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### The Politics of Twilights: Notes on the Semiotics of Horizon Photography

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# The politics of twilights: notes on the semiotics of horizon photography

MICHAEL W. RAPHAEL 

*Visual sociology is crucial for exploring the indexical meanings that thick description cannot capture within a cultural setting. This paper explores how such meanings are created within a subset of the domain of photography. Using data gathered over several years, I constructed the semiotic code 'horizon' photographers use when 'in the field' for photographing periods of twilight. This code explains the relevance of subject matter to the photograph's aesthetics. Specifically, I detail how 'the horizon' communicates the potential for the photographer to 'capture' the index of a symbol that later permits the photographer to culturally mark scenes with 'light'. In doing so, the paper explains how photography is a means through which a given truth about a given culture is made intelligible, elaborating the relationship between cultural meaning, narrative and decision-making despite the increased automation of the means of production of photographs. This is done to examine how this process of cultural marking is changing and why the agency of 'the photographer' still matters for evaluating the cultural significance of the resulting photograph and for photography as a vital part of ethnographic research. This paper concludes with a commentary on the aesthetics of twilight as an allegorical reflection of society.*

"The biggest cliché in photography is sunrise and sunset."

## 1. INTRODUCTION

It is a common quip made by students that geometry 'is not very practical'. Yet, artists tell us, at least in their representational works, that we are always relative to some 'horizon' line as we move through the world: the significance of which goes far beyond the mere perception of the sun's location. This means as we communicate with each other, we are still entangled, as an unavoidable matter of practice, in a geometric relationship with a horizon line that plays with light, colour and shadow, which in turn, alters our own perception of the world. For example,

Matisse and Van Gogh went looking for 'good light' because of how it shifted what a 'line' in a landscape looks like: the intelligibility of form in 'good light' might produce bright and clear colours, whereas 'bad light' might produce dark, graduated and ambiguous colours. While it is true that this relation acts as an indicator of physical relationships,<sup>1</sup> it can also be argued that this spatiotemporal relationship performs an important socio-cognitive function: a prototypical 'line' for making distinctions and determining relevance.<sup>2</sup> Many cultures have used this line and the cosmological activities that happen in relation to it for organising all kinds of rites and rituals.<sup>3</sup> It is this 'line', after all, that perpetuated the belief that the world was 'flat', and yet it is the threshold around which a cycle seems to repeat. Our orientation towards this line is a concern for rigid divisions that result from us forgetting how this line reminds us of the primordial space between categories that have become naturalised in semiotic systems. This is why, it seems, that photographers are fascinated by the horizon. Chasing this geometric relationship with a horizon line that plays with light, colour and shadow has become a hunt for that moment – a moment that is motivated to capture, reflect and play, not only with reality but our expectations of it. Thus, photographs of the horizon, when captured, create an *indicator of symbolism*: a cultural code about light's relationship to the horizon and its viewer. That is, the photographer aims for fidelity to the moment by crafting a large matrix of interdependent decisions in terms of lenses, exposure, composition and colour in order to condense a three-dimensional reality into two dimensions.

The photograph captures this ratio in the play of light, colour and shadow, and because of the kind of capture involved, namely a concentration on only a portion of what the passing subject experiences, it is able to show how those visual elements challenge, and thereby confirm, the distinction between an expanse that knows no upper limit and one that knows no vertical limit. When such photographs are shown to persons who have seen the 'real thing', they invariably comment on the accuracy of the capture – not merely its conformity to what the eye otherwise beholds but its capacity to convey

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TABLE 1. The domain of photography.

Photography			
Fine art photography	Macro and close-up photography		Animal photography
	Architectural photography		Food photography
	Underwater photography		Street photography
	Travel photography		Portrait photography
	Astrophotography		
	Landscape photography		
Horizon photography	Night-time (below -18°)		
	Dawn	Morning twilights (from -18° to 0°)	Astronomical twilight (from -18° to -12°)
			Nautical twilight (from -12° to -6°)
	Sunrise		Morning magic hours
		Blue hour (from -6° to -4°)	
		Golden hour (from -4° to 6°)	
	Daytime (above 6°)		
	Sunset	Evening magic hours	Golden hour (from 6° to -4°)
			Blue hour (from -4° to -6°)
	Dusk		Evening twilights (from 0° to -18°)
		Nautical twilight (from -6° to -12°)	
		Astronomical twilight (from -12° to -18°)	
Night-time (below -18°)			

something uncanny about the ‘reality’ it re-presents. The two, divided by what their very difference indicates as a boundary, meet at this peculiar abutment of all that can be human with all else. This is consistently indicated by the sense of grandeur reported by viewers of both the actual scenes and the photographic re-presentations of those scenes. It is this primordial spiritual aspect of cultural life that is documented in photographs of the ‘horizon’, and it is made manifest in how a picture momentarily fixes and frames, and in so doing, concentrates on the otherwise impossible: to capture the spiritual aspect of everything that we refer to as a ‘culture’. It is here that photography is not simply an addition to the tools for documentation. It is not merely an archive. Instead, photography is something that shows – in ways that it cannot otherwise be shown – a rational hypothesis about a given truth about a given culture.

It is here, in figuring out what constitutes a ‘domain’ or a ‘unit of analysis’ when there is a ‘stream’ ‘flowing’, we

find that photographers are dealing with many of the same issues facing sociologists,<sup>4</sup> philosophers and computer scientists. Now, because of current technological limitations, cameras can only see half of the amount of light as the typical human eye, this technically ‘perfect’ capture is brought into post-production to guide the viewer’s engrossment and exaggerate the cultural messages of how light ‘speaks’ because of its spatiotemporal relation to the horizon. By examining this process, we can learn more about how photography is a means through which a given truth about a given culture is made intelligible. In other words, given these introductory comments, this research question can be addressed by drawing on visual sociology’s discourses concerning the nature and cultural function of photography and cognitive sociology’s discourse on the intelligibility of cognitive style and its relationship to cultural meaning, narrative and decision-making (Raphael 2017). Using this framework, this paper presents a semiotic analysis of the cognitive style of horizon photography and its

relationship to culture. It clarifies this cognitive style by reviewing the domain of photography, presenting how the horizon operates as a semiotic code, and details how this code enables photography to become a process of cultural marking – as a form of expertise. The paper concludes with some notes regarding the aesthetics of twilight as an allegorical reflection of society. Before elaborating the cognitive style of horizon photography, a few notes on the paper's analytic methods and data collection are useful.

## 2. ANALYSIS AND DATA

How is photography a means through which a given truth about a given culture is made intelligible? In other words, what is the narrative style of horizon photography and what stories do these photographs tell? Answering this research question requires an analysis suitable to the intersection of visual sociology and cognitive sociology, namely semiotic analysis. As Manning (1987) explains, semiotic analysis is a 'cognitive mapping procedure' where a semiotic code connects clusters of meaning to represent one aspect of a domain's cognitive style. This analysis operates at two levels: the level of the domain (the general categories of photography and the location of horizon photography in that domain) and the level of the horizon as a semiotic code (a specification of how the craft and the decision-making processes involved generate the narrative style of horizon photography). This analysis draws on data gathered from two sources. The first source is data collected in the field over the course of several years of cruising to the Caribbean. Thus, while some of the data are autoethnographic in character, relying heavily on informal interviews. On these trips, I found other photographers with whom I talked while watching a few sunrises and many sunsets and twilights. We talked about craft and the allure of what we were doing. Each of these trips lasted approximately 2 weeks where I shot more than 2000 photographs centring the horizon and the play of light that occurred. This required several hours per a night and two mornings of each trip. These data have been verified by a second source – an archive of materials containing various photographic manuals and photography blogs that represent the discourse of expert photographers, samples of which are cited in the bibliography. However, there is one unusual feature about such a venture that seems to go undiscussed in the literature: from a moving platform (i.e., a cruise ship), how does one deal with the methodological challenge of photographing the horizon, which is moving relative to the earth's rotation? This is the addition of a dimension that is often taken-for-granted; it is well known that the camera needs to be stabilised, but what does a photographer do when the platform moves as well? As these are landscapes

where the curvature of the earth is slightly visible, the photos that are included have not been corrected in post-production in regard to this. While these data, with additional information, are often interpreted with regard to the many other culturally specific symbolic metaphors that arise from the horizon line, this paper focuses instead on what these data, taken as a set, are sufficient to make explicit: the symbolic stories light tells in relation to the horizon.<sup>5</sup> This curvature, after all, is crucial to the horizon's dynamic symbolic potential. But first, something needs to be said about the general politics of photography and its cultural functions.

## 3. THE DOMAIN OF PHOTOGRAPHY

'Photography is a marvellous language that crosses linguistic borders as a universal, powerful, and direct communication. As photographers, we see something we find interesting and simply want to share it' (Dykinga 2013).

Photography has multiple purposes.<sup>6</sup> Visual sociology has connected to the traditions of documentary photography (Becker 1974) and its concern for the 'critical' examination of society. Others have followed up exploring its possibilities for imaginative and meaningful use in ethnography and have shown how to use images in presenting an argument (Grady 1991; Harper 2003; Pauwels 2010). As an art form, Bourdieu examined art as either as a spontaneous act of individual expression or a direct bi-product of socio-economic material conditions in which photography fulfils the aesthetic expectations of the working classes. He defines photography as 'a conventional system which expresses space in terms of the laws of perspective (or rather of one perspective) and volumes and colours in terms of variations between black and white' (Bourdieu [1965] 1990, 73–74). The question here is between the aesthetic expectations of the photographer and the semiotic system used to communicate it. When Bourdieu was writing, developing photographs was still an extensive exercise. Technological advances have permitted extensive codes to develop where it is 'becoming more of a language. [...] We're attaching imagery to tweets or text messages, almost like a period at the end of a sentence. It's enhancing our communication in a whole new way.'<sup>7</sup> In this way, some kinds of photography that acted as semiotic markers of memories are transitioning to becoming mere 'bookmarks'. And yet, this is largely a discussion of subject matter where the term 'photographer' is becoming so generic to anyone who takes a photo.

'Selfies' photos of an expensive meal and explicit snapshots for 'sexting' (that disappear once they are viewed) are particular to this fast-paced globalising society. Here, to follow up on Bourdieu's point, what is

shared through applications like Facebook, Twitter, Instagram, Snapchat, text messaging and other avenues, where photography is acting as another form of punctuation, there is little to no craft. It is largely conducted through automatic means with little understanding of how to make light say anything at all. In this way, the aesthetic of these is semiotically limited to be mostly indicators. The subject matter here is not really even about 'a faithful and truthful reproduction of reality' as Bourdieu puts it. It is a celebration of illusion, a cry for social status and an attempt to mediate the alienation of modern life. It is this subject matter that companies (like Google) want to bring solely into 'the cloud' in order to 'analyse' them, 'find commonalities' and 'draw inferences' around moments that 'matter' just so that machines can supposedly 'learn' 'our style' of photography.<sup>8</sup> Here, it seems, photography is becoming just another avenue to exert social control over *what* the moments of 'our' lives can mean and be classified as – by algorithms – where for 'our convenience' is actually the increased personalisation of services such that we become 'free' from technical tasks and routines that are so 'essential' for producing solidarity in modern life. That series of existentialist codes this paper is not concerned with. Rather, culturally speaking, the domain of photography is a domain divided by subject matter. The semiotic organization of this domain is indicated by Table 1.

This table draws on the titles and categories of the specialised photographic manual publisher: Rocky Nook. Titles in their catalogue are organised into 'art and inspiration', 'camera guides', 'image editing' and 'specialised topics'. These titles tend to elaborate the relationship between equipment, composition, workflow and 'artistic style'. 'Artistic style' is the signifier for what these authors, who are socially situated as recognised experts in their sub-fields of the photographer's domain, for something that is supposedly 'subjective', or personally idiosyncratic. And, yet, each of these titles, dealing with different kinds of fine art photography, constitute a different aesthetic community with its own semiotic system for how to capture *that shot* in a way that 'can say something'. Thus, for example, street photography aims to create an indicator for 'the moment in which the meaning of an event was most clearly captured in a photograph'. It is about 'a gesture, expression, or composition that may exist for only a fraction of a second, but can leave a lasting impression of the wonders, challenges, and absurdities of modern life' (Lewis 2015). In a similar manner, Schulz (2015) claims: 'Architectural photography is more than simply choosing a subject and pressing the shutter-release

button; it's more than just documenting a project. An architectural photograph shows the form and appeal of a building far better than any other medium'. On a smaller scale, macro photography is about how to 'document the world of the infinitesimal' which plays with perspective and challenges expectations in the experience of space. Underwater photography is not so different. It is about 'being free and weightless in the seas' such that the photographer can be 'on the same plane as the subject or viewing them at an extreme angle that includes scenes below and above the waterline within the same frame' (Friedrich 2014). When on 'land', rather than 'sea', travel photography aims to 'achieve a unique perception of places that have been photographed many times before' (Petrowitz 2013). In this way, Bourdieu is correct:

The value of a photograph is measured above all by the clarity and the interest of the information that it is capable of communicating as a symbol, or, preferably, as an allegory. The popular reading of photography establishes a transcendent relationship between signifier and signified, meaning being related to form without being completely involved in it. Photography, far from being perceived as signifying itself and nothing else, is always examined as a sign of something that it is not. (Bourdieu [1965] 1990, 92)

The question is whether there is 'something' about the horizon, as a subject matter for photographing, which makes it 'different'. To assess this 'something', another answer is needed: what is the code of the horizon? (This code is important in other sub-domains such as street photography and architectural photography.) Addressing this question shows photography is not simply an addition to the tools for documentation. It's not an archive. It is something that shows in ways that it cannot otherwise be shown – where, at least, it offers a rational hypothesis about a given truth about a given culture.

#### 4. THE HORIZON AS A CODE

Whereas Heidegger (1971) suggested that 'Language speaks', horizon photographers suggest 'Light speaks'. What does 'light' say? Or, less poetically, since the light 'we see' is relative to the horizon, what does the horizon permit light to 'say'? That is, the way in which the horizon 'acts' as a code is organised to communicate a series of indicators that the photographer to socialised<sup>9</sup> to – in order to learn how to produce *the very indicator that makes the light symbolically speak*.<sup>10</sup>

This means photographers look to the horizon, and the sun's relationship to it, in 'composing the shot'. Composition relates to the differences between what we see and what the camera captures because, unlike documentary photography, fine art photography seeks to eliminate all elements that do not contribute to making the image stronger or more intriguing. This means what is brought into focus, independent of technological limitations, is acting as an element as part of an indicator for the possibility of becoming a symbol. Here, with the light in relation to the horizon as the subject, when one is floating on a cruise ship in the Caribbean, what other elements are there? Clouds. (Clouds, being what they are, refract, reflect and scatter light to play with perspective even more.) At times, this makes it difficult to know where the sun is without a compass, especially since the route taken by the captain is not strictly 'north' nor strictly 'south' – but in some intermediate direction. Nevertheless, the distribution of clouds relative to the horizon tends to create various forms of 'negative space' where light flourishes. The message the photographer needs to know is how long of a 'window' is there for composing and capturing the shot and how does this differ between sunrise and sunset, dawn and dusk, and, across twilights? This has been studied extensively with detailed planning data made available to photographers through a variety of mobile applications such as PhotoPills. This application bills itself as a 'personal assistant in all photographic matters'. Applications like these are sites of socialisation for learning how to

'make' the horizon 'speak'. They use 'augmented reality' to help new photographers learn and plan where the sun is going to be – given that one can predict the location (this is something that is quite difficult on a cruise ship) and figure out what kind of light will be available based on whether it is during one of the 'magic hours' or various forms of twilight.

We can see an illustration of these periods and their indexical transitions in [Figure 1](#).

Each of these transitional periods can widely range in the distribution of light and produce a code where the spatial contrast is reflected in a temporal contrast between what happens in the morning and what happens in the evening. This semiotic code (illustrated in [Table 2](#)) communicates to the photographer socio-cognitive information necessary to capture a photograph with symbolic potential.

Thus, the sequence of the morning relates to the order in which light appears refracted, which in turn, points to how much light is available to be gathered on the camera's sensor, which in turn indicates the requisite shutter speed and aperture for getting the composed shot. This order is different in the evening where 'dawn' is contrasted with the 'sunset' rather than 'dusk', which is contrasted with the first 'golden hour' of the day. What makes these photographic indicators so 'special'? Photographers are taught that 'interesting light' happens when it 'does something' other than offer visibility *as such*. This means that fieldwork is about

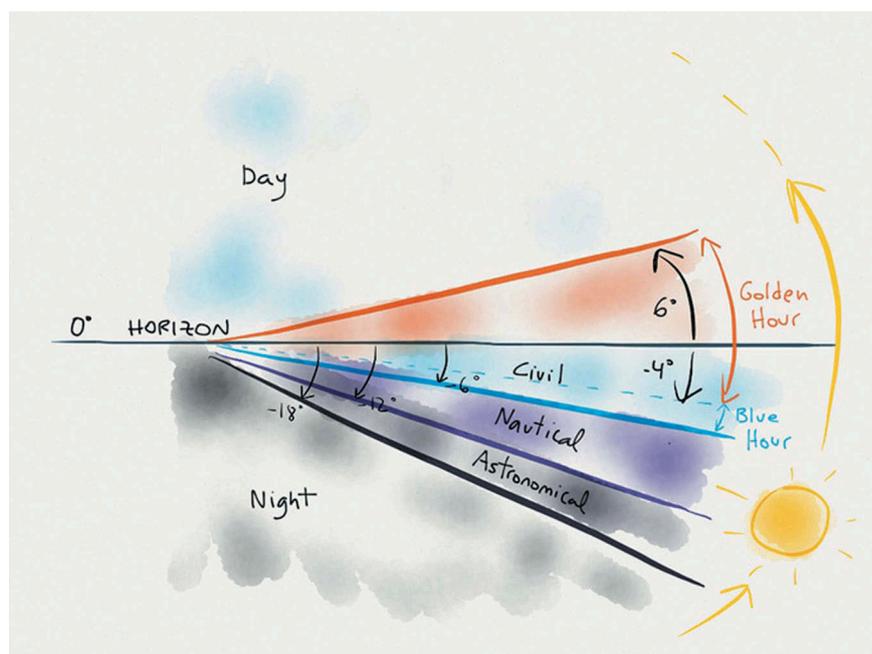
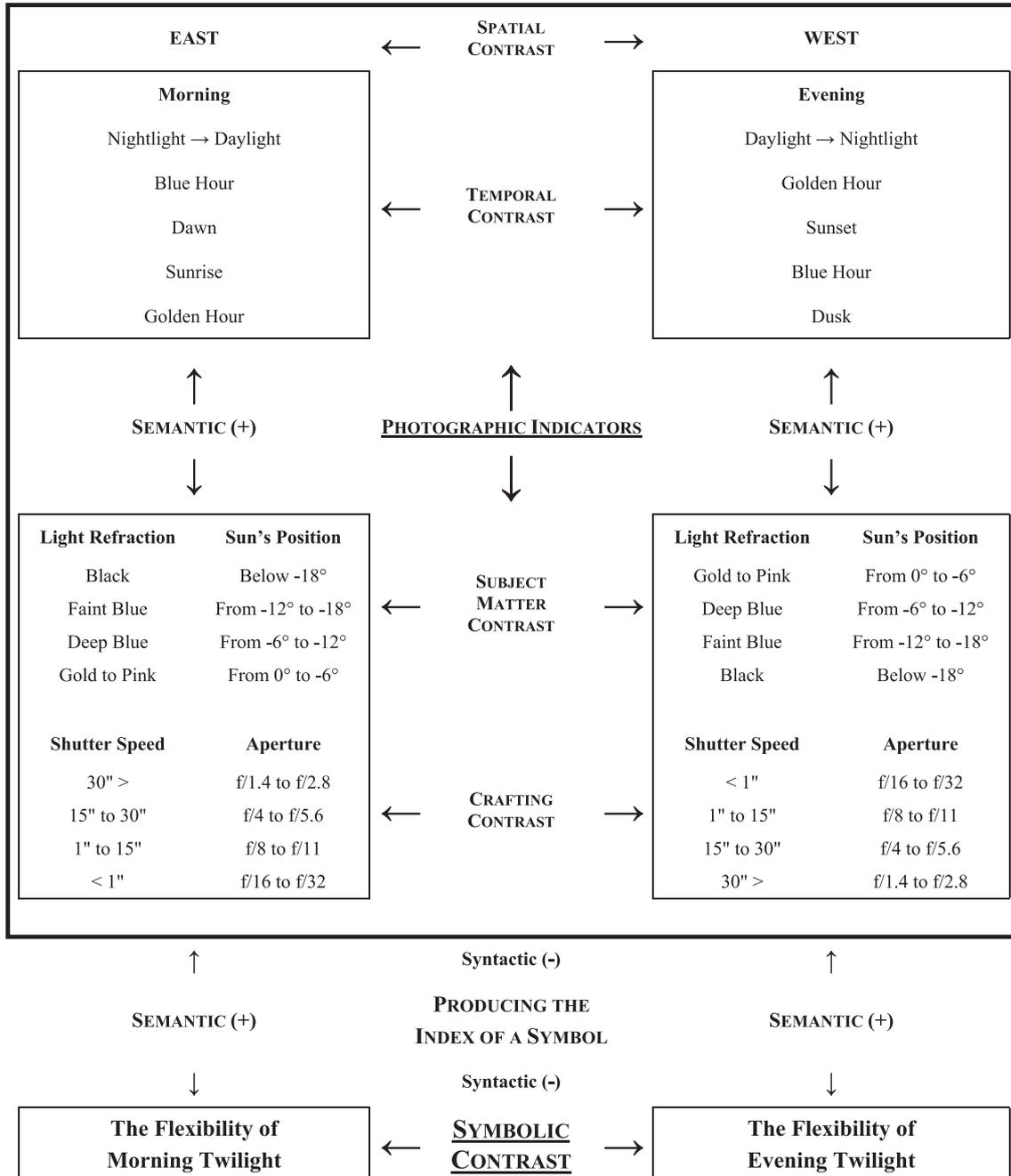


FIGURE 1. The horizon line and indexical transitions.  
(Source: PhotoPills.com)

TABLE 2. The horizon as a code.



achieving the maximal flexibility of the symbol the resulting photo is an indicator of – capturing data in such a way that the photographer understands enough to be able to design, plan and envision *what can and cannot be done after the fact*. The photographic indicators of crafting contrasts correspond semantically to the temporal and subject matter. The sun’s position relative to the horizon communicates several different messages.

In the morning, for example, there is astronomical twilight. This is when atmospheric colours consist of deep dark blue towards the horizon, and completely black when facing west. In the evening, there is still a small amount of indirect, ambient light from the sunset still discernible on the western horizon. This phase communicates a fuzzy period between what ‘darkness’ and ‘somewhat darkness’. This is when the visibility of celestial bodies to the naked eye changes. In the evening,



FIGURE 2. Evening astronomical twilight.

this is the last phase of twilight. In the morning, it is the first. It looks like [Figure 2](#) in the evening.

It is a time of joy for stargazers and a time of sadness for lovers of the sunset. For photographers, it likely means changing lenses to switch from the horizon to the stars and the moon. This is a faint blue when the

sun is between  $-12^\circ$  and  $-18^\circ$  relative to the horizon and is exposed for 15–30 s at a relatively large aperture.

In contrast, morning nautical twilights (see [Figure 3](#)) offer a cast with a deep blue hue with some orange and yellow tones at the horizon due to the rising sun. Now, details will become easier to distinguish but will lack most 'edge

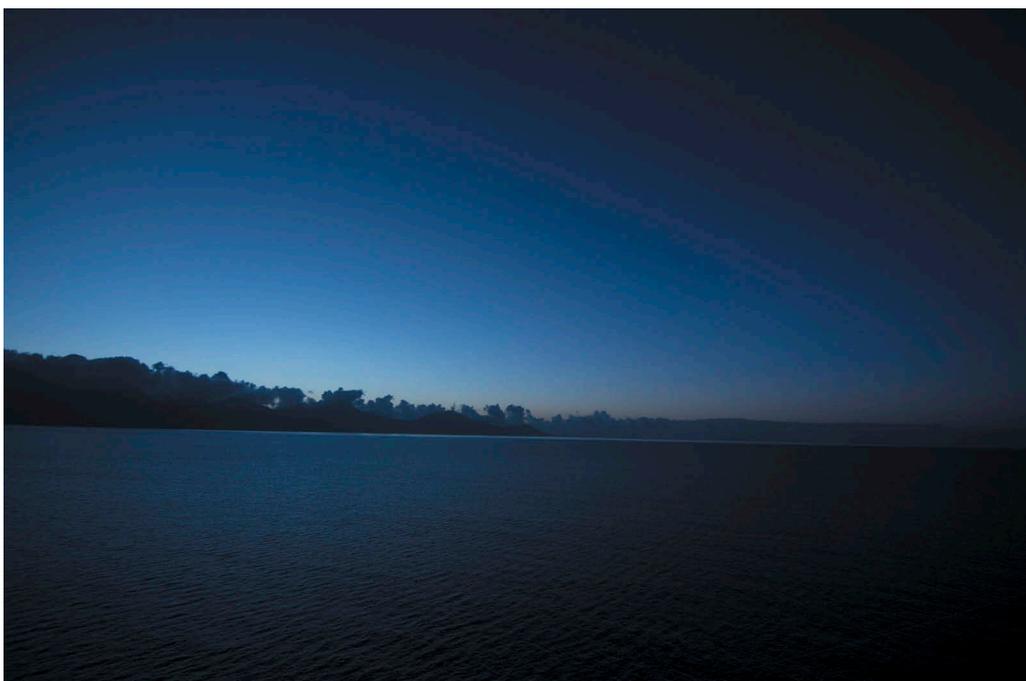


FIGURE 3. Morning nautical twilight.



FIGURE 4. Evening nautical twilight.



FIGURE 5. Morning blue hour.



FIGURE 6. Evening blue hour.

definition'. This is when the sun is between  $-6^\circ$  and  $-12^\circ$  relative to the horizon and communicates to the photographer to try to expose 'the shot' for 1 to 15 s at a medium aperture.

In the evening, nautical twilight (see Figure 4) represents the last part of the day when navigation via the horizon and star sightings at sea is possible. Since weather varies, the intensity of the saturation varies as well. In the evening, this is preceded by 'blue hour'.

Blue hour lasts for approximately  $2^\circ$  when the sky has a deep blue hue with a cold colour temperature and saturated colours. Here, in contrasting (Figures 5 and 6), the direction of the gradient communicates the 'when' the photograph was taken. Now, despite this sign of 'blue hour' the range of plausible symbolic meanings seems to depend on this indicator. While this constraint, of course, is impersonal and conventional, photographers treat this light as something that creates a 'surreal' or 'ethereal' environment because it offers

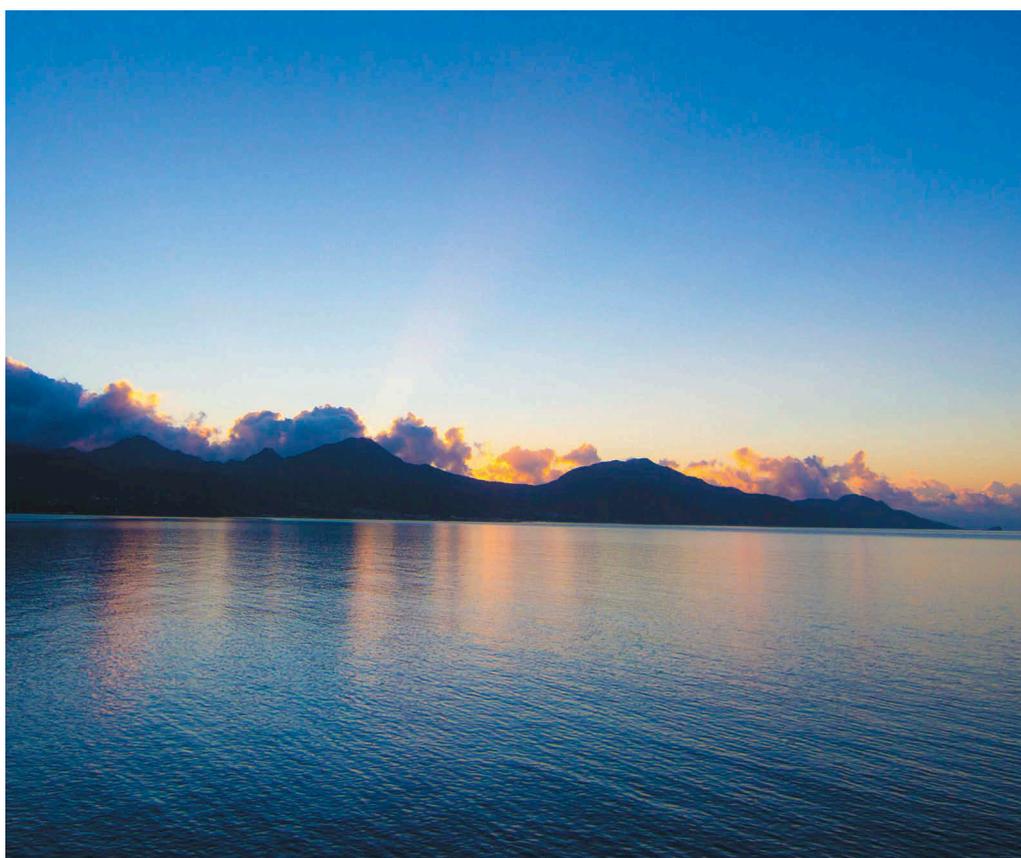


FIGURE 7. Morning civil twilight.

two very different types of light within a single time span. As the earth turns, 'civil twilight' rises. We can see this captured in [Figure 7](#) in the morning and [Figure 8](#) in the evening.

This is the time when there is the most contrast between sky, clouds and ground. Here, only the brightest celestial objects can be observed by the naked eye during this time. The horizon is clearly visible, and shadows are easily apparent. Objects are clearly defined, and no additional light is needed in most cases. The light cast during this phase can be anywhere from warm golden tones to cool pink tones, and these colours change quickly. When looking westward a mixture of Earth's shadow and scattered light where the pink and blue hues can be separated by multiple layers. Depending on the season and latitude, civil twilight lasts for about 20–30 min. This is when the sun is between  $-6^\circ$  and  $-0^\circ$  relative to the horizon, the photographer needs to expose for less than a second at a small aperture.

After civil twilight in the morning and before it begins in the evening is called the 'golden hour'. As

the sun continues to rise in the sky, colours shift from yellow to white. This is captured in [Figure 9](#).

When the sun reaches a higher position (more than  $6^\circ$  above the horizon), the light hits that plane on earth directly. And, since a camera can only capture a marginal bandwidth of difference in light intensity, more shots are typically needed to capture the high dynamic range of light. During golden hour, the contrast is less where shadows are less dark, and highlights are less likely to be overexposed – providing a glow. This is because more of the blue wavelengths are scattered, leading the light to have a warmer colour temperature. We can see this in [Figures 10](#) and [11](#).

These times and kinds of twilight and magic 'hours' are elements of a code of the horizon that differentiates between sunrise and sunset. It communicates what kind of light is likely to be visible and what means are necessary for 'capturing' 'it'. Order matters. It is not just that the temporal contrast is relative to the spatial contrast. It is that the direction of the gradient of light is a 'meta-message' for what the range of meanings the resulting photograph can come to symbolise because of



FIGURE 8. Evening civil twilight.

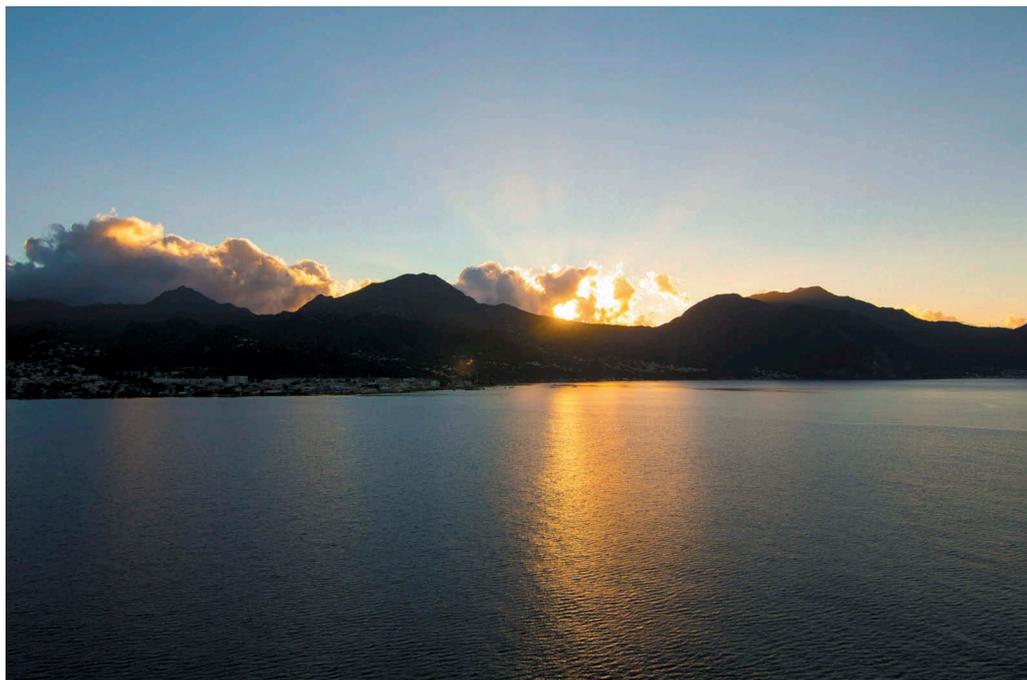


FIGURE 9. Morning golden hour.



FIGURE 10. Evening golden hour.



FIGURE 11. Evening golden hour #2.

what is already culturally associated with 'up' versus 'down', or 'right' versus 'left' (Needham 1973).

## 5. SEEKING TECHNICAL FLEXIBILITY: SEMIOTICS, CULTURAL MARKING AND PHOTOGRAPHIC CRAFT

Photography is a process of cultural marking.<sup>11</sup> There is nothing intrinsic to what constitutes 'interesting light' – only that it seems this may coincide with light that is not too 'blinding' nor too 'soft'. With the sun as the vanishing point, this composition is what sets the limitations on what embellishments can be made to make the symbol clear. A photograph of sunrise taken over Washington, D.C. has a different semiotic potential from a sunrise taken in the Caribbean. The first emphasises the range of symbols pertaining to Washington, D.C. as a 'capital' with whatever a sunrise is culturally marked to mean, whereas the sunrise on the horizon as the subject matter is more generic. There it is more about the colour and what is culturally associated with what those colours mean. This is why photographic fieldwork for horizon photography uses the horizon as a code for maximising technical flexibility where the indicators are tied to the potential for symbolism. What makes a photographer, however, is not just craft. Capture is merely what happens when the shutter is pressed and released. Doing that act does not mean the craft is all of a sudden 'documentary' or 'artistic'. Rather, it is what craft offers – as an opportunity – to step in when automations do not match the vision for 'the shot'. One of the major contemporary debates in photography is about equipment and what justifies spending absurd amounts of money on lenses when most subject matter can be 'captured' by the camera included with most mobile devices. The technical answer deals with the camera's sensor size and questions of focal length, which affect the plausible marking that light can have within a photograph. (Also, lenses, film and digital sensors introduce changes to the colours we perceive in the 'real' world. These changes vary from lens to lens, film to film, and sensor to sensor.) Blur can either be marked as 'poor craft' or a 'structured ambiguity' to obscure elements (like clouds) in order to let the light speak for 'itself'. If it is the latter, that decision cannot be automated. Thus, equipment is not what 'makes' a photographer. Instead, it is one's socialisation into this cognitive division of labour; or, in other words, the acquisition of a particular cognitive style. What are its features? Given the data and my informal interviews, Briot (2010, 36, 37) said it best:

Once you reach a certain level of experience and proficiency as a photographer, when looking at an inspiring scene, you start to see a finished print in your mind. You no longer see just the scene. You see the image recorded as a histogram. You see areas that may be clipped if converted to the wrong colour space. You see the modifications that you will have to make in order to correct the defects introduced by the camera. You see ink on paper and, more precisely, specific shades of ink on specific types of paper. You see the image displayed with a mat and frame; even with a specific mat size and in a specific frame moulding. Yet, while all this is going on in your mind, the scene in front of you is still unframed, unmatted, unprinted, uncorrected, and unphotographed. It is, as I said before, exactly what it is, nothing more and nothing less, but certainly not a matted and framed photograph in a specific print size. What the camera will capture is exactly what is in front of the lens, and depending on the exact equipment, exposure, and settings used to capture the photograph, it will impart a number of defects to the natural scene. In other words, as experienced photographers, we see a final print in our mind. The camera on the other hand sees and captures exactly what is in front of the lens. [...] However, no photograph will be left untouched by the differences between what we see and what the camera captures.

Learning to see what is culturally marked technically permits the photographer to gain the ability to what photographers call 'seeing'.<sup>12</sup> And, like most seemingly mundane activities, such technical details about paper, print framing, ink and colour spaces mean very little to the viewer on the face of it. Except, that it is precisely these elements that classify the scene in the photograph to be a symbolic reality of its own. Portraits can creativity play with the edge of a frame and horizons can be set up such that the horizon line continues to line up with the horizon in a window or another photograph. The ink and paper choice can effect what kind of glare occurs and what angles the photograph is best viewed at. These kinds of elements take the 'captured scene' and push it into an 'unreality' precisely to bring the viewer to some particular reality, which places the range of symbolic meaning in play. (The player can be either the viewer or the photographer.) Thus, semiotically, how does light mark? Or, more specifically for the moment, what does twilight mark? Here are several answers:

- ‘Dawn is the time where the air is freshest and the electricity of all our dreams we had during the night are there for us to see, like frost resting on the trees along the Setsari River (Tsurui, Hokkaido). And it is at dawn when our dreams sparkle in hope that today will be the day when the dreamer claims them, instead of once again being tossed aside. This makes the moment before dawn so special’ (An anonymous photographer from Japan).
- ‘I think there is also something very spiritual about these times of day; they have a way of making people stop and take everything in. It’s both calming and invigorating’ (Brandon 2010).
- ‘Sunrise and sunset produce particularly attractive lighting in photos; both on land and under water. Twilight produces a world of magic below the surface because the shadowy light looks much different than the harsh light of midday’ (Friedrich 2014, 34).

Interestingly enough, despite being a ‘true’ thought community in its own right (with their own set of optical, focusing, semiotic and mnemonic traditions), photographers seem torn between understanding ‘artistic style’ as something that is personally idiosyncratic (as represented in photographic manuals such as Briot 2010) and something that is a feature of culture (Elkins 2007). Coming from the style as the former, Friedrich (2014, 74) suggests there are ‘psychological connotations’ to colour:

Red is a signal colour that is often associated with heat, fire, and activity, but it can also serve as a warning. Orange has a positive, invigorating, and optimistic effect because it’s a bright, warm colour. Yellow often conjures feelings of ease, comfort, and weightlessness. Green conveys a sense of a new beginning and growth, and it produces feelings of harmony and stability. Blue often suggests calm, distance, or depth, and we often associate it with air or water.

Here, while he is speaking in regard to colour that is exaggerated by underwater photography, studies have shown that ‘mental colour boundaries’ are at least partly determined by language (Regier and Kay 2009). This points to how impersonal the semiotic system of light and its relation to the horizon has a normative dimension that is negotiated in photography classes through criticisms.<sup>13</sup> One way this is done is to draw on themes described in photography textbooks. These criticisms tend to be assessed either on the basis of ‘correspondence’ or

‘coherence’. Barrett (1990, 46) indicates, correspondence ‘helps to keep interpretations focused on the object and from being too subjective’ by attempting to ‘account for all that appears in the picture and the relevant facts pertaining to the picture’. Coherence, in a similar fashion, turns the interpretations of photographs into arguments where hypotheses backed by evidence make a case ‘for a certain understanding of a photograph’, meaning that the interpretation should not be internally inconsistent or contradictory; it either makes sense in and of itself because it ‘accounts for all the facts of the picture in a reasonable way, or it is not convincing’. Such criticisms aim to mark light in a way that can place a photographer’s work into a historical and stylistic context or by drawing on other disciplines of interpretation such as Marxism, psychoanalysis, communication theory, semiotics, structuralism and the psychology of perception. For example, assessing the use of ‘golden hour’ in a photograph may draw on its wide variety of cultural associations with sunrise clichés (e.g., rebirth) and sunset clichés (e.g., cowboys riding into the distance; marriage proposals, etc.).

What is the problem here? Before the development of artificial light, the horizon acted as an indicator in many cultures for organising a variety of elements of social organisation. It was used as a reference point for navigation. It seems these traditions are what has led the ‘sunrise’ to associated with ‘life’ (and other similar symbolic meanings) and ‘sunset’ to be associated with ‘death’ (and other similar symbolic meanings).<sup>14</sup> These seem to creep residually in the collective memory of humanity as the horizon acted as the ‘boundary’ and twilight acts as the ‘space between’ where morning twilight being a transition between ‘death’ and ‘life’ and evening twilight being a transition between ‘life’ and death’. ‘Old’ then ‘new’ is not the same structurally as ‘new’ then ‘old’. With this multiplicity of plausible symbolic meanings and corresponding emotions that can be triggered, the photographer is drawn to this ‘line’ as a subject of artistic study. (And this does not even account for the breadth of colour!) With this *seemingly* ‘universal’ appeal, the question that needed asking was: is there ‘something’ about the horizon, as a subject matter for photographing, which makes it ‘different’. In so far as the question of politics is concerned. After all, what could be ‘political’ about ‘nature’ and the geometric relation to this line? Here, the subject matter has generated a two-part semiotic code for the sub-culture of horizon photographers that enable the achievement of technical flexibility, which in turn, permits the marking of a culturally intelligible message.

The first part of the semiotic code deals with fieldwork – the indexical aspects of learning how to/practice

'capturing' the subject matter under conditions that are highly variable when on a moving ship near the equator with its semantic relations (communicating what settings correspond to different transitional phases of the sun 'crossing' the horizon line) and its syntactic relations (communicating the contrasts in space, time/order, subject and craft). The second part treats the relationship between what is gathered from fieldwork and the flexibility that the fieldwork generates for the post-production of the symbol that the finished photograph means to signify as an index of. And, since the kind of composition this genre of photography is about, this flexibility largely deals with light (and maybe a little cropping) in post-production to make sure 'light speaks' 'properly' such that its tonal range of colour, brightness and contrast are either accurate for 'that' scene or for the symbolism or emotion trying to be conveyed by the way the light 'highlights' the vanishing point of the image. For example, Figure 8 positions the semiotic weight of the moon (at a time when it looks like a smile) and semiotically counter-balances the deep sea blue foreground mediated by a warm twilight. By cropping it to be almost a square, the light in this image is semiotically redistributed.

Culturally speaking, other technical discussions have been raised to explore the larger context in which this semiotic code illustrates the markedness of *being a photographer* in the contemporary age of automatic cameras where, to a layman's eyes, it is near impossible to distinguish a qualitative difference between a print produced digitally or analogically through chemical techniques. For more than 100 years, the light in the photograph was unmarked in that it was produced by a 'camera'. Then between 1957 and 1990, there were unparalleled advancements in technology, including the beginning development of 'digital cameras' and 'digital photography' in which the means of production changed where the semiotic weight of the light still depended on its chemical production – maintaining a semiotic asymmetry in light between digital and analogue photography. The 1990s experienced an explosion of technological progress (such as in the introduction of Adobe Photoshop) slowly shifting the semiotic weight from analogue to digital. Then, in 2006, Nikon discontinued most of its film cameras and its large format lenses to focus on digital models – and this 'cemented' the move from the unmarked category being analogue to digital. In more recent years, many contemporary artists are deliberately using analogue photographic techniques in their work (as opposed to those who are just comfortable with the darkroom and the chemical and negative-based processes) – thus intentionally linguistically marking the light in the photograph as analogically produced emphasising it as a sign-function of the materiality that the image is able to hold, leading a number of contemporary

artists to appear to highlight the indexical qualities of 'analogue' photography (Callahan 2012). At a greater cost, the beginnings of the image are held in the negative, and the image is 'gently prodded', 'coaxed', 'manipulated' and 'forced' to appear by the photographer in the analogue process. While the digital workflow is similar, beginning with a RAW file, adjusted in the RAW converter and modified in a programme like Photoshop, the major difference between the digital and the analogue photographer is the skill of being able to work without 'non-destructive editing'. Digital edits can be done, removed and tried again – leaving no trace. That trace in analogue photography marks light. It raises questions of the photograph's indexical character. ('Is that an artefact of editing or was that there?') This exaggerates the difference between morning and evening twilight even more *while* reducing the flexibility of its plausible symbolism for potential viewers and photographers. The cultural effect of this is the semiotic asymmetry attributed to how 'light speaks'. In other words, the technological development of photography reinforces the idea that photographic craft is a process of cultural marking that differentiates fine-tuned technical skill from expert craftsmanship.

## 6. TWILIGHTS AND AESTHETICS

The argument could be made that there is a certain politics to an aspect of geographic location and photography. This is illustrated by way in which climate change is altering what scenes are possible. For example, the weather in relation to longitude, latitude and altitude effect how light scatters (and how long the transitional period is visible to an observer) (Corfidi 1996). Those who grow up and live in heavily light-polluted areas could easily live their lives not knowing a full-horizon twilight in its 'majesty'. Yet, there is also a price paid by the photographers, who move away from light-polluted areas (such as parts of the American southwest and the northern regions of Scandinavian countries), for the discipline of studying these endangered aesthetic possibilities. The same argument can be made regarding access to the purity of the night sky, given the geography necessary to properly view the galactic centre of the Milky Way, a bright sight that erases the association between night and darkness. Whether it is twilight or the night sky, modernity has denied the majority of the world's urban populations the opportunity to gaze upon these wonders. This is because of the effects of living in urban environments or through the less obvious effects of a modern division of labour where a majority of work is no longer scheduled in line with the sun's relationship to our horizon. The denial of access to these vistas places these populations back into Plato's cave where the dream of escape is merely a matter of realising that we are a victim of

our own light pollution; meaning that to awaken ourselves we must remind our imprisoned selves that these vistas do exist and that viewing them does tell us an important cultural story that needs to be retold continually to revitalise our energies. Conversely, the photographer's unmarked sacrifices of modern comforts are marked in the price of their work and their dedication to their craft – as a justification for the high cost of fine art photography (Briot 2011). We grant the photographer, like the magician, permission to bring us to a moment that is motivated to capture, reflect and play – not only with reality – but our expectations of it. The politics of such semiotic associations introduce us to the tension between the generic and the particular. That is what an index of a symbol does. It brings us in relation to something that is difficult to doubt is there (like the sun and the illusion of the horizon as a 'line') and asks us to 'make it mean something'. Culture did, does, and likely will. This is not an assessment meant to 'essentialise' any specific conventional tradition of semiotic association. Rather, light is ubiquitous. Where light does not visibly reach, it is likely still there – indicating something about cosmological activities. Light speaks to challenge conventional notions of time and space. And, photographers see this as their 'prey' and will go to great lengths to get 'the shot',<sup>15</sup> to give the indices of that moment some symbolic 'essence' to communicate *a truth*. This aesthetic of light communicates how twilight is an allegorical reflection of the problems of 'Society'. It is a time of day that, in the Caribbean, at least, is visibly in motion – classifying and re-classifying, scattering, marking and unmarking what is 'under a shadow' and what is 'in the light' and, like decisions dealing with the distribution of resources, the photographer must decide when the moment is 'just' and 'right'. Expressing this analogically versus digitally only exaggerates the materiality of how *light speaks* to this photographically, in the way *language speaks* to organise society. Thus, of course, it is not about *the image* nor *an image*, but, the degree to which this aesthetic is one which can communicate a message of unity in which it is possible to recognise that life is about flexibility – the kind of 'being' that is *in between* categories and not within categories nor between categories. That is the politics of twilight.

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## NOTES

- [1] For example, this communicates that 'I am here and the horizon is there'.
- [2] Cf. Zerubavel (1987, 1991, 1993, 1995).
- [3] Here, the relationship between the location of a people and the equator can be of some importance in shaping culture. This is because in many densely populated regions of the Earth, including the entire United Kingdom and other countries in northern Europe, the Sun does not go more than 18° below the horizon, meaning that complete darkness does not occur and twilight lasts all night. The schedule of the sun's relationship to the horizon is often connected to the marking of sacred time (e.g., the Sabbath), fasting rituals (e.g., Ramadan in Islam; Yom Kippur in Judaism), rites of passage (e.g., the Paiutes' menarche ritual), and burial rituals (e.g., Nubian funerary rites).
- [4] '*Under what circumstances do we think things are real?*' The important thing about reality, he implied, is our sense of its realness in contrast to our feeling that some things lack this quality. One can then ask under what conditions such a feeling is generated, and this question speaks to a small, manageable problem having to do with the camera and not what it is the camera takes pictures of (Goffman 1974, 2, emphasis in original).
- [5] For example, Grondin (2016) is a French photographer who spent 3 years travelling capturing landscapes and cityscapes with the sun on the horizon line.
- [6] In this regard, Roland Barthes offers his views on photography by expanding on interpretive codes, narrational systems, functions and indices, denotation and connotation. See Barthes and Heath (1977).
- [7] See Malik (2016) for an elaboration of this hyper-modern view.
- [8] See Lee (2016).
- [9] Cross (2014, 68) examines how this works in terms of family photography where 'amateur and professional knowledge can be seen to intersect within a larger field of institutionalized photographic practice'.
- [10] Hirsch (2009) offers a detailed examination of the discipline of photographing.
- [11] In linguistics, markedness is the 'asymmetrical and hierarchical relationship between the two poles of any opposition' (Waugh 1982). Socio-cognitively, these features are processed perceptually and are 'passively defined as unremarkable, socially generic, and profane' (Brekhus 1998). This is in contrast with aspects of reality that other cognitive norms make formal, explicit, real and even *ostensibly* fixed and unchangeable.

- [12] In terms of landscapes, and not the horizon in particular, Cosgrove (1998) offers a historical sketch of ideas about landscape as they have evolved and changed in Europe and North America since the fifteenth century. This is later expanded in DeLue and Elkins (2008, 20) showing how 'landscape constitutes a discourse through which identifiable social groups historically have framed themselves and their relations both with the land and with other human groups, and that this discourse is closely related epistemically and technically to ways of seeing'. Papson (1991) offers an earlier analysis of this.
- [13] Barrett (1990, 2) is a textbook for socialising photographers. He defines 'criticism' as 'informed discourse about art to increase understanding and appreciation of art. This definition includes criticism of all art forms, including dance, music, poetry, painting and photography. "Discourse" includes talking and writing. "Informed" is an important qualifier that distinguishes criticism from mere talk and uninformed opinion about art. Not all writing about art is criticism. Some art writing, for example, is journalism rather than criticism: It is news reporting on artists and art world events rather than critical analysis'.
- [14] See, for example, Wengle (1983) and Greci (2010).
- [15] See, for example, the movie *The Secret Life of Walter Mitty* (2013) where Ben Stiller's character goes on a world adventure chasing a photographer for LIFE magazine. Less fictitious tales exist in books about nature and climbing photography. Cf. Thurber (2008).

## DISCLOSURE STATEMENT

No potential conflict of interest was reported by the author.

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## References

- Barrett, T. 1990. *Criticizing Photographs: An Introduction to Understanding Images*. Mountain View, Calif.: Mayfield.
- Barthes, R., and S. Heath. 1977. *Image, Music, Text*. New York: Hill and Wang.
- Becker, H. S. 1974. "Photography and Sociology." *Studies in the Anthropology of Visual Communication* 1: 3–26. doi:10.1525/var.1974.1.1.3.
- Bourdieu, P. [1965] 1990. *Photography, a Middle-Brow Art*. Stanford, CA: Stanford University Press.
- Brandon, J. 2010. "Beyond Sunset: The Different Phases of Twilight." Digital Photography School. Accessed 14 April 2016. <http://digital-photography-school.com/beyond-sunset-the-differen-phases-of-twilight>
- Brekhus, W. H. 1998. "A Sociology of the Unmarked: Redirecting Our Focus." *Sociological Theory* 16 (1): 34–51. doi:10.1111/0735-2751.00041.
- Briot, A. 2010. *Mastering Photographic Composition, Creativity, and Personal Style*. Santa Barbara, CA: Rocky Nook.
- Briot, A. 2011. *Marketing Fine Art Photography*. Santa Barbara, CA: Rocky Nook.
- Callahan, S. 2012. *Tracing Shadows: The "Analogue" and the Indexical Sign-Status of the Photographic Object*. Södertörn, MA: Södertörn University.
- Corfidi, S. 1996. "The Colors of Twilight." *Weatherwise* 49 (3): 14–19. doi:10.1080/00431672.1996.9925403.
- Cosgrove, D. E. 1998. *Social Formation and Symbolic Landscape*. Madison: University of Wisconsin Press.
- Cross, K. 2014. "Training the Eye of the Photographer: The Education of the Amateur." *Visual Studies* 29 (1): 68–79. doi:10.1080/1472586X.2014.862996.
- DeLue, R., and J. Elkins. 2008. *Landscape Theory*. New York: Routledge.
- Dykinga, J. W. 2013. *Capture the Magic: Train Your Eye, Improve Your Photographic Composition*. Santa Barbara, CA: Rocky Nook.
- Elkins, J. 2007. *Photography Theory*. New York. London: Routledge.
- Friedrich, T. 2014. *Underwater Photography*. Santa Barbara, CA: Rocky Nook.
- Goffman, E. M. 1974. *Frame Analysis: An Essay on the Organization of Experience*. New York: Harper & Row.
- Grady, J. 1991. "The Visual Essay and Sociology." *Visual Sociology* 6 (2): 23–38. doi:10.1080/14725869108583689.
- Greci, E. 2010. "The Beauty of a Sunset." Accessed 13 April 2016. <http://www.everything-beautiful.com/beautiful-sunsets>
- Grondin, J. "I've Spent 3 Years Travelling around the World to Catch the Sun." BoredPanda. Accessed 16 April 2016. <http://www.boredpanda.com/travelling-around-world-to-catch-sun-beboy>
- Harper, D. 2003. "Framing Photographic Ethnography A Case Study." *Ethnography* 4 (2): 241–266. doi:10.1177/14661381030042005.
- Heidegger, M. 1971. *Poetry, Language, Thought*. New York: Harper & Row.
- Hirsch, R. 2009. *Seizing the Light: A Social History of Photography*. New York: McGraw-Hill Higher Education.
- Lee, S. 2016. "Rembrandt Comes Alive 350 Years Later through AI and 3-D Printing." Newsweek. <http://www.newsweek.com/rembrandt-comes-alive-350-years-later-through-ai-and-3-d-printing-444731>
- Lewis, G. 2015. *Street Photography: The Art of Capturing the Candid Moment*. Santa Barbara, CA: Rocky Nook.
- Malik, O. 2016. "In the Future, We Will Photograph Everything and Look at Nothing." *The New Yorker*, April 4. <https://www.newyorker.com/business/currency/in-the-future-we-will-photograph-everything-and-look-at-nothing>
- Manning, P. K. 1987. *Semiotics and Fieldwork*. Newbury Park: SAGE Publications.

- Needham, R. 1973. *Right & Left: Essays on Dual Symbolic Classification*. Chicago: University of Chicago Press.
- Papson, S. 1991. "Looking at Nature: The Politics of Landscape Photography." *Visual Sociology* 6 (1): 4–12. doi:10.1080/14725869108583678.
- Pauwels, L. 2010. "Visual Sociology Reframed: An Analytical Synthesis and Discussion of Visual Methods in Social and Cultural Research." *Sociological Methods & Research* 38 (4): 545–581. doi:10.1177/0049124110366233.
- Petrowitz, S. 2013. *Traveling Photographer*. Santa Barbara, CA: Rocky Nook
- Raphael, M. W. 2017. "Cognitive Sociology." In *Oxford Bibliographies Online in Sociology*, edited by L. Spillman. New York: Oxford University Press.
- Regier, T., and P. Kay. 2009. "Language, Thought, and Color: Whorf Was Half Right." *Trends in Cognitive Sciences* 13: 439–446. doi:10.1016/j.tics.2009.07.001.
- Schulz, A. 2015. *Architectural Photography: Composition, Capture, and Digital Image Processing*. Santa Barbara, CA: Rocky Nook.
- Thurber, J. 2008. *The Secret Life of Walter Mitty*. Mankato, MN: Creative Education.
- Waugh, L. R. 1982. "Marked and Unmarked: A Choice between Unequals in Semiotic Structure." *Semiotica* 38 (3–4): 299–318. doi:10.1515/semi.1982.38.3-4.299.
- Wengle, J. 1983. "Fieldwork, Sunsets, and Death." *Anthropology and Humanism Quarterly* 8 (2): 2–12. doi:10.1525/ahu.1983.8.2.2.
- Zerubavel, E. 1987. "The Language of Time: Toward A Semiotics of Temporality." *Sociological Quarterly* 28 (3): 343–356. doi:10.1111/j.1533-8525.1987.tb00299.x.
- Zerubavel, E. 1991. *The Fine Line: Making Distinctions in Everyday Life*. New York: Free Press.
- Zerubavel, E. 1993. "Horizons: On the Sociomental Foundations of Relevance." *Social Research* 60 (2): 397–413. doi:10.2307/40970743.
- Zerubavel, E. 1995. "The Rigid, the Fuzzy, and the Flexible: Notes on the Mental Sculpting of Academic Identity." *Social Research* 62 (4): 1093–1106.