

Technology's Stories

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## Light "Pollution": The Aesthetics of Modernity vs. Pastoral in Britain

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The people were out late that night, and indeed, it was pleasant to be out. Not as yet were there any of those street lamps along the road which now make all nights alike dingy; but one felt as if walking into the unspoiled country. For though it was after ten, and the sky overcast, still one could see very clearly the glimmering road and the hedgerows in the soft midsummer twilight.

- George Bourne/Sturt, Change in the Village, 1912

In Britain, despite initial criticism in some quarters of the harsh effects of excess illumination, innovations in artificial lighting (such as the development of paraffin, coalgas and electricity, incandescent mantles and light bulbs) in the hands of promoters, advertisers, designers and social improvers eventually became associated with the positive in urban and industrial settings. But, despite the supposed boons of higher values of lux to the public—crime prevention, celebration, civic pride, increased

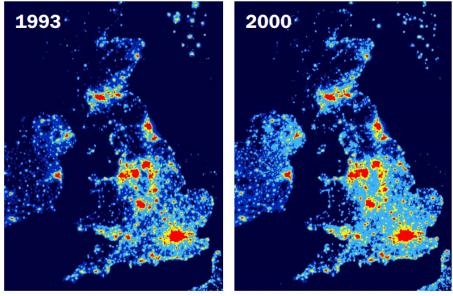
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production and more safely-lit pleasures—in the case of rural areas much greater weight was placed on its ills. Even (or, indeed, especially) when coded as "modern" and the very embodiment of "progress," its generation and use in rural areas were cast as inherently out of place. Light in the countryside came to be treated as something that polluted rural landscapes and heritage, and seen as capable of corrupting the qualities that were most valued by the observers of country life. And, though we may think that this response is due purely to the brilliance associated with electric lights, even before their use in rural areas, we can already see this attitude in George Bourne's' comment on the dingy effects of gas-light (epigraph). This is because, long before 1912, the countryside had already acquired a nostalgic patina of unchanging continuity and idyllic escape. As the bulk of the population started living in the towns and cities in the midnineteenth century, they began to see the countryside simply in transit as visitors rather than inhabitants. Culturally-speaking the British countryside became (idealistically) in popular and elite culture the very antithesis of the "progress," "modernity," and "industry" represented by illumination, and so supposedly quite separate from the city.

## Night Blight in England and UK

Satellite data shows that light pollution is rapidly increasing across the country, leaving less and less countryside where we can still enjoy starry, starry nights



Campaign to Protect Rural England

Figure 1. Source: http://kitenet.co.uk/wp/category/light-pollution/.

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When the Council for the Protection of Rural England, in conjunction with the British Astronomical Association produced a leaflet entitled "Starry, Starry Night – How to Keep Sight of the Stars" (c. 1994), it was very easy to harness these negative connotations to their campaign, especially as illumination appeared to erase the difference between country and city. "Dark skies, moonlit and star-studded nights and the dawning of the day are part of the rich variety of our countryside," the leaflet stated. "Yet", it went on:

nowadays much of the country is lit, often throughout the night. . . . We are in danger of losing our starlit skies, twilight and the emerging of daybreak. . . . Illuminated skies blur the separation between country and town. They reduce the feeling of remoteness in rural areas and introduce a suburban character deep into the countryside.

The response was to begin a campaign "pressing for":

- Better protection of our remaining unlit landscapes and countryside;
- Greater attention to the siting and type of lighting used in both the country and in towns, in order to reduce wasted light; and
- Removal of unnecessary lighting because of its impact on the night sky.<sup>1</sup>

Among the problems they identified were street lights in villages, "ribbons of road lights," "illuminated shop windows and advertising signs left on overnight," lighting in "car parks, stations and shopping centres," domestic security lighting, floodlighting of sports grounds and motorway service areas and new housing estates.<sup>2</sup> At around this time in

<sup>&</sup>lt;sup>1</sup> Anonymous, "Starry, Starry Night," Council for the Protection of Rural England, c. 2000.

<sup>&</sup>lt;sup>2</sup> The original materials are no longer on their website, though as they state, "Since the 1990s we've campaigned for policies to reduce light pollution, partnering with others such as the British Astronomical Association, and in 2012 a national planning policy to control lighting was introduced as a result." Current CPRE campaign (www.cpre.org.uk/news/why-were-working-for-starry-starry-skies/) resources available via www.nightblight.cpre.org.uk/ (last accessed 19 Dec 2019); G. I. Crabb, R. Beaumont, and D. Webster, "Class and Quality of Street Lighting," Transport Research Laboratory Published Project Report PPR 380,

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2008–9, a survey was undertaken by the Transport Research Laboratory, (Published Project Report PPR 380), which explained that there were already British and European non-mandatory standards and sets of guidance re appropriate street lighting schemes and levels in place. As well as urban schemes, there were "Environmental Zone" light levels for "E1" areas described as "Intrinsically Dark Landscapes" ("National Parks, Areas of Outstanding Natural Beauty, etc."), and "E2" Low district brightness areas ("Rural, small village, or relatively dark urban locations") that had been set out in 2000. However, when surveyed, many local authorities focused first on issues of safety and economy rather than "intrusive," "stray," or "obtrusive" light. And, the report's authors noted in summary that despite improvements in the technology of street lighting that allowed for much "greater control of the color and distribution of the light," and reductions in the use of energy:

There is concern that the guidance and advice is being applied conservatively when designing new and replacement lighting schemes. This may result in such lighting schemes having excessive lighting levels, leading to waste of energy, and increased potential for visual intrusion and light pollution.<sup>3</sup>

Based on reports from bodies such as the Institution of Lighting Engineers (ILE) who published *Guidance Notes for the Reduction of Light Pollution* (2000), as well as its survey of local authorities, this report therefore showed that there was a concern about light as a form of pollution emerging at the time. However, where this report addressed stray light falling into bedrooms in urban districts, the various forms of lighting needed on different categories of road and foot and cycle paths, as well as referring to different rural localities (and suggested that there should be a distinction within E2 between smaller (E2a) and larger (E2b) villages), the CPRE focused at the time on the rural heritage of open night skies and visibility of stars, which it saw as being damaged by the

<sup>2009,</sup> available at www.theilp.org.uk/documents/css-sl1-class-and-quality-of-street-lighting/ (accessed 20 December 2019).

<sup>&</sup>lt;sup>3</sup> Crabb, Beaumont, and Webster, "Class and Quality of Street Lighting," 3.

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effects of illumination across the board. Where "stray light" and poor "utilisation" (i.e. whether or not the light generated is actually useful) impacted residents, road safety, Local Authority value for money, or energy efficiency, in the TRL Report; for the CPRE the question was essentially an aesthetic one, grounded in the values associated with conservation: can we still see the night sky in the country? Where one report looked down, the other looked up.

It is not that rural Britain has in fact lacked in either "progress" or "modernity." But, when we deal with the British countryside we deal, not with a single "countryside," but rather a range of perceived countrysides, many of them seemingly paradoxical or conflicting. It is important, therefore, to recognize that the Royal Agricultural Society of England (RASE) promised "Practice Through Science" when established in 1836, and like other improving agricultural societies (e.g. the Royal Highland Agricultural Society of Scotland, founded 1784) and its county equivalents, it promoted technological change. In its journal and at its shows, RASE compared new methods of agricultural production throughout the Victorian period and into the twentieth century, covering everything from animal and plant breeding to chemistry, from machinery to pest control, and awarded prizes to the best stock, farms, and more. A beautifully clean and well laid out field offered the improvers as much aesthetic pleasure as a work of art, because they saw the visible effects of progress on the land in the same light, as an Art. Resting on ongoing structural changes in agricultural production from the eighteenth century, the reformation of land ownership and management, new methods of animal breeding and arable processes, along with the resources drawn in via Britain's expansion in global trade networks and Empire, Britain was claimed later to be the first industrial nation and workshop of the world. However, this progress in rural form tended to be celebrated by landowners via images of their estates that were sweeping, yet often cleared of human labor, or guietly harmonious and content, and the bourgeois art market that emerged for the urban art connoisseur produced material of much the same type. The rural life feted was therefore different to the rural life that was happening on the ground, for all the interest that city folk showed in the RASE's annual shows.

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This cultural take on the rural was reinforced in the lyrical and often bucolic work of the Georgian poets during the first half of the twentieth century, and the deeply felt backward glance to "the land of lost content" ("A Shropshire Lad XL" A. E. Houseman, 1896), that became especially powerful after the First World War. As the countryside itself became more widely celebrated as belonging to a time that stood apart from conflict, and representative (especially the South of England) of the whole of the nation, so the material hardships of late nineteenth-century Interwar agricultural Depression, the mechanization and efficiency gains of agricultural production fell by the wayside in the popular imagination. Technological innovations in farming, after the Second World War, were seen as essential to labor release from agriculture aimed at answering the needs of British manufacturing, but equally meant that the focus was on drawing men (always men) away to industry; though innovation in farming permitted that to happen, it created an image of agriculture and rural areas as "backward." In the meantime, the countryside was picked up by the city as a site of amenity, open to walkers following mass trespass on Kinder Scout (1932); as a place to be conserved in the National Parks and by bodies like the National Trust; wildlife was to be saved. State agencies then encouraged tourism in areas of "High Landscape Value" through diversification from the 1980s—seen as essential to farming families who could not make a profit from land that did not sit within areas that were highly productive/lent themselves to specialization. It was this field that the CPRE (founded 1926) worked. By the 1990s, it sought not just to save the look of the land, but also the skies above now polluted by washes of artificial light.

Just as the rhetoric of modernization that so often used the trope of "electrification" (a word that assumed that electricity was transformative) reached its ascendency, therefore, so the rural idyll was acting as a placeholder for urban anxieties about modern life/modernity. The association that built up in urban environs (within advertising, in guides written by apologists, producers and suppliers, in Impressionist and Modernist High Art, in institutions of engineers, in Civic or Imperial projects, among those who organized exciting exhibitions of technology, or public spectacles of commerce, celebration and theatre), between electricity and modernity, did not sit well

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with this. As a result, in the twentieth century, conflicts emerged that pitched pylons against pastoral.

Before the 1990s electric lighting's paraphernalia and the aesthetic impact of electricity's technology, had long caused conservationists concern, as if its inherently industrial materials and technology (wiring, concrete or metal lamp standards, etc.; pylons, or substations) would inevitably cause decay. To judge from The Face of the Land (1930),<sup>4</sup> which used many CPRE images, the CPRE itself seems to have had a mixed response to electric infrastructure, on the one hand being quite particular about the type of street furniture and wiring it approved of, on the other suggesting that some pylons might be quite acceptable. In one caption, it was noted that the "vexed question of electricity pylons can only be touched on. No one can deny a real beauty in the standards of the upper picture [tall modernist national grid pylons], but the lower is disquieting [untidy mess of poles]." But, referring to a mocked-up image of pylons, when "we come to scenery such as that of the South Downs or Lakes, we are entitled to ask whether it is not grotesque folly to mar such national heritages for the sake of uniformity or for less money than buys an old masterpiece." And, CPRE photographs of pylons, wires and street furniture etc. from this period include captions suggesting hostility to some forms of design, e.g. "Sevenoaks: Townside Road exit obtrusive concrete lampstands against Kurle Park" and "Huge inappropriate lamp standards at rural roundabout – A592 junction with the A66 at Stainton." This sort of response to the material aspects of electrical infrastructure in rural areas continued. In 1969 a Parliamentary Secretary in the Ministry for Agriculture won a three-year dispute against "pylons being erected across his 500-acre farm" in Essex, after the Minister for Power intervened and established that the pylons would be diverted to run instead along the edge of Nazeing Common, referred to by the Times (15 May 1969) as "a beauty spot in the heart of the countryside." Nazeing had had access to gas since 1926. The North Metropolitan Supply Company provided electricity from 1926–27 and the supply was

<sup>&</sup>lt;sup>4</sup> H. H. P. and N. L. C. [sic], eds., *The Face of the Land: The Year Book of The Design and Industries Association 1929-1930*, with an Introduction by Clough Williams-Ellis (London: George Allen & Unwin, c.1930).

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extended to Bumble's Green and Hoe Lane in the mid 1930s, but the paraphernalia of an extended supply could still cause debate. In this instance there were three possible routes, and three corresponding sets of interest groups. These were: (1) the farmer/Parliamentary Secretary Mr. Mackie, who believed the pylons would "ruin his farm, which stands on the site of King Harold's hunting lodge"; (2) Essex Country Council, the CPRE, & the trustees of Nazeing Common, who "said that the pylons would desecrate the common which attracts hundreds of visitors"; and (3) two councils, the Church of England, & Mr. Stanley Newens, the Labour MP for Epping, who fought the pylons passing near to the hamlet of Bumbles Green. The politics of this were therefore complex, and reveal the ways in which farming, history/heritage, emerging understandings of visitor access to the countryside, amenity and settlement all vied for special consideration and entitlement after the Second World War. It also demonstrates very clearly the ways in which rural "electrification" might be seen simultaneously as a bad thing and as a good thing in the context of contested/ing countrysid*es*.

We know that specific light waves have an impact on bodies—lighting patterns have been used by farmers to stimulate chickens to lay all year round since the Interwar period; disruption to human sleep has led to tablet and phone manufacturers to put in alt-lighting for evening use. So just as with sound (traffic noise drowning out certain birdsong pitches and therefore impacting reproduction), or industrial pollution (recently re-confirmed as shaping the camouflage of moths on urban trees), human-generated environmental impacts are physiologically and ecologically dramatic. The inefficiencies of using energy then wasted in producing excess/"stray light" are also harmful. But that is true of country and city, and this is not what was at stake in the debate about light pollution and its impacts in rural areas from the early twentieth to the early twenty-first century. It was at the aesthetic level of a rural idyll—looking at villages, or up to skies recast as part of the heritage of the land—not the actual/ecological that those who sought to preserve the countryside read intrusive, obtrusive or stray light as "pollution."



Figure 2. During the Second World War, light's return was anticipated eagerly, its absence created strangeness. (Source: Advert for Milk of Magnesia, in *Home Notes*, 1943.)