(Esper Chao) Scientific Accommodation: “The Value of Darkness: A Moral Framework for Urban Nighttime Lighting”

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Light pollution, and embracing the “dark” night sky

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Humans are born with a fear of the dark. It only seems natural. If a hungry bear or an enemy with a spear were standing in front of the caveman, they wouldn’t be able to see the danger before it hit them. Thus, we quickly teach ourselves to shun the dark.

The natural night sky is anything *but* dark. Thousands of twinkling stars can be visible on a clear night. Meteors sweep across the landscape. However, many people today are not even aware that this what the night sky is supposed to look like. Street lights and other artificial lighting increases the brightness of the night sky, making stars much less visible. According to a recent study by the Light Pollution Science and Technology Institute, “the Milky Way is not visible to…nearly 80% of North Americans.”

Excessive artificial light at night, or light pollution, doesn’t just take away some pretty stars from the night sky. In the past 30 years, we have become more aware of the environmental impacts of artificial light at night. Nature was intended to be dark, and brightly lit city streets interrupts everything from bird migrations to human sleep patterns. Scientists have dubbed this phenomenon as a “loss of the night.”

But as Taylor Stone of the Deflt University of Technology puts it: “what exactly are we losing?” The fear? The unknown? The creepy things that go bump in the night? Most people today do not instinctually see light pollution as a “loss.” As Stone says, “Historically, darkness has been seen as full of evil spirits, chaotic and dangerous…and primitive in the face of new technologies,” like LED lamps and flashy neon billboards.

Stone argues that before we can effectively combat light pollution, we must learn to see the dark night sky as a positive asset.

In their paper, “The Value of Darkness: A Moral Framework for Urban Nighttime Lighting,” Stone creates a list of positive values of darkness, that we can use to reframe our perception of the night sky. Instead of thinking about what we have *lost*, we should think about what we can *gain* by preserving the dark night sky.

To combat light pollution, experts suggest more responsible use of outdoor artificial light, such as shielded light fixtures or dimmer, more orange-hued light. But dimmer outdoor lights are often perceived as dangerous and unsafe, because they seem to bring us closer to darkness.

What if, instead, we perceived dimmer outdoor lights as a way to reduce energy costs, and improve the sustainability of the city? In the words of Stone, “Darkness, when understood as a manifestation of efficiency, can conceivably have immense economic value, particularly in urbanized regions.”

Instead of reducing the quality of life at night, less artificial light at night *improves* the quality of life of residents by improving sleep and reducing numerous other health risks associated with excessive light exposure at night. A recent study in Environmental Health Perspectives even found that “prostate and breast cancer were associated with high estimated exposure to outdoor [artificial light at night].”

Less light pollution doesn't just bring back more pretty-looking stars to our night sky. As Stone mentions, it also leaves a legacy for future generations. The millions of stars in the Milky Way galaxy reminds us of our place in the vast universe. The stars inspire children to pursue science, and helps ensure a future generation of scientists that will help solve the world's problems, beyond just light pollution.

Light pollution is one of the simplest forms of pollution to fix, since the effect of better lighting practices is immediate. Yet, very little is being done about light pollution compared to air pollution or water pollution, because of the way society portrays "darkness."

Before we can get let go of the excessive light, we must first learn to understand and embrace the "dark."

References

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