

1 Introduction

Digital photography has conquered the market at breakneck speed despite the fact that in the early years of the technology, professional photographers eyed its development with skepticism. As photographers migrated from analog to digital, they suffered through more than their share of growing pains, struggling with the new technology and doubting its viability. Following are some of the questions that were being asked:

- Is it actually possible to make large, quality prints from digital images?
- Don't digital photos look artificial?
- Do the colors look natural?
- How does digitalization affect black and white photography?

In order to answer these questions and to get acquainted with digital photography one thing was certain: it was necessary for photographers to devote time to learn the technology of the meteorically advancing digital photography. Not only was it essential for photographers to become familiar with a new, and rather complex camera technology; it was also necessary to thoroughly understand the new image manipulation programs. Many photographers initially shied away from these efforts, and as a result, traditional analog photography had to be defended by those who had not even acquired an in-depth knowledge of the digital process.

The Image in the Digital Age

Many textbooks have been written about digital cameras, digital technology, and the latest image manipulation programs, which are meant to facilitate both amateurs and professionals as they transition from analog to digital. However, one aspect seems to have been almost forgotten in the process: Digital photography goes beyond the technical and is also about images and their content—about moods and their formal arrangements. This book will help you become familiar with digital photography, and will help you to focus again on the image in the digital age.

Images have their own special language and primordial laws. Black and white photography is a medium that begs to be artistically shaped in both digital and analog photography. Certainly, digital photography technology appears complicated and must be mastered, however, the technology of photography should not always be the main subject; rather, the technology should only serve to guide you toward the end result of expressive, artistic images.

Apart from the technical aspects of production, whether a picture was taken in analog or digital format is completely irrelevant to the presentation of the image. Therefore, to help you learn about image composition, several of the examples included in this book were produced through analog photography. While this book forgoes specifying the processes used to create analog images, it provides exact information on the technical procedures used to create each digital photograph.

Needless to say, although this book deals with digital technology and provides you with essential technical information explained in simple terms, it is primarily an advanced guide to image composition. Thus, the first and longest part of this book deals mostly with content-related subjects such as landscape, architectural, portrait, and street photography. For each of these subjects, well-known examples from historical and current photography are mentioned with the aim of motivating the reader to go beyond this book and delve further into these subjects.

The second, larger part of this book deals extensively with the classic rules of image composition such as the golden ratio, triangular composition, image tension, etc. This part of the book teaches the essentials of image analysis; however, you should not view the rules of composition as recipes to be strictly followed. On the contrary, after you have absorbed these compositional rules, you will be reminded not to adhere to them at all times; rather you should feel free to discard them when it suits your purposes, and in the best-case scenario, apply them to develop your own pictorial language.

Technical Information in this Book

Analog black and white technique is taken for granted and is not explained in this book, whereas with every digital image included the precise technical pro-

cedure is briefly explained. Some chapters in this book are devoted to important technical information such as:

The quality and features of digital cameras

- The processes of shooting in RAW mode
- Photoshop CS2 techniques that you really need for manipulating the perfect digital black and white photo are explained in a simple way.
- The basics of the new black and white conversion and filter simulation features of Photoshop CS3, which became available shortly before publication of this book.

Please note that the digitally photographed images in this book were manipulated with Photoshop CS2. I refer to the channel mixer in the picture legends, because at the time of writing, Photoshop CS2 was the most advanced version and it offered the best conversion method available for black and white.

New Filter Mode Starting with Photoshop CS3

In the chapters on nonspecific techniques, such as the chapter on filters, I include some CS3 manipulated images, but in general, for CS3 information, you should refer to the final chapter. Photoshop CS3 finally gives you the ability to simulate the effects of blue, yellow, green, and red filters in black and white conversion. In the final chapter, you will see examples of the innovations introduced by Photoshop CS3. I should mention that the filter calculation works very well in some, but by no means all cases. In any case, it is superior to using the camera's filter mode when taking the picture.

Emphasize Expression

Throughout this book you will be repeatedly reminded that photography is about learning to see, to compose an image, and to think pictorially. In a nutshell, this book will stimulate you to analyze images in-depth and will motivate you to find your own photographic style. To accomplish this, my photographs are used as examples to communicate the diversity of pictorial language. The knowledge you gain from the information this book provides can be transferred to other totally unrelated subjects.

One thing is certain, however: With digital photography, although the increasingly difficult techniques must be mastered, technology should never become an end in itself. It is precisely because of this that it is so important to stress that photography is not preeminently about technique, but is rather about images with content that express the photographer's consciousness while being created in an interesting way. And that is what this book is about.



1 Choosing a Good Digital Camera

In analog photography, the camera does not have the essential importance often attributed to it. Rather, the quality of the lenses is paramount, because the optical system and the type of film used are mostly responsible for a technically satisfactory image quality. These things are completely different in digital photography, where the quality of the camera sensor determines image quality as much as the optical system. Therefore, most of the time—and in contrast to analog photography—the latest camera sensor model is in fact often the best one as well. Digital photography has evolved so much in recent years that high-quality images have become a reality; something that even a few years ago was by no means the case.

When digital cameras were in their infancy, 3 megapixels were insufficient to allow for large-sized enlargements. There were other problems too: image noise in night photos, moiré effects in delicate graphic structures, unnatural colors, color fringing in photo edges, and above all very slight burnt-out lights in backlit situations, making backlit photos almost impossible to shoot. In addition, shutter release delay was a problem in the early days of digital photography, making it totally useless for snapshots.

Meanwhile, all the problems mentioned above have been largely resolved. Small-frame sensors now have an average resolution of 10 megapixels and the Canon EOS 1 Mark III DS has already reached 21 megapixels, which is the maximum resolution of a small-frame sensor at the time of publication of this book. Digital backs for medium-format cameras currently have a resolution of almost 40 million pixels. These are magnitudes of resolution that an amateur doesn't

need and which only make sense if you intend to print images at least three feet long.



Figure 1-1



Figure 1-2



Figure 1-3

APS Sensors

The active pixel sensors (APS) used by most manufacturers provide a pretty good image quality, but they don't perform very well with extremely wide-angle lenses, because with a focal length extension of 1.5 you must generally purchase a 12 mm optical system to reach an actual 18 mm focal length (an extremely wide-angle lens). However, a good 12 mm optical system placed before an APS sensor with a focal length extension does not quite reach the same image quality as a good 18 mm optical system placed before a full-format sensor. These differences in quality can be noticed only in large prints (16" × 24" and larger), yet are nonetheless important.

Let's look at our comparison once again: This inartistic image perspective (Figure 1-1) is the result of a test performed in front of a friendly, professional photography shop in Frankfurt; taken first with a Canon EOS 5D and the 16–35 mm-Canon-L lens with an 18 mm focal length, and then taken again with a Nikon D200 and the 12–24 mm Nikon lens at the 12 mm focal length, which corresponds exactly to the 18 mm focal length of the full format. If you enlarge both images to 100%, you will see that the Canon full format camera has an excellent resolution in the building's structure, (Figure 1-2) whereas it can barely be recognized with the Nikon D200 (Figure 1-3). However in reality, the building has a facade corresponding to the structure resolved by the Canon EOS 5D. The standard adjustment was selected for both cameras during the test.

Full Format Sensors

On this book's publication date, the full format sensors developed by Canon and Nikon deliver such outstanding results when used with high-quality, wide-angle lenses that the images come close to the quality once only achievable with a 6×4.5 cm medium format camera. This is the reason many pros have switched to these digital single-lens reflex cameras equipped with full format sensors developed initially by Canon. Their advantage becomes especially noticeable in large prints made from wide-angle photos. Their disadvantage is the clear vignetting of the full format sensor under full aperture; but this problem can also be eliminated by slightly stopping down or by using the aperture correction of the distortion filter (lens correction in Photoshop CS3), so the full format sensor has no real argument against it.