

REVIEW ESSAY

Research in the Dark

Explorations into the Societal Effects of Light and Darkness

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Edensor, Tim. 2017. *From Light to Dark: Daylight, Illumination, and Gloom*. Minneapolis: University of Minnesota Press.

Bille, Mikkel. 2019. *Homely Atmospheres and Lighting Technologies in Denmark: Living with Light*. New York: Bloomsbury Academic.



The question of how human-environment interactions help constitute society is an integral part of social scientific research. The social sciences and humanities have taken several “turns” to explore the role of materiality or the body and the human senses in order to understand how humans make sense of and socially construct their environment. In this rugged landscape, an emerging interdisciplinary research field is currently developing into a promising test bed for exploring the social dimension of human-environment interactions. The shared focus is on ALAN—artificial light at night. While astronomers, biologists, ecologists, physicians, and psychologists explore primarily the visual and nonvisual effects of light and darkness on flora, fauna, and humans as well as ecosystems (Falchi et al. 2016; Gaston et al. 2015; Roenneberg et al. 2013),¹ there is also an increasing interest in day and night rhythms, artificial lighting, dark skies, and their social and cultural implications in the social sciences, historical studies, and humanities. As outlined in the following, this research is perfectly suited to challenging the persistent dichotomous notions of nature and culture and add to a better understanding of how our sense making relates to our senses.





Seeing and Living with Light

The two recent books under review in this essay are exemplary for social scientific work on artificial light at night. Tim Edensor's *From Light to Darkness* (hereafter abbreviated LD) focuses on the experience of *Daylight, Illumination and Gloom*, as the subtitle explicates. Mikkel Bille's *Homely Atmospheres and Lighting Technologies in Denmark: Living with Light* (HA) explores how Danes make themselves feel at home by illuminating their place, that is, by "attuning atmospheres."

The particularities of social life after dark are a rich but widely neglected aspect of social life.² Only in the past decade, social dynamics, conflicts, and practices related to artificial light at night, especially in urban spaces, have received increasing attention (Challéat et al. 2014; Deleuil 2009; Ebbensgaard 2015; Edensor and Millington 2009; Entwistle and Slater 2019; Green et al. 2015; Jensen 2014; Meier et al. 2015; Morgan-Taylor 2015; Schulte-Römer 2015; Stone 2019).³ The two monographs make important conceptual contributions to this research by offering comprehensive and empirically rich accounts of how we perceive and interact with our environment through light.

Bille and Edensor pursue a similar methodological approach to light and lighting and are interested in similar problems, especially the emergence of atmospheres. The two authors are also well familiar with each other's work and have worked and published together (Edensor and Bille 2017). Nevertheless, they have different foci. Edensor, the cultural geographer, is interested in how we "see with landscapes" in natural and artificial light in order to "examine the complex configurations through which . . . geographies have been conceptualized, experienced, and practiced across time and space" (LD: viii). Bille explores from an anthropological perspective how people do and "live with light." By studying Danish ways of producing cozy, convivial, homely light (*hyggelys*) he aims to challenge predominant natural-scientific "asocial perspectives" on both light and human light perception (HA: 7).

Thus, they approach the nature and culture of light from different angles. Edensor takes presumably *natural* experiences of light, darkness, and gloom as a point of departure to better understand an "existential dimension of living in the world" (LD: vii). Bille's starting point is the Scandinavian lighting *culture*, which is also described as "Nordic lighting" (HA: 97). This culture has come under pressure through the political decision to replace incandescent light bulbs with energy-saving light sources (chaps. 1 and 8). Based on observations and interviews, he elaborates how *hygge*, the Danish notion of coziness and conviviality,



is achieved in ways that appear culture-specific when compared to the ways in which migrants in Denmark or Bedouins in Jordan illuminate their homes.⁴ Edensor, in contrast, compares experiences of spaces under changing and dynamic lighting conditions. As his observations show, human-environment interactions can change significantly due to weather conditions or man-made lighting designs and light art.

From Blackpool Illuminations to Blackouts in New York City

Edensor's book covers a wide spectrum of empirical examples ranging from daylight to nocturnal darkness, from festive extravaganzas to permanent functional illuminations. With his rich analysis, he aims to remedy what he calls a "startling dearth" in geographical analyses of space, place, landscape, and time rhythms:

The perception of luminous and gloomy space is a key existential dimension of living in the world. . . . Despite this shared, all-pervasive human experience in which spaces appear radically different according to time, season, and weather, social science investigation of daylight, darkness, and illumination is meagre. (LD: vii)

As the title suggests, the book moves from light to dark with a first part on natural light and perception, a second part on the experience of different kinds of illuminations, and a third part on moving and seeing in the dark.

Artistic, vernacular, and festive illuminations as they can be observed during festivals of light, in art performances, fairgrounds, or at Christmas time are an important vantage point of Edensor's inquiry into the nature of human-environment interactions in relation to light, or its absence (Edensor 2012; Edensor and Millington 2009). Throughout the book, he describes festival experiences and interactions with artworks that deal with light. The artificial, often temporary installations thereby serve as quasi-experimental interventions and inquiries into the nature of human perception. For instance, Carlos Cruz-Díaz's indoor installation *Chromosaturation* consisting of three monochromatic chambers reveals how humans differ in their color perception, "which endlessly fluctuates, while vision, too, is an emergent capacity" (LD: 7). In Olafur Eliasson's work *Skyspace* "the dynamic sky becomes the focus of an intensified scrutiny [as] an integral aspect of the circulations and emergences of the landscape" (LD: 30). However, Edensor also shows that human-environment interactions are more than just an act of perception

that is determined by physics and physiology. By focusing on festive events (chap. 5) like the Lyon *Fête des Lumières* and the vernacular Blackpool Illuminations in the popular sea resort in northern England, he outlines that illuminations also have the potential to transform or transcend people's social engagement with their environments. The societal function of such events is thus not limited to creating spectacles (Debord [1967] 1970). Instead, they "can stimulate critical awareness about the specificity of perception, promote interrogation of the normative uses and meanings of place, bring to mind forgotten histories and neglected spaces, and generate conviviality and playfulness" (LD: 137). This appreciation of cultural expressions in light is further elaborated in a chapter on atmospheres, which draws on Gernot Böhme (1995) and Jacques Rancière (2009), but also shows how even *staged* atmospheres, like the Blackpool Illuminations, are "coproduced" in situ by the "active absorption of visitors," their "anticipated attunement" and "animated verbal and physical expressions . . . as well as myriad other elements that circulate around the seafront" (LD: 143, 153, 154).

Unfamiliar experiences of darkness can be as revealing as artistic encounters. Accordingly, Edensor explores the "sensual and affective affordances"⁵ of dark environments that "remind us that the normative glare of Western streets is historically contextual and far from universal" (LD: 184). In a chapter on "The Pleasures of Noir" he offers detailed accounts of physical interactions in and with dark environments. Examples include cyclists' and runners' experiences of moving through dark landscapes as well as auto-ethnographic accounts of walking through Galloway Dark Sky Park in the southwest of Scotland, attending a concert and art performance in the dark, or eating in the dark restaurant *Dans le Noir*. He concludes that the experience of darkness can facilitate "different connections with otherness," "give rise to unfamiliar, unbidden thoughts and fantasies," but also foster a sense of care between people and "gratitude for those who make journeying and residing in the darkness more comfortable," for instance, a guide (LD: 210–211).

Finally, historical accounts of social life after dark (Ekirch 2005) and sociotechnical changes (Koslofsky 2011; Schivelbusch 1988) reveal that there is no such thing as natural sensory perception. Instead, physical obstacles and hazards we might encounter after nightfall in pitch-dark environments seem inextricably linked to positive and negative associations related to light, darkness, and gloom. Thus, everything we see is always already attuned to familiar or alienating atmospheres and embedded in social contexts, morals, and cultural meaning—including



religious and symbolic references. Edensor's historical and contemporary empirical observations range from nyctophobia to the present "reenchantment of darkness" as it can be observed in lighting design and dark-sky tourism (chap. 8; cf. Schulte-Römer et al. 2018).

The ambivalent and contingent social meaning of darkness becomes most obvious in the public responses to three different blackouts in New York City. While in 1965 and 2003, people "poured onto the street" in a "celebratory mood" and atmosphere of "convivial conversation," the blackout of 1977 "became emblematic of social and economic discord" under conditions of inflation, unemployment, "overzealous policing and widespread mistrust between inhabitants" (LD: 178–179, quoting Nye 2010).

Through the lens of cultural geography, human-environment interactions thus seem to have "no essential qualities," but depend on ever-changing spatial and temporal contexts "within which they are experienced according to widely diverging cultural norms" (LD: 213). Light, both natural and artificial, thereby appears as an "integral element of atmospheres" that "transforms the materialities on which it falls." But while physical reflections might be best described by natural scientists, Edensor demonstrates the added value of social scientific reflections on the "affective and emotional resonances in the sensing body" (LD: 143).

Nordic by Nature?

Compared to Edensor's kaleidoscopic empirical accounts, *Homely Atmospheres* is more academic in style. Bille starts with outlining the relationship between light and sociality and moves on to explore the notion of *hygge* as a specifically Danish way of living with light. At the end, the book takes a political turn by outlining how an "atmospheric approach" relates to notions of community and current climate change mitigation policies. Bille is explicit about his methods, elaborates the state of the art in his research field, and clearly outlines which social scientific research gap his book aims to close. His key argument is that conventional scientific research on light, which is also the kind of science that produces technological standards, limits its focus to physics and physiology, neglecting sociocultural realities. Bille criticizes this dominant perspective as "a 'scientification' of lighting . . . in which the user is a physically responding *body* more than a social *person*" (HA: 17). To give an example, the perfect reading light for a *person* might not correspond with studies that define "the best reading light" based



on the reading speed and fatigue of a statistical *population*. Accordingly, personal light preferences “may not always be in accordance with scientific claims of optimal light” (HA: 43). To offer more clarity in this respect, Bille proposes a practice-oriented “atmospheric approach” that draws attention to “how ‘reading’ may be embedded in different atmospheres,” including homely atmospheres (HA: 8).

A key message of the book is that light is not shed *on* things, but *for* things such as the home (e.g., HA: 9, 27, and 154). In other words, lighting practices are part of more complex everyday routines, expectations, and affective engagements with material environments. They are part of our material culture and attune atmospheres like *hygge* at the dinner table. However, this culture-specific sense of creating a cozy home are under threat since the EU has banned incandescent light bulbs.⁶ As Bille points out, the 2012 ban reduces light to the energy it consumes. It tries to tackle climate change with a technology fix, ignoring the need for more profound sociocultural adaptations. In Denmark, the energy-saving policies led to irritation if not anger. Compact fluorescent lamps clash with Danish home-making practices as they give an unacceptably pale light, have long ignition times, and are poisonous if they break (chap. 7). They are now being replaced by LED retrofits, which are more comfortable. But LEDs also cause irritation, as they demand people change their routines, gain knowledge about lumen, color rendering, and smart lighting, and *re-learn* how to attune their homely atmospheres in line with, or in opposition to, new lighting standards that are inscribed in the new technology. According to Bille, the out-phasing of tungsten light and its effect on Danish *hygge* is an exemplary case of “sensory politics,” that is, politics that affect how we sense the world and “how ways of sensing become political topics” (HA: 141).

The different meanings and sociopolitical implications of *hygge* and *hyggelys* (cozy light) are presented in chapter 3. *Hygge* is “a term that every Dane knows and to which foreigners are quickly introduced” (HA: 48). The closest translation in English is “coziness,” but the notion of *hygge* is more encompassing. It can be a verb, noun, and adjective (HA: 52) and is used in expressions like “‘hyggeligt at se dig’ (directly translated into *cosy to see you*) or ‘kan du hygge dig’ (*can you cosy yourself, equal to have fun*) when departing” (HA: 49, quoting Levisen 2012). While *hygge* has been hyped and glorified in literature and Danish cultural politics and touristic marketing, it is also a normative concept and can have the effect of silencing conflicts (HA: 49). Since it is somewhat mysterious to outsiders it can also be exclusive



or excluding (cf. Linnet 2011). Since *hygge* and the associated cultural practices are hard to explain and are even beyond words, many Danes think that foreigners do not understand what it means (HA: 48).

One key aspect that Bille highlights—and which beautifully illustrates his ethnographic approach—is the vagueness of *hygge*. Taking his informants' expressions of uncertainty seriously⁷ and as an analytical vantage point, Bille explains that:

Informants *sense* that light instantiates *hygge*, but at the same time, when further reflecting upon it, they *know* that it is not. Therefore, sensing is not only a mode of knowledge but also an affective relation through an atmosphere . . . *Hygge* then is an emic term for a particular atmosphere: it is real, it is what is experienced, yet it also escapes clear definition. (HA: 58)

Light is closely associated with *hygge* and thus with Danish culture. In his chapter on “atmospheric communities” Bille explores how such relationships between people and their environment emerge through cultural practices like particular forms of atmospheric lighting. Among his informants are couples that orchestrate their marital lives by dimming the lights “really low late in the evening just before bed time . . . ‘just to get that feeling of calm, and slow-down in tempo’” (HA: 83). There are Danish people who purposefully illuminate their windows after dark as a welcoming gesture into their neighborhood, expressing a sense of community. Another informant with a non-Danish background draws the windows every evening to preserve her family's privacy.

Bille carefully explores the shared elements in their lighting practices. He also scrutinizes the notion “Nordic lighting,” which “has become popular in Scandinavia claiming that there is a particular natural light in this region that guides our lighting practices and preferences” (HA: 97). This naturalistic explanation raises the question of why these particular aesthetics are found in Copenhagen, but not in cities like Glasgow or Moscow, which are on a similar geographical degree of longitude. Bille concludes that “Nordic lighting” should be understood as “*practices with light*” and suggests that the sense of community that is associated with and created by Nordic lighting and *hyggelys* should be understood as “sensory performative,” rather than an essence or territorial representation. “There is not necessarily a collective ‘we,’ or moral codex, yet there is a sense of togetherness” (HA: 99). Based on this conceptualization, social scientists might see the high candle consumption in Denmark (5.79 kilogram candles per capita and annum, HA: 52) in a different, more meaningful light.



Understanding Atmospheres, Embracing Ambivalence

Taken together, the two books illustrate how light affects human-environment interactions in powerful ways. Light directs our attention and conveys cultural meaning to such an extent that it reproduces social inequalities. It makes us feel at home or alien and “materializes power” (LD: 81, chap. 4). It also governs our bodies’ circadian rhythm, influencing our sleep and health. Together, symbolic meanings, values, and effects on our body affect the ways in which we use or avoid light and darkness. However, these dynamics are not well understood. Knowledge about these visual, nonvisual, and sociocultural effects of light remains mostly implicit and creates an “epistemological wasteland,” as the geographer Jürgen Hasse (2007) has argued. The two books explore this wasteland by making experiences with light and darkness explicit. There is a slight tendency to idealize the social function of atmospheres, as the focus is more on the productive and meaningful side of light than on potential disintegrating effects (Hirdina and Augsburg 2000).

At the same time, the books are analytically transparent in the sense that their everyday examples allow readers to personally relate and further test the proposed concepts. For instance, when reading Edensor’s auto-ethnographic accounts, I remembered how surprisingly well I could see in a moon-lit landscape without artificial lighting or how uneasy I once felt in a dark restaurant. Likewise, Bille’s observations on lighting cultures resonate with my own experiences in Berlin-Kreuzberg, where popular bars are lit in gloomy warm-white tones, whereas Turkish cafés are brightly illuminated by cool-white compact fluorescent light. I also recalled a conversation I had with a Danish city representative who argued that Danes would “hate the EU” because the ban of their beloved tungsten light is destroying their culture. Luckily, Bille’s findings show that a lighting culture is not that easily destroyed. The presented empirical accounts can thus also inform a more comprehensive socio-cultural diagnosis. While Bille offers a critical perspective on the ongoing technological transition to LED lighting, Edensor outlines three current processes that might dramatically change the “ways in which light and dark are practiced, understood, and sensed” (LD: 213). First, techniques of highlighting and foregrounding make light and dark an interesting signifier of inequalities. Second, he sees new design approaches and artistic interventions as a starting point for challenging and reevaluating boring standardized lighting schemes. Third, he presents empirical evidence that suggests that we are witnessing a revaluation of darkness as a positive quality and part of our everyday lives.⁸



Finally, the strength of the two books lies in accepting and highlighting complexity rather than reducing it for the sake of clear-cut cause-effect models. Both books suggest that focusing on atmospheres and interactions also means to accept vagueness and ambivalence. They embrace this challenge methodologically with auto-ethnographic approaches and a special focus on emic expressions of doubt, insecurity, and irritation. As Bille argues, “Taking vagueness seriously should not mean ending with an inconclusive analysis. What is needed are precise descriptions of the way such vagueness informs social life, grounded in empirical data” (HA: 47). Edensor, who is more concerned with human perception, highlights the emergent and multisensorial nature of seeing environments as a “world-in-formation” (LD: 18). This perspective is also politically relevant, as it draws attention to diversity, dynamics, and alterity in human-environment relationships. The focus on situated practices acknowledges the different ways in which light can occur and shape social situations. The *comparative approaches* to lighting practices and experiences reveal the historical and cultural particularities of human-environment interactions. The focus on *light in practice* reveals what photometric experiments are missing. Light is not monofunctional, but can play multiple roles. In human-environment interactions, it can work as a medium reflecting its material surroundings, play its own part as glare that blinds us or signal that attracts our attention, or contribute to creating an atmosphere (Schulte-Römer 2011). Thus, the ethnographic focus prevents us from essentializing atmospheres as a fixed quality of material surroundings, or a reproducible design with specific features and light characteristics (Vogels 2008). Instead, it allows us to understand atmospheres as a coproduction of light, materialities, human senses, and minds.

The focus on lighting can thus contribute to a better social scientific understanding of human-environment interactions in at least two respects. Empirically, it draws attention to a widely neglected nocturnal realm of the social. After all, human-environment interactions take place not only in bright daylight, but also in the dark and under artificial light that is practiced in powerful ways. In theoretical terms, it underlines the multiple ways in which we engage with our environments. The socio-cultural effects of light cannot be fully separated from its visual and nonvisual effects on our body. Accordingly, social scientific concepts need to be aligned with the empirical findings of other disciplines. The presented books acknowledge but only touch this important bodily dimension of human-environment interactions in light. “We can only speculate about the radical alterity of how nonhuman animals see with

light and landscape,” writes Edensor, “consider the impossibility of comprehending the effects of the fly’s compound eye.” This lack of understanding underlines the need for integrating natural scientific and social scientific research on human environmental perceptions. Integrated perspectives seem even more important as emerging scientific knowledge, for example, about the nonvisual biological effects of lighting on our circadian rhythm, will affect the ways in which we live with light (cf. Vinh et al. 2018; Roenneberg et al. 2013). Thus, the sociocultural phenomenon of light once again blurs the boundaries between nature and culture and calls for integrated interdisciplinary perspectives. The nature of light is inevitably cultural, the cultures of light inevitably natural.



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Notes

1. Nonvisual effects include most notably the impact of light on the circadian rhythm of living organisms.

2. Historical research offers valuable exceptions. Historians have described the coevolution of lighting technologies and nocturnal social life from candle light in the Middle Ages to electrification in the twentieth century. See, for instance, Schivelbusch (1988, 1992), Nye (1990), Binder (1999), Barnaby (2009), Brox (2010), Nye (2010), Koslofsky (2011), and Otter (2008).

3. The references listed here include various disciplines, for example, geographical, sociological, legal, and planning perspectives, but do not include the literature on nighttime economies.

4. As Bille writes, the experience of lighting practices in Jordan, which are so different from those of his home, first raised his interest in his research subject.

5. He explains these affordances as follows: “While it may seem that the ability to walk seamlessly through brightly illuminated streets is an indisputable blessing, the need to pick a path carefully through the relative gloom might alternatively be conceived as enlivening the body, sharpening the senses and making one aware of others, and soliciting a heightened, tactile sense of mobility” (LD: 184).



6. The ban of tungsten light is part of the EU Ecodesign Directive, a policy instrument for stimulating the demand for more efficient energy-related products (Directive 2009/125/EC). For more detail see Schulte-Römer (2015).

7. Bille further explains his research practice as “scrutinizing expressions of clarity with juxtaposing expressions of ambiguity, vagueness and multiplicity—the ‘I think maybe’ or ‘I don’t know, perhaps’ one often hears from informants, particularly when addressing issues of explaining sensory experiences and atmospheric engagements” (HA: 46).

8. Linked to “the dwindling influence of dominant religious and enlightenment notions that contend that light is good and darkness is bad” (LD: 217).

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