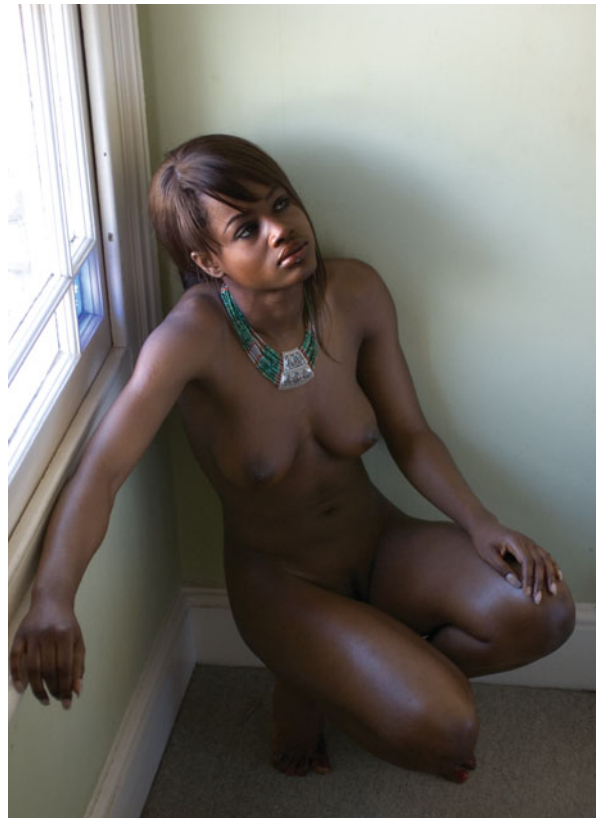


Figure 3.51 Diffuse light.

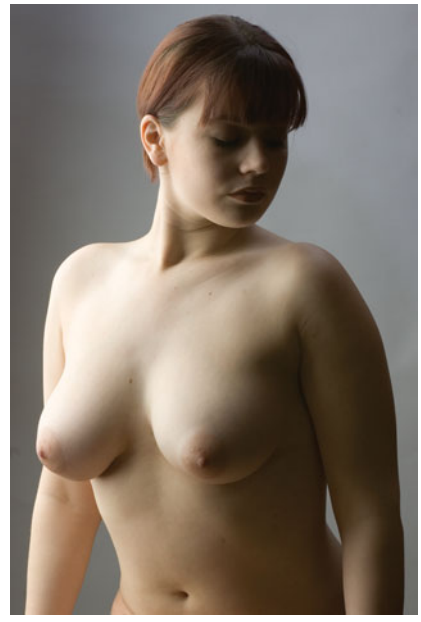


Figure 3.52 Using a softbox to create a similar effect.

Figure 3.53 A different beauty.

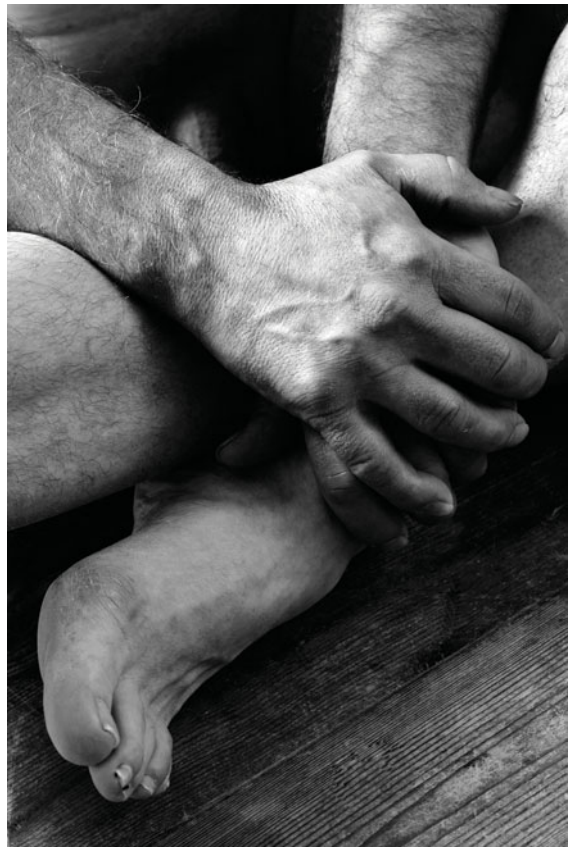


Figure 3.54 Soft lighting emphasizes textures.

Figure 3.55 The sensuality of smooth skin.

Big softboxes positioned on the far side of the model work well for rim-lit shots. The softbox itself can be used as a white background, as in Figure 3.56. It's positioned by trial and error to light the curves, here, of both buttocks, without creating refraction patterns inside the lens and without blowing out the edges nearest the softbox. In this position the softbox also shadows the deep furrow of Naomi's spine. The composition is suggestive of a yin-yang symbol. Posing the model against a dark background, and repositioning the softbox out of the frame, we can create a different rim-lighting effect, with the illuminated curves standing out against the black, as in Figure 3.57.

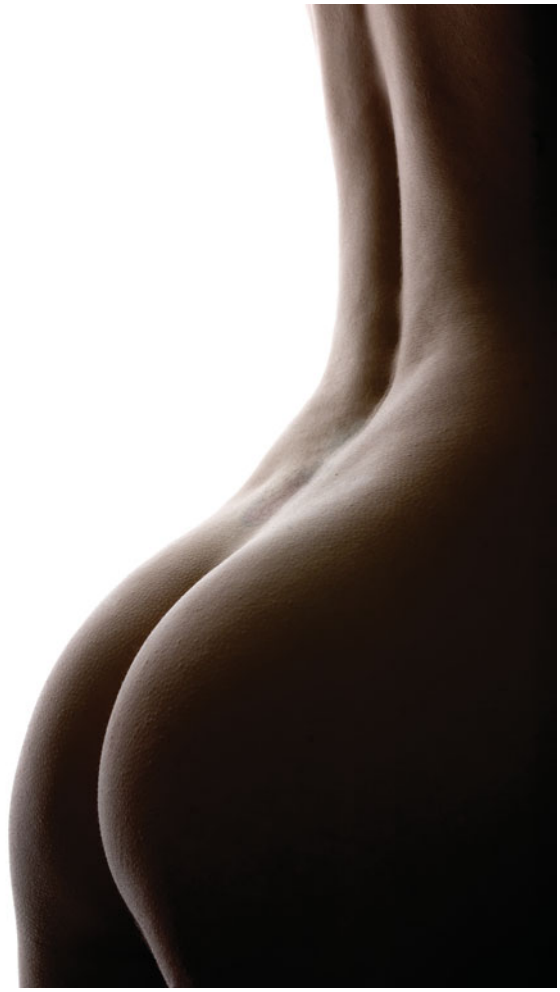


Figure 3.56 Rim lighting with a bright background.

Figure 3.57 Rim lighting with a dark background.

A small softbox positioned above the model's head gives a different look. To position the light so that it's facing straight down I hang it from a sturdy ringbolt screwed into a ceiling beam in my studio; an alternative is to use a securely weighted tripod with a boom arm. By itself, the softbox will light the shoulders too strongly, so a reflector needs to be used as well.

Once the light's set up, it's a matter of finding the best position for the model underneath it. In Figure 3.58 light from the reflector catches model JadedRed's eyes, as well as molding her curves attractively. A different head angle works well in Figure 3.59, lighting her eyes from the softbox itself (and with the reflector backed off slightly), but in Figure 3.60, after I'd asked JadedRed to shuffle backward barely a couple of inches, the play of light and curves has lost most of its subtlety. Softboxes typically have a reflective inner surface and two diffusers: an internal one as well as the front surface. You can experiment with different combinations of these, as well as remove both and use the softbox's reflector by itself.

Figure 3.58 Reflected light catches the model's eyes.

Figure 3.59 Here, light from the softbox catches the model's eyes.

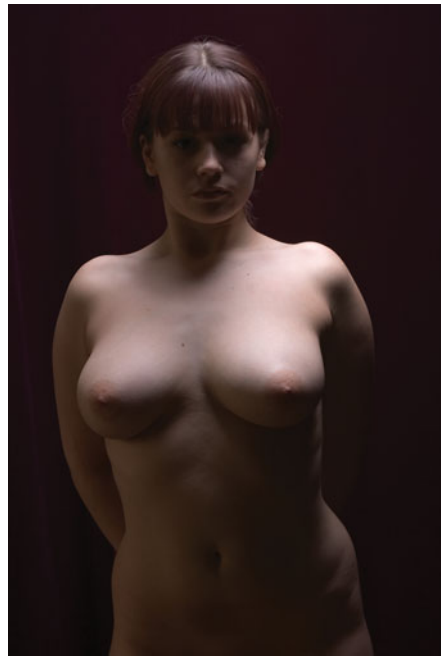


Figure 3.60 A small change in the model's position makes a big change to the image.

On-camera Flash

The built-in flash on most cameras isn't really a serious light source: It lacks power and leads to red-eye. On-camera flash units, on the other hand, have their uses. You can use a unit which has variable output as a fill light, particularly working outdoors, but you'll get better results and make more interesting shadows if you take it off the camera. In Figure 3.61 I've mounted the Nikon SB800 flash unit on a tripod to the right, adding extra punch on a bright but overcast day. The slightly hyperreal look of the lighting works well with the setting and the model's pose and fantasy makeup.

Figure 3.61 Horizontal shadows from a fill-in flash add a sense of unreality.

You can also bounce a sufficiently powerful on-camera flash off the ceiling if your studio flash units aren't available, or experiment with a diffuser cover for it. Or you can exploit the flash's intrinsically harsh, hard-edged journalistic feel, and go for a paparazzi look, as in Figure 3.62, where the model's caught-by-surprise expression contributes to the impression the image conveys. I've heightened the unfriendly effect of the lighting by pushing the shadows down a little further. Again, this was shot with the flash unit mounted on a tripod a little to the right of the camera. In instances such as these, the on-camera flash unit provides an effective light source which is both cheaper and more easily handled on location than a standard studio flash head driven from a portable power supply.

Figure 3.62 In the style of the paparazzi.

Other Attachments

Like lenses for cameras, there's almost no limit to the different reflectors and other attachments you can buy to enhance your lighting kit, as a quick browse through the manufacturers' web sites will reveal. Apart from buying bigger softboxes and several square feet of diffusion material, I work with a couple of attachments with my Bowens two-head 500W kit. This is the 120º wide-angle umbrella translucent reflector you can use as a diffuser to shoot through, as well as a silver reflector cover for the brolly, and a Maxilite reflector with barn doors. The wide-angle umbrella reflector, which can be used by itself, has a highly polished reflective surface; the Maxilite's reflective surfaces are duller and stippled. Highly polished, reflective surfaces combined with a narrow diameter produce intense, hard-edged shadows like those in Figure 3.63.

Figure 3.63 A highly polished reflector casts crisp shadows.

Apart from its usefulness in casting intentional shadows, the umbrella reflector seems to me too brutal for most photography of the nude. Shooting through its white brolly, however, softens its shadows, which are still harder edged and denser than the softbox. This works particularly well in creating pools of light and shade in images such as Figure 3.64, but is perhaps less appealing when used as a main frontal light source, as in Figure 3.65.

Figure 3.64 Using the brolly in a backlit image.

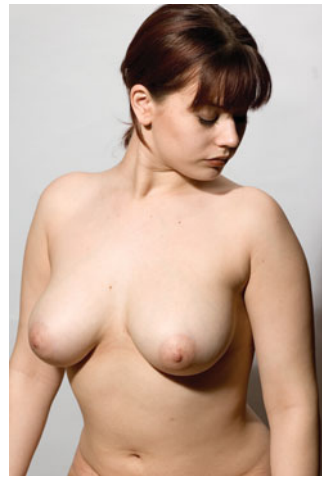


Figure 3.65 Brolly light is harsher than the softbox.

The barn doors on the Maxilite reflector allow its beam to be narrowed down—for example, to create shadowless lighting or to provide a hairlight like that in Figure 3.66. By itself, the Maxilite's light is rather too harsh to use as a hairlight but it can be softened by clipping one or two thicknesses of diffusion material onto the barn doors. Diffusion material, principally produced for use in film and video lighting, is available from manufacturers such as Lee (www.leefilters.com) and Rosco (www.rosco.com).

Figure 3.66 Barn doors prevent light from the hairlight spilling onto the background.

Taking pictures during the shoot involves many aspects: planning, preparing, posing your model, and finding interesting angles and frames; deciding on locations; furnishing the studio; choosing from the dressing-up box. Other considerations include working with your model before, during, and after the shoot.

Planning and Ideas

Where do ideas for images come from? Different photographers give different accounts. Talented young Floridian photographer Chris Oakley neatly summed up the interweaving strands of his creativity:

> I'm always reading books on photography, and there are always shots that catch my eye. I use them for a basis (not to copy them). It could be the pose, the lighting, the contrast…just something that gets my mind thinking about integrating something in there which I like, into *my* shot. Once that process starts, it takes on a life of its own, and grows into what I will capture. I've trained my imagination to develop scenes: I can actually build an entire shoot (lighting, costume, makeup, location, etc.) in my head and see it just as it will appear when I shoot it. When I plan something out in my head there's no guesswork; everything in the shoot is set up as I [envisioned] it. And when I know for a fact I have the whole setup the way I planned it and want it, I shoot very instinctively and follow the model, reading and anticipating her poses and emotions.

Chris clearly expresses here what seem to me the three main components of photographic creativity. The first is the photographic and visual *environment*. We're all of us inevitably influenced, more or less consciously, by the endless flow of images all around us. Chris seeks such images out, as part of the development and growth of his art as a photographer. The visual environment also includes the real world around us. If you live in an area where seasonal change makes a big difference to the light and to nature, your ideas for location shoots are bound to be shaped by the time of year.

The next element is *imagination*: the photographer's ability to assimilate and transform those found ideas and images into something new and distinctive, within a carefully considered framework of lighting, location, and so on. Imagination isn't a rational, thinking process so much as a subconscious, intuitive one making connections while the conscious mind is busy doing something else.

And the final element is *awareness*, by which I mean the photographer's ability to respond to what actually happens during the shoot, allowing immediacy and spontaneity into work already partly shaped by environment and imagination.

Although in terms of our own practice of photography each of us would probably emphasize differently each of these three elements, we need to keep them all in mind as we shoot. Clinging too much to a preconceived plan, we may fail to notice marvelous but fleeting poses and expressions from the model, and distrust our intuitions in the moment. At the same time, going into the shoot unprepared is, in effect, expecting the model to do all the work for you. A good, experienced model with a wide repertoire of poses won't disappoint you, but who really created the resulting photographs—you or her?

So developing ideas and planning for the shoot go hand in hand, whether you work your ideas out in your head, as Chris does, or keep a notebook of themes and ideas, as many other photographers do. As your experience grows, you acquire a repertoire of techniques, approaches, and working methods in which you have confidence, and can adapt and combine to express the theme you're working on and to respond to what you see and feel as the shoot progresses.

One theme, for example, might be creating bodyscapes. Another might be setting the model in a dominant position: shooting powerful poses from low angles. You might choose to shoot one set in a limited location, such as one corner of a room, giving the model scope to find different poses within that constraint, which you combine with a specific style of lighting. Figure 4.1 exemplifies this. Being positioned in the corner gave Jessie a feeling of confinement, which she responded to by drawing even more closely against the wall. The scene was lit by a small flash head bounced off the wall out of shot to the left, creating the feeling of an image illuminated only by window light.

Figure 4.1 Model Jessie posed in the corner.

Another approach might be to work with available light; another might be to shoot silhouettes; another might be to set up your lights to give virtually shadowless illumination; and so on. The purpose of approaching the shoot in this way is to provide a *framework* within which you can operate with assurance, moving toward goals you and the model both understand. This also helps project a sense of purpose to the model, to encourage her to keep focused on the work.

Once you've evolved the theme or themes for your shoot, many aspects of planning are straightforward, although they can be time consuming. There are the hours you spend on the Internet, in online chat, on the phone, writing emails, signing up a model, discussing ideas, pinning down a date and time, and confirming levels for the shoot. Then, locations need to be secured, the studio set up, and lights, storage cards, and lenses checked; perhaps you wish to book a makeup artist; and so on. You may want to hire additional equipment, like the fish-eye lens I use for one of the summertime location shoots described in this chapter, or negotiate with a body painter to do a piece of collaborative work.

Places to Shoot

In this section we'll consider the range of photographic settings provided by a commercial studio and by shooting on location. Then we'll see what can be done in an ordinary house and garden, and end by looking at the possibilities offered by a home studio; see Figures 4.2 and 4.3.

Figure 4.2 This was shot in my garden. The color treatment combines with the enveloping foliage to suggest an escape into solitude, with an additional element of sensuality conveyed by the model's sandals.

Figure 4.3 One of the features of my home studio is its wooden floor. The floorboards are pine and about 100 years old. After experimenting in other studios with highly varnished floorboards or laminates, I chose to stay with this rougher, less-finished look.

Commercial Studio

Even if you have a home studio, you may be tempted to make occasional use of a commercial studio. It may offer more space and equipment, as well as a range of sets which you'd find difficult to create at home. If you don't have access to a usable space at home, then a commercial studio is even more attractive, providing a controllable environment in which to work. In this section I'm using, as an example, Photo-Studio, a small commercial studio about 35 minutes from Cambridge.

As a basic set of facilities for the photographer, a commercial studio should offer the following things:

- Up-to-date flash heads
- A good range of softboxes, umbrellas, snoots, and barn doors
- Reflectors, colored gels, and diffusion material
- A wind machine to blow the model's hair about is also a common item of equipment

- Rolls of background paper in different colors (and possibly other backgrounds)
- A private changing space for the model
- A well-lit area with a table for the makeup artist (mua) to set out materials and work effectively

Background rolls are regarded as consumables, and you should expect to pay for the amount you use. Most studios will also offer free coffee or tea. And the studio's management should be discreet: quickly available when you need them, invisible when you don't.

Typically the studio is divided into sets, as in Figure 4.4, where behind model Eliz and mua Tess Mangan you can see the bedroom set, a sheet metal background, and a military set hung with camouflage netting. Photo-Studio also offers office and classroom sets and a rustic barn set, complete with 150-year-old oak beams. On this shoot we decided to use the bedroom, the metal background, and the rustic barn.

If you haven't seen examples of work done in the studio on its web site (or possibly even if you have), when you walk in and view the studio for the first time you may feel disappointed: The sets, squeezed in next to each other, may look unreal and unconvincing. With competent lighting, however, they'll come to life. Once you settle into working in this different environment and your eye adjusts to it, the results you get can be of at least the same standard as the rest of your work.

Figure 4.4 Some of the sets at Photo-Studio.

It's a good idea to check with the management how freely you can move equipment and furnishings around for yourself, or whether the studio staff expect to do that for you. By default studios tend to assume that you'll want to use fairly conventional, open, frontal lighting and organize their sets accordingly, so you may need to move lights and even parts of the sets around to achieve different lighting styles. In the bedroom set, for example, I wanted to shoot into the light, which required the bed to be moved away from both walls to make room for the flash head and to avoid light spilling from the edge of the softbox creating a hotspot on the wall behind the model's head; see Figure 4.5. There's also a large, silver reflector on the camera side of the shot (and the encroaching column of the tripod behind the model's hip was removed in postproduction).

Makeup for the bedroom was a basic natural look, but we decided to be more experimental with makeup for use in the other settings. The pattern of ridges on the metal background and the hard, reflective properties of the metal suggested a design of cross-hatched lines of dark, iridescent body paint across the model as Figure 4.6 shows.

The pair of images I was most pleased with from this shoot were made on the barn set, making use of nothing more than a few handfuls of the straw lying on the floor. Figures 4.7 and 4.8 show the results, with the tight framing and sepia toning evoking the early days of photographic erotica. The digitally created sepia toning also helps the carefully positioned straw blend with the body makeup.

Figure 4.5 Setting up this shot required furniture and lights to be shifted.

Figure 4.6 The metal background is most effective when it's sharply in focus.

Figure 4.7 Straw from the floor of the barn, used…

Figure 4.8 …to conceal and reveal.

Location

Location shooting is a stimulating challenge. Far from the security of the studio, where the components of every shoot are well known and reliable, location work may involve travel, extra expense, issues of access, the vagaries of weather and light, the need for solitude, the fragility of equipment…. At the same time, the location shoot also places the photographer and his model in the real world, with its opportunities for originality, creativity, imagination, and strikingly different images. A location may just be your own back garden; it might be a barn or factory; or it might be the middle of a desert. In each case (except perhaps the first) you won't want to go back for anything you've forgotten, so preparation is important.

Technically the greatest challenges in outdoor location photography are to do with containing the range of lighting intensities within a scene which contains bright sunlight and deep shadows. Avoiding the vertical angles of light and shade at noon helps reduce the problem, and a polarizing filter can make a huge difference also. Polarizers work best when the lens axis is at right angles to the direction of the sun: They have little effect when you're shooting straight into the sun or have the sun on your back. In Figure 4.9 the sun is to my left, and the polarizer holds the full range of tone and color in the cloudscape behind the model.

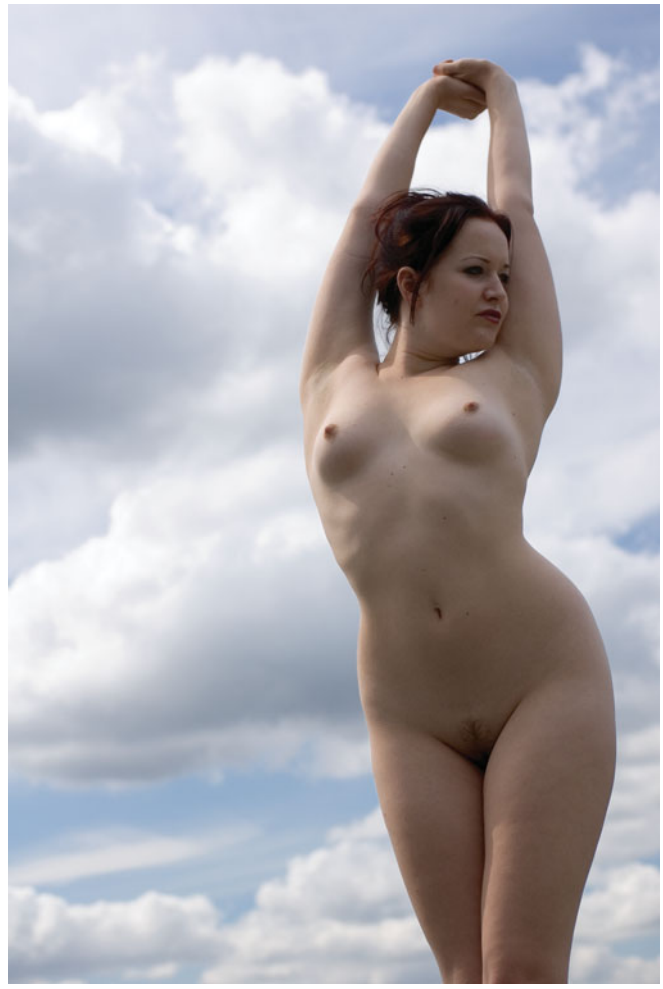


Figure 4.9 Using a polarizer.

The unpredictable flow of light and shade in outdoor location shoots makes the histogram and highlight displays of a digital camera invaluable. Bright sunlight and deep shadow push digital cameras to their limits, but at least the photographer can tell what's happening. The wonderful shadows across the path in Figure 4.10 and the play they make with the model's skintones proved less than straightforward to capture: A lot of time was spent waiting for just a wisp of cloud to drift across the sun, in the hope that it might make the dynamic range more manageable. (And yes, that is a cyclist, complete with faithful dog, coming rapidly into view at the far end of the path.)

Shooting your images uncompressed rather than JPEG also helps here, as this maximizes the dynamic range the camera can capture. This in turn makes it more possible to improve the results in postproduction in Adobe Photoshop. In Figure 4.10 I've used Photoshop to lift the highlights and midrange of the image, while allowing the shadows to hold their intensity.

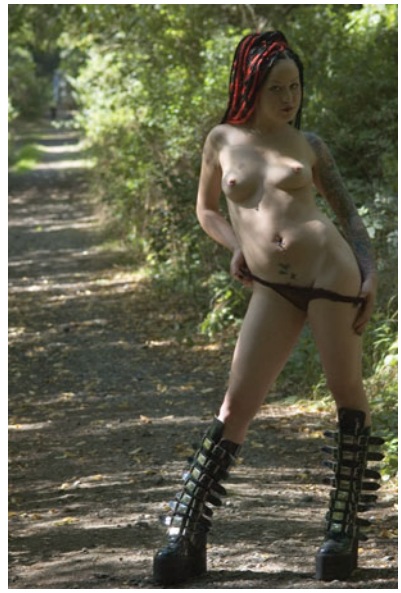


Figure 4.10 Waiting for the light: a traditional pastime for the outdoor photographer.

Choosing a Location

The locations you choose will be those which move you and stimulate your curiosity. Coming to the U.K. as a young man, used to the vastness of the Australian landscape (while at the same time being ignorant, as most Australians were then, of its human history), I couldn't fail to be struck by the extraordinary diversity of the U.K. landscape and scenery, even in the shortest journey. Both natural and man-made features are densely packed into this small country, and you quickly come to understand that almost all the nature you see around you is far from natural, but is the result of human intervention. People have been making marks on this landscape for millennia, whether for agricultural, architectural, or ritual purposes. Living in this landscape, and spending much of my free time exploring it on foot, led to a deep interest in landscape history and painting, which in turn have influenced my approach to photography. And this combined somehow with my education in classical Greek culture, with its reverent awe for the forces of nature.

Photography in this landscape thus becomes a way of creating a new, personal vision of what it is to be human, drawing and building on that long tradition. The first set of images in the next section were created within four miles of each other, yet draw on very diverse settings. I'd known the area in which they were taken, not far from Stonehenge, for about six months before the shoot, and had walked much of the ground in preparation. I also worked with detailed maps to identify locations which were likely to have deep vistas and varied growth. Even so, the day was full of surprises and unanticipated opportunities.

In terms of equipment, the only special item I took with me was a fish-eye lens. The overall theme for the shoot was to find as many different settings within a small area as I could, as a series of reflections on the balance and scale of the human figure against the English summer landscape and sky. Initially I envisaged doing some shots with a wide-angle lens, to manipulate the scale of the natural setting within which the model appears. Eventually I decided to rent a fish-eye lens to maximize that effect. As so often, the reality worked out rather differently. The morning was very bright, with almost no cloud. Without a polarizing filter for the fish-eye lens (such a thing is prohibitively expensive), it wasn't possible to get enough detail and color in the sky to make the image work as I'd wanted it to. In the end, the shots which work best made use of the glitter of the water, with less emphasis on the sky. Figure 4.11, with its distant swan, illustrates this. With a standard lens and polarizing filter back on the camera, the limpidly clear water of the stream provides scope for a range of poses, as Figure 4.12 illustrates.

The rolling fields and rough pastures provided a number of opportunities, some of which benefited from diverse treatments in postproduction. Figure 4.13 is such a shot, except that the seven-strand barbed-wire fence which marks the field edge and ran right across the foreground has been removed. This clean-up job makes clearer the harmony between the model's skintone

Figure 4.11 A helpful swan adds to the composition of the shot.

Figure 4.12 Venus emerging from the river.

and the color of the grasses on the field edge in the afternoon light, as well as the connection between the flow of the grass and the model's hair in the breeze. In Figure 4.14 the model's pensive pose and the sense of solitude, and engagement between the human figure and nature, are enhanced by the warming effect of digital sepia toning. It's an image which evokes the spirit of an ancient Greek landscape, with the model in the role of the goddess whose benevolence ensures fruitfulness and survival.

Figure 4.13 Deep views across the English countryside.

Figure 4.14 From the ancient world.

The diminutive scale of the human figure against the mature trees in the background in Figure 4.15 is balanced in the image by the opposing contrast of light and dark. The high-contrast treatment of the image also catches the gleam of light on the foliage. A softer treatment of light and texture is more appropriate to this meditative image (see Figure 4.16) in which human mortality and physical beauty are juxtaposed. Just as Figure 4.14 evokes ancient Greece, so this image derives from a painting by the 18th-century artist Poussin, in which a group of shepherds in an idyllic landscape gather around a tomb, clearly reflecting on the transience of their own existences.

Figure 4.15 A study in light and shade.

Figure 4.16 Reflecting on youth and eternity.

Other Locations, Other Models

A worked-out lime quarry provides a location with a very different feel to it (see Figure 4.17). The wide swathes of bare chalk have a harsh, almost lunar, quality and the cliffs and scrubby trees have an arid look very different from the English countryside we've seen so far. The day was windy, with periods of bright sun and fine cloudscapes—again, shot with the help of a polarizing filter, which also helped keep the brightness of white chalk on the quarry floor within manageable limits; see Figure 4.18. It's worth noting that the effects of a polarizing filter are amongst the hardest to mimic in digital postproduction.

Figure 4.17 A deep view of the location.

Figure 4.18 The polarizer takes the glare off the chalk.

Chalkland is home to numerous species of wildflower, many of which have returned to the quarry since it was abandoned: they contribute to a more intimate image in Figure 4.19. An unused agricultural building, in Figure 4.20, creates a very different mood again. Its rigid, straight lines, harsh textures, and stark emptiness are offset by the softer play of light entering through the open end and side of the building and through roof lights.

Figure 4.19 The spider is a happy accident!

Figure 4.20 Pools of light.

Around the House

Moving between varied locations provides good opportunities to experiment, diversify, and create a varied portfolio. There is in any case a great attraction in domestic environments which look natural and real, so I'm going to take you on a photographer's guided tour of my terrace house in Cambridge, U.K., to demonstrate some of the opportunities even a small dwelling offers. Mostly this is a series of exercises in using available light (see Figure 4.21), though of course it's always possible to work with flash heads anywhere indoors, not just in the studio.

At the same time, for all their attractiveness, such locations may suffer from the disadvantage that they're too cluttered with all the signs of everyday life to work well without a certain amount of adjustment and simplification, and that also needs to be allowed for and carried out. It's a question of getting the balance right: If you strip out of the frame every item which forms part of domestic life, the picture takes on a studio look. (Nothing wrong with that, of course!) If you fill the frame with too many distractions, the model might as well not be there.

Compare the images in Figures 4.22 and 4.23 which illustrate both sides of this dilemma. This idea started with the view from my kitchen window on a wet summer day, the beautiful light coming through the window and the interesting Mexican tiles below it. But even after managing to bounce enough light back from the camera side to light the model the way I wanted and to make the scene look natural, the picture still wasn't satisfying and needed a fair amount of postproduction work to eliminate or modify its distractions. (In fact, I'd put this image aside after the shoot, over two years ago, because it seemed likely to need so much work, and only reconsidered it when I started to look for examples for this book.)

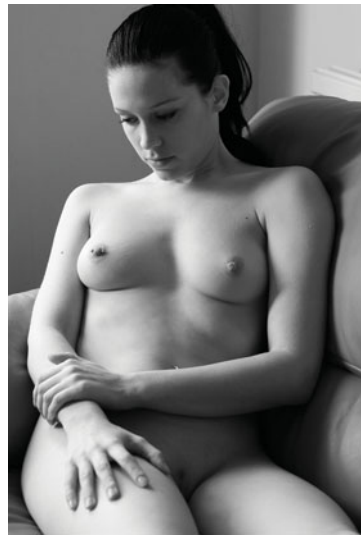


Figure 4.21 Available light from a large window is hard to beat for the sensual, romantic look it gives.

I rotated the picture in postproduction to level the edge of the windowsill and remove that tangle of wires, the shiny brass security lock on the window, and the electrical outlets on the right. (With hindsight, it might have been a good idea to remove the window catches as well.) I've carefully blurred the more distant surfaces of the window frame and the view through the window (a different amount of blurring for each). As well as creating a better sense of depth, this also has the effect of losing those distracting raindrops on the pane. The eye is now able to concentrate on the model and the contrast between her curves and the shapes and patterns of the tiles.

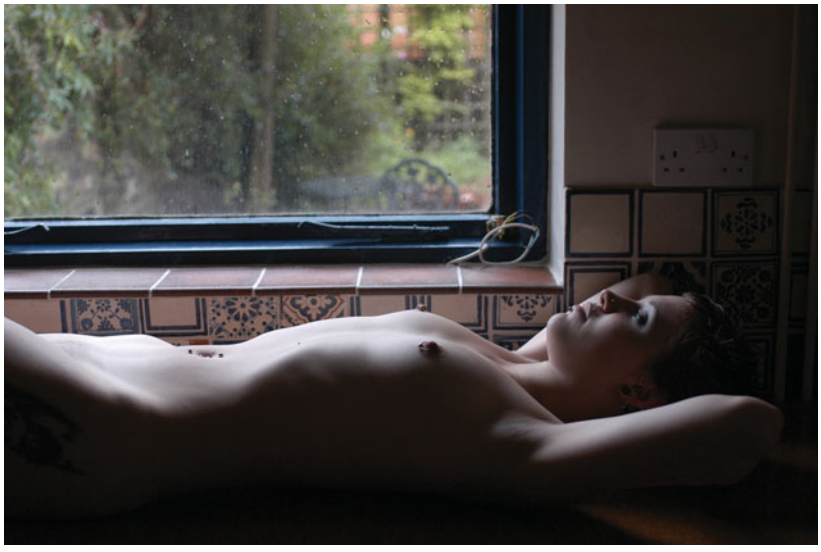


Figure 4.22 Using a real domestic location, with its inevitable distractions.

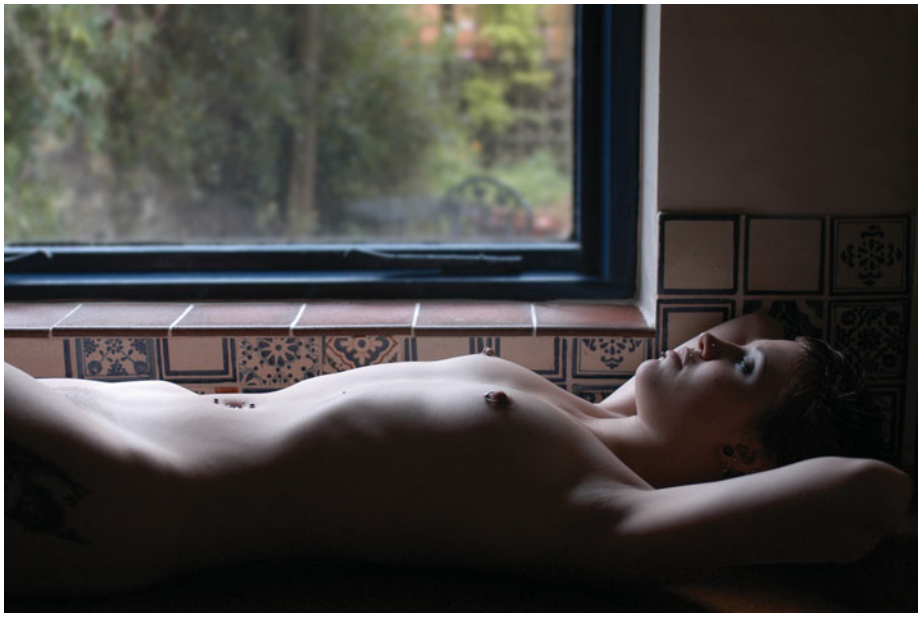


Figure 4.23 This is more what I envisioned when I set the shot up.

Any dwelling is likely to offer a range of possible locations, each with its particular qualities. In Figure 4.24 a different window, partway up the stairs, enables me to shoot from a low angle, which emphasizes the curves of the model's hips. In this example I haven't used a reflector: The stairwell is fairly narrow, and the wall out of shot on the viewer's right is painted a pale color and reflects sufficient light to make the image work.

I shot half of this set with the lily prints in position on the wall behind the model, and half without. Along with the window frame, they seem quite effective in creating an uncluttered sense of a real domestic space. (There's actually a third lily print on the wall, above the two seen here. The top edge of this image cut through it, so I removed it postproduction.) The window overlooks a quiet side street and is high enough off the ground not to draw attention to the model.

Figure 4.24 Working on the stairs makes it easy to shoot from low angles.

Like many British terrace houses, mine has a bay window in the living room at ground level. The bay faces north, and as there are no tall buildings opposite, it provides bright, diffused lighting. A sofa positioned in the bay window catches the light well, and because the house is set back from the road behind a shallow garden, models positioned here don't attract the attention of passersby; see Figure 4.25. (There's a slight cheat here. The view through the window is taken from a different shot in the same set and combined digitally with this interior, because I like the coat of the passerby, which closely matches the color of the sofa.) So exploring the house reveals a number of possibilities for using it as a photographic setting, relying simply on available light. And then there's always the bathroom and the bedroom.

Wetting the skin—with water, oil, or mud, for example—adds to the sensuous appeal of the image. The bathroom's an easy and safe place to work with water in your shoot. Figures 4.26 and 4.27 show where I've covered the wall tiles around the bath to get a less distracting background. In the first example the cosmetic mud needed to be kept wet, or it would dry to an unappealing, pale color. I was assisted here by an artist friend of the model's, who daubed and painted and sprayed water on the model while I clicked away. In the second example I'm using aluminized plastic sheeting as a background: It reflects light back into the shot and provides a beautifully fragmented reflection of the model as well.

Figure 4.25 Passersby pass by.

Figure 4.26 Working with wet cosmetic mud.

Figure 4.27 On reflection.

Then there's the bath itself. A white bath in a white bathroom can be a frustrating location to shoot, with light on all sides killing shadows and making images look flat; and the bath itself reduces the range of camera angles. In my bathroom the main available light comes through a tall window at the faucet end of the bath, so I hung a black velour drape on the wall at the opposite end of the bath and along the wall at the other end to kill some of the reflected light.

This would have worked fine for a conventional girl-in-the-bath image. But what caught my eye as we worked was the way the water eddied around the model when she moved. After some experiments, with the model's husband sending the water swirling over her, I settled on a shutter speed of 1/6 second (at f/5.6). The water was moving fast and rather unpredictably, so I improved the chance of getting a couple of good images by switching the camera into continuous shooting mode. In the end we took 100 photographs in less than 5 minutes.

The two images shown here demonstrate the very different moods that result. In Figure 4.28 the body seems hard and unyielding as the water is driven around it. (The apparent shadow of a bird flying over the model is actually the partially visible gothic cross tattooed in the small of her back.) In Figure 4.29 the body is inundated by the almost sexual energy of the water.

Figure 4.28 The body resisting.

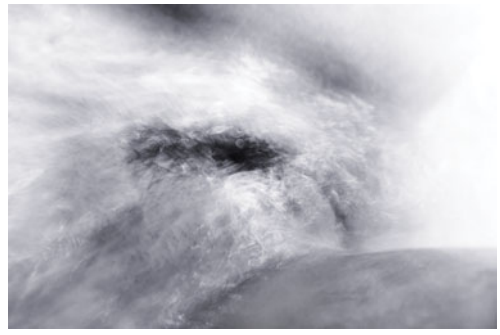


Figure 4.29 The body yielding.

The bedroom is another frequently used photographic setting, for obvious reasons; see Figures 4.30 and 4.31. The smooth regular curves of the ornate wrought-iron bed frame adds to the voluptuousness and dynamism of the couple's entwined bodies in the first example, and is visible in the mirror in the second example.

Figure 4.30 Exploiting the curves of the bed frame. This image was suggested by Gustave Courbet's great painting Le Sommeil (1868).

Figure 4.31 The mirror fixings are shimmed at the top so that the mirror angles slightly downwards, making shots like this easier to achieve.

Home Studio

The final stop on our guided tour of the house is the home studio. I use this term for what is, in fact, a temporary conversion of my living room. Setting it up as a studio involves hanging dark, full-length drapes on two walls and using the same fittings that support the drapes to set up rolls of background paper. I then take up the rug which normally covers the wooden floor. The roll of background paper is the easiest way to achieve a flat, bright background. Light-colored drapes show every wrinkle and shadow.

Originally I draped all three walls, but then discovered that just two dark walls at right angles to each other work fine, and that it is useful to have some light bouncing off the third, white wall behind the camera. The drapes can also be opened on one wall to enable me to use window light. In Figure 4.32 the dark drapes provide a strongly contrasting background for the model's skin tones, and the window provides the principle light source with a 6 × 6' reflector opposite it.

Figure 4.32 Working in the studio with available light (f/4.5 at 1/15 sec).

But why work in a studio? The argument against the studio nude is that the studio is an unreal and artificial setting that represents a convention that has been worn out and overused since photography began, and that studio lighting draws attention to that artificiality. The factual part of the argument is certainly true: The studio is an unreal setting, and countless nudes have been shot in studios (just as in earlier ages countless nudes were painted in studios). But while the tradition may be old, it isn't necessarily exhausted: The photographer's imagination, vision, and skill can still find new things to say, and new ways of appealing to and moving the viewer. Studio images can also acquire an extra richness precisely *because* they belong to that long tradition. In Figure 4.33 the pearls, fake fur, and model's voluptuous look evoke the tradition of nineteenth-century French erotic studio photography and painting, reframed into a more modern white space.

Figure 4.33 An image which evokes a long photographic tradition.

I'd hate to be confined to the studio environment forever, with no opportunity to shoot elsewhere, but there's no doubt the studio remains a valuable resource for every photographer. There's more excitement, but also more frustration, in location shooting—all that time spent waiting for the light to be right, for example, and, on a nude shoot, finding suitable and safe locations. The more your eye and attention to detail develops, the more frustrating and limiting it can be to have to work in environments where too many variables are outside your control. Think of working on location on a windy day, with clouds whipping across the sun (and the model's hair whipping across her face) as you try to set the aperture. There's a balance to be struck here, between the vividness of the real world and the more austere look of the studio; and between the intractability of the real world and the precision of the studio.

The strongest argument for working in a studio, then, is the control it provides over both lighting and the image's whole visual environment.

Furnishing the Studio

The idea of creating a home studio came about because my nearest commercial studio is nearly an hour's drive away, and I have to pay to rent it. Even the endless supply of free coffee provided by the management doesn't diminish the inconvenience of having to pack and take with me everything I might possibly need that the studio doesn't have. I don't mean lighting or other photographic equipment, but things like furnishings and garments for the models. (See "The Dressing-Up Box" later in this chapter.)

The furnishings in my studio are pretty basic, because I have limited storage space and need to be able to turn the studio back into a living room when I'm not shooting. I have a few chairs and stools of different styles, as well as a 1930s chaise lounge, whose shape produces distinctive reclining poses. The living room also contains two red leather sofas, as well as a large pine chest. None of these were bought with photography in mind; in fact, the color of the sofas makes it difficult to use one of my preferred techniques for converting color to monochrome on any image in which they appear, because it bleaches out to an unattractive pale grey. But all have their uses. As well as these items of furniture, I keep lengths of fabric of different textures and colors. In Figure 4.34 swathes of muslin give the whole studio a completely differnt look. In Figure 4.35 a length of richly colored velour transforms the chaise lounge.

Figure 4.34 Altering the studio's look.

Figure 4.35 Different coverings make the chaise lounge a versatile prop.

The Dressing-Up Box

Why would a photographer of the nude need a wardrobe? Maybe you don't if you only ever shoot pure nudes, but if you have an interest in the partial nude, it's worthwhile building up a collection of suitable garments. (This is in addition to the clothes and shoes you've arranged for the model to bring.) Your specific tastes and preferences may differ from mine, but I think the principle of building up an inexpensive collection makes sense for every photographer in this field.

Over the years I've accumulated a range of clothes in lace, net, and other sheer materials, gloves, scarves, and shoes, mostly bought secondhand or on sale. There's a wonderful vintage clothing stall on Cambridge market which, over the years, has produced some great bargains. Most models, not surprisingly, love dressing up, and will become absorbed in the contents of the dressing-up box. Many will find something which strikes a chord with their own fantasies. This can lead to great images as the model puts that special something extra into her poses, as in Figure 4.36.

Figure 4.36 I thought I'd never get Alex to remove the red gloves!

Models are often happy to lend each other garments for a shoot, as in Figure 4.37.

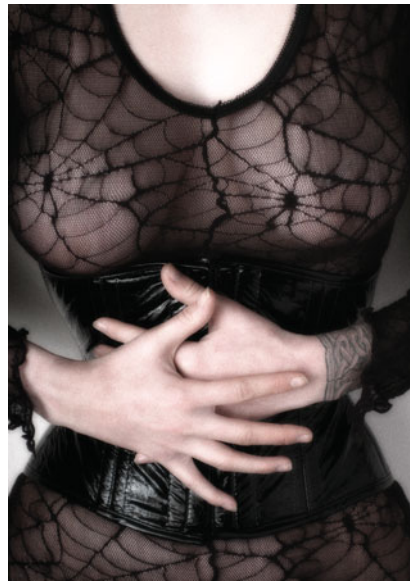


Figure 4.37 In this, her first shoot, Claire is wearing a spider-web dress from my wardrobe and a corset belonging to Jackie, who introduced me to her.

Some garments hang around for months until an opportunity to try them out arrives; see Figure 4.38.

The "Slut" top, despite or because of its unusual graphics, is also a favorite with many models. In Figure 4.39 Naomi's "Don't mess with me!" gaze and severe hairstyle create a teasing and ironic contradiction of the top's apparent message.

Figure 4.38 Zoey's distinctive and contemporary look seems paradoxically to work with this 1920s-influenced lace dress.

Figure 4.39 Typography as fashion statement?

Corsets are a favorite theme for many photographers. There's no point for a photographer in owning huge numbers of them, however, because corsets have to fit properly if they're to photograph well. It makes better sense to rely on using the model's own. Under-bust corsets may be an exception to this, and a 24" under-bust corset—one which reduces the model's waist to 24"—has proved very useful. The others in my collection (of four) fit some models, but not others. With practice it only takes a moment to try a corset out on a new model. See Figure 4.40.

The dressing-up box also includes a couple of synthetic fur jackets; see Figure 4.41.

I also collect jewelry, but this can be an expensive pastime; see Figure 4.42.

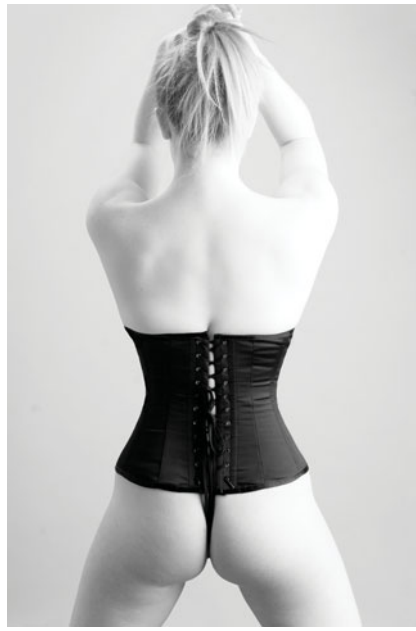


Figure 4.40 The corset emphasizes the model's curves by narrowing her waist.

Figure 4.41 The contrast of fur against skin forms a theme in itself.

Figure 4.42 Fake pearls don't quite have the luster of the real thing, but Rosie's mischievous expression more than makes up for that.

Rather than build up a vast collection of expensive pieces which would fairly quickly become redundant (you can't photograph everyone wearing the same jewelry), I've developed agreements with a couple of local stores which deal in ethnic and other unusual pieces to borrow from, in exchange for doing their publicity and advertising shots; see Figures 4.43 and 4.44.

Figure 4.43 Tia's dark skin tone beautifully sets off this simple silver necklace and pair of bracelets from India. I borrowed the pieces from a shop called Nomads in Cambridge for this shoot.

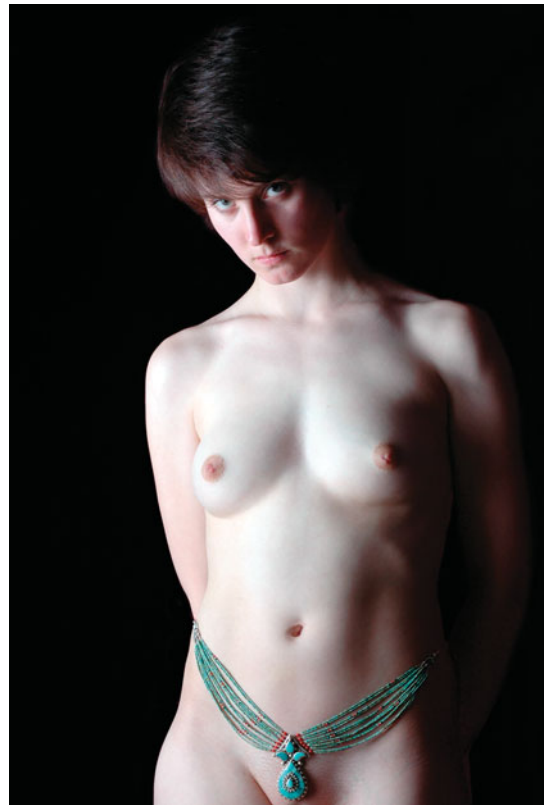


Figure 4.44 A beautiful and unusual turquoise piece, also from Nomads.

Over time one can build up a very useful network of contacts with craftspeople as well as stores; see Figure 4.45. Models often find shoots appealing if they're allowed to keep a favorite piece from the collection they've worn. It's a variation on the time-for-clothes form of payment discussed in Chapter 3.

Figure 4.45 For this shoot I worked with John Rothwell, a local silversmith specializing in making body jewelry.

Moving into the Shoot

Once you're ready to start, you have different options, which you'll want to talk through with the model. If as well as nudes I'm intending to shoot the model in garments which leave marks, such as corsets or fishnet tights, I prefer to leave those to the end of the shoot, to avoid the Photoshop clean-up work. On the other hand, if I have the sense that the model would prefer to ease into the nude sets gently (keeping in mind that at this stage she and I may have only known each other face to face for about 20 minutes), then I'll look for some clothed or partially clothed themes to pursue.

If I feel that the model's particularly tense, I may suggest that she and I do a few shoulder-rolling exercises to unwind. This also gives me a chance to talk about posture, and in particular about how important it is to keep the spine long, strong, and straight in most poses, while keeping limbs soft and relaxed.

I also remind her that there are really only two rules in my studio. The first is that we're there to have fun. We're going to work hard, but if the whole experience isn't enjoyable for both of us, that's a sign that I'm doing something wrong. And the second rule is that if I ask her to take any pose that she's not happy with, she must feel free to tell me so, so that I can change the pose to keep her comfortably within her limits. We will almost certainly have discussed both these points online, but they're always worth repeating.

My goal in the first half hour or so of a shoot, particularly with a new model, isn't to produce great pictures. That, hopefully, will come later, as the shoot develops. At the beginning, I'm aiming to get used to handling the camera again (I know, it's foolish!), to get the lighting setup right and, most importantly, to discover how best to develop a rapport with the model and to build a relationship of trust with her. The most difficult part of communication is receiving, not sending, messages, so this means not only giving instructions, but also noting how she responds to them, picking up on her comments and on the subtler body language which indicates how she's feeling about the whole process. And, of course, I'm also trying to learn about the model's appearance: what angles work best, how flexible her body is, how the camera "sees" her skin, and so on. I also assume with every model that I'll want to work with her again, so I'm trying to keep a mental note of other possible directions and themes to pursue, either later in this shoot or on a subsequent occasion.

How do you set a pose? The simple answer: You explain to the model how you want her to stand, sit, or lie. If (and only if) the model's agreed that you may do so, you can touch her to adjust the pose; otherwise, you explain in more detail until the pose is as you visualize it. With practice you'll get your and the model's left and right the right way round more often than you

confuse them. (I'm still working hard to achieve that!) You may find that you need to remind the model to keep her back tall, strong, and straight, and check that she's doing so just before you press the shutter. I find also that even with experienced models it's helpful to remind them to continue to hold each pose and not to move the moment they hear the shutter trip. This lets you check the shot on the back of the camera, and make any necessary adjustments to lights, camera settings, or your position, without having to reset the pose. As the shoot progresses, you'll issue an almost continuous stream of requests, in order to make small (but not necessarily minor) adjustments to the pose: "Turn your head to your left…sorry, I meant your right!…That's a bit too far…that's fine! Now look straight into the lens…your left shoulder needs to be a bit lower…" and so on. Lift your eye away from the viewfinder from time to time as you work, and look at the model in the real world, not just as an image.

A note on touching: The quickest way to make minor changes to a pose is often for the photographer to adjust the position of the model's hand, arm, or whatever. The rule is to always ask first! Some models are comfortable if you hold them carefully by the shoulders, say, to adjust their pose; but others will simply refuse to allow you to touch them, so you'll need to give them verbal directions instead. If you're doing a shoot where the model's agreed to be covered in something like oil, you may need to apply it to her back: Tell her exactly what you're going to do and make sure she's okay with it before you get started. It's better to have a model laughing at you for being overly cautious and repeatedly checking that she's okay, than resentful, distressed, and uncooperative because you've overstepped the mark. (On a practical note: If the model has a chaperone, it's much better, with the model's agreement, to ask the chaperone to do the oily work. That way you don't have to worry about getting oil on your precious lenses.)

In *Digital Nude Photography* I discussed the question of touching and received some criticism for bothering to mention it: Surely every photographer, even the most basic beginner, understands how to behave towards models? The blunt answer, which every model will give you, is that not all photographers understand. Apart from raising questions about the empathy and ethics of some photographers, there's a more pragmatic point to be made here. You won't get good pictures from a model who is stressed, upset, uncomfortable, or angry.

I've described this process so far as if it were a one-way flow of instruction from photographer to model. In reality you can expect to get feedback from a good model as you work—for example, when you show her images on the back of the camera. She may also offer advice about the poses you're asking for, based on her ideas about which angles show her at her best. This isn't

advice you're obliged to accept, but it shouldn't be rejected out of hand. In addition to all of that, you should remember to check from time to time that the model's okay—not too hot, not to cold, feeling comfortable with the work, enjoying herself. All in all there isn't a lot of peace and quiet in the studio.

You may also want to check with the model about any edgy shots you feel may be overshooting her limits. Even a slight position change by the model or camera angle may be more revealing than the model is happy with. Here the camera monitor and the Delete button come into their own as a way of helping build the model's trust and confidence in you.

As an example of how a typical shoot might run, here are some images from my first shoot with Opal. When I first worked with her, Opal had only a little experience of nude modeling, but we'd been friends for some time, so we already had good rapport. Her preferred way of working was to start off in the robe and gradually shrug it off her shoulders, finding poses with which she felt comfortable at each stage. See Figures 4.46 and 4.47.

As Opal became more comfortable with the shoot, the poses became freer (see Figure 4.48), and over time we explored a wide range of different setups (see Figure 4.49).

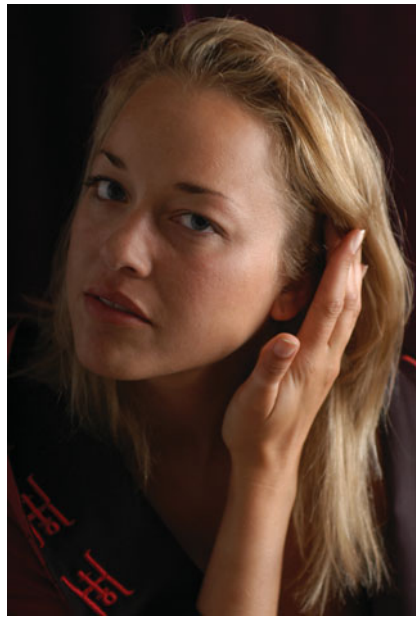


Figure 4.46 After changing into a robe.

Figure 4.47 The robe becomes part of the shot.

Figure 4.48 The model relaxing into posing nude.

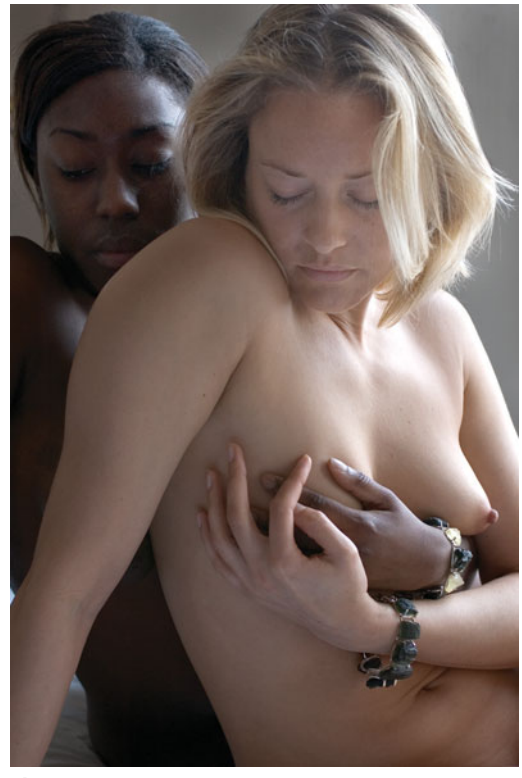


Figure 4.49 Working with another model.

As we start to work, I'll be carefully checking each image on the back of the camera, set to display the histogram. I'll also zoom in on the camera monitor to check that I have the depth of field I want. I won't show the very first shots to the model, because they're unlikely to be impressive: however many shoots I do, it always takes time to get my eye in. But once I feel there are some good images appearing, I'll show them to the model so she knows what's going on. Often this produces suggestions from her as to how the pose could be improved. Sometimes that will be an adjustment that the model feels will show her to better advantage—you may not always agree with her!—but sometimes it's a new take on what you're trying to achieve. It was SarahW's suggestion, for example, that helped me develop Figure 4.50—nice S curve and hair and some erotic impact from the tights, but a bit of a cliché—into Figure 4.51—the tights find a different use and the flying hair and SarahW's smile of pleasure make for a much more distinctive image.

Figure 4.50 A familiar pose.

Figure 4.51 A different twist, following up on the model's suggestion.

As I work I'm also thinking about how the images might be manipulated in postproduction. This may involve nothing more than a decision not to stop to sort out a slightly untidy background because I know I can fix it "in post," and that's preferable to disrupting the flow of the shoot. (On the other hand, I may conclude that a couple of minutes spent fixing the problem in the real world is preferable to much longer struggling with it in Photoshop.) Or it may mean pushing the lighting levels up to lay the foundations for a high-key image. Overall, the deeper your skills in picture editing, the more confidently you can approach the shoot.

The shoot will gradually fall into a rhythm: set a new pose, adjust the lighting, make some test shots (including the ColorChecker Chart), adjust the pose and exposure until you have the image you're looking for, check it with the model; set a new pose…. Plan to take a break every 90 minutes or so to offer the model something to eat and drink and to check with her that she's enjoying the shoot, to start downloading images, and also to give yourself a moment's calm and relaxation.

Shooting Faces and Expressions

What does each of the portraits in Figures 4.52 through 4.54 say to the viewer?

Let's reflect on how a viewer reads—attributes meaning, expression, and emotion to—the face of the subject of a photograph, whether it's a nude or a portrait. As viewers we have no way of knowing what the model was *really* feeling in the 1/160 second in which the photograph was taken; instead, we create an interpretation of the model's expression, make up a story into which the model and her expression fit, and take that interpretation and story to represent the truth of the model's experience and emotions at that time.

Figure 4.52 We seek to find the meaning of facial expression, in a baby's face as much as an adult's.

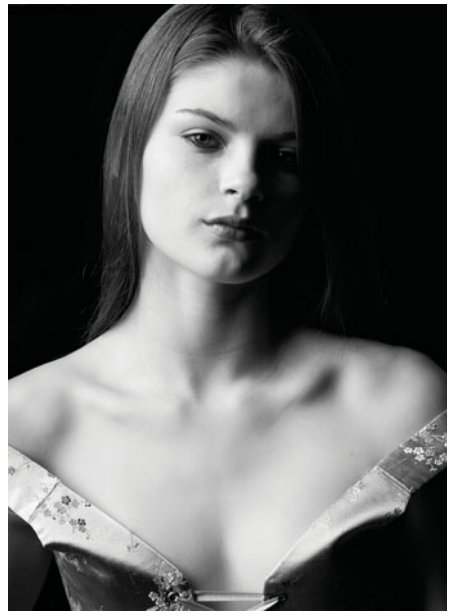


Figure 4.53 Serenity? Challenge? Detachment?

Figure 4.54 Defiance? Disregard? Rejection?

As viewers, then, we respond strongly to facial expression. The nature of that response is shaped not just by the expression in itself, but also by all the elements of photography which have been brought to bear on it: lighting, camera position and angle, and so on.

In the case of nude images, the way the viewer reads the model's expression will also determine how the body is read as a whole. From our point of view as photographers of the nude, this is very important: By setting the model's expression, we can influence how the viewer reads the entire image. There can be considerable differences between the readings different viewers give of the same photograph, but in any shot which includes the model's face, her expression is a critical part of the image. So our discussion of how to pose models begins with the face.

There's no such thing as an expressionless face. Some facial expressions may seem to the viewer to have a clearer, more obvious meaning than others, but if we can see the model's face we will seek to read a significance into her facial features. We may shoot the model frowning, smiling, snarling, or maybe looking enticing; see Figure 4.55.

Figure 4.55 "Hi there!"

In Figure 4.56 the gloves suggested the pose to the model, and the expression followed spontaneously from the pose. But the way we read the image works in the opposite direction, beginning with the expression.

Figure 4.56 Pose and expression go together.

These are expressions which seem pretty unmistakable: When we see them we can easily believe that we know what emotion the model's projecting at the viewer. On the other hand, the model may be gazing at us in a way which is much harder to read, her features less obvious or less distinct, and more ambiguous in what they convey. Or we may deliberately ask the model for an expression which contradicts the rest of her pose.

We can take this a step further.

If we shoot the model with her or his face turned aside or down, the viewer may still not escape from the impact of the *absence* of their gaze, that is, of the fact that they seem to be avoiding looking at us. Once more this is ambiguous: As in real life, a person may be *not* looking at us for a variety of reasons. The turned-aside gaze creates a vacuum, which the viewer's imagination works overtime to fill. We see this clearly in Figures 4.57 and 4.58, where the only difference is the direction of the model's gaze. With her eyes downturned she appears (to me) to be absorbed, either with something just outside the frame or perhaps with the adornment of her own body. With her eyes directed at the viewer, her expression seems assertive and challenging, the body paint taking on almost the quality of warpaint.

Figure 4.57 The model's gaze turned away.

Figure 4.58 The model's gaze directed towards the viewer.

One of the most striking aspects of the facial expression is the extent to which it draws our eye, even in an image where other, more obviously erotic elements are present. In Figure 4.59 the voluptuousness of the model's body and pose, with its undertones of masochism, isn't sufficient to hold our gaze away from her eyes and mouth. How would we describe her expression?

In Figure 4.60 all we see of the model's face is one eye. But because its gaze is unequivocally directed towards us, here again it calls our attention away from the sensual curves and vibrant colors of the rest of the image. Here again, our reading of the image as a whole begins and ends with the face.

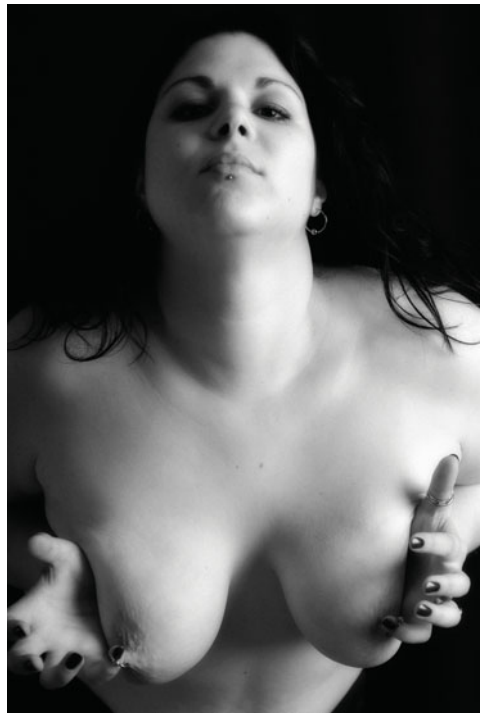


Figure 4.59 The model's expression recaptures our attention.

Figure 4.60 The model's eye provides a focal point.

The conclusion, then, is that any approach to photography of the nude which includes the model's face needs to give serious attention to facial expression and make a choice across this range of possibilities: from unmistakable yielding sexual invitation to the challenging level gaze which meets the viewer as his equal.

In practice, however, not all expressions are equally achievable. I've found that many of the models I've worked with find it hard to smile naturally for the camera: The results often look self conscious or rather frozen. The most natural smiles often come about by chance, or by managing to catch the model off guard, as seen in Figures 4.61 and 4.62.

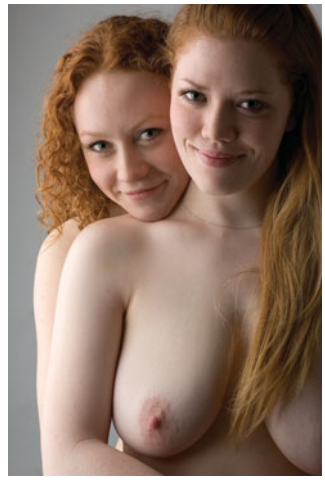


Figure 4.61 Happy in their work.

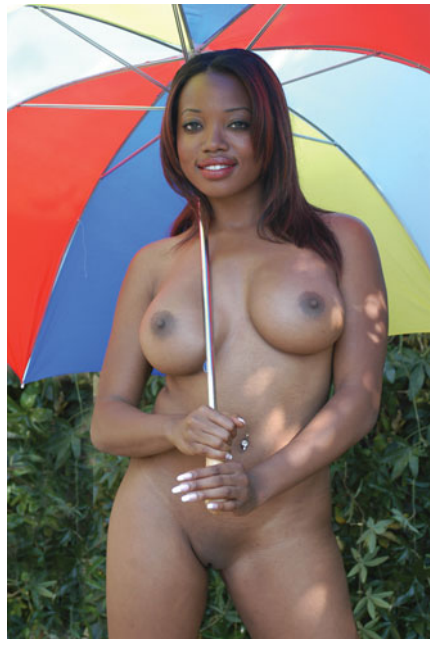


Figure 4.62 Naturally at ease with the camera.

Working with more than one model, the possibilities increase significantly. Each of the models can be looking at the other or at the viewer; their expressions can be similar or different. Figure 4.63 achieves its tender sensuality through the gaze of one model on the other, who rests in her friend's gentle embrace. In Figure 4.64 the two women seem almost amused at the viewer's intruding gaze.

Figure 4.63 A tender embrace.

Figure 4.64 A separate existence.

Themes and Poses

The practice of photography is holistic. We can discuss features of the image such as location, lighting, camera angle, focal length, depth of field, and the model's pose separately from each other, but every photograph you take consists of the outcome of your choices and decisions about *all* of these features, as they stood at the moment the shutter was pressed. So every image in this book has something to say about posing models.

In describing how to pose a model, therefore, we won't be able to keep the discussion focused just on the pose itself; we'll also often need to take those other aspects into account, as Figure 4.65 demonstrates. Looking at it we can see vividly how the mood and sensuality of the image are constructed out of many elements, all of which the photographer strives to be aware of and to control as they interact with each other. A shot like this is also a reminder of how very valuable the instant replay of the digital camera is during a shoot, enabling the photographer to adjust those interactions easily and quickly.

Figure 4.65 How many elements are at work here?

An analysis of what makes the photograph work might include: the confident set of the model's head (even when seen from behind); the corset, high heels, and the dangling corset laces; the play of light across the model's back; the pools of light on the floor and the background; the hard shadows of the model's legs; and, of course, the pose with its strong, braced stance. Perhaps the pose is the most important element; but if so, it's first among equals.

Some themes appeal because they combine the everyday with nudity. Others, such as Figures 4.66 and 4.67 appeal, in their very different ways, to our sense of imagination and fantasy.

Figure 4.66 Images which derive from fantasy…

Figure 4.67 …and imagination.

In this section I want to establish and illustrate some useful guiding principles about posing, rather than try to create an exhaustive catalogue of how to pose models. As in many other fields of creative activity, rules are, at best, only guidelines for what's often been found to work before (or not). In specific instances the rule may work best if flipped upside down.

Standing

Consider symmetry, for example. Books on photographic composition often warn against it and talk about the need to avoid too much stability within the frame. Some symmetrical poses do seem dull—they're too obvious and they lack sensuality. In Figure 4.68 the model's attractiveness and her calm, direct gaze into the lens don't compensate for the very static pose. Too much symmetry, we might decide: Only the lighting is off the center line.

Figure 4.68 An excess of symmetry?

But Figure 4.69 is a shot which seems to achieve its impact precisely through its symmetry. A number of elements at work here interact, so to speak, with the symmetry. One of them is the model's expression, in particular her gaze, which engages the viewer very much on the model's terms; another is the exotic torc round her neck; and another is erotic positioning of her hands. So we could argue that the reason symmetry works so well here is precisely that it provides a stable framework within which those other, more arousing and challenging elements can do their work more potently.

Figure 4.69 Symmetry working against the other elements within the frame.

Let's stay with standing poses. The S curve, created by the model placing more weight on one hip than the other, and allowing the other leg to flex at the knee, is perhaps the most commonly used way of making the model more dynamic, as Figure 4.70 illustrates. This is a pose whose roots can be traced back to classical Greek sculpture. (New models may discover, with a little experimentation, that they prefer placing their weight on one hip or the other for this pose; it's like being left- or right handed.) Notice also that in this and Figures 4.71 and 4.72 I've positioned the model to one side of the frame, thus avoiding symmetry in the composition. Incidentally, after the model's been in the S-curve pose for 30–40 seconds, she should find that she can bend further, as her muscles adapt to the pose.

In the last picture, the S curve was two dimensional. We can add a third dimension to it by asking the model to move so that the shoulder above the hip carrying her weight twists forward. The model's head in these examples is turned over her forward shoulder, but other positions, either facing towards the camera or turned over the other shoulder, also work.

Figure 4.70 The basic S curve—simple but effective.

Figure 4.71 The three-dimensional S curve, with the model's gaze directed along the line of her shoulder.

So far the examples have been shot with the camera more or less at the model's eye level. Figure 4.72 is a very asymmetrical pose where it's also apparent that the shot has been made from a much lower level. This gives the model a more dominant position within the frame: She's literally looking down on the viewer. There's a lot of energy in the pose, in the twist of the body and the outspread arms, but the camera angle counts just as much here.

And if we revert to a symmetrical pose, but keep the low camera angle (see Figure 4.73), the power in the image seems to remain. Looking at all the elements in the image, we can see that the gunslinger positioning of the hands contributes to the vivid sense of the model's presence, as do the red shoes, both in themselves and in the tension they create in the model's calves.

Figure 4.72 The S curve with a low camera angle.

Figure 4.73 A symmetrical pose with a low camera angle.

Floor

So far we've mostly kept the model on her feet. Now let's ask her to sit or lie on the floor.

Initially, in Figures 4.74 and 4.75 we're in classic art nude territory: We don't see the model's face, so the image is a representation of woman, rather than of one woman in particular. (We could make this interpretation more convincing, perhaps, by removing the tattoo from the back of the model's neck!) In the first example the near-shadowless lighting will allow us to rotate the image to any orientation. Poses of this kind are endlessly variable. You can experiment by asking the model to move one limb at a time to a different position until the pose is completely opened out; you can change your shooting position; you can vary the lighting; and so on.

Figure 4.74 The body reduced to a minimal shape…

Figure 4.75 This pose invites us to reflect on the smooth articulation of the body.

In Figures 4.76 and 4.77 the model's grace, her short-cropped hair, and the proportions of her limbs add impact to these simple poses.

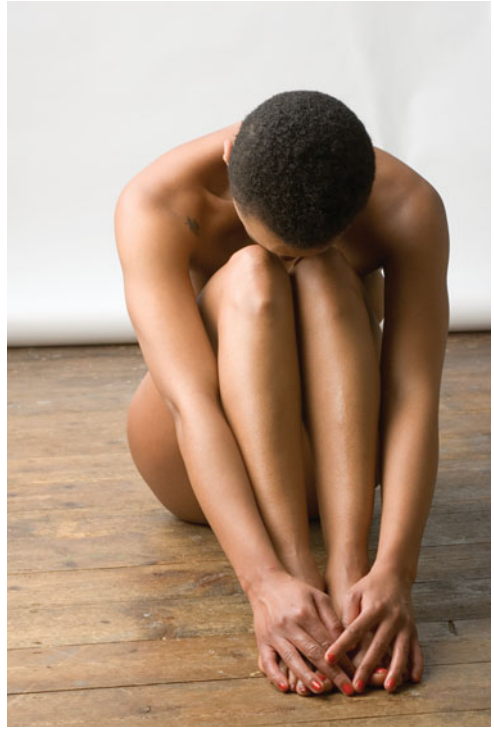


Figure 4.76 A folded pose.

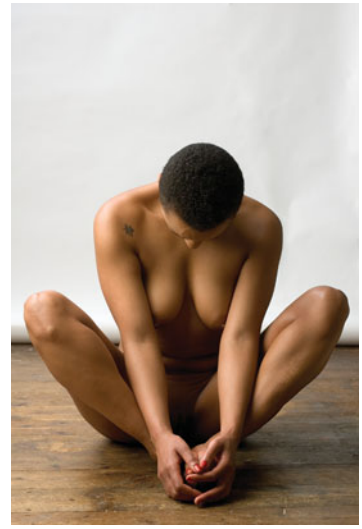


Figure 4.77 Gradually opening out.

On the other hand we could choose to stay with variations on these simple floor poses, but include the model's face, thus creating a stronger sense of engagement with the model as an individual. The difference can be seen in Figures 4.78 and 4.79, which developed out of the related poses shown earlier.

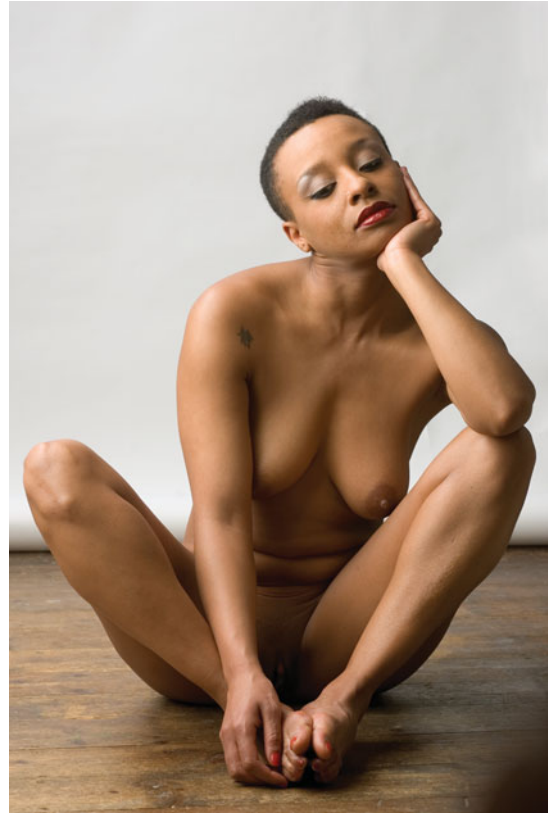


Figure 4.78 The pose opened out further, and made asymmetrical.

Figure 4.79 The pose opened out and the camera angle shifted. Symmetry is essential to the effectiveness of this shot.

Let's pursue the theme of high camera angles, as in the last image. You can experiment with different relationships between the axis of the model's body and the camera, and also with varied depth of field and focal zone, as in Figures 4.80 and 4.81. I keep a couple of ladders in the studio to make it easy to work directly above the model.

Figure 4.80 A bold crop combined with a disorienting camera angle.

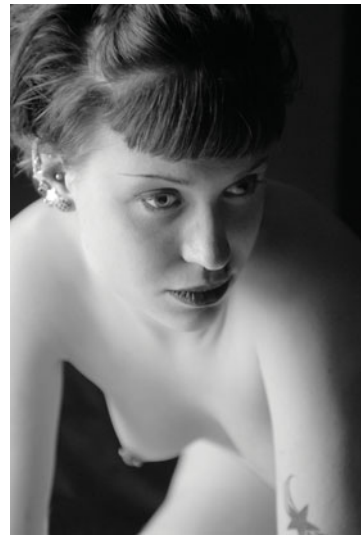


Figure 4.81 Contrast the focal zone of this image with the previous one.

If we now ask the model to stretch out on the floor, new possibilities are added to those we've been exploring in the seated poses. As well as working above the model, we can bring the camera down very low, for example. Figure 4.82 shows the effect of getting the camera right down onto the floor. Not comfortable for the photographer, but this less familiar angle produces a striking image.

As well as camera position and zone of focus, we can experiment with depth of field within a single pose. This is pretty basic stuff, but it's important not to lose sight of its value in photography of the nude. In these examples the different effects of depth of field depend also on the diagonal framing of the model. See Figures 4.83 and 4.84. The same principles work on location shoots. In Figure 4.85 the composition and depth of field are similar to those in Figure 4.83.

Figure 4.82 More impact when the camera is at floor level.

Figure 4.83 Shallow depth of field directs the viewer's attention, in this case, to the model's expression.

Figure 4.84 Greater depth of field draws the viewer's eye all the way along the diagonal.

Figure 4.85 Asleep in the long grass.

Floor poses offer the model more scope to experiment with the pose than standing ones do: "There isn't so far to fall!" as one model commented. So it's worthwhile inviting your model to move around freely and see what poses she can find. It's helpful also if she can be encouraged to move in slow motion, so that you have a chance to yell, "Stop!" when you see something interesting and unusual emerging. Figure 4.86 is one of a series of striking body shapes, both on the floor and on the stool, that model Caz devised. My only requests to her were to move slowly and to avoid symmetry. This curved pose displays Caz's spectacular tribal tattoo.

Figure 4.86 Caz uses the stool as a climbing frame.

At the opposite extreme, familiar poses can be made to look different by a shift of camera position. I shot Figure 4.87 on the stairs, which enabled me to work from below the model. I could have achieved the same effect in the studio by posing her on the dressing-up box.

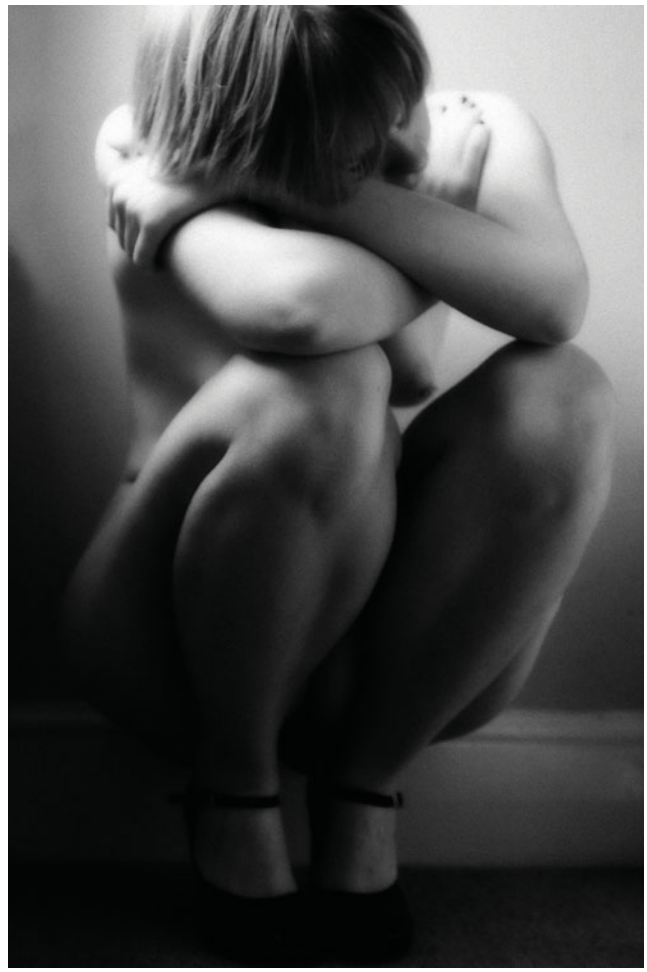


Figure 4.87 The low camera angle gives the shot extra impact.

Backs

I've always found backs a very alluring subject, but also difficult to shoot. The challenge is to create a vivid impression of the spine's combination of strength and flexibility along with the traditional erotic appeal of the buttocks, rather than leaving the back as a bland, featureless surface. Cross lighting which brings out the dips and hollows of the back is often the key element in conveying these elements to the viewer. Partial concealment can be another ingredient in the composition of the image, as in Figure 4.88, where the curve of Akemi's kimono contributes to the elegance of the image.

Figure 4.89, on the other hand, offers more concealment than revelation.

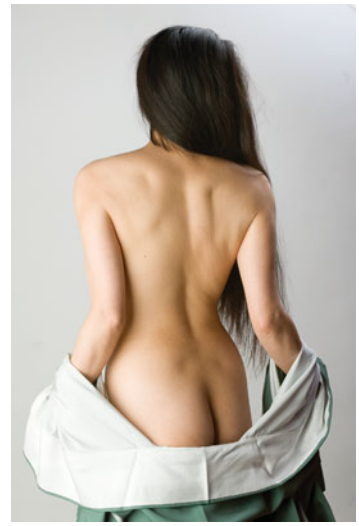


Figure 4.88 The graceful curve of the kimono adds to the image.

Figure 4.89 Revealing less; implying more?

General principles are sometimes better turned inside out. In Figure 4.90 the model is posed within an 800-year-old oak tree. Here the photograph was shot on a day of very faint shadows. The combination of color and monochrome, manipulated in postproduction to bring out the roughness of the oak while making the model's skin very smooth, suggests human fragility protected by the encircling strength of the tree.

Figure 4.90 Safe within the tree.

A more fetishistic approach in Figure 4.91 makes use of high heels and stockings, with the model posed to give the impression that she's stalking away from us. Note how, even in this grained image, the cross lighting emphasizes the Venus dimples at the base of the model's spine.

Figure 4.91 Venus in heels.

Cross lighting is equally effective on the male back, as Figure 4.92 demonstrates. It's also possible to emphasize the shape of the back by covering it. In Figure 4.93 the sand that sticks to the model's back similarly draws the eye to the curves of shoulders, waist, and buttocks.

Figure 4.92 Cross lighting brings out the structure of the model's shoulders and spine. The model is a gymnast, and the lighting here brings out his lithe muscularity.

Figure 4.93 Sand marks the contours of the model's back.

Finally, in Figure 4.94, a different view of the back, showing the scars from major spinal surgery. Model Phillippa's willingness to pose for this and other images in this book serves as a reminder that disability and sexuality are not incompatible.

Figure 4.94 The symmetry of scars.

Reclining

The final pose we'll consider is the reclining nude. Whereas standing, sitting, and kneeling poses derive ultimately from ancient Greek sculpture and vase painting, the reclining nude begins with painters of the Renaissance. It's easy to understand its popularity: The location of the (usually) female body on the couch powerfully suggests a range of sensual and erotic possibilities, and the pose itself does much to emphasize female curves. Conventionally, this pose is seen from the front, with the lens axis at right angles to the couch, garden bench, or whatever the model is reclining on, and at the model's eye level. The classic reclining nude has to pay attention to where she places her hands. In Figure 4.95, is the model defending her modesty or drawing our attention to what she conceals?

We can also work from above, as in Figure 4.96.

Figure 4.95 What does the position of the model's hands signify?

Figure 4.96 Gazing straight down.

And a model who's comfortable with the pose can slide partway off the couch, head first. (This isn't as easy as it looks in Figure 4.97: My model here is a circus artist and is used to hanging upside down.)

We might also catch the model halfway lying down or tying her shoelace, as in Figure 4.98. The effect of a familiar reclining pose can also be strengthened by a strikingly different location, such as this deck with its sharp lines in Figure 4.99.

Figure 4.97 Half on, half off.

Figure 4.98 Responding in the moment; this was taken spontaneously, rather than posed.

Figure 4.99 Strong diagonals disrupted by the model's curves.

Digital postproduction represents the most significant advance for photography to have emerged from the era of the personal computer. Applications such as Photoshop provide us with a range of powerful image-manipulation tools, producing effects which a traditional darkroom, however lavishly equipped, would find it difficult to match, and even more difficult to repeat accurately time after time.

Digital photographic postproduction begins with the moment you start to download files from your camera's storage card onto the computer, and ends when you save and close the edited file. Except…postproduction is never really over. It's always possible to rework an image—maybe to use it in a different medium or for a different purpose; or because you've seen a different potential in it; or because you've learned some new techniques which will enable you to realize your previously unachievable vision. See Figure 5.1.

Some photographers still debate how far to go with image manipulation programs such as Photoshop, questioning whether it's legitimate to use software to transform an image so far that its photographic origins are lost. My own view is that anything—be it camera, lens, or computer—which provides better tools for the imagination should be embraced wholeheartedly and exploited fully. The photographer now works on a continuum of creative possibilities which extend all the way from simply using Photoshop to correct

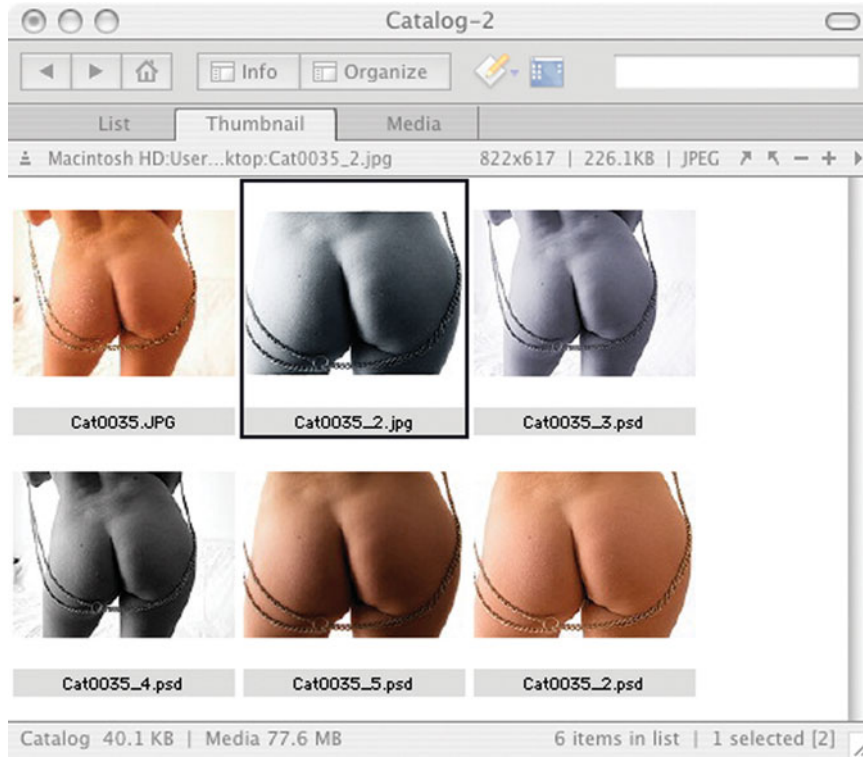


Figure 5.1 Images reworked over time and for different purposes.

the brightness and contrast in an image, through to works of digital art which may begin with a photograph, but which manipulate that original image to the extent that it's no longer identifiable in the final product. This is a process which has been happening, on the border between photography and the traditional visual arts, since photography began.

In fact, in the course of writing this book, with its attention to digital postproduction, I've come to think, in my own practice, of the data produced by the camera as no more than the raw material which the photographer (even that term no longer seems entirely adequate) takes as the starting point for creating the "photograph." In Figures 5.2 and 5.3, for example, we begin with an image which is adequate, but not much more than that. Its strong points are the model's expression and the graceful lines of her raised arm and breast. The computer allows the image to be manipulated into this simplified, very high-key interpretation which emphasizes those qualities. And the result is still unmistakably a photograph, rather than anything I'd call digital art.

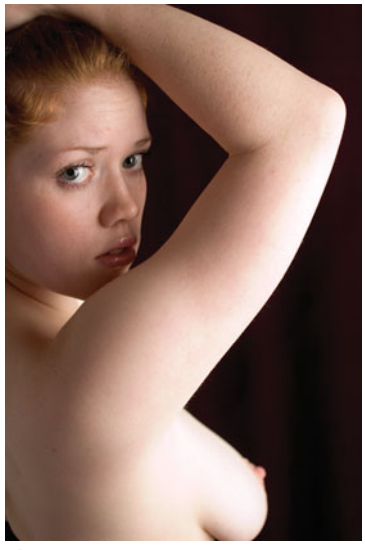


Figure 5.2 An adequate image.

Figure 5.3 This simplified version has much more impact.

At the same time, there seems little point in striving to make a photograph look just like a painting or just like any other art form. The benefit of image-manipulation software lies in two things. The first is its power to allow you to make your photographs look as near perfect as possible, in terms of maximizing dynamic range, cleaning up, straightening images, correcting color, producing punchy monochrome work, and so on. The second is the vast range of experimentation it permits the photographer.

There's a comparison with language here. A community shares vocabulary and linguistic structures, in whatever language it speaks, yet every day people in that community produce any number of utterances which are entirely original, and have never been spoken before. In the same way, we all share image-editing tools, but each of us has the capacity to produce, with those tools, different treatments for our images. These treatments will be achieved not by just sticking a filter on, but by exploring different combinations of, for instance, layers, blends, filters, and opacities, and using them imaginatively.

In the case of Figure 5.4, for example, I wanted to develop the image with an emphasis on the contrast in form and texture between the delicacy of the model's curved pose and the massive, harshly lit stonework of the bridge. The low-key treatment in Figure 5.5 uses two layers. The bottom layer is as shot. I've applied the Midnight filter from Nikon Color Efex Pro! to the top layer, adjusting its settings to increase blur and reduce color. I've changed the blend mode of the top layer to Multiply, and then used a partial layer mask on the top layer (done with the brush opacity at about 20 percent) to allow the brighter version of the stonework in the lower layer to be visible. This may all sound daunting, but don't worry—we'll look at all these steps individually in this chapter.

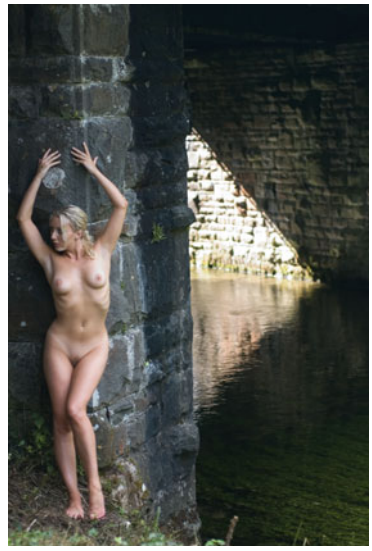


Figure 5.4 The image as shot.

Figure 5.5 The image after postproduction.

So this chapter includes how to organize your work; understanding and using the Camera Raw plug-in to set the white balance and maximize the dynamic range of an image; basic processes such as cleaning and straightening up the image, fixing skin blemishes, tidying up backgrounds; making selections, processing color images into black and white; and using filters.

A note on software: As explained in the Introduction, this section of the book is written around Photoshop CS2. And as the book is part of the *Mastering* series, it's assumed that you have a reasonable familiarity with Photoshop's tools and interface, and that you can find your way around Photoshop's online Help to fill in any gaps in your knowledge of basic techniques and steps, such as duplicating a layer, adding a layer mask, and so on. This assumption doesn't apply to the sections dealing with the use of the Camera Raw interface, because it seems that many photographers haven't yet switched to shooting RAW, and because the interface is both very richly featured and initially rather difficult to make sense of. For these reasons the use of Camera Raw is dealt with in detail.

A couple other aspects of the way you run Photoshop, whose value isn't always appreciated, are worth mentioning here. One is that it's well worth setting up a scratch disk, following the guidelines set out in Photoshop Help, to speed up the processing of large, and particularly multilayered, images.

The other is to set the History options to Automatically Create New Snapshot When Saving. This is to be found under History Options in the flyout menu for the History window, not in Photoshop Preferences where you might expect it to be. Once you've done this, just remember to save the file *before* trying out any daring new modifications to it, so that if your experiment goes wrong you can just click the last snapshot you created and bring the file back to its previous state. But keep in mind that snapshots can't be retrieved after you close the file: If you create more than one possible version of the image during an editing session and want to leave them aside so you can mull them over, you need to save each of them to a separate name before closing the file.

Because Photoshop represents the gold standard for still-image manipulation, there's a large industry of third-party software companies producing Photoshop-compatible plug-ins, covering everything from faster and better blur and sharpening filters to fake painting effects. A good range of other applications work seamlessly with Photoshop to provide, for example, a wider range of digital picture frames. In this section I'll be keeping pretty much to Photoshop as you get it out of the box, referring to or making use of only two additional plug-ins. If you want to explore further, searching online for "Photoshop plug-ins" will provide a mass of links to the wealth of resources available.

The process of editing and manipulating images as shown here assumes that you've been shooting RAW images, and will therefore make use of Photoshop's Camera Raw plug-in for the early steps in editing your pictures. If you've not been shooting RAW, you can pick up the process at the point where I move from Camera Raw plug-in to Photoshop itself. Using Camera Raw is, in many ways, easier than the following description might suggest: With practice you'll spend no more than a minute or so tweaking the Raw settings for most images.

One final note of caution: Photoshop has been compared (by me, if no one else) to a huge ball, made up of hundreds, maybe thousands, of separate strands of wool. Learning to use Photoshop is a process of teasing out some of those strands, until you understand enough to make Photoshop do what you need it to do. But hardly anyone teases out *all* the strands! My son, for example, who's an illustrator, paints and draws with Photoshop, using tools and techniques I've never even tried; and he's completely unversed in the photographic manipulation methods which are my daily bread and butter. What's the point of all this anecdotal rambling? Simply to indicate that in this chapter we'll be looking at the methods and tools which I've found most effective, but not attempting to survey *everything* that Photoshop can do. The Bibliography contains details of some excellent books about Photoshop which work through all the other strands.

Organization

I'm describing one method here. Your approach may be different. The details of the method are less significant that the fact that, whatever working methods evolve, apply them consistently to ensure that your images are secure.

Once your images are downloaded, the next steps, before you embark on editing selected pictures, are likely to include doing these things to the shots:

- Cataloguing
- Reviewing
- Renaming
- Backing up
- Burning to CD for the model

Cataloging, Reviewing, Renaming

Photoshop's old Browse facility has been significantly upgraded in CS2, and has metamorphosed into Bridge, a standalone application which works with Photoshop to provide wide-ranging cataloguing features. (Bridge can still be accessed through Photoshop's File > Browse command.) However, Bridge still seems one of Photoshop's weaker features. Even on a fast machine, it's slow to start up, works very slowly when building thumbnails, and is also slow opening multiple images into the Camera Raw plug-in. Rather than rely on Bridge, I use MediaPro (www.iview-multimedia.com), a multimedia cataloguing application available for Macintosh and Windows, which creates and opens image catalogues quickly.

Figure 5.6 shows MediaPro in thumbnail view. The thumbnail size is adjustable. In my method of working, the MediaPro file has the same name as the folder of images it catalogues, and is stored in that folder. Note also the numbering convention used here. The info panel on the left (only partly visible here) shows the metadata for the edited image, which is highlighted in the thumbnails area, including the EXIF metadata for the original image on which the edited version is based. *EXIF metadata* is information, stored with each image, about the data which comprises the image. The metadata includes the camera make, the filename, the ISO setting, the lens aperture, the shutter speed, and the lens' focal length, along with the time and date the image was shot.

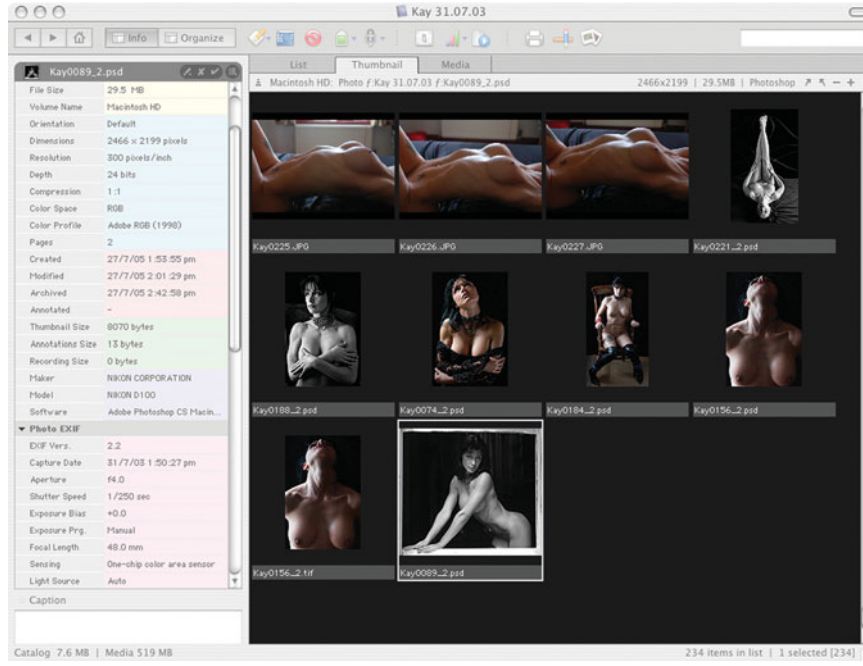


Figure 5.6 MediaPro in thumbnail view.

When it's time to review the shoot, MediaPro also has a very useful timed Slideshow facility, as well as the option to work through the catalogue in your own time using the cursor keys, with images displayed full screen; see Figure 5.7. Note the filename below the image and the controller top left. Like Bridge, MediaPro also seems to know which way photographs taken by recent cameras should be oriented, and will rotate the thumbnails automatically into the correct position.

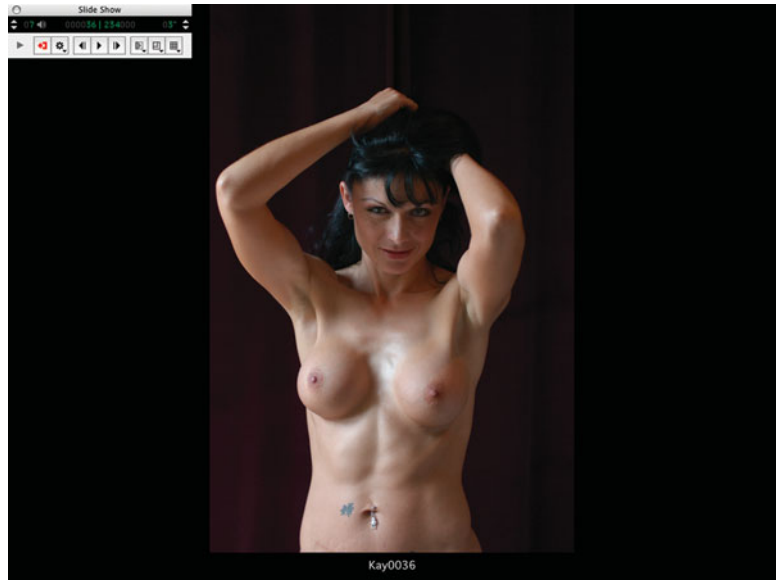


Figure 5.7 Image displayed in slideshow mode by MediaPro.

Again like Bridge, MediaPro lets you add your own information, such as copyright details, to the metadata. MediaPro doesn't let you view the settings for RAW files, but I haven't found that to be a problem. And MediaPro offers one useful feature not available in Bridge: a double view, with two images shown as large as possible next to each other on a black background, either side by side for portrait format or one above the other for landscape. (The settings are found in Make > Slide Show Settings.) This can be helpful when you're trying to decide which of two similar images you prefer: As Figure 5.8 shows, the black background makes it easier to focus on the images than does trying to arrange the same thing in Photoshop with all its clutter.

I download images into a folder whose name consists of the name(s) of the model(s) in the shoot plus the date. Once your images are on the computer, you may want to review them to delete any you feel are not going to be useable. Do this very cautiously, if at all. A decision taken at this point in the process is irrevocable, and in general I'd rather use some extra storage space and keep even the most marginally useable images. Having made any deletions, the next step is to rename the image files. You can do this as a batch process in either Bridge (Tools > Batch Rename) or MediaPro (Action > Batch Rename). I think it's well worth doing, because the numbering conventions used by digital cameras aren't at all user friendly and tell you nothing about the content of the image. I rename each file after the model(s) in that shoot, then number them, including a couple of leading zeroes, so that if I shoot more than 999 images of the same model, the filenames will be consistent. Some photographers include the date within the filename, which makes for very long filenames! On the other hand, my method does have the weakness that finding a specific image of a model with whom I've done a large number of shoots takes a little longer because I have to find the right folder first.

Figure 5.8 Images can be displayed side by side in MediaPro.

MediaPro's Organize button allows you to select files according to type. In Bridge you can select View > Show Graphic Files Only, or Show Camera Raw Files Only. If you've shot RAW + JPEG, as suggested in Chapter 1, this makes it easy to select and rename all the JPEGs, then all the RAW files.

Remember to set the starting number back to the same value for both the JPEG and RAW files! (See Figure 5.9.) These commands also make it easy to review only the JPEG files when you're evaluating the shoot (quicker than viewing each image twice) or to select and copy the JPEGs into a separate folder. First time round I review the JPEGs because they load faster than the RAW files; more precise judgments will be made later looking at the RAW files.

In MediaPro you can also set the default application into which the files will open. This may be necessary if you've had to load your camera manufacturer's proprietary software onto your computer, but don't want to use it to edit the images. Select all the files in the folder, then click Action, Set Finder Properties, Creator. Use the Browse button to navigate to the application you're using; see Figure 5.10. Once you've culled and renamed the files, set the correct Creator, and saved the catalogue, you can back up the folder. There's a detailed discussion of the importance of this step, and how to go about it, in Chapter 1.

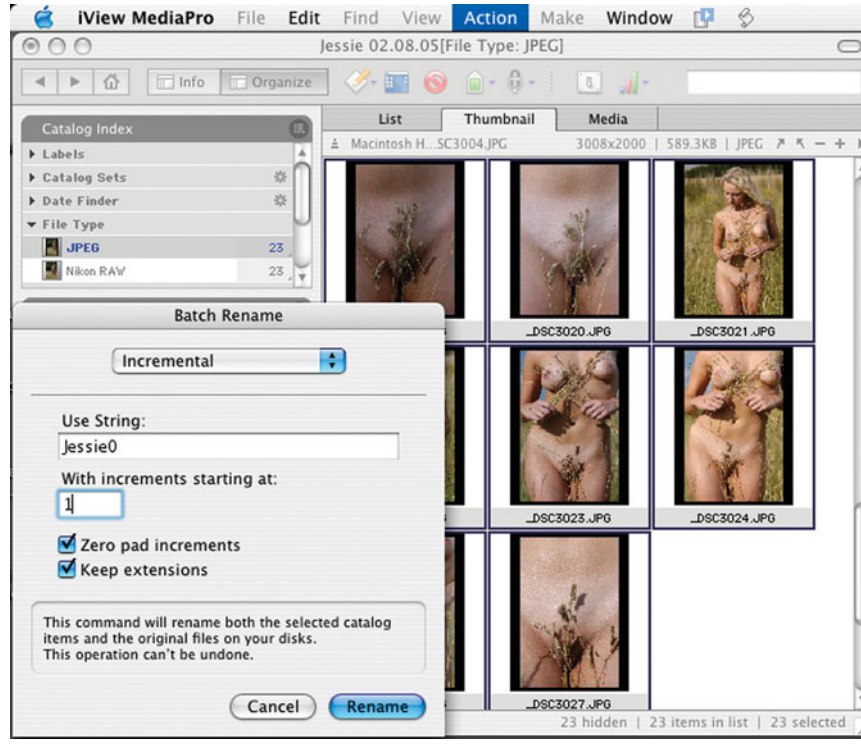


Figure 5.9 Batch renaming files in MediaPro.

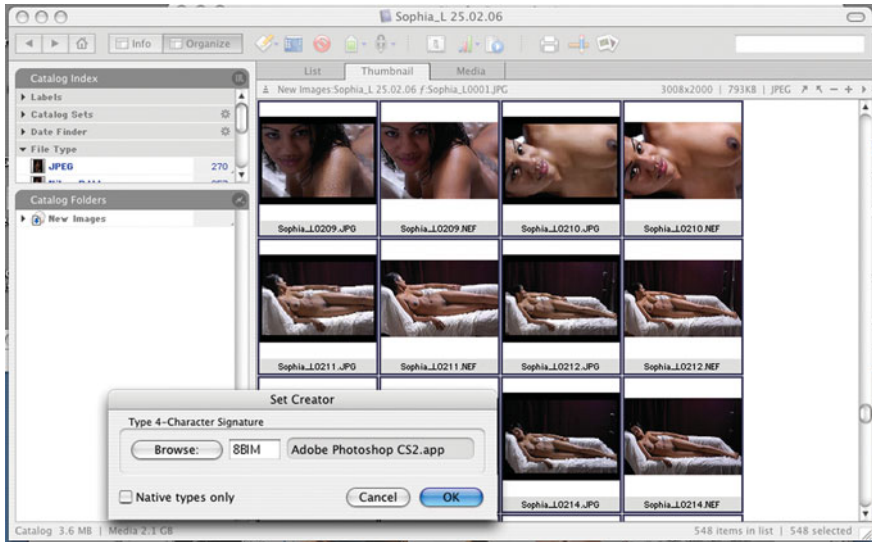


Figure 5.10 Setting Photoshop as the default application to open all the files in this folder.

Making a CD for the Model

After the discussion in Chapter 3, there's not much more that needs to be said about this. Some photographers allow the model to have only a selection of the best images from the shoot. I usually give her all the images, because the model release she's signed makes it clear that I retain the right to check and edit (or reject) the images she wishes to use on her web sites or have printed. It's also possible that images which seem only adequate to me as photographs nonetheless show the model well and would be useful for her portfolio. Either way, you probably won't want to give her full-size images, which are too large for the Internet. To carry out the task you can write an *Action* and make use of Photoshop's Automate > Batch command to process a number of files at once. An Action is essentially a series of prerecorded steps that you can play back in one go to save time. Figure 5.11 shows such an Action, written to batch process full-size camera JPEGs (3,008 × 2,000 pixels) down to 650 × 432 pixels, a more suitable size for web use. The Action is applied to a folder into which I've put copies of the camera JPEGs, *not* to the folder containing the original camera JPEGs themselves!

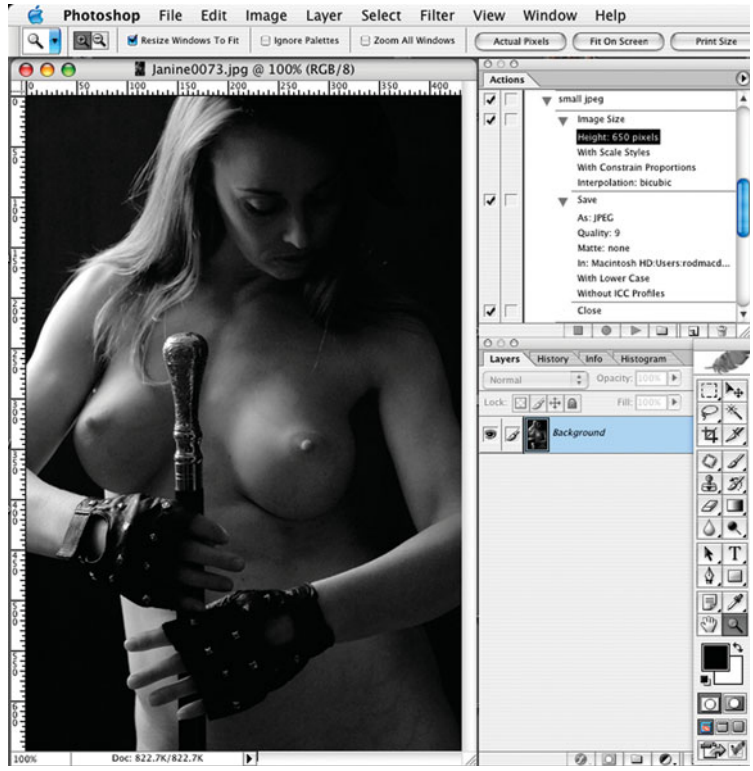


Figure 5.11 A straightforward action to resize camera JPEGs.

The Camera Raw Plug-in: Main Features

In this section I'll refer to the Camera Raw plug-in, its window, and its interface as *Camera Raw*, and to the main Photoshop window and its interfaces as *Photoshop*.

The first steps in editing may appear to be predominantly technical rather than creative, but they still call for an imaginative eye, as well as a careful one. To start with, we'll use Camera Raw to optimize the image, giving it maximum dynamic range, placing the white point correctly, and achieving the most expressive brightness. Once the RAW phase is completed, we can move on to cleaning up the image in Photoshop.

We'll start by opening some images into Camera Raw. Ideally, you'll have taken a shot of your test chart (see Chapter 4) in the set you now wish to work on. I'm assuming you've used a GretagMacBeth 24-square ColorChecker chart, and the values for white balance I'll use are based on that. If you used a different test chart, you'll need to experiment to see what values work best. If you've been shooting RAW + JPEG, simplify the work by changing your view of Bridge or MediaPro to show only the RAW files. (In Bridge, View > Show Camera Raw Files Only; in MediaPro, click the Organize button, then select the RAW files from File Type.)

Command+click (Ctrl+click) the test chart image from the set you want to edit, and then Command+click (Ctrl+click) the most promising images from the same set. When you've selected the images you want to work on, press Command+R (Ctrl+R) in Bridge or double-click any one of them.

The files will open into the Camera Raw window in the order they're sorted: The test chart, assuming you shot it first, will open in the preview area, with all the images you've selected visible as a filmstrip down the left side of the window. If you don't have a shot of a test chart, just open one of the images which has an area in it you know is white. Without some known white area in the image, it's harder to get the best out of Camera Raw. You should now see something like Figure 5.12.

Time for a guided tour of Camera Raw, before we start to apply it to our images. Camera Raw has a relatively small set of essential controls, as well as a rather larger bunch of features which you'll make use of less frequently. This section is pretty detailed, because Camera Raw isn't well documented in Photoshop Help or in the Photoshop manual. Photoshop CS2 includes version 3 of Camera Raw, which is much more user friendly than the version released with CS, but it's still easy to lose one's way.

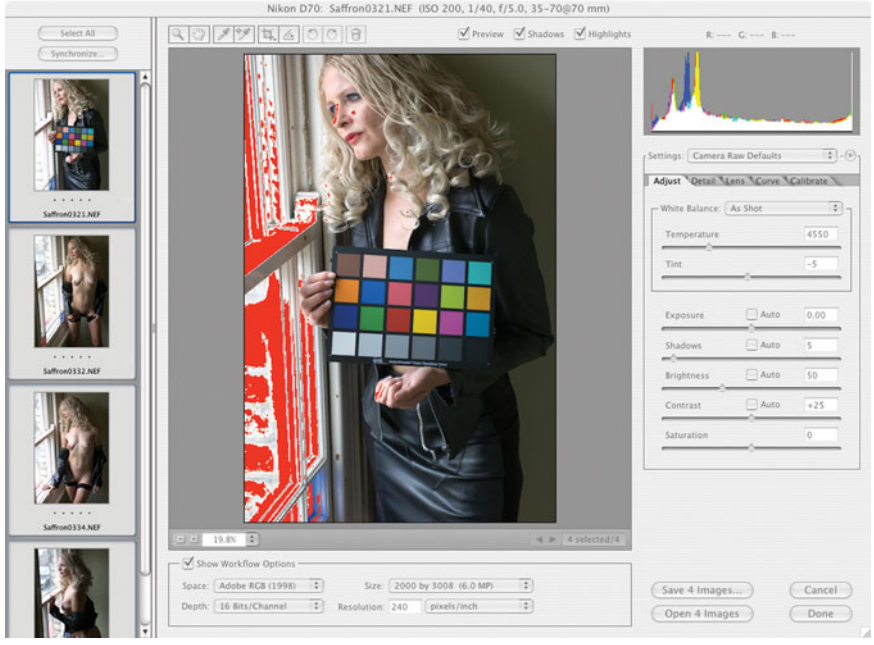


Figure 5.12 The Camera Raw window.

Camera Raw is rigid in some regards, but flexible in others. For example it really *is* best to work through the settings in the Adjust tab from top to bottom; but there are at least three different ways of saving changes you've made to a file, and a range of possibilities when it comes to saving and reapplying settings from one file to others.

By default, and differently from Photoshop CS, Photoshop CS2 saves the settings for each edited RAW file in a sidecar file, in the same folder as the original file and with the same name, with the extension .xmp. This means that when you copy your files to a different computer or archive your work, providing you do so a folder at a time, the .xmp files will always be accessible to Camera Raw if you want to do more work on any of the images or retrieve them from the archive. The other option, available in the Camera Raw preferences, stores the .xmp files in a central Camera Raw database. (See Photoshop Help for more details.) Whichever option you choose, Photoshop will maintain the link between a RAW image and its .xmp file even if you rename or move the RAW file, providing it's still on the same computer.

When Camera Raw is in use, the only item available from the main Photoshop menu is View. By default, Camera Raw opens with the whole of the image visible (View > Fit on Screen). The window titlebar contains some EXIF details of the camera settings for the photograph. It may be comforting to see that Camera Raw has all this information, but its display doesn't seem to have much practical value. In Figure 5.12 I've shot the test chart and its context, rather than just a close-up of the chart. This lets me keep an eye on the image as a whole—helpful with a window-light picture such as this, where I'll deliberately let part of the picture blow out.

The largest section of the Camera Raw window is the preview area, where you can see the selected image and, if you've selected the Preview checkbox, the changes you make to it as you adjust the settings. The filmstrip of other files you've opened runs down the left side. Top left, above the preview area, is the toolbar; see Figure 5.13.

The Hand and Zoom tools (which are arranged the opposite way round to the main Photoshop toolbox, with the hand to the right, not the left, of the zoom icon) work as they do in Photoshop. The first eyedropper is the White Balance tool: We'll look at it in detail when we discuss making adjustments later in this chapter. The next eyedropper is a Color Sampler, which you can use to observe the shift in RGB values of up to nine sampler points—for example, when you make adjustments using the Settings > Calibrate controls. The Crop tool allows you to crop the image, but is applied only to

Figure 5.13 The toolbar and checkboxes.

the preview in Camera Raw, and to the image itself when you open it in Photoshop; in other words, the original RAW file *isn't* affected by the cropping you apply. There's a drop-down menu on the Crop tool which requires you to specify an aspect ratio for the crop, but once you've drawn a marquee around the area you want to select, dragging any of the handles will change the aspect ratio, just like the Crop tool in Photoshop, unless you hold down Shift while you drag

A cautionary note: As in Photoshop, holding the spacebar down with any tool selected turns that tool into the Hand tool, which should make it easier to navigate around the image. However, I've found that at 100-percent zoom the Camera Raw window scrolls slowly, so it's easy to get ahead of yourself and inadvertently click in the window without the computer's realizing that the spacebar is depressed. If you've been using the Zoom tool plus the spacebar, this isn't a significant problem because you can readjust the amount of zoom easily. If you've been using the White Balance tool with the spacebar, you may reset the white balance dramatically. Press Command+Z (Alt+Z) to undo the change

Next is the Straighten tool: Drag it along a line in the image which is meant to be horizontal or vertical, and you'll see a crop which, if applied, would rotate the image to make that line horizontal or vertical. (Again, this won't affect the original RAW file.) It's a rather crude tool: It's much easier to carry out the same procedure in using Edit > Transform > Rotate in Photoshop. Finally, we come to the Left and Right Rotate tools, which spin the image through 90º in the specified direction, once more without affecting the RAW file.

To the right of the toolbar are checkboxes for Preview and Shadow and Highlights clipping displays. Toggling Preview on and off lets you see the effect of the adjustments you make, in comparison with the state the image was in when you opened it. If you've already worked on the image, you'll see that previous version of it when you deselect Preview. (See "Setting the Defaults" in this chapter for further discussion of this.) When the Shadow or Highlight boxes are checked, shadows which are solid black are shown in blue, and highlights which are blown out are shown in red. RGB values under the cursor are displayed to the right of these checkboxes. The Shadow and Highlight displays are essential for optimizing the dynamic range of your images.

The Workflow options, bottom left, include the Space and Size drop-down menus; see Figure 5.14. These reflect the settings for the image as they were downloaded with the image from the camera, and Resolution is the default print resolution as set in Photoshop's preferences. You can use the Size drop-down menu to alter the processed image's resolution. (Sizes larger than the original camera file are helpfully marked with a +, and smaller sizes with

Figure 5.14 The workflow controls.

a -.) If you want to increase the image's size, doing so by interpolating from the raw data in this window will give smoother results than working on the file in Photoshop.

Assuming, then, that you had these three values correctly set to begin with, you won't need to alter them. The only option specific to the Camera Raw plug-in is Depth. I have it set to 16 bits per channel rather than 8, thus enabling me to use all the information produced by my 12-bit camera. See this book's Introduction for more.

It's worth pointing out that expert opinion on the real value of working in 16 bit is strongly divided. The argument in its favor is, broadly, that it makes sense to use the largest possible colorspace when editing, in order to more precisely adjust to the image's colors. Even if the image is going to be displayed or printed on devices which only handle 8-bit color, this argument runs, working in 16 bit must give you more accurate color, which must in turn improve the look of the image when it's expressed in 8 bit. Certainly if you have to stretch the tonal range of an image using levels (discussed later), there are more likely to be gaps in the histogram in 8-bit mode than in 16-bit mode. The counterargument asserts that while the color may be more accurate, the difference is too subtle to be visible to the human eye, and that the slower working and larger file sizes which result from using 16 bit just aren't worth it. You will, in any case, at some stage have to set the bit depth to 8 for any images you wish to convert to JPEGs.

The histogram is located to the right of the preview area; see Figure 5.15. It shows the tonal distribution of the Red, Green, and Blue channels in the image, from each color's being completely absent (value 0) on the left side of the histogram, to being present at maximum value on the right side (value 32,767, as we're working in 16 bit). It also shows the distribution of composite RGB, represented by the white trace. The higher the histogram at any point, the more of that color is present at that level in the image. The histogram for a well-exposed image of an average scene will extend all the way from one side to the other. (A larger histogram would be very helpful in working with the Camera Raw plug-in; perhaps one day Adobe will give us one.)

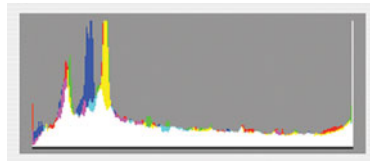


Figure 5.15 The histogram.

Setting the Defaults

Before we get to the Settings tabs, a note about Camera Raw's default settings: Out of the box, Camera Raw applies Auto settings for Exposure, Shadows, Brightness, and Contrast as soon as you open a RAW file for the first time. This is an unusual default action in that all other Photoshop dialogs leave it to you to decide whether you want to use auto correction or adjust the image manually, and you'd expect Camera Raw users to be unlikely to settle for auto settings. As with most other Auto settings, the results you get here will be perfect for some images, but less satisfactory for others, particularly when dealing with such things as specular highlights, bright white backgrounds in high-key images, or dark backgrounds in low-key shots. So I prefer to change the defaults to open the RAW file without auto adjustments being applied to Exposure, Shadows, Brightness, and Contrast, so that I can see what I shot, as I shot it.

So if you decide you'd like to reset the defaults to open your images as shot, follow these steps. Open any RAW file into Camera Raw, then deselect Use Auto Adjustments from the Settings flyout menu. You can also uncheck the Auto boxes one by one. You'll see the image change back to its as-shot appearance. If your image isn't perfectly exposed, and you have the Highlight and Shadow gamut boxes checked, you'll see overexposed highlights showing up in red, and/or solid blacks showing up in blue. Click Save New Camera Raw Defaults from the same menu. Click Done in the Camera Raw window. This will save the changes you've made to the defaults and close the file.

There's one other default you may want to consider resetting. Click the Curve tab, and you'll see that, by default, Camera Raw slightly increases the contrast by applying a medium-contrast curve. After a period when I'd set the default for the tone curve back to Linear (no change applied), I realized that I still ended up using the Medium Contrast setting for almost every image, so I restored it to my default settings. If you decide you'd rather work with the Linear curve, you can select it and once more save your new default settings as described.

Once you've carried out these steps, selecting Camera Raw Defaults from the Settings menu will always take you back to the as-shot settings of your RAW image, regardless of how much adjustment it has undergone. However, if you've applied a Crop or a Straighten to the image, selecting Camera Raw defaults won't cancel that: You can cancel these adjustments by selecting Clear Crop from the Crop tool menu, or by hitting Escape with the Crop tool selected.

Note that if you decide you want to go back and start from scratch on a RAW file you've already worked on, the safest way to preserve the settings from your previous attempt (if you wish to do so) is to select Save Settings from the Image Settings flyout menu *before* you do anything else to the file.

The Settings Tabs, Part I

At last we come to the Settings tabs, where all the work is done; see Figure 5.16. The Adjust and Curves tabs are the most important. Before you start to work on the image, all the Adjust settings are set to default values: Exposure 0.00; Shadows 5; Brightness 50, and Contrast +25. The Exposure, Brightness, and Shadow controls are the ones you'll use most.

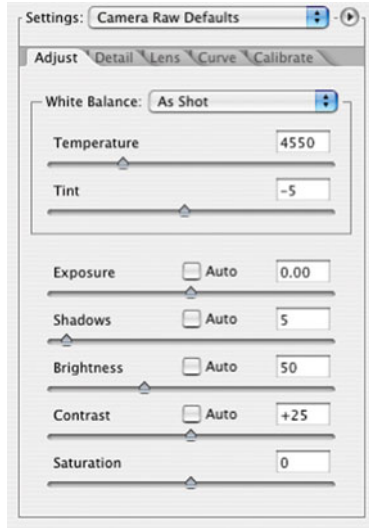


Figure 5.16 The Settings tabs.

Adjusting the Image

Let's go to work.

Make sure that the color chart image is open in the preview window. Click the Select All button at the top of the filmstrip; see Figure 5.12. You'll see all the images in the film strip are highlighted. Now click with the White Balance tool on the third gray patch from the left on the color chart in the preview window, and observe the result. (You don't *have* to use the third square—any square in the middle of the range will do—but that's the one I've chosen to use here.) Unlike the Color Sampler tool, which analyzes the color you click, this eyedropper *equalizes* the RGB values of the pixel it touches. You'll see this change ripple through all the images in the filmstrip. In my example, this patch as shot has RGB values 138, 154, 166. When you click it with the eyedropper, Photoshop adjusts its values to remove all color from it and make it a pure gray with values, in this case, of 165, 165, 165.

In correcting the white balance for the image, this step should also provide accurate color across the whole spectrum.

If you're working without a test chart, find an area in your image which you know is on the grayscale, (somewhere between white and black, with no color in it, or what's also referred to as a *neutral color*). Click that area, and again observe the result. A mid-gray is best, but I've also found that, in desperation, with care the whites of the model's eyes work quite well. Specular highlights (with RGB values of 255, 255, 255) give unpredictable results and if you click one persistently, Camera Raw will warn you that the area is too bright, and advise you to click somewhere else. If your image has several different mid-gray areas, try clicking each of them to see which gives the most acceptable white balance.

I find that, even though it might seem a rather crude tool for such a crucial setting, the eyedropper gives pretty good results, and you'll rarely need anything else to get a satisfactory white balance. In Figures 5.17 and 5.18, by way of experiment, I set my camera as far off the correct lighting setting as possible, and to make things tougher, dispensed with the test chart. Fortunately, I know that the window sill's painted a true white, neither warm nor cool. Clicking it once (in a less brightly lit area, to the model's left) with the White Balance tool in Camera Raw produces the result in Figure 5.18. It compares well with Figure 5.19, taken with the camera correctly set and balanced using the color chart.

Figure 5.17 I usually do better than this!

Figure 5.18 White balance set using the eyedropper on the white window sill.

Figure 5.19 White balance set using the test chart.

You may find that the even simpler method of selecting one of the preset values available for white balance also works well for most images; see Figure 5.20. However, if you need to adjust the white point further, you can use the Temperature and Tint sliders, which between them allow you to create any white balance imaginable. Moving Temperature to the left makes the image more blue; moving it to the right makes it more yellow. Moving Tint to the left adds green; to the right adds magenta. Whichever method you choose, don't move on to the next step until you're fully satisfied that you've set the best possible white balance. (This process is difficult, if not impossible, to carry out successfully if your monitor isn't calibrated.)

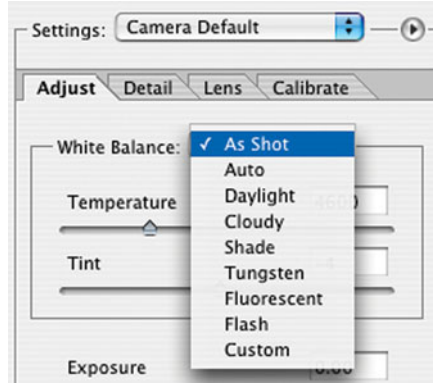


Figure 5.20 The preset white balance options.

Using the eyedropper, then, has produced values for the third gray patch of 165, 165, 165. GretagMacBeth specifies that the correct Red, Green, and Blue values in the Adobe RGB (1998) colorspace, for the six gray patches on the bottom row of this chart are as follows, from left to right: 243, 243, 243; 200, 200, 200; 160, 160, 160; 122, 122, 122; 85, 85, 85; and 22, 22, 22. So we need to adjust the image so that the values for the third square come down from 165 to 160.

This isn't surprising, because I can see the spike on the right edge of the histogram, which tells me that parts of the image are overexposed. At the same time, the spike on the left indicates that the blacks in the image are slightly compressed, so any correction made to the image needs to allow for this as well.

The next step, then, is to adjust the exposure. (Because I still have all the images in the filmstrip selected, the changes I make in this next set of steps will all be applied to all the images.) The Exposure value is calibrated in increments equivalent to f-stops. Rather than using the slider, which is a bit too erratic to allow for fine adjustments, I click in the Exposure value box, then use the up and down cursor keys to make the necessary changes. If after clicking in the box I reposition the cursor over the same gray patch (without clicking!), I'll get a reading from it. The cursor keys by themselves alter the exposure by 0.05 stops every time you press the cursor key; holding down Shift while using the cursor keys adjusts the value by 0.5 stops. With the exposure reduced by 0.25 stops, I get the desired readings of 160, 160, 160. Incidentally, the Exposure control, like all the controls in Settings, is scrubbable: If you position the cursor over the name of any slider, the cursor changes and you can adjust the value by scrubbing with your pointing device to left and right. Again, it's not entirely smooth.

At this stage you may still see some blue and red indications of clipping in the shadow and highlight areas. You'll get a clearer idea of how significant these are by zooming the image up to 100 percent. What you see may surprise you. There'll be some small areas of red or blue which you couldn't see when the whole of the image was visible in the Fit on Screen view; but some of the red and blue you could see in that view may have disappeared. This suggests that Camera Raw is displaying highlights and shadows on the basis of the data as it's been processed to create the preview, rather than on the basis of the raw data as a whole. At any rate, it's a good idea to check the 100-percent view frequently as you work, to make sure that you're not limiting the dynamic range of the image more than you need to. Achieving the "correct" values for the color chart may not be perfect for your image as a whole.

Camera Raw also supports the other method of viewing highlights and shadows which is available in, for example, the Photoshop Levels dialog. Option+drag (Alt+drag) the Exposure and Shadows sliders. Completely blown-out areas show up as white as you adjust the Exposure slider. Areas which are blown out in one or more colors show up in color, and areas which are safely exposed show as black. When you adjust Shadows in this way, white areas are safe, black areas are crushed in all colors, and so on. However, because the accuracy of these indicators depends partly on the zoom level you've chosen, and because you can't drag the sliders and move the image around in the viewing area at the same time, I find it easier to work with the blue and red clipping indicators.

Now we tweak the Shadows. The Shadows adjustment is pretty fierce, compared to all the other Adjust sliders, and you probably won't want to hold down Shift with the cursor keys. A couple of strokes on the down cursor remove the spike on the right, but leave the histogram still extending all the way across. If you zoom the image up to 100 percent, this adjustment has recovered some detail in the shadows on the model's black jacket and skirt. However, it also reduces our cherished values of 160, 160, 160 for that gray patch!

The final step with the Adjustment tab is to raise the Brightness to bring the gray patch back up to its correct value. Some small areas of the image may blow out, so you may have to go round the Exposure/Shadow/Brightness loop two or three times to get everything as close to correct as possible. In Figure 5.21 the window remains blown out intentionally (and you can see that reflected in the narrow spike which remains on the right of the histogram), but the model's skintones have been brought into line compared with Figure 5.12.

If in the process of juggling all these settings and sliders you feel you're getting lost, just Option+click (Alt+click) the Cancel button to reset all the dialogs, or select Camera Raw Defaults from the Settings menu and start again. Keep in mind that nothing you can do in Camera Raw will make a permanent change to the RAW file!

Now click the Curve tab. As well as a linear state which doesn't alter the image, the Tone Curve menu offers two preset curves for Medium and Strong Contrast. These may offer a quick way of adding a bit more punch to your image. And, of course, you can always draw your own, watching the histogram and the preview area closely as you work, and cycling back round through the Adjust settings if necessary.

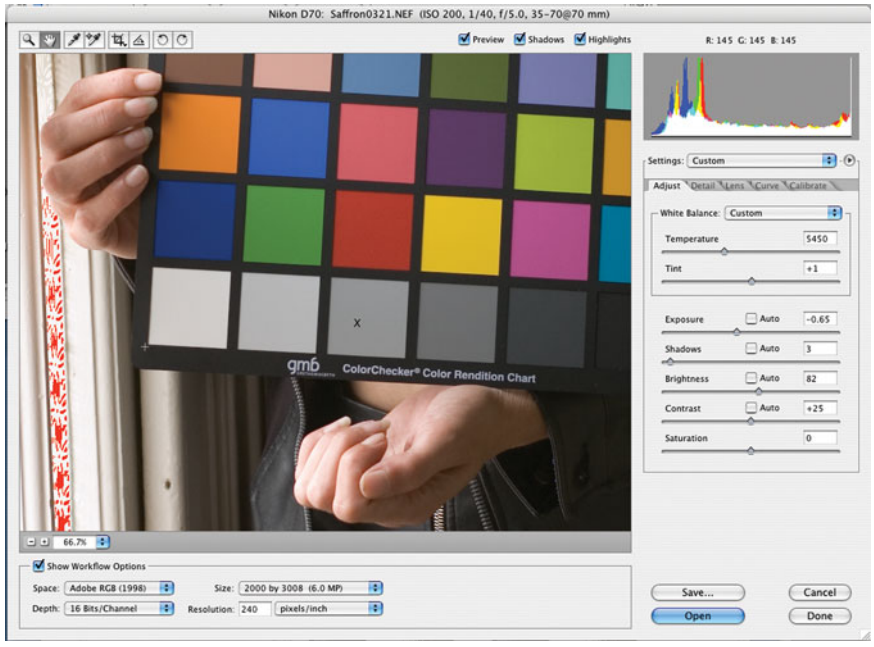


Figure 5.21 The correctly exposed gray patch. The X represents the position of the cursor.

After all this work, you now have a beautifully adjusted photograph of a test chart! The next step is to look at the other images in the set to check how well the settings have worked on them. The white balance should be fine; other settings may need adjustment, depending on, for example, whether the model's turned towards or away from the light through the set. To check this, click each image in the filmstrip to open them in the preview window. (If the color chart image is at 100-percent view, you'll notice that each of the other images is also at 100 percent, and that the area of each image visible in the View window has scrolled to the same position as the color chart image.)

In the set shown in Figure 5.22, the model's wearing fewer clothes in the real images, so more light is reflecting off her pale skin than off the black leather jacket she was wearing in the test chart shot. But the light outside hadn't changed much between shooting the test chart and the real image, and the model hasn't changed position. As a result, the settings work pretty well. I'm not worried about the fact that the window's still blown out: That's part of the mood of the picture; and the smaller blown-out areas on the model's face have also been corrected by applying the settings from the test chart. If they weren't, I could try making some more alterations to Brightness and Shadows.

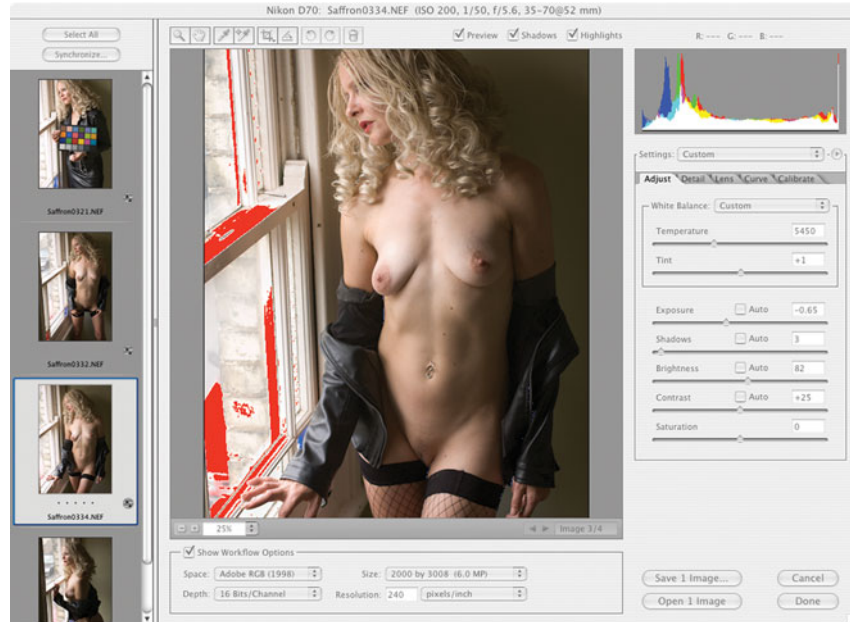


Figure 5.22 The settings for the test chart image work well on this real image.

It's often the case, however, that the technically most accurate settings don't look right or don't fit with the emotion you're trying to create in the image. It's not impossible, therefore, that you'll choose to readjust the highlights and shadows (and perhaps even the white balance) away from their most accurate settings; but at least you'll be able to see clearly what difference your subjective changes make to the "correct" version of the image.

Camera Raw offers one useful additional trick. Suppose you've adjusted one or more images' settings so they're now different from the color chart image's settings, and you change your mind and want to revert their settings so they're the same as the color chart again. Select the color chart image, so it opens in the preview window. Its setting values will appear in the appropriate boxes in all the tabs. Command+click (Ctrl+click) in the filmstrip on the images whose settings you need to revert. The boxes for any settings you adjusted for the other images will go blank, because those settings are now different from the values for the color chart image. Click in the blank boxes, and the values for the color chart image appear in the boxes, and will be applied to the other images.

Once you've finished adjusting a RAW image (see "Leaving Camera Raw" later in this chapter), its settings are held in its .xmp sidecar file and applied whenever you reopen it. So you can use this same trick if you decide subsequently to work on other images from the same set. Select in Bridge or MediaPro the color chart image and the other images you want to adjust, and open them all into Camera Raw. Then just follow the steps described in the previous paragraph.

In addition, as an example of Camera Raw's flexibility, if the color chart image was the last image you adjusted before leaving Camera Raw, you don't need to reopen it to get access to its settings. Just open all the images you want to apply its settings to, select them all in the filmstrip, then click Previous Conversion in the Settings drop-down menu. And, in Bridge, if you've saved the settings from the test chart image, and have a very large number of photographs taken under the same conditions which you want to apply those settings to, you can select those files and use Automate > Apply Camera Raw Settings in Bridge to apply the same settings to them all without opening them, rather than working through them individually or in small sets as we've been doing here.

Finally, there's one more method for saving the settings for the color chart image in case you wish to apply them to other images in the set. From the Settings menu, choose Save Settings. This will save all the settings for the image. If you wish to save only some settings, choose Save Settings Subset and deselect the settings you don't wish to save; see Figure 5.23.

By default the saved settings will be named after the file you're working on. To apply the settings, open (and select) the image(s) you want to apply them to, then select the settings from the bottom section of the Settings drop-down menu. (Unlike .xmp sidecar files, saved settings are stored by default in a single central Raw Settings folder. If you need to move images from one computer to another, you may want to save the settings into the same folder as the image.)

I didn't adjust the contrast when I was working on the test chart image, because it's a more subjective alteration which is best judged while working on the real images. So I could now experiment with the Contrast slider or value box, image by image, keeping an eye on the left end of the histogram, as well as on the image, to make sure I don't crush the blacks unacceptably. Alternatively, I could wait until I have the image open in the main Photoshop window and use Curves, with its capacity to make subtler changes, to adjust the contrast.

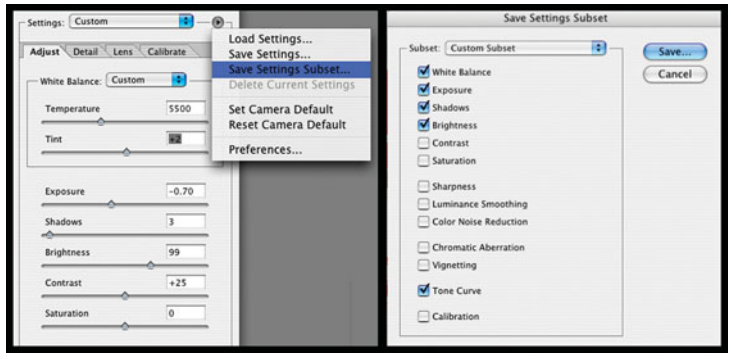


Figure 5.23 The options for saving Camera Raw settings.

Much the same argument applies to the Saturation control. If you have a bunch of images that need the same saturation adjustment applied in a batch operation, then you could use this control. But as far as individual images are concerned, a Hue/Saturation adjustment layer in Photoshop is a much more flexible way of altering the image. An *adjustment layer* is a clever way in Photoshop of making an image look different without permanently changing the RGB values of its pixels. For example (as done here), you can apply a Hue/Saturation adjustment layer and use it change the hue, saturation, and lightness of all image layers stacked beneath in the Layers tab. But if you remove the adjustment layer, or toggle it off, the layers below it still look as they did before you applied it. Adjustment layers are used later in this chapter.

So far we've taken the color chart image as our starting point for all the adjustments we've made. Without a shot of a test chart, or at least a reliably neutral object in the shot, setting the white balance depends on a subjective judgment, but even without the precise RGB values of the test chart to guide us, we can use the shadow and highlight-clipping indicators to adjust the dynamic range of the image.

So start by checking both clipping indicators. To adjust the exposure, make sure the whole image is visible in the preview window. Look at the areas, if there are any, in which red highlight warnings are visible, and scrub the Exposure slider down until they just disappear. Ease the slider back up, and note which significant areas light up first. They're the brightest areas of the image. (*Significant* means excluding specular highlights and areas which you want to allow to remain blown out, such as the window in Figure 5.22.) If there aren't any red highlights showing, hazard a guess at which area of the image is the brightest. Next, zoom the image up to 100 percent and scroll that potential highlight into view. Now adjust the exposure down to reduce the highlight, or up to extend the dynamic range. The ideal setting is the one where (for an overexposed image) the highlight warning has just disappeared, or (for an underexposed image) where the highlight warning will appear if you increase the exposure by one more up-arrow click. You may want to scroll around to other bright areas and check that they also are now within range.

Now go for the shadows. The easiest way to check these is to repeat the same process, working this time with the blue shadow warning and the Shadow slider. And just as there are highlights which you're happy to leave blown out, so there may be peripheral areas of the image in which you're willing to lose shadow detail.

The capacity to maximize the image's dynamic range, and thus use *all* the information recorded by the camera's sensor is what shooting RAW is all about. I would have lost detail at both ends of the range, irretrievably, in a

JPEG. Exactly how much useable latitude shooting RAW provides, by comparison with shooting JPEGs, will depend on your camera. With a Nikon D70 it's just under a stop either way. Having said that, it's also important to emphasize that RAW can't work miracles: If your image is so overexposed that there's simply no detail at all in some areas (the RGB values are 255, 255, 255), then no amount of playing around with Camera Raw will re-create the missing information. In Figure 5.24 the blown-out area is obvious; in Figure 5.25, a later shot from the same set, the highlights are just within range. Equally, pushing the exposure to retrieve a seriously underexposed image may create the necessary dynamic range, but it may also significantly increase the visibility of noise in mid-tones. It is, however, possible to graft new texture onto *small* blown-out areas, thus potentially rescuing images such as Figure 5.24. This will be discussed later in this chapter.

Figure 5.26 shows the real picture from the set shot by the window, as finally edited: cropped, blemishes removed, and the window frame tidied up.

Figure 5.24 The model's shoulder is blown out.

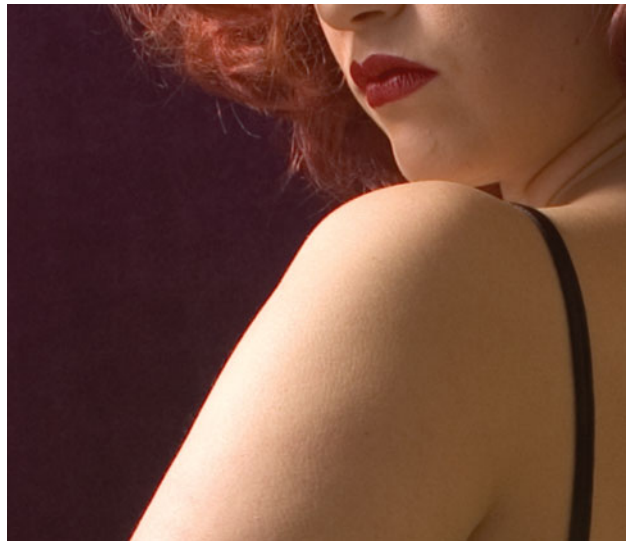


Figure 5.25 After adjusting the lighting.

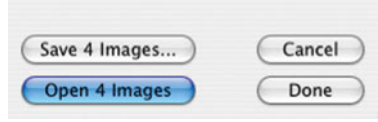
Figure 5.26 The edited image.

Leaving Camera Raw

Camera Raw can be dismissed by any one of the four buttons in Figure 5.27. The easiest one to understand is Cancel: That closes the window without saving or remembering any changes you may have made to the raw image(s) you were working on. If you Option+click (Alt+click) Cancel, it will reset the Camera RAW dialog. This means it will take the dialog back to the settings that applied when you opened the file, not automatically to the Camera Raw defaults.

The default button is Open. This opens the image into Photoshop, incorporating the adjustments you've made in Camera Raw, and also updating the metadata for the RAW file. Option (Alt) with Open will open the file, but won't update the metadata—useful if you've just made some experimental

Figure 5.27 Dismissing Camera Raw.



changes to an image which you'd already adjusted satisfactorily, and want to work on the image in its current state in Photoshop without losing the earlier adjustments. If you've opened more than one image into Camera Raw, the Open button reads Open 1 Image, and will open the image currently in the preview area. If you Command+click (Ctrl+click) more than one image in the filmstrip, the button changes to Open 2 Images, and so on.

Save allows you to save the image into a non-RAW format without opening it. (Remember that nothing in Photoshop allows you to make changes to the RAW file itself.) Just pressing Save opens up a dialog box in which you can specify file format, extension, and the like; Option+Save (Alt+Save) just saves the file, in accordance with the current settings in the Save dialog, without opening the dialog. If you've opened more than one image into Camera Raw, the Save button reads Save 1 Image and will save the image currently in the preview area. If you Command+click (Ctrl+click) more than one image in the filmstrip, the button changes to Save 2 Images, and so on.

This is an appropriate moment to mention Adobe's DNG (digital negative) format. At present, RAW file formats are determined by camera manufacturers, and creators of RAW-editing software have to struggle to keep their products current by adding a new set of parameters for every new camera which comes on the market (assuming that the camera manufacturer is willing to make the information available). To try to overcome this problem, Adobe has proposed DNG as a universal format for all RAW images. From the photographer's point of view it's a very sensible proposal, ensuring compatibility and guarding against obsolescence, and it's to be hoped that in time all camera manufacturers will either go over to DNG completely, or at least offer it as an alternative to their own RAW formats.

By default, the Save dialog offers DNG as the format to save into. Other formats available are .jpg, .tif, and .psd. If you've adjusted several images in Camera Raw and want to work on a number of them in Photoshop, you can save them as .psd or .tif files. This Save dialog is the only way just to convert and save images to work on in Photoshop later, without opening them into Photoshop now.

Finally, the Done button applies the changes you've made to the RAW image, without opening it, and dismisses the dialog.

The Settings Tabs, Part II

Here I've grouped together features which are provided better in the main Photoshop window and those you're less likely to use every day. Several of them could be useful, however, if you have a large number of images to which the same alteration has to be applied, again using Automate > Apply Camera Raw Settings.

Burrowing deeper into the Camera Raw interface, the Detail tab offers Sharpness, Luminance Smoothing, and Color Noise Reduction. By default, Sharpness is set to 25. On the one hand it seems to me to be pretty safe to leave this setting as is: It gives images a natural look (remember to zoom the image at least to 100 percent when assessing this) with no obvious sharpening artifacts. On the other hand, it's not as subtle as Unsharp Mask or Smart Sharpen in Photoshop, and those are the tools to use to improve the sharpness in individual images, as the final step in editing. It's also worth noting that many image libraries require submitted pictures to be unsharpened, so if you have this destination in mind, you can set Sharpness to 0.

Luminance Smoothing and Color Noise Reduction both come into their own when you're working with images shot at high ISO ratings under low light conditions, circumstances which the serious photographer of the nude is perhaps unlikely to encounter every day! Both are likely to soften the image significantly if applied with too heavy a hand. Tweaking Luminance Smoothing can smooth out the darker flecks of noise in the image, and Color Noise Reduction handles the brighter color noise which also occurs under these conditions. Be sure to view the image at 100 percent at least, and to toggle the Preview on and off, to be certain that using these controls is really worth it: A noisy but sharp image may be preferable to a marginally cleaner but much softer one.

Moving on to the lens controls, you'll find two adjustments for chromatic aberration and two for vignetting. Chromatic aberration is visible as a color fringe, caused by the lens' not converging different colored light accurately. It's a feature you're most likely to encounter in lenses which are cheap or very wide angle, or both. In Figures 5.28 and 5.29 I've simulated an example of chromatic aberration, showing first the whole image, then a couple of details in which the aberrations are clearly visible. The controls allow adjustment on two color axes: Red/Cyan and Blue/Yellow. You may need to zoom up to 200 percent or more to see clearly the effect of making adjustments.

Vignetting is caused by another type of lens defect, and results in the corners and edges of the image looking (usually) darker—as in Figure 5.30—or (occasionally) lighter—as in Figure 5.31—than the rest of the image. Again, these are simulated examples of vignetting. Moving the slider to the right lightens those areas of the image; to the left darkens them. By default it's assumed that the vignetting occurs equally all round, but you can also adjust its midpoint if necessary.

Figure 5.28 Chromatic aberration is barely visible in the whole image…

Figure 5.29 …but can be clearly seen in details.

Figure 5.30 Dark vignetting.

Figure 5.31 Light vignetting.

The final tab reveals the Calibrate controls. These have two separate uses. In a studio with a fixed and unchanging lighting setup, you can calibrate a shot of a test chart and apply the resulting settings to everything you shoot to get a very accurate rendition of the whole color range. The other occasion, theoretically, is to use the Calibrate controls when you need to pull back into line images which can't be satisfactorily color corrected using Camera Raw's Adjust tools. This is most likely to happen because Camera Raw's built-in profile for your camera won't stretch to handle the lighting under which you've shot a particular set of images—under some very green fluorescent strip lights, for example.

In the course of writing this book, I tried several times to create lighting conditions which Camera Raw's Adjust tab couldn't put right. I never succeeded in fooling it, so it didn't seem necessary to go into the intricacies of the Calibrate controls. Nonetheless, if you want to explore the quite extraordinary manipulative capacity of this aspect of Camera Raw, you'll find included in the Bibliography some books which deal with it in detail.

That completes our survey of the uses of Camera Raw, and brings us back to Photoshop proper. If you've been working in Raw you have the comforting knowledge that however you've altered your images, you can always revert to the original data. If you're working from your camera's JPEG files, however, the only way to ensure that the original remains unchanged is to copy it and edit the copy. I can't emphasize too strongly how important this step is. There's nothing more frustrating than deciding to start over from scratch, and then realizing that you've irretrievably altered the original file.

One simple method of ensuring that you always work on a copy is to double-click the Background layer in the Layer tab as soon as you've opened the file. This will bring up the New Layer dialog, with the effect of changing the Background layer to Layer 0. Once this change has been made, any attempt to save the file brings up the Save As dialog. The best choice here is to save the file into Photoshop format (.psd), but if you try to save the file as a JPEG, it will be flattened and saved as a copy. Either way the original file won't be changed.

Adjusting Levels

The first step in editing JPEGs is to use Image > Adjustment > Levels to optimize your image's dynamic range before moving on to clean it up. Levels has the capacity to stretch the dynamic range of underexposed images (see Figure 5.32), but not to pull overexposed images back into line (see Figure 5.33).

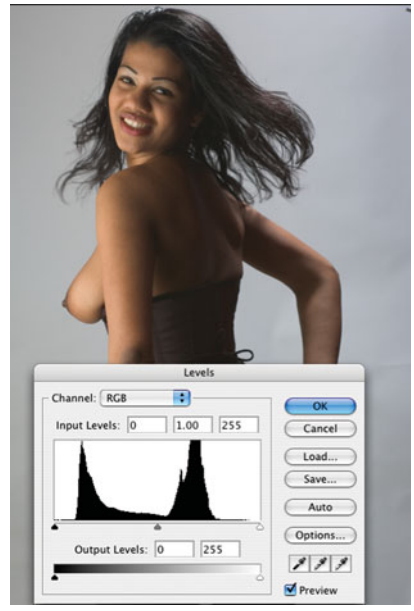


Figure 5.32 The levels controls and histogram, superimposed over an underexposed image.

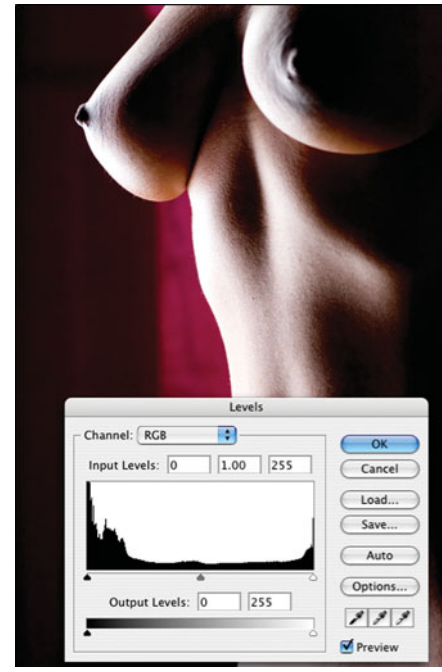


Figure 5.33 An overexposed image.

The right Input Levels slider, Highlights, works somewhat like the exposure control in Camera RAW, except that it isn't bidirectional. The highlights slider won't allow you to recover detail out of highlights which have been clipped, but it lets you stretch the image and force areas that are close to highlights. For example, if you drag the highlight slider from 255 to 240, every pixel in the image with RGB values of 240, 240, 240 or more will be increased to 255, 255, 255. Values below this point will be adjusted to make the transition from level to level as smooth and imperceptible as possible, thus brightening the image. A downside is that you may lose detail in some areas of the picture.

The Shadows slider on the left works in the same way: You can't use it to "uncrush" blacks with a value of 0, but if you raise its value to 30 (for example), every pixel with a value of 30 or less will be crushed down to 0. Compared to the Camera RAW plug-in, Levels works effectively at stretching a narrow dynamic range, but can't help recover apparently clipped areas from an image.

The midtones control does at least offer bidirectional adjustment, but tends to push both ends of the dynamic range more than the brightness control in Camera Raw. Applying these changes results in what you see in Figure 5.34. In Figure 5.33, the dynamic range is beyond what Levels can correct, as the histogram makes clear.

Figure 5.34 The image "corrected" using Levels.

If you click Image > Adjustment > Levels again after correcting the levels, you'll see on the histogram the effect of the corrections you've made. (Clicking Auto in the Levels window when you first open the image will show you instantly how the histogram would change if you used the Auto adjustment.) A number of white gaps appear in the histogram, representing levels where there's no longer any information, and some taller, black spikes where two or more levels in the original image have been compressed into just one level. Figure 5.35 shows the histograms before and after adjusting levels—done in this case by applying the Auto setting. I've chosen a very underexposed image to demonstrate how many levels can go missing as a result of this process.

Figure 5.35 The effect of applying auto levels to an image with a narrow dynamic range.

Making Selections

One of the most common procedures in image editing is selecting part of an image to manipulate it separately from the rest of the picture. Depending on the context, a selection may need to have a hard edge (making a strong separation between two areas) or it may need to be feathered (creating a softer edge). Photoshop offers a range of tools for doing this, including the Magic Wand, Lasso, and Pen, all located in the toolbox, as well as the very powerful Extract, which is available under the Filter menu. Every Photoshop user has favorite methods, and most people tend to stick to one or two. So after an overview of everything that's available, I'm going to concentrate on the methods I've found most useful. Other methods also have their champions, and the some of the books listed in the Bibliography provide further instruction in using the tools which are only briefly considered here.

Magic Wand Tool

The most obvious way of making a selection—and the method that seems to make the biggest impression of any tool on Photoshop newcomers—is the Magic Wand. It really does seem magical! However Magic Wand is also the tool which Photoshop professionals favor least. It's often difficult to judge what Tolerance will work effectively on a given image. If you set it too low, you'll spend hours making your selection. If you set it too high you run the risk of selecting areas you don't intend to select (see Figures 5.36 and 5.37), some of which may be so small that they don't become evident until you

make some change to the selected areas, and observe it taking effect in places you didn't intend it to. I don't think I've ever made a Magic Wand selection without having to go round it and tweak it with one variant or another of the Lasso tool. All in all, the Magic Wand seems too slow and too risky.

Figure 5.36 So far the Magic Wand has made a usable selection of the background of the image.

Figure 5.37 Just one more click selects the wrong area.

Pen Tool

The Pen tool, in all its many guises, is at the opposite end of the precision scale. The Pen tool lets you draw around the areas you want to select. Although it's less intuitive than most Photoshop tools, it is very accurate and, once you've gotten used to it, pretty speedy. However, the Pen tool seems to have one significant disadvantage in editing images: It isn't possible to feather a selection as you make it with the Pen tool, and as most edges in photography aren't razor sharp, selections made with the Pen tool may need feathering separately, and with different amounts of feathering at different points, if they're to look natural.

Lasso Tool

Somewhere in between the Pen and the Magic Wand tool comes the Lasso tool and its variants. The Magnetic Lasso in particular can be impressively fast and accurate in selecting strong, clear edges, but like many other tools tends to get lost in the intricacies of hair.

Extract Tool

Hair. There's a book to be written about handling hair in image manipulation. The Photoshop tool which separates hair from its background best is the Extract tool. But this isn't an easy ride. Even using Extract, selection of big hair

is a slow process that needs patience and a meticulous hand and eye. I've never seen a perfect and totally convincing example of extracted hair in any textbook on Photoshop, and I've certainly never managed to create one myself. This demonstrates nicely that some elements of photography are done best and most easily by getting them right in the real world—in this case by getting the background behind the model's head as it needs to be before you take the photograph.

Layer Mask

The final method we'll consider is the one I use most: a layer mask. In essence, it's simple. You create a layer mask in a duplicate or adjustment layer and paint out, in the mask, the area you want to select. Because you're painting the mask, rather than drawing it, you can easily vary its hardness by varying your paintbrush's hardness; you can also vary the opacity of the mask areas; and you can easily correct the mask by flipping the foreground and background colors and painting over the area where you went wrong. If you Command+click (Alt+click) the layer mask, as I've done in Figure 5.38, you'll see the familiar marching ants which show the masked area as a selection that can be edited (using the Lasso tool, for example) and saved under Select > Save Selection. (You can work this way using Quick Mask as well, but keep in mind that quick masks vanish when you save and close a file.) The mask is stored in a special channel, known as an *alpha channel*. Masks and channels are grayscale images, so you can edit them like any other image, as we'll see later.

Figure 5.38 The marching ants show the first rough outline of background areas which, in this case, are to be darkened using an adjustment layer and Multiply blend mode.

Cleaning Up

It's surprising, looking at photographic web sites, how many otherwise competent and creative photographers don't bother to clean up images. By *cleaning up* I mean the process of removing minor imperfections in the image. These might be anything whose presence distracts from the purpose and meaning of the image: blemishes on the model's skin, a coil of the cable for your flash head that strayed into the shot, or the like.

However the need for cleaning arises, I can't emphasize too strongly how important a step it is. Along with correcting tilt in an image, it's one of those (usually) straightforward processes which can be carried out quickly, and improves the appearance of the image out of all proportion to the effort involved. So be thorough! Look your images over carefully, identify any unnecessary elements, and use Photoshop's battery of tools to eliminate them.

Admittedly, there's always debate over how far it's "right" or appropriate to remove imperfections from the model. There's no doubt that overcorrection produces a plastic-looking, inhuman figure at the heart of your image, but there's much that can be done to make the model look better without reaching that extreme. It depends what impression you're trying to give. For example, is the model's body in the image you're editing intended to be symbolic of flawless physical perfection and allure, with every curve approximating to a classical Greek statue and marble-smooth skin? Or is it intended to remind the viewer that we're all physically imperfect and, over time, likely to become even less perfect?

On the other hand, even an image whose purpose is to depict the experience of being human may need to be edited to emphasize some aspects of that experience and deemphasize others. For example, in Figure 5.39 (already seen at Figure 2.12) I looked for a black-and-white treatment which would emphasize the parallel stretch marks on the model's skin. I also wanted to remove some marks which weren't part of that pattern, such as shaving bumps and also the mark left by the model's belly-ring piercing. Compare Figure 5.40.

As a general rule, be cautious about using destructive editing processes to make any kind of extensive alteration to an image. Wherever possible, it makes sense to use methods which allow you, at any stage, to get back easily and safely to earlier states. For example, in the case of tools which have an option to sample all layers, you can create an empty layer above the image layer and edit on the empty layer. Where making selections are concerned, you can make them using layer masks. (This is discussed in detail in "Making Selections" later in this chapter.)

Figure 5.39 The corrected image.

Figure 5.40 The original for comparison.

Because I'm shooting RAW, I know that the original of every image is stored in a format to which I can't apply destructive editing and to which I can always go back. But it's frustrating to do a lot of basic work in Photoshop, like removing blemishes, and then have to go back to the RAW file because some adventurous but destructive technique (perhaps applying a couple of filters or cropping the image) you tried on the image hasn't worked, and I can't recover the file to a stage before my unsuccessful adventure but after the blemishes were fixed. So it makes sense always to produce a clean, straightened image first—and save it!—before approaching the riskier phases of editing.

Photoshop offers several tools designed to deal with imperfections, such as the Clone, Spot Healing Brush, Healing Brush, and Patch tools. The Spot Healing Brush is new to Photoshop CS2, and is almost too good to be true. You just make the tool slightly larger than the blemish you want to fix, click the blemish, and it's gone; see Figures 5.41 through 5.43.

You can play around with the parameters for the Spot Healing Brush, but nine times out of ten the defaults work perfectly. As well as just clicking a more-or-less circular blemish, you can drag the tool over a more elongated one. Note also that you can play safe, as recommended earlier, by creating an empty layer above the image layer, clicking Sample All Layers in the options bar, and making your corrections on the top layer. Too much trouble, I'd agree, if there's only a handful of blemishes to fix, but a useful precaution if you have to do a lot of work with this tool.

Figure 5.41 The image as shot.

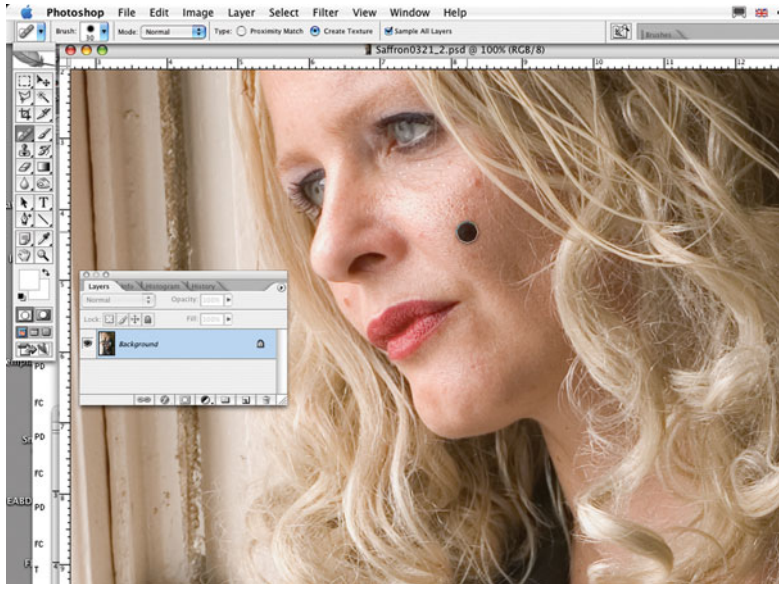


Figure 5.42 The Spot Healing Brush at work.

Figure 5.43 The image after cleaning up.

The Healing Brush and the Patch Tool both work by matching the texture, lighting, transparency, and shading of the pixels from a clean area of the image to the area containing the blemish. I find that I'm using them less now that the Spot Healing Brush is available, but they give subtler and more invisible results than using the Clone tool on larger areas where the Spot Healing Brush might seem too slow.

All these tools, however, are effective only if the area to be healed is pretty homogenous in terms of color. In particular, attempts to use them to heal areas with sharp edges between different colors will usually result in smearing. Figures 5.44 and 5.45 demonstrate this. However carefully you use plastic wrap, it wrinkles. Fortunately, it's easy to remove the rough edges convincingly and make the model appear smoothly wrapped. In this image I also want to get rid of the feather (part of the model's far-out hairstyle) which is visible under her left arm, because in that position is seems distracting. However, none of the healing tools can handle the difference between the black wrap and the background, or even between the feather and the background.

Figure 5.44 The unedited image.

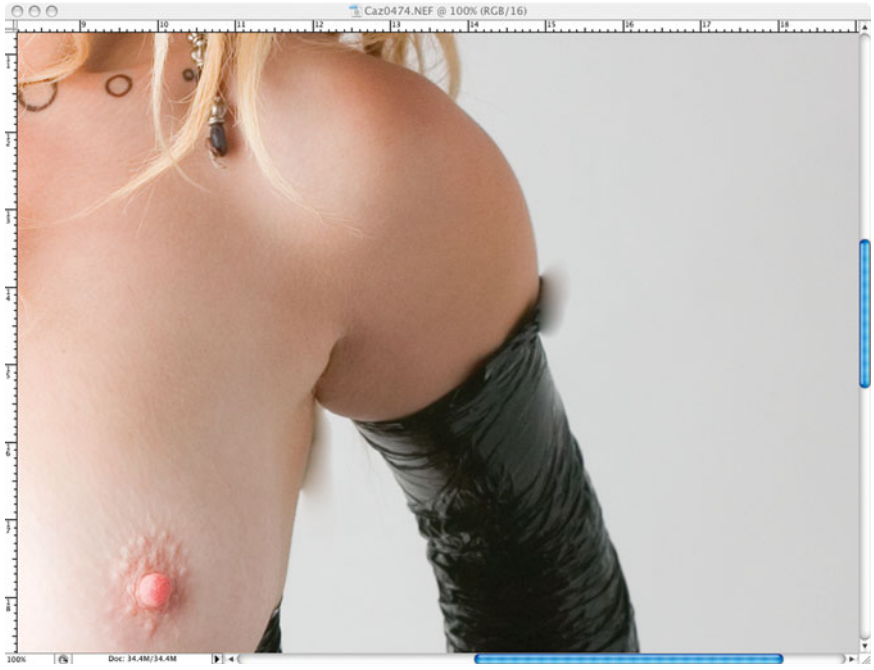


Figure 5.45 Healing tools can't handle situations like this.

So the way to handle this is to go back to the Clone tool. Create an empty layer, check Sample All Layers in the Clone tool options, and in the top layer clone the background over the rough edges. I've cloned out the feather as well. You may need to adjust the brush hardness so it matches the crispness of any edges you're cloning up to and retains consistency with the rest of the edge.

On the other hand, don't worry if you do clone slightly over areas you don't want to alter: You're working on a separate layer, and the overlap's easily cleaned up. To clean the overlap, lower the top layer's opacity, so you can see the outline you need to preserve; see Figure 5.46. Then use the Eraser tool to clean up any overlap areas. Again, you may need to adjust the Eraser tool's hardness to match the edges you're cleaning. When you?re finished, move the opacity for the upper layer back up to 100%, and click the top layer on and off to check that your adjustments are all correct, before merging layers or flattening the image; see Figure 5.48.

A word on merging and flattening: Once you?ve taken either of these steps with an image, then saved and closed it, you can?t get it back to its pre-merge/flatten state. With corrections such as cloning, it?s easy to be certain that everything?s okay before you merge or flatten. With many of the other processes described later, however, it makes sense to keep the image layered so you can rework it later. The opacity settings in Figures 5.61 and 5.63, for example, result from revisiting and playing with the images over a period of a couple weeks. Multilayer images do take up more space, but that?s a small price to pay for the flexibility they offer.

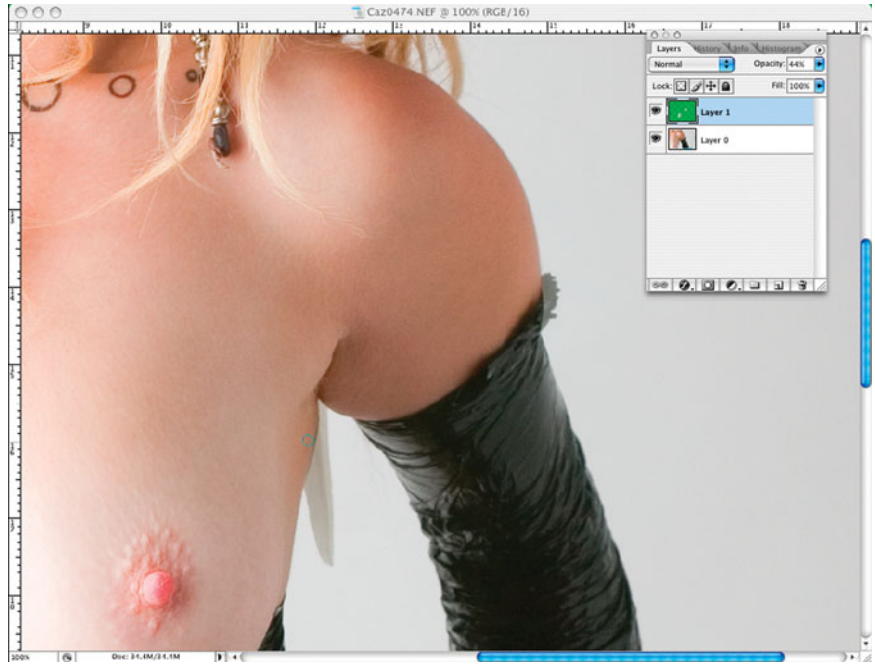


Figure 5.46 Working with the top layer half transparent makes it easy to clean up the effects of overzealous cloning.

Figure 5.47 The final version of the image has the plastic wrap cleaned up all around.

These examples have focused on the foreground, but getting the background right can be just as important. If you're working with a shallow depth of field and the background's a little soft, this makes it all the easier to alter. This doesn't mean, however, that it's worthwhile spending hours and hours doing clean-up work on every image. Each of us will have our own sense of where to draw the line. Here's an example, chosen because it needs quite a lot of correction but where the quality I hope to achieve in the end product makes that effort worthwhile. Figure 5.48 shows the unedited version of the image.

Figure 5.48 The image as shot.

This studio nude depends on simplicity. Here the backlight which picks out the model's musculature so beautifully has also caught and highlighted a fold in the drapes (which are also wrinkled where they reach the floor). As a further complication, a futon has also intruded into the shot; this was a test shot which turned out to be the best of the set. I could crop the futon out, but I like the positioning of the model in the space, so I'll remove the futon. This is easier than it looks, because the background's flat and slightly soft with a shadowed lower edge (and therefore not difficult to clone), and the lines made by the floorboards can be used to extend the floor accurately and convincingly. I'll also crop the image slightly on the right side, and take out what remains of the leg of the lighting stand.

I've started by removing a couple of small spots on the model's back, using the Spot Healing Brush as described earlier. Next I used the Healing tool to take out the bright fold in the drapes. The lasso around the area I want to alter is deliberately drawn quite roughly and unevenly—the less regular the outline of the alteration, the less likely it is to be noticeable; see Figure 5.49. This is pretty straightforward work and doesn't need to be done on a separate layer.

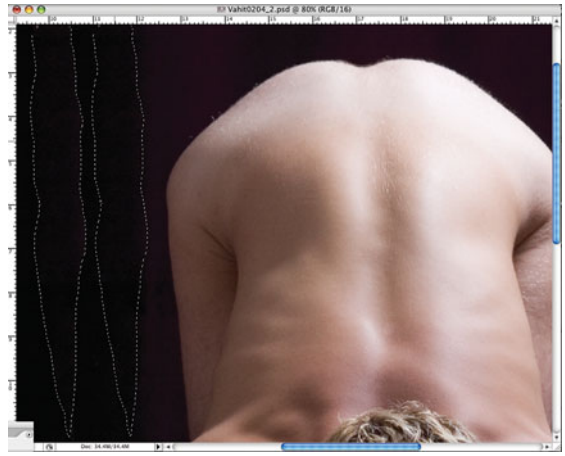


Figure 5.49 Lassoing the area to be altered.

The next and largest step is to take out the futon and the wrinkled lower edge of the drapes using the Clone tool. This definitely needs to be done on a separate, empty layer. Using the largest brush size that will fit, I selected as my source a point just to the right of the wrinkled area, where the drape and its shadow meet the floor. Once I've made this selection, I press down the Shift Lock. This will turn the open circle which normally represents the Clone tool into crosshairs, which represent the center of that circle. Clicking down carefully on the edge between drapes and floor just to the left of my sample point, and starting to clone in new drapes, I made sure that I got a clean new edge. I checked also that the edge was in the right place and ran at the best angle; see Figures 5.50 through 5.52. In this case, because the drapes recede slightly, I reshaped their edge a little forward of its real position. If you don't get it right the first time, undo what you've done (or go back a step in History) and try again.

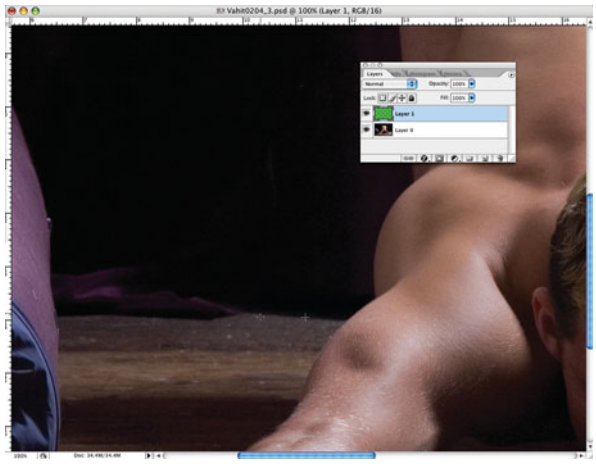


Figure 5.50 Positioning the clone tool.

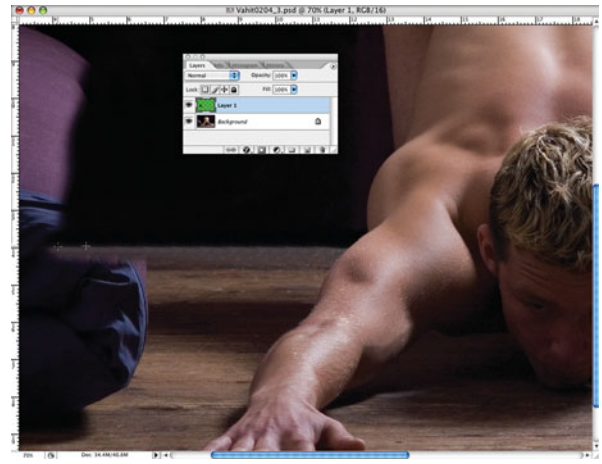


Figure 5.51 Cloning a new edge to the drapes and removing the upper part of the futon at the same time.

Figure 5.52 Note that the new edge where the drape meets the floor looks convincing, thanks partly to the shadows.

Then I extended the floor over the futon. The edges of the floorboards run parallel to the edge of the drapes, so in theory the Clone tool needn't be reset. I tested it on a small area in the foreground first: If it weren't producing convincing edges to the floorboards, I'd have used Undo or the History again to get rid of the test and then reselect the source point; see Figure 5.53.

One irritating but inevitable feature of cloning areas in an image is that small features within the source you've selected, which are scarcely noticeable in themselves, begin to form a rhythmical pattern as you apply the Clone tool, as can be seen in Figure 5.53. This wasn't a problem with the drapes, but it is with the floor. (There's a tradeoff here: I've chosen to keep cloning with the same sample point, in order to keep the edges of the floorboards dead straight, and that's why I'm getting these patterns. I find it easier to fix the patterns than to keep those edges straight while changing sample points.) So as a final step, after double-checking that the new floorboards are straight, I merged the two layers and used the Healing tool to take out any such patterned features; see Figure 5.54.

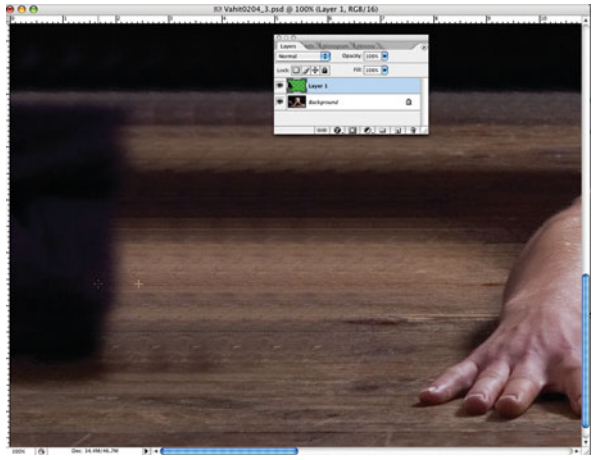


Figure 5.53 Starting work on the floor boards.

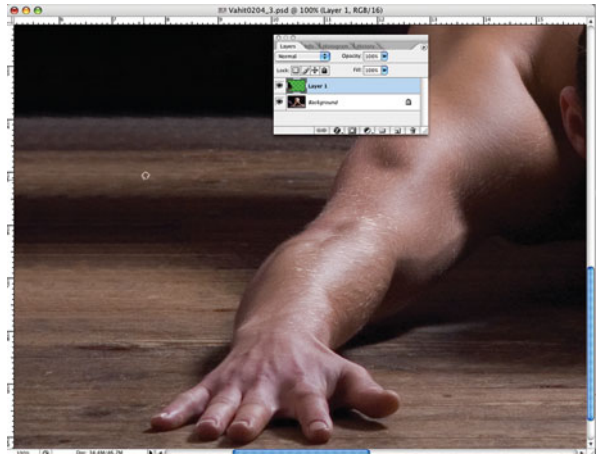


Figure 5.54 Removing the repeat pattern.

Working in this way, fixing even large areas of images is straightforward, if time consuming. All that remained was to crop the image slightly, clone out the lighting stand on the right, and convert the image to black and white using Image > Calculations as described later; see Figure 5.55.

Figure 5.55 The image in its final form.

Correcting Tilt

Edit > Free Transform isn't available for the Background layer: You need to convert the background layer to a normal layer first by double-clicking it in the Layer tab, then clicking OK in the New Layer dialog. Once that's done, you can rotate the image so that it looks right. There are at least three possible versions of "right" here, and they may not all be simultaneously possible: making the horizontals look right, making the verticals look right, and making the model's position look right. In Figure 5.56, for example (already seen as a color image at Figure 4.22), the most important element in judging the rotation turned out to be the edge of the windowsill tiles.

When you rotate an image, you either have to crop it to remove the empty areas created in the corners by the rotation, or you have to fill those empty areas. In studio images, this might just be a matter of cloning in some more flat background; in location shots, particularly if you're working with shallow depth of field and deep perspective, it's also easy to extend soft-focus, real-world backgrounds of trees, brick walls, and so on. It's also possible to clone (some parts, at least) of the model's body or garments. In Figure 5.57, for example, model RubyBlue seems to be leaning to the viewer's right. Rather than crop the image after rotating it, it's possible to draw the missing part of her thigh; this can be done the same way the floorboards were extended in Figure 5.53. Here the Clone tool needs to be set carefully on the edge of the model's thigh, just as it was on the edge of one of the floorboards; see Figure 5.58.

Figure 5.56 The image has been rotated to make the edge of the tiles horizontal.

Figure 5.57 The original image is tilted to the right.

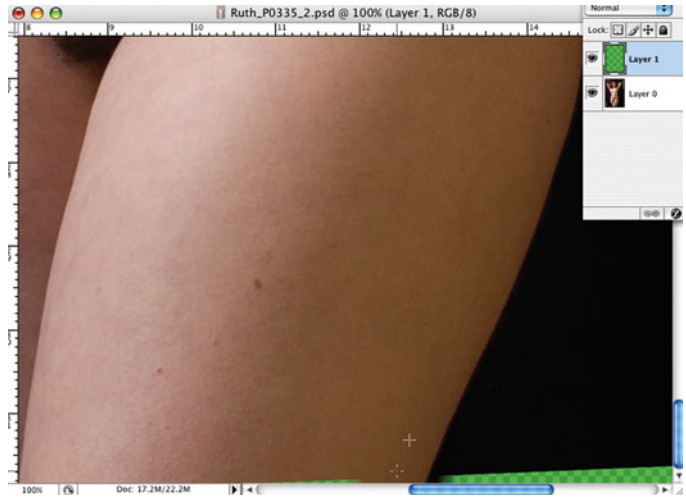


Figure 5.58 Cloning in a section of thigh.

Altering Emphasis

Once you've adjusted the image so that it has the greatest possible dynamic range, you can manipulate it to achieve the greatest visual and emotional impact. Often this is just a matter of improving the brightness and contrast. You can do this via Image > Adjustments > Brightness/Contrast or a Brightness/Contrast adjustment layer. Another very effective way of doing this is to use an adjustment layer with either Multiply or Screen blend

applied to it, to darken or brighten the image, respectively. Multiply and Screen, in effect, each apply a predetermined tonal curve setting. In Figures 5.59 and 5.60 the adjustment layer is set to Multiply, with an opacity of 40 percent, after some experimentation.

Figure 5.59 The image before adjusting with a Multiply layer.

Figure 5.60 After editing.

Screen has been used in Figures 5.61 and 5.62, and again, the opacity setting worked out at 40 percent.

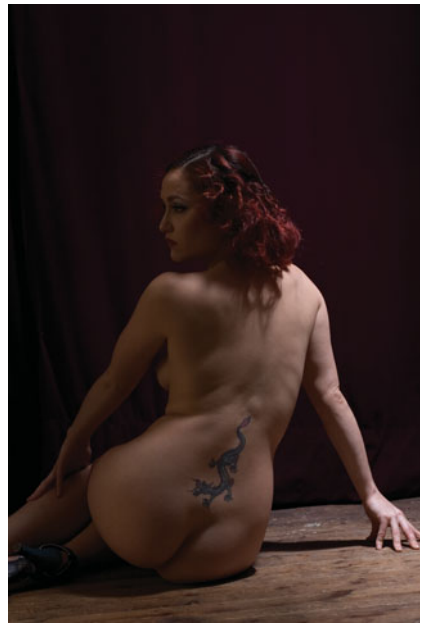


Figure 5.61 The unedited image.

Figure 5.62 After applying a Screen adjustment layer.

It's often desirable to darken or lighten just the background to emphasize the figure in the foreground. You can do this using the Burn and Dodge tools on the background, but while these methods can work well on small sections of the image, I find it difficult to get an even effect over large areas. Again, an adjustment layer with either Multiply or Screen blend applied to it can be used; but this time we'll mask out the foreground, so that only the background is changed.

Figure 5.63 is the unedited image: I want to make the background darker. Begin, again, by creating a Curves adjustment layer. Set the blend mode for this layer to Multiply. This will immediately darken the whole image. Click in the layer mask to make it active and check that the foreground color in the toolbox is set to white. (Whatever colors were set before change to black and white when you click in the layer mask. Press X to swap background and foreground colors, if necessary.) Now press Command+Backspace (Alt+Backspace) to fill the layer mask with black (the background color). This makes the upper layer transparent, removing its effect. Next, choose a paintbrush the right size and, still with the layer mask selected, start to paint (in white) over the background areas of the image. As you make these areas of the mask opaque, you'll see the effect return, darkening the areas where you're painting the mask.

If you go too far and paint over the foreground, just press X to reverse the background and foreground colors for your brush, and paint the area where you went wrong. You may need to change brush sizes frequently as you work: The easiest way is to use the square bracket keys: [makes the brush smaller and] makes it larger. There may be areas (particularly when dealing with the

Figure 5.63 The unedited image.

model's hair) where you get the best results by reducing the opacity as well as the brush size. In Figure 5.64 we see the work partway through. It may also be helpful, in parts of the image where the background and foreground meet with a fairly hard edge, to increase the hardness of the brush. And don't worry if, as you work, the background still seems too light or too dark.

Once this process is complete, you have a range of further options. If the background is too dark, you can reduce the adjustment layer's opacity until the balance between background and foreground looks right. If the background still seems too light, duplicate the adjustment layer. When you do this, the new layer will include the adjustment layer's layer mask and will also be set to Multiply. This may make the background too dark; if it does, reduce the opacity of the top layer to bring the image into balance. In Figure 5.65 the adjustment layer works best with an opacity of 80 percent.

Figure 5.64 Darkening the background.

Figure 5.65 The edited image.

This works well with a simple (for example, single-layer) image such as this one, but because adjustment layers are applied to all the layers below them, it may produce unexpected results in a multilayered image. So if you expect your image to acquire more layers below these, create a duplicate layer of the image instead of an adjustment layer, and follow the same steps.

At the other extreme, you may want to make the background brighter, if, for example you've been shooting against a white background and it's slightly underexposed. You can do this by following the methods described earlier: selecting Screen rather than Multiply.

Alternatively, try this method. The background of Figure 5.66 needs to be made brighter. An adjustment layer won't work for this method. Duplicate the layer and use Image > Adjustments > Replace Color on the upper layer. Set the eyedropper to Add to Sample, and click the background until all of it is highlighted. Then set Saturation to –100 and raise the Lightness to give the look you require. (Keeping some tone in the background usually works better than turning it blinding white.) See Figure 5.67.

Each of these steps will also have an impact on the foreground figure in the upper layer (see Figure 5.68), so the next step is to create a layer mask in the upper layer and paint in the mask. Painting reveals the unaltered foreground in the bottom layer. Once more, adjust the opacity of the upper layer to produce the desired balance between background and foreground; see Figure 5.69. You can also use Replace Color in this way to change, rather than lighten, the background color.

Figure 5.66 This will work better with a lighter background.

Figure 5.67 The Replace Color window.

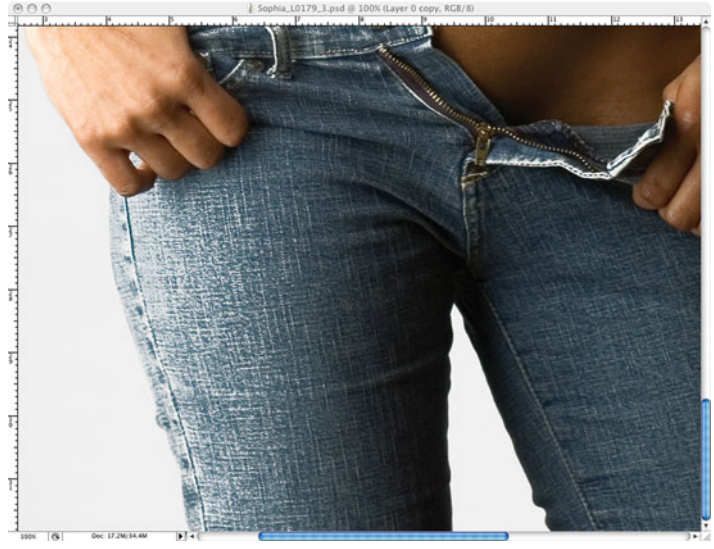


Figure 5.68 Pushing the lightness value for the background may affect some parts of the foreground.

The combined use of duplicate layers or adjustment layers, blend modes, and layer masks is at the heart of most serious image manipulation in Photoshop. At its simplest, trying an idea on a duplicate layer is a good, risk-free way of experimenting: If the idea doesn't work, you just scrap the duplicate layer and start over. At a more advanced level, the use of layers gives you powerful yet subtle control over the your image's "lighting," enabling you to adjust anything from the whole picture to any small part of it.

Figure 5.69 The edited image.

Here's another example of the same techniques, used this time to control the lighting in the foreground of the image in Figure 5.70. The model brought the fan to the shoot, and we were struck by the possibility of making something of the model's very striking eyes and the "eyes" of the peacock on the fan. I lit the shot with a big softbox in front, and another light, with its barn doors closed down to a narrow slit, aimed from the side and behind the fan to bring out the model's eyes. It all worked fine, except that the second light also lit up the fan fabric from behind, reducing the saturation of its colors and making it look flat and dull. The solution was to create a Curves adjustment layer, set it to Multiply, and in the layer mask paint in the fabric of the fan (but not the fan's wooden ribs, which are opaque and thus weren't backlit). See Figure 5.71.

Figure 5.70 The fan's tones are made duller by being backlit.

Figure 5.71 The fan masked in with a Multiply adjustment layer.

Playing with Filters and Blend Modes

The filters supplied with Photoshop, to say nothing of those devised by third-party manufacturers, constitute a huge resource for changing the appearance of your images. But they suffer from one problem as far as creativity and originality are concerned: Every Photoshop user has access to the same filters, so when you just apply a filter to your image, it's likely to come out looking just like every other Photoshop user's work. The Filter > Filter Gallery option helps you escape from this sameness by letting you carry out quick tests of different filter combinations. Using the filter gallery, you can create a stack of filters on an image, and change their order in the stack, to see the different results; see Figure 5.72.

This is a very helpful first step, but because the gallery only allows you to apply the filters full strength and has no blend mode controls, it's still only a test bed—not a way of getting straight to a finished image. The real power of filters lies in varying their strength and blending them in different modes. (Also, as Photoshop Help points out, some filters listed in the Filters menu are unavailable in the Filter Gallery. This applies particularly to third-party filters.)

Once you've applied a filter, however, Photoshop does provide Edit > Fade as a way of adjusting the filter's strength; you can use the same command to fade changes made with tools such as brushes. However, Edit > Fade can only be applied to the *last* tool or filter you used, and this isn't very helpful. Here

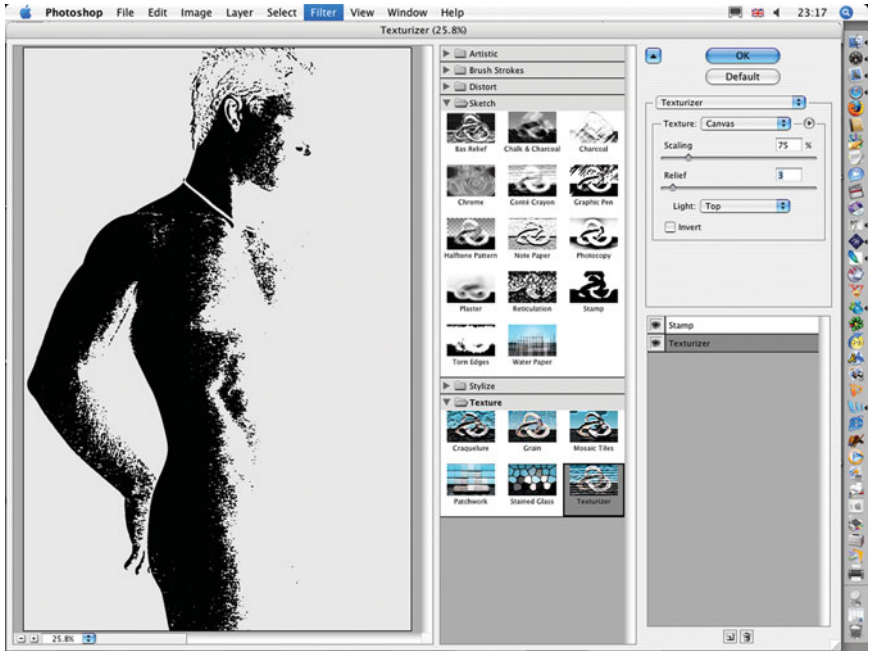


Figure 5.72 Using the filter gallery.

again the easiest way to work is to create a duplicate layer and apply the filter to that, so that you can then experiment (at any subsequent point in your work on the image) with varying the opacity of the top layer to reduce the filter's impact.

Photoshop Help is surprisingly good on what each of the blend modes does, described in terms of the underlying math as well as the likely result of applying it. You can find the information under Blending Modes > Described in the Help index. At the same time, the results of applying the same blend to different images can differ surprisingly, so always expect the unexpected, particularly when using Image > Calculations.

Many filters and blend modes push the dynamic range of an image to the extreme. Applying Color Burn or Linear Dodge, for example, increases contrast to an extent that makes most normal images look very blown out. Plastic Wrap, Accented Edges, Diffuse Glow, and Chrome are among filters which often have the same impact. Once you understand how a filter or blend mode is likely to effect your images, you can adjust the image before applying the filter to avoid excessive blowout or empty black areas, thus getting more out of the filter or blend mode. I'll illustrate this with a third-party filter: the curiously named Monday Morning from Nikon Color Efex Pro! This is a great tool for applying subtle grain to an image, but it also pushes the brightness and contrast, as Figures 5.73 and 5.74 demonstrate.

To hold all the detail in the image while using the filter, create a duplicate layer and lower the brightness and contrast in that layer, use Image > Adjustments > Brightness and Contrast, not an adjustment layer. Then apply the filter and check it carefully in the preview window. There's a certain amount of trial and error in this process, so if the preview looks too flat or is still too high contrast, cancel the preview, readjust the brightness and contrast for the layer, and apply the filter again; see Figures 5.75 and 5.76.

We haven't been working on a duplicate layer just for security. Now you can experiment with different blend modes for the top layer, combined with different opacities for the bottom layer, to produce a range of subtly different versions of the image. In Figure 5.77, for example, a very punchy version of the image results from setting the blend mode to Soft Light, with both layers at full strength; in Figure 5.78 the opacity of the lower layer is reduced to 35 percent, making the grain more prominent.

Figure 5.73 The original.

Figure 5.74 With Monday Morning applied at default settings.

Figure 5.75 This very flat image produces…

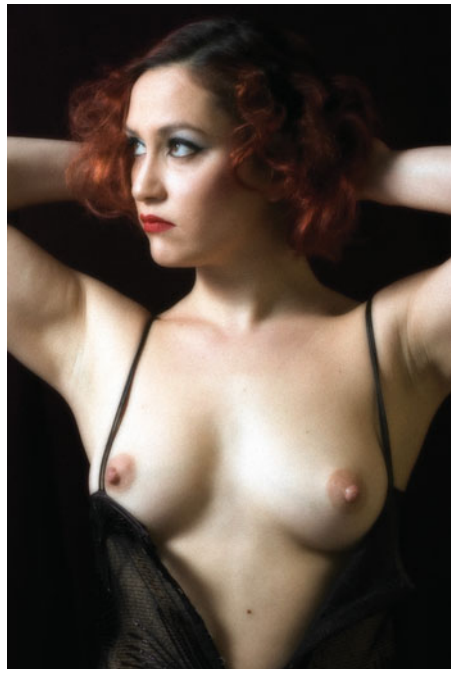


Figure 5.76…this when Monday Morning is applied.

Figure 5.77 Both layers at full strength.

Figure 5.78 Lower layer opacity at 35 percent.

Creating Monochrome

The advent of 35mm color films in the 1950s did little to challenge the place of monochrome as the natural medium for much artistic nude photography. Similarly, the fact that many digital cameras don't have a black-and-white setting shouldn't discourage photographers from working in monochrome. We'll start with a few different methods of converting images to black and white, then look at the extra steps needed to tint these images—for example, to mimic traditional sepia and selenium (blue) toning.

The Desaturate and Channel Mixer Commands

The simplest way to change a color image to black and white is to click Image > Adjustments > Desaturate, illustrated in Figure 5.79. This is a one-shot deal, with no parameters to adjust: Either you get a good-looking black-and-white image or you don't. Desaturate tends to reduce skintones to a rather dull mid-gray, however, and that's why you may choose to pursue other possibilities.

The next method is Image > Adjustments > Channel Mixer (or a Channel Mixer adjustment layer). Channel Mixer treats each of the three channels of an RGB image as if it were a grayscale image, and allows you to, well, mix the channels. (You can see the grayscale differences between the channels if you go to Preferences > Display and Cursors, toggle off Display Color Channels in Color, and then look at the channels of your image one by one.

Figure 5.79 Monochrome conversion: the quickest method.

The most noticeable difference, on skintones, is usually between the Red and Blue channels.)

By default, the Channel Mixer window opens with the Red channel set to 100 percent and the other two channels set to 0. Check the Monochrome box and observe the results. Now try lowering the Red to 80 percent and setting Blue and Green each to 10 percent. Experiment also with the Constant slider. Note that you generally need to keep the total value of the RGB channels for a correctly exposed image to 100 percent to avoid the image looking flat or blowing out; see Figure 5.80. When you finish mixing the channels and click OK, all three channels will have the same values. This results in an image which is technically in color (in this example, an RGB rather than grayscale image) but looks monochrome.

Figure 5.80 A more vivid monochrome rendering using Channel Mixer.

Channel mixer gives best results with quite big differences between the channels. If you set all three channels to 33 percent, you'll get the same result as with the Desaturate command: rather flat and uninteresting. I find that settings around 80/10/10, as described earlier, produce pale skin with little textural detail. To increase texture, drop the Red and raise the Green. Go cautiously with Blue: Too much of it tends to produce uneven skintones.

The Calculations Command

Channel mixer is clearly more powerful than Desaturate, but Photoshop has another tool for creating black-and-white images. This is the very versatile, but rather fearsome, Image > Calculations. I've no idea why it has that name, and Photoshop Help is pretty unhelpful about it all.

In theory, Calculations allows you to combine channels from two or more images, converting them to black and white and blending them at the same time. "Or more" is a little imprecise: You can combine channels from a maximum of three images, and only in a rather inflexible manner. In practice, I use Calculations with just one image at a time, using its two layers and mask to achieve the most powerful and flexible manipulation and conversion into black and white that Photoshop itself offers.

To use Calculations, start by making sure that no other image with the same pixel dimensions as the image you want to convert is open. This will avoid confusion later. If the image is 16 bit, you can switch it to 8 bit. This speeds Calculations, without losing any quality or dynamic range in your monochrome image. Double-click the background layer of the image in the Layers window to convert it to a normal layer. (I'm assuming for the moment that the image you're working on has only one layer.) Then select Image > Calculations. The interface presents two source layers and a mask, with options for Layer and Channel for each source; for blend mode and opacity between the two sources; and, if you check the Mask box, for Layer and Channel for the mask as well. If you don't convert the background layer to a normal layer, you won't have transparency as an option for any of the layers. See Figure 5.81.

From this point on, it's time to experiment, and it's every photographer for himself! I begin by setting the channels for both sources to Red, which gives an ivory glow and transparency to a wide range of skintones. This works well with Soft Light as the blend mode, but it's worth experimenting also with combinations of Red and Green channels for the two sources, as well with Red or Green as one layer, and transparency as the other. (I avoid using the Blue channel, because it's the noisiest and tends also to produce uneven skintones.)

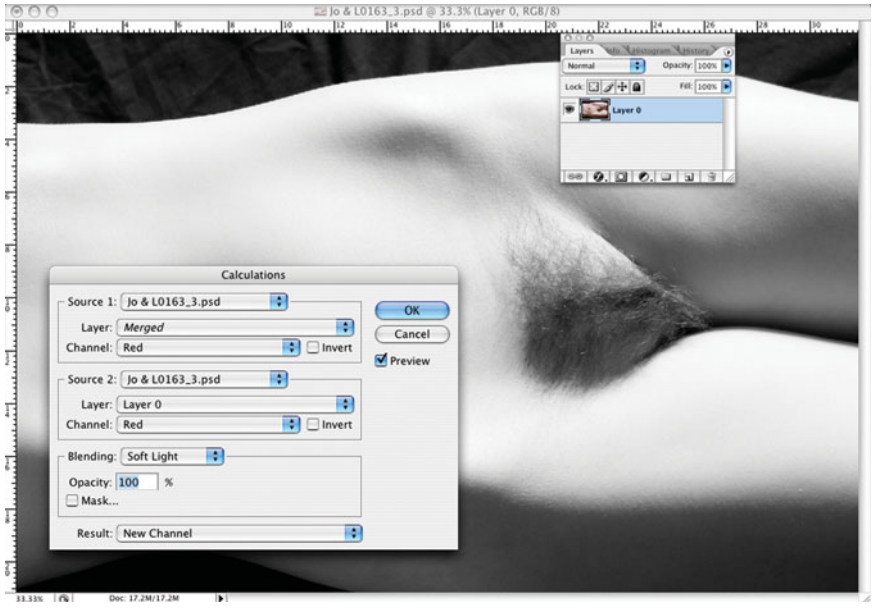


Figure 5.81 The Calculations window.

Try running through the different blend modes and adjusting the opacity. (If you're just experimenting, dragging the opacity down to about 50 percent will preview more quickly, to give you an idea of the possibilities in that particular blend mode.) Not all blend modes will work with all layer combinations: For example, Red + transparency produces a rectangle of pure white when blended in Soft Light mode. Changing opacity will make no difference to some settings, either. If your image has more than one layer, you can use any individual layer, or the merged image, in each source. Again, some changes here will make no difference to the output.

Note also that the glowing skintone you can achieve with Red + Red in Soft Light mode often extends also to darker areas such as the model's lips, making them look rather ghostly; see Figure 5.82. You may want to fix that afterwards, and there's a good method for doing that, described later.

Try the effect also of switching the mask on. Generally it will flatten the image noticeably. Check Invert and the flattening effect will reduce, and with blends such as Multiply may provide a better tonal distribution than using the blend without a mask. You'll also get subtle changes in the mask's effect by switching the mask layer from Gray to Red or Green. (If you have another image open with the same pixel dimensions as the image you're working on, Photoshop will make it the default mask. Just click the Mask menu and select the correct image.)

If you've been trying these steps on your computer as you read this, you'll understand why Calculations is less understood than it should be and less used than it deserves to be. The range of results is perplexing. There's a great

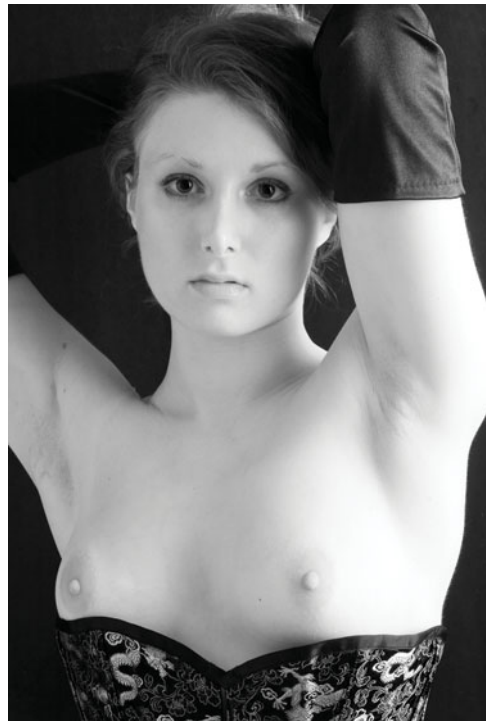


Figure 5.82 Glowing skintones, but the lips are too pale.

deal of redundancy, with different combinations producing very similar results, and it's hard to keep track of them all. It's a good idea to keep a recipe book of what works for your personal aesthetic. My own favorites are variants of Red/Green/transparency with Multiply or Soft Light, often with a red inverted mask; and some slightly flat images can be given more punch by applying Hard Light.

As you experiment, you'll often find that different areas of your image look better with different combinations of layers and blends. One example, as we've seen, is the model's lips, which often look darker, more sensual, and less ghostly as Red + Green or even Green + Green. Rather than having to choose just one of the many different possibilities, you can process the image twice, once for paler skintones and once for darker details, and then combine the two versions.

Once you've set the parameters for one of the versions you wish to combine, you may want to make a note of what the settings for the second version should be while you can remember them! Then select New Document from the Result menu and click OK. This will create a new document of your first version, leaving the original image untouched, so you can go back to it to create the second version. This new document comprises only an alpha channel and will be called something like Untitled-1. Select it, then convert it to RGB by clicking Image > Mode > Grayscale, then Image > Mode > RGB.

Next, go back to the original image, go back into Calculations, and reset its parameters to the other version of the image you want to combine with the first version. (Switch the result back to New Channel to avoid creating more versions of the image on screen than you need.) Now click OK. This time if you click Window > Channels, you'll see an RGB image with an alpha channel. To use it, you need to throw away the RGB channels, then convert the alpha channel into a new RGB image. You can do this by flattening the image, then dragging the RGB channels, one by one, into the trash at the bottom of the Channels window. Now, as with the first version of the image, go to Image > Mode > Grayscale, then Image > Mode > RGB. It isn't strictly necessary to convert a black-and-white image to RGB, but I always do this for the sake of consistency, and if you want to tint the image you'll need to do it anyway.

Finally, select Untitled-1, Shift+click the background layer in its Layer window, and drag it onto the other image to create a single image with both layers. Then it's just a matter of creating a layer mask for the top layer and painting it out to reveal the appropriate areas of the layer beneath. In this case I've varied the brush opacity to add more emphasis to the lips than to the nipples. You can also safely close Untitled-1 without saving it: It's now the top layer of the other image, and you're editing it nondestructively. Figures 5.83 and 5.84 show the darker image (created using Multiply in Calculations) and the effect of combining it with Figure 5.82.

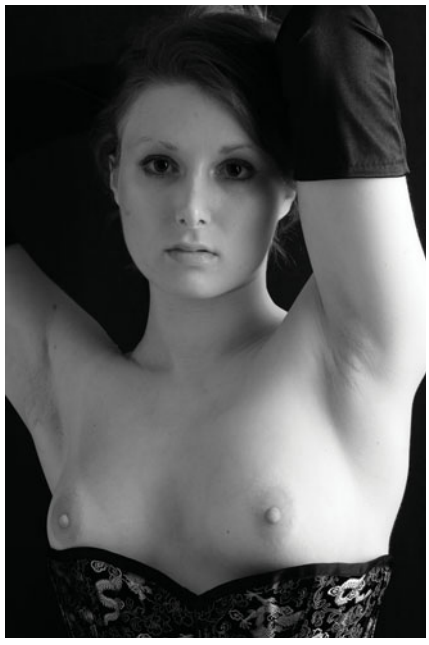


Figure 5.83 A darker version of the image.

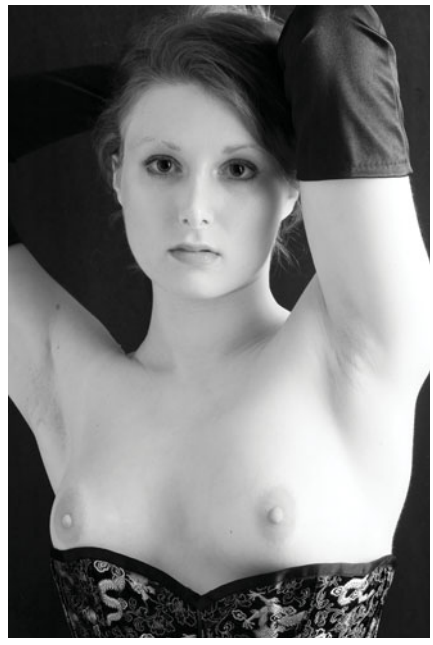


Figure 5.84 The result of combining both images.

This may seem a lot of effort for an area as small as the model's lips, which could be darkened by simply burning them in with the Burn tool. However, the right choice of settings in Calculations will retain the highlights on the model's lips in a way that's hard to match with the Burn tool.

So far we've produced black-and-white images. There's a long tradition in photography of images which are monochrome but not black and white. In traditional photography the most common forms of this are sepia- and selenium-toned images. Photoshop offers a quick and easy way of creating such pictures, which still have a strongly sensual and nostalgic feel. Having created your monochrome image, go to Image > Adjustment > Curves or use a Curves adjustment layer. Click Channel > Red. Click the curve midpoint (input value 128) and pull it up to an input value of about 117 and an output value of 140. Do the same with Green (input 122, output 133), and reduce Blue at the midpoint to input 134, output 125. This will create that sepia look shown in Figure 5.85. You'll find that the precise values that work best vary a little from image to image. For the selenium look, set the Blue channel at the midpoint to input 120, output 139, or thereabouts; see Figure 5.86.

Figure 5.85 Sepia toning created in Curves.

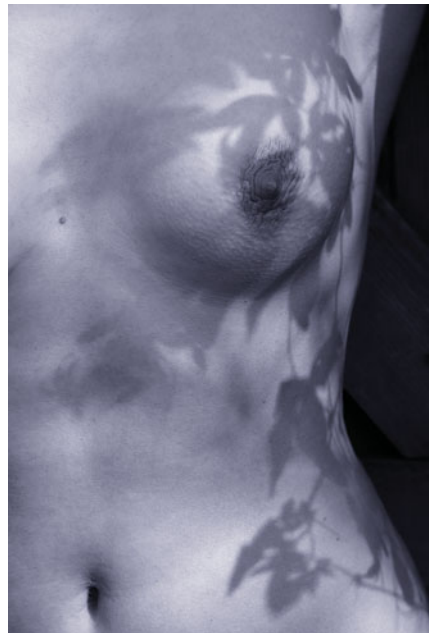


Figure 5.86 Selenium toning created in Curves.

That covers the methods available in Photoshop itself for creating monochrome images, but many third-party manufacturers have plug-ins available. I've found ConvertToBW Pro from theimagingfactory (www.theimagingfactory.com) a useful filter for this purpose. Its parameter adjustments let you apply a prefilter; set a color response either by manually adjusting the response across the color spectrum or selecting from a range of presets which mimic different photographic negatives; adjust the contrast ratio, mimicking the use of multigrade paper; and, in the sepia options, create a monochrome image based on any color, not just sepia. Figure 5.87 shows the results of using ConvertToBW Pro. I made two versions at slightly different settings and combined them to keep the skin texture of model's left hip and to reduce the shadow over her pubic hair.

Figure 5.87 Selenium image produced in ConvertToBW Pro.

The best parameters for converting even very similar images are rarely the same, so the filter needs to be applied in Preview mode every time, rather than opening a bunch of images, setting the filter for the first of them, and then applying Filter > Last Filter to all the others.

Color Pass

Color pass is the process of retaining one color or color range in an image, while converting the rest of the image to monochrome. The color you retain needn't be the color of the original. In Figure 5.88 (already seen at Figure 2.48), the lily was originally yellow.

Color pass is an easy enough technique to learn: You just create a monochrome version of the image, put the color layer over it (or vice versa), add a layer mask to the upper layer, and paint it out to reveal the appropriate areas of the lower layer. However, finding interesting, striking, and unusual ways of using color pass is less straightforward. Monochrome models in brightly colored bikinis are a dime a dozen on the Internet, as are monochrome models with brightly colored flowers. In Figure 5.89 I aimed to achieve something a little different, taking a subtler approach to color. Some color of the model's nipple has been retained, helping establish the formal parallel between the shape of the breast and the curves of the lily.

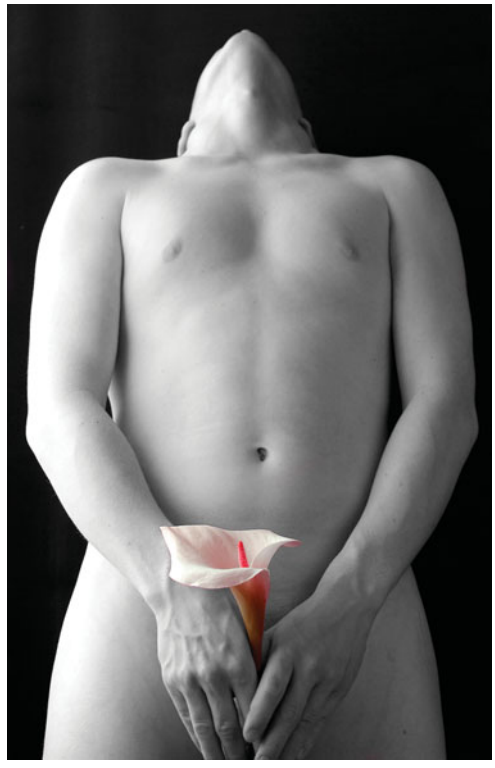


Figure 5.88 One carefully positioned lily.

Figure 5.89 And another.

In Figure 5.90, the retention of the gold tones of the model's shoes heightens the richness of the selenium toning and draws the viewer's eye into the composition.

Figure 5.90 Selenium and gold.

In Figures 5.91 through 5.93, the original image has been treated in two different ways. The red PVC trousers look sexy and striking, but at the same time they're a bit obvious. (There's something about red that seems to make it many photographers' favorite color for color pass work.) I prefer the second version, which picks up the sensual texture of the model's fake-fur jacket.

Figure 5.91 The original image.

Figure 5.92 Go for the red, or…

Figure 5.93 …choose something less predictable?

Incidentally, this image also illustrates clearly the benefits of combining layers produced with different settings in Calculations. The layer made with Soft Light and Red + Red makes the red trousers a very unappealing gray, as Figure 5.94 shows.

Figure 5.94 The Calculations settings which make the rest of the image look good, but make the trousers less attractive.

The basic method uses Calculations to create the monochrome layer. When you do this, select New Document as the Result. The presence of a colored element in the image often seems to make the monochrome areas look rather flat, so go for a high-contrast black-and-white conversion. Using Image > Adjust > Desaturate will let you down badly here. Once that's done, add the monochrome image as a second layer to the original picture, give it a layer mask, and set to work painting out the appropriate areas. In the case of the feathery edges of the fake-fur jacket, some experimentation with the opacity of the brush was necessary to get a convincing look.

In Figure 5.95 (already seen in Figure 2.114), the rich colors of the laces in this corset piercing contrast powerfully with the model's skin, rendered very white by using Red for both channels in Calculations. In this example the reflections on the metal surfaces work best when held in monochrome, but in some images you might want to try using a brush with reduced opacity when you paint out the corresponding areas in the mask, allowing a little color into the reflections. Figure 5.96 shows how the image is created: The mask cuts a hole through the monochrome layer to reveal the color detail beneath. The opacity of the monochrome layer is set to 100 percent, but it's often worth experimenting with reducing this, retaining a little of the skintone in the final image.

Figure 5.95 Strong contrasts in color and texture in this color-pass image.

Figure 5.96 The hole cut through the top layer, which reveals the colored layer below.

As with all layer mask processes, meticulous accuracy is essential here, particularly when dealing with reflections on highly polished surfaces in the image. Check the work by clicking the top layer off and on, watching the edges of the color area closely. Try clicking the bottom layer off and on also, and check the empty areas where you've painted the image out.

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