

Introduction

The Current Place of Cinematography in the Visual Language of Storytelling

THE INCEPTION OF THIS book occurred around the start of the 2010s. A number of trends in cinematography—including new questions around the authorship of the image, the influence of digital capture technology, and alternating pessimism and optimism in the cinematography community on the future of the profession—had seemed to coalesce around this time in the form of academic commentary, journalistic coverage, and broader debates in the film community. As such, this book was founded on a number of key questions.

Who Claims Authorship of the Image?

Since around 2000, an increasing number of high-level director/cinematographers have come to prominence. Where Ridley Scott aided with framing and operating in previous decades, the likes of David Fincher, Steven Soderbergh, David Lynch, and now, debatably, Paul Thomas Anderson act as their own operators and direct the lighting of their shots. In the age of digital cinema, the director/cinematographer is no longer the hungry amateur looking to save money, filling a position with himself (Robert Rodriguez is a fine example of this), but established auteurs with the financial resources and artistic cachet to hire the best cinematographers in the world. Of course, they often do. Lynch and Peter Deming created

stunning imagery in the 2017 *Twin Peaks* season, the continuation of a two-decade partnership. Anderson has created memorable imagery with Robert Elswit. What once was an essential partnership in filmmaking, the cinematographer and director collaborating hand in glove, is now no longer the case. Frequently, the work produced may be described as serviceable. *Logan Lucky*, Soderbergh's comeback and shot by him, was vivid at times, exempting the odd bit of overexposure. Just as often, it may not. Critics noted the look of Lynch's *Inland Empire*, on which he served as cinematographer, was crude and amateurish. The argument could be made this was his intent, but equally, the argument might be made that a similar aesthetic aim in the hands of a professional cinematographer might have yielded some digital visual delights like Anthony Dod Mantle has provided to audiences over the past twenty-odd years. Somewhere in the middle is arguably Anderson's work on *Phantom Thread*: tasteful but nondescript. But could it be pointed out that authorship, rather than beauty or craft, is the key to understanding this choice?

In the behind-the-scenes documentary *Perspectives on "Othello"*: *Joseph McBride on Orson Welles*, film historian McBride points out the unusual fact that during *Othello's* lengthy, tortured production a total of eleven cinematographers worked on the film. "The unifying factor," he observes, "was in Welles' style. He was the auteur" (McBride 2014). This is a simple statement of fact and speaks directly to the profound question of who may claim authorship of the image in cinema. As this book goes to print, there is, on the part of some of the more major filmmakers and some of the more significant cinematic, streaming, and television output, an increasing drive toward auteurs seeking a greater role in crafting the image. *Roma* has seen director Alfonso Cuarón stepping in as his own cinematographer. In doing so much of the long, virtuosic takes and complex choreography that featured in his collaborations with Emmanuel Lubezki on *Children of Men* and *Gravity* have translated precisely into his own work as cinematographer. The director-as-image-author is not unique, as can be seen from McBride's acknowledgment of Welles, yet it might be safe to say that some of the more major productions of recent times have forgone the classic notion of a cinematographer who crafts images as a member of a larger team including the director, producer, production designer, and costume designer.

This observation is neither an endorsement of nor an overt critique of this trend. By all accounts, Cuarón's work as a cinematographer is as virtuosic as one would expect of a filmmaker of his pedigree. Equally, one could quibble with the visual sameness of the template Soderbergh created for his series *The Knick*, which he also shot, or quietly acknowledge that

although *Magic Mike* and its sequel have plenty of razzle dazzle, a full-time, life-long cinematographer may have brought greater finesse to the enterprise. There have been upstart productions that entirely transcend the relative debates that might surround a director/cinematographer. *Sin City* was directed, adapted, edited, and shot by Robert Rodriguez. This film ranked as the thirty-third best-shot film of the 2000s, as voted for by the subscribers of *American Cinematographer*. In the case of Rodriguez, his specific work as a cinematographer exceeded sterling work on films such as *Zodiac* and *Gangs of New York*, by the likes of cinematography titans Harris Savides and Michael Ballhaus. Visual talent has always been the province of the best directors, of visualists; with the increasing availability and accessibility of cameras and filmmaking equipment, coupled with the ever-expanding technical acumen of the best directors, it is little wonder that what was once the exception for the likes of Welles is increasingly becoming a norm.

Where does this leave the role of the classic director of photography? In the tenth *American Cinematographer Manual*, the cinematographer's role is defined by the following statement:

The cinematographer's initial and most important responsibility is telling the story and the design of a "look" or visual style that faithfully reflects the intentions the director, or the producer/show runner if the project happens to be an episodic television series. It is mandatory for the cinematographer to accomplish that primary goal within the limitations of the budget and schedule. Other collaborators who are generally involved in this creative process with the cinematographer and director include the production designer, art director, and occasionally the visual effects supervisor and/or producer. . . .

The cinematographer is responsible for executing the vision for the "look" of the film, while helping to keep production on budget and on schedule. On many feature films, the day begins with the cinematographer viewing dailies during early morning hours at the lab to verify that there are no technical problems and nuances in the "look" are working. They frequently watch rehearsals of the first scene with the director, and suggest whether modifications in lighting or coverage are needed. (Goi 2013, 3–5)

These are not recommendations of the cinematographer's role from some bygone decade but can be traced to 2013. Cinematographers are their

director's right arm in relation to the visual aspects of a production, and tending to its details is a responsibility they regard with profound solemnity.

At this moment, it is opportune to return to Rodriguez's achievement. In the first half of his career, he worked with respected cinematographers such as Enrique Chediak and Guillermo Navarro. Direct testimony on the character of those collaborations is scant, but it might be inferred from Rodriguez's opining in the 2012 documentary *Side by Side* that he felt disconnected from the image-making process and forced to trust that his cinematographer was carrying out his vision. In further outtakes from that film, Rodriguez elaborated that at a screening held by George Lucas in the early 2000s introducing digital capture technology to a crowd of directors—including Steven Spielberg, Martin Scorsese, Rodriguez, and Oliver Stone—the *Sin City* director found himself enthused by the possibilities of the new technology, particularly the ability to directly see on a monitor what was being captured. It meant less “guessing,” as he put it. Interestingly, Jerry Lewis is apocryphally credited with the 1960 invention the video assist, which allowed directors to see what they were shooting in real time (still in use today). Lewis certainly assisted with popularizing this technology. In contrast, the likes of Oliver Stone passionately defended the conventional role of the cinematographer, and symptomatically, a schism has persisted in the film world of those filmmakers who seek to reinforce the classic role of the cinematographer, such as Stone, Quentin Tarantino, Christopher Nolan, Alejandro G. Iñárritu, and those who have taken a more active role in image-making, such as Soderbergh, Rodriguez, James Cameron, and David Fincher.

While the more obvious instances of this trend of directors acting as their own cinematographers are mentioned earlier, the most famous instance is from 2009. James Cameron frequently acted as his own operator, and worked extensively crafting the lighting and ambience of digital environments during the post-production of *Avatar*. His ubiquitous stamp on the visuals of that production was so profound that some have questioned the relative presence of Oscar-winning cinematographer Mauro Fiore on the film, the relative input of conventional cinematography in that production. In addition to this, Vince Pace's contribution to the cinematography on *Avatar* has often been overlooked. In short, in film the conventional sense of the director of photography as key author of the images has become contested.

In the early 2010s, American Society of Cinematographers (ASC) president Michael Goi acknowledged the controversy surrounding the Oscar awarded to Fiore for his work on *Avatar*:

A few months ago, a firestorm of controversy erupted as a result of *Avatar*'s cinematography win (for Mauro Fiore, ASC) at the Academy Awards. Almost overnight, it seemed cinematographers and cinematography societies all over the world were calling for some voice of reason as to what was in store for the future of "traditional" cinematography, and what our place was in the emerging virtual-production world. . . . I think there's a kind of chaos of perception at work in these shifts, a chaos born from the belief that because a technology is capable of expediting an artistic vision with more clarity and precision than was previously possible, that technology must inherently be a threat to the human elements of collaboration and artistry. As we've seen with all of the innovations I mentioned, the nature of how we use these tools might change, but the spirit of collaboration and creativity is actually enhanced in the process. (2010, 10)

In the intervening years the debate has not subsided. *The Life of Pi*, in the wake of its twin Oscar wins for cinematography and visual effects, was beset by controversy with respect to who could and should claim authorship of its visual triumphs, which were bountiful. *Gravity* similarly won major plaudits for its cinematography and visual effects, as did *Blade Runner 2049*. The latter's win was less controversial and was seen as overdue recognition for cinematographer Roger Deakins. The earlier wins provoked further debates about how such visual achievements—those that blended photorealistic visual effects and lighting with expert cinematography, frequently under the guidance of visionary directors—could easily be parsed into relative domains of aesthetic achievement. Similarly, if the works contained a "look" that cohered well, the question might be "was this luck, teamwork, or the dominant vision of a single individual?" In part, this book seeks to investigate these tricky questions.

How Does a Cinematographer Evolve?

Examine these four images. They are from four different films and feature seven different actors. The first image is from the mid-1980s, from the film *Sid and Nancy*. The second is from 2017's *Blade Runner 2049*. The third is also from the mid-1980s, from *White Mischief*. The fourth is from the 2013 film *Prisoners*. Their respective genres are a punk biopic, a philosophical science fiction epic, an erotic courtroom drama, and a grisly thriller. Not

much is shared in common between them, right? But look at the first two images. In the foreground are the active figures. These figures are central to the film's drama. Nancy (Chloe Webb) surveys her lover Sid Vicious (Gary Oldman) and Deckard (Harrison Ford) and K (Ryan Gosling) engage in a tense standoff in front of an Elvis hologram. Interestingly these key foreground figures are in silhouette. The background figure is contemplative, yet more brightly lit. There is, in short, an aesthetic link between the two, with the drama set in a silhouetted foreground with the passive figure lit more brightly in the background. Then consider that all images were filmed, lit, and framed by Roger Deakins.



Image 1. Nancy (Chloe Webb) approaches Sid (Gary Oldman) at the end of his performance of the cover version of Frank Sinatra's "My Way" in *Sid and Nancy* (Cox 1986).



Image 2. K (Ryan Gosling) confronts Rick Deckard (Harrison Ford) in the darkened foreground while a hologram of Elvis stands atop a set of stairs in *Blade Runner 2049* (Villeneuve 2017).

Examine the following pair. In the first image, from *White Mischief*, an aging character played by Trevor Howard spies the film's heroine as she enjoys a bath through a peephole. In a very different scene, Paul Dano's character in *Prisoners*, tortured by Hugh Jackman's character, languishes in a cupboard following his beating, a tiny slit of light his only contact with the world outside. The context, again, is entirely different, by the visual idea is the same: a character, surrounded by darkness, engages with some intense vision on the other side of a barrier, that vision being their only source of light.



Image 3. Through a small aperture a lecherous Jack Soames (Trevor Howard) peers at a woman bathing in *White Mischief* (Radford 1987).



Image 4. Alex Jones (Paul Dano) is tortured and trapped, with a tiny aperture his only source of light in *Prisoners* (Villeneuve 2013).

Close inspection of these images will testify to Deakins's skill at crafting imagery and his ability to convey complex visual storytelling in a simple, graphic style. Equally, his growing mastery of technique, the sensitivity of his lenses, and his ability to direct light are attested to in the noted differences seen in the thirty or so years that separate each pair of images.

The next two pairs are from the work of Emmanuel Lubezki. Three distinct lighting environments are found in the frame of this shot from 2015's *The Revenant*. There is the bright torchlight of the foreground, the darkness of the forest in the middle-background, and the dying light of the sky of the deep background of the shot.

In 2015's *Knight of Cups* the same visual predilection may be found, but now Lubezki is playing with exposure and time of day. In the background, the sun's final rays are touching the horizon. In the foreground, to screen left, is the darkness of empty houses, to the right a swarm of traffic. Again, three distinct lighting environments appear in the same shot.



Image 5. Assorted men on horseback travel across the ice in *The Revenant* (Iñárritu 2015).



Image 6. *Knight of Cups* (Malick 2015).

In the following pair of shots Lubezki uses a shallow depth of field to highlight the intimacy of a close-up. In the first shot, Brad Pitt in *Meet Joe Black*, specifically during a love scene, the idea is clear and the focus appropriately shallow, yet the blocking and framing seem unclear, undecided. Seventeen years later, a moody closeup of an actor, in *The Revenant*, features the same shallow depth of field, the same feeling of a subjective, intimate point of view, but now the framing seems more confident.

Such casual observations, and a registering of the attendant shifts in technique while maintaining the salient visual ideas from film to film, seem to suggest that cinematographers experience a notable evolution in



Image 7. Joe Black (Brad Pitt) in *Meet Joe Black* (Brest 1998).



Image 8. Hawk (Forrest Goodluck) surveys the forest in *The Revenant* (Iñárritu 2015).

their style over decades of working. The growing of this style constitutes a kind of authorship frequently overlooked in what is a more auteur-focused theory of what sets a film's style, specifically the notion that the director originates the visual design, the visual ideas of the film. The stamp of the cinematographer can weave from film to film in their oeuvre, irrespective of who the director may be. The eight films cited above were made with six different directors. The shots are separated by genres and sometimes decades between their production, yet the visual glue that holds a cinematographer's output can be, for the very best, unmistakable and in a constant state of evolution—the education of a lifetime.

What Are the New Challenges Cinematographers Face in a Changing Production and Media Landscape?

To discuss contemporary cinematography is not merely to discuss an aspect of filmmaking in a state of change or flux, but to discuss an art and science in the process of cellular transformation. In the digital cinema of the 2010s, the future of cinematography as it has hitherto been known has come into profound question. A number of key notions are consistent throughout this new paradigm.

Never before has the technology used for capturing the moving image been so tangibly accessible to the masses. Arguably, as Christopher Doyle admits, consumers of film have themselves become budding cameramen based on the increasing sophistication and technical virtuosity of even the simple smartphone. The technology of filmmaking, once the province of the technical and artistic elite, is now accessible to the budding amateur editor, effects artist, and even cinematographer. As such, images—striking images, richly colorful images, images technologically impressive in their capture and presentation—are as common as once were flat, dull, utterly disposable Polaroids or grainy home movie footage. Even in the few years spent assembling this volume there has been the advent of 4K capture in cameras that might be attached to a tablet, phone, or stills camera. Super slow-motion in high definition is now a simple gimmick for those capturing footage. Filters or grading tools are now a simple click on a plug-in away from the average possessor of such devices. In the late 2010s, the public has arguably been lulled into the belief by advertisers and tech companies that they have within their grasp the skill and equipment to capture images comparable to

those of professional photographers and cinematographers. In a recent podcast for *American Cinematographer*, Spielberg's regular cinematographer Janusz Kamiński noted this trend but bemoans that it has led to a copycat visual culture: "Anyone can take away what you have done once you have created it. . . . Is there anything new created in visual technology due to the advancement of our technology? I don't think so" (Kamiński 2018). To Kamiński, this culture has seen a democratization in film aesthetics offset by a dearth in visual storytelling. The aesthetics he helped pioneer on films such as *Schindler's List* and *Saving Private Ryan* are easily mimicked, and in turn easily accessible technology has made filmmaking more accessible than ever to the masses the core technology of cinematography has failed to evolve:

Contemporary cinematography has not evolved beyond anything which European master cameramen . . . were doing . . . I don't think aesthetics have evolved to a point where there is now a lack of storytelling . . . the truth is we haven't really evolved. We're still making the movies with the same equipment. It is not evolving. It is beginning to fail. All of the attention is beginning to focus on digital things . . . The lighting units have only really evolved a little bit. (Kamiński 2018)

Ironically, for some major cinematographers, the growth in the accessibility of camera technology has been offset by an encroaching lack of vision in the field itself.

Indeed, prosumer technology and prosumer-level capture technology has crossed increasingly into the mainstream such that, for instance, an ad campaign for the iPhone 13 explicitly focused on how professional-grade cinematography may—according to Apple's claims—be extracted from these tiny phones and multiple apps. Equally, feature films such as *Tangerine*, famously shot on iPhones, have further fostered the notion that the skill—and talent—to create cinematic imagery is now in the grasp of the public. Intriguingly, the explosive innovation found in digital cameras, at a prosumer level and in professional cameras such as the Alexa, and their accessibility has seen the very characterization of the image, of our expectations of what an image should look like if it is "good" or "beautiful" or "professional," be pulled in every direction. Famed colorist Peter Doyle, who has put the finishing touches on films by Peter Jackson and the Coen brothers, in addition to working with many of the world's best cinematographers, is in the most opportune position to comment on

these struggles and defines them thus: “I’d like to share some observations about HDR and film. We have distributors and manufacturers pushing for 4K pipelines. We have DPs pushing for the worst piece of glass you could ever imagine in front of the sensors. We have manufacturer and distributors pushing for ultra-wide-gamut color spaces” (Doyle 2018). In this perfect storm of expectation and demand, the typical digital projection technology for most of the world, large-screen televisions on which people stream films and series, is wrenching the work of cinematographers into a garish and supersaturated color space:

There are manufacturer of projectors and monitors which are pursuing the possibility of displaying what I call fluorescent colors, colors which are of high luminance and high saturation. These colors are not very pleasant to look at. Filmmakers are actually pursuing colors which are beautiful, luxurious, which are, generally, not in fact desaturated, but of low luminance, and of higher saturation. Filmmakers are pursuing images with desaturated highlights, and saturated low lights. Manufacturers, in contrast, are trying to display everything known to mankind in their color space. They are displaying, theoretically, colors beyond what we can even see. The intention of the manufacturer is honorable. They have a shared goal of accurate image representation. What is not happening though is the required etiquette. A film print, produced by the DP, director, production designer, was the display medium for the film. These prints could be damaged. But the etiquette, or the protocol, was that the production would create this visual artifact which represented everyone’s intent. We’ve gone now to a place of manufacturers existing as an equal voice, alongside the production of the film, the studio. They decide if the Barco laser is better than the Sony laser. This creates a general problem because on a laser projector, for instance, all blues look the same. In the past the production company could manage the distribution medium. That isn’t the case anymore. It is still being negotiated. (Doyle 2018)

The technology has effectively become an instance of the cart leading the horse. Consumers are being visually educated to expect that the widest color gamut, the sharpest highlights, and the sharpest image are also the “best” image.

In the film and television industry there are also, as never before, the fingerprints of multiple departments on the final images enjoyed by the viewing public. In this climate, the image and its production are subject to the intervention of many kinds of filmmaking technologies. In their specific capture, digital cameras now allow for the relative absence of ambient or artificial light. Where once lighting was explicitly a part of the cinematographer's brief, it is now a quantity open to debate. The calculus is simple. Fewer lights mean more setups, in turn means more footage. It also means lower expenditure of power, less time spent on lighting, and more money saved. Digital cameras, specifically the likes of the Alexa, are arguably setting the agenda and timeline for many productions these days. Equally, in the pre-vising of shots, the image is subject to extensive preplanning and preconceiving before many cinematographers are able to inspect a set or address lighting issues. Frequently the technical specifications that create these images in a computer are not even compatible with the realities of photographic capture. As such, noncinematographers are blocking and framing shots and making lens choices not compatible with real-life technology, which in turn locks cinematographers into choices about these aspects of image-making they are now exempt from. In postproduction the cinematographer's autonomy may be equally compromised. Several years ago the editor of *Life of Pi*, Tim Squyres, was on record saying that the decision to change the aspect ratio of a key sequence in the film, an attack of flying fish, such that the fish would seemingly breach the outside of the frame was an *editorial* decision. The same choice was claimed as a cinematographic one by the film's director of photography, Claudio Miranda. Visual effects may similarly alter, and even distort, the lighting and compositions of a cameraman. Takes may be stitched together, one side of screen one take, the other one filmed hours or days later. Backgrounds may be rendered in such a manner as to make the cinematographer's initial lighting seem flat or misjudged. The workspace in which the cinematic image is created is becoming increasingly crowded with coauthors, all seeking their own type of credit for the final outcome. In this new workspace, cinematographers must work harder than ever to stake out their place.

Methodology

The methodology for putting this text together was, as mandated by its long gestation (around six years) and wide scope, necessarily complex.

Certain major cinematographers were not disposed to contribute. Others were enthusiastic. In specific cases, permissions could not be secured in the time allotted. A wider range of cinematographers representing Indian and Chinese cinema was sought out, but unfortunately, many significant cinematographers from those countries proved elusive. Otherwise inactive and retired cinematographers were sought out, personal favorites of mine, but it became clear that expanding beyond practicing cinematographers meant that the scope of the project became less manageable. I must confess that interviews with some of my personal favorite cinematographers did not always result in material of sufficient quality to print. A number of excellent female cinematographers were interviewed, but it is worth emphasizing that in the period following the collection of all interviews a further number of talented female cinematographers have been given opportunities not open to them before. Among the most notable are Reed Morano, Rachael Morrison, and Natasha Braier, to name a few. These superb cinematographers have inspired many in their profession and future texts are certain to explore their visionary work, work which fell outside of the period of production for this text. The balance was finally struck with what seemed a good mix of those established as key influences of this period of digital cinema, cinematographers with major “brand” recognition based on their celebrated works, expert technicians from the world of television, recognized mavericks, and present elder statesmen of the world of cinematography.

Equally, a marker for inclusion in this volume was based on the ability of the cinematographer to articulate their thoughts on their work and the current cinema. The level of skill (even genius) required for a great cameraperson is hard for most cinema audiences to easily appreciate. This sometimes translates into fluency and infectious commentary on cinematography as a discipline, or it may not, through no fault of the practitioner. The work of a cinematographer requires discipline, calculation, and above all artistry. It is a highly practical and highly reflective vocation. Often cinematographers may be bored reciting the technical details, which to them are boilerplate, and find the act of articulating a process that is personal and emotional, even painful, to be a challenge. Many contributors chosen were hyperarticulate on their process, both practical and creative, in a manner that I believed would be compelling for the reader.

Based on the extent of their influence in modern cinema, certain interviewees were essential. Rodrigo Prieto has worked with Ang Lee, Oliver Stone, Alejandro G. Iñárritu, and Martin Scorsese on some of their more celebrated films of the past two decades. His facility in collaborating with major creative forces deserved further inquiry. Dean Cundey

worked with Robert Zemeckis, Steven Spielberg, and John Carpenter on arguably their most iconic films. His ability to construct distinct visual grammars that translated their texts so effortlessly to worldwide audiences speaks to a honed instinct for storytelling using primarily images. Mauro Fiore is the cinematographer of the highest-grossing film ever, *Avatar*, and, with the choice of James Cameron to shoot the film in 3D, Fiore's cinematography kicked off a trend that has seen everyone from Jean-Luc Godard to Ang Lee to Wim Wenders emulate. Anthony Dod Mantle, like many of these figures, is a cinematographer with a gift for collaboration. His work with Lars von Trier, Oliver Stone, Danny Boyle, and Ron Howard is a testament to his versatility. By the reckoning of most, Dod Mantle is also one of the key pioneers in what has become the digital cinema of our modern world.

The particularities of my methodology as interviewer are worth exploring. Typically interviews lasted between 90 and 150 minutes at a single stretch. Occasionally, the interview would be split into two hour-long segments. While numerous bits of industry scuttlebutt and gossip came up, often the cinematographers would come to rue mentioning it and usually requested that I leave such material out. I have obliged. Similarly, the testimony on who said what to whom and why so-and-so was fired from a particular film is easily accessible in other sources whose primary focus is not on image-making and the craft of cinematography. My style of interviewing and the particularity of my questions were customized to each cinematographer. Peter Deming, for instance, is technically masterful irrespective of whether the film is *Lost Highway* or the more obviously fun *Drag Me to Hell*. As such, my interview with him was ultimately more technical. Research had indicated that Peter Suschitzky could be terse in his responses if the line of questioning became overly technical, so I endeavored to make it more personal. Martin Ruhe impressed me with the immaculate, cohesive nature of the aesthetic he might develop for a film, so my questions centered on how he might develop this. Research indicated that Luciano Tovoli had an incredible capacity to translate technical decisions into a poetic explanation. Conversely, Claudio Miranda's depth and breadth of technical knowledge was so extensive as to acquire its own poetic rhythm when explained. As such no "format" for questions was devised, but was customized based on the key factors influencing each cinematographer.

Another important point should be made on the content of the interviews. In arranging these interviews to be faithful to the statements, language, and points of view of the cinematographers I spoke with, I did not use editorial discretion to excise material. My main goal was

always to be as fairly representative as possible of their views in how the interviews were transcribed and presented.

Points of Connection

Cinematographers are frequently loath to admit to influences. They are also critical of themselves and of one another. In 1999 I was drawn into a brief discussion with one of the world's most well-respected cinematographers, who poured scorn on the then recently released, stage-bound *Eyes Wide Shut*, and how it looked nothing like the New York streets it claimed to depict. Similarly, it is interesting to note that the more successful the cinematographer, the more relentlessly self-critical they are, and the more passionately critical they are of a film's images. At times they may be actively engaged in debate and discussion, even competition, with other cinematographers; at other times they may pass by other cinematographers like ship captains nodding across a gulf, each set in their course and briefly recognizing the work of another. Despite this, there are admitted touchstones for the modern cinematographer. These might not be what one would expect. Despite their accolades, the achievements of Mauro Fiore in *Avatar* and Claudio Miranda in *Life of Pi* generated controversy. These have since receded, but the implications of the criticism are well worth exploring in the broader context of the early history of digital cinema. In his interview, Fiore is arguably ambivalent on the 3D legacy of *Avatar*, and this trend, which was prevalent in the early 2010s, has since also receded. The digital camera legacy of films such as *Collateral* and *Miami Vice* is arguable given what Dion Beebe notes to be the lukewarm response of the camera company responsible for the Thomson Viper camera, which was used to shoot those films. Instead, the key themes of this decade could be summed up with a number of significant ideas and technologies: prosumer cameras, the digital intermediate, the Alexa camera, the digital-celluloid debate, and the challenges of filmmaking collaboration (an eternally relevant topic).

The boom of prosumer-level cameras in common, everyday usage has arguably robbed some of the exclusivity and charm from professional cinematography, according to Christopher Doyle. Films, particularly those of the found-footage genre, are getting to look more and more amateurish in their camerawork and lighting. A film might well have a budget in the hundreds of millions, but its aesthetic is closer to that of a kid on YouTube filming their friends. The filmed image is arguably subject to such a range of transformations—from the “capture” phase

found in production, to the postproduction phase where it undergoes further changes—that much debate can now occur as to where exactly the majority of the work of the cinematographer is done: in the lighting and filming on a set or location, or in the later phases when the frequently digital image is tweaked, sometimes for far longer, and involving far many more departments, than went into the initial phase in which the image was captured and stored (or converted to) a digital version. One need only look at *Independence Day: Resurgence* to see a prime example of this. A “before and after” comparison show the initial set, lit in flat and glary light, and its final dynamic manifestation, with a bluish tint, shadow and atmosphere added to a what would otherwise be a very flat image.

The digital intermediate, a phase in which the captured footage may be retimed, have new texture mapped in, have colors removed from the image, and so forth, is now *de rigueur* on productions. This allows for the cinematographer to alter any major flaws in the image. More important, it expands the visual toolbox available to the cinematographer and allows them to elaborate on an aesthetic they may have already decided to pursue.

Collaboration

The final word of this introduction must be given to the celebration of effective collaboration. My first collaborator was Australian Cinematographers Society (ACS) president Ron Johanson. A fatherly figure, he welcomed the notion of a book exploring modern cinematography. Over the years, he was tireless in his assistance and encouragement, often directing me toward kindred spirits and future collaborators. My most valued collaborator has been Roberto Schaefer. I always respected his work as a cinematographer, but over time I came to know him as an artist, intellectual, champion of his art form, and now a dear friend. It soon became clear that Schaefer was in a unique position as a respected member of the ASC and AIC, and we agreed that certain interviews would be far better if he conducted them. Without Schaefer, we would not have been able to secure an interview as fruitful and informative as the one with Claudio Miranda. Peer to peer, the conversation was rich, technical, and candid. An important mentor who was engaged with the project from the start was Ricardo Aronovich. My initial interview with the eloquent Javier Aguirresarobe was initially hindered by a language gap and the necessity of a translator. This was remedied when the multilingual Ricardo Aronovich conducted the interview in my stead. On technical matters, Roberto Schaefer was a consistent source of knowledge and

perspective, but so was Ellery Ryan, who often stepped in with technical advice. Going back even further, this idea was first encouraged by Darius Khondji in the late 1990s during a series of stimulating interviews and conversations. It is said that it takes a village to produce something, and that is certainly true. I thank all of these cinematographers. Theirs is the essential spirit of shared vision and collaboration.

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