Lighting for Cities Inhabited by People, Not Cars

Community Co-Design and Creative Lighting

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Context

'Streets and public spaces are tools for inclusion, security and prosperity. They trigger economic activity, increased social interaction, grow a sense of identity, enhance feelings of security and the creation of orderly development. The introduction of street lighting and mixed use environments is likely to bring more usage and social interactions amongst residents with positive impacts on the sense of safety.' (UN Habitat 2007)
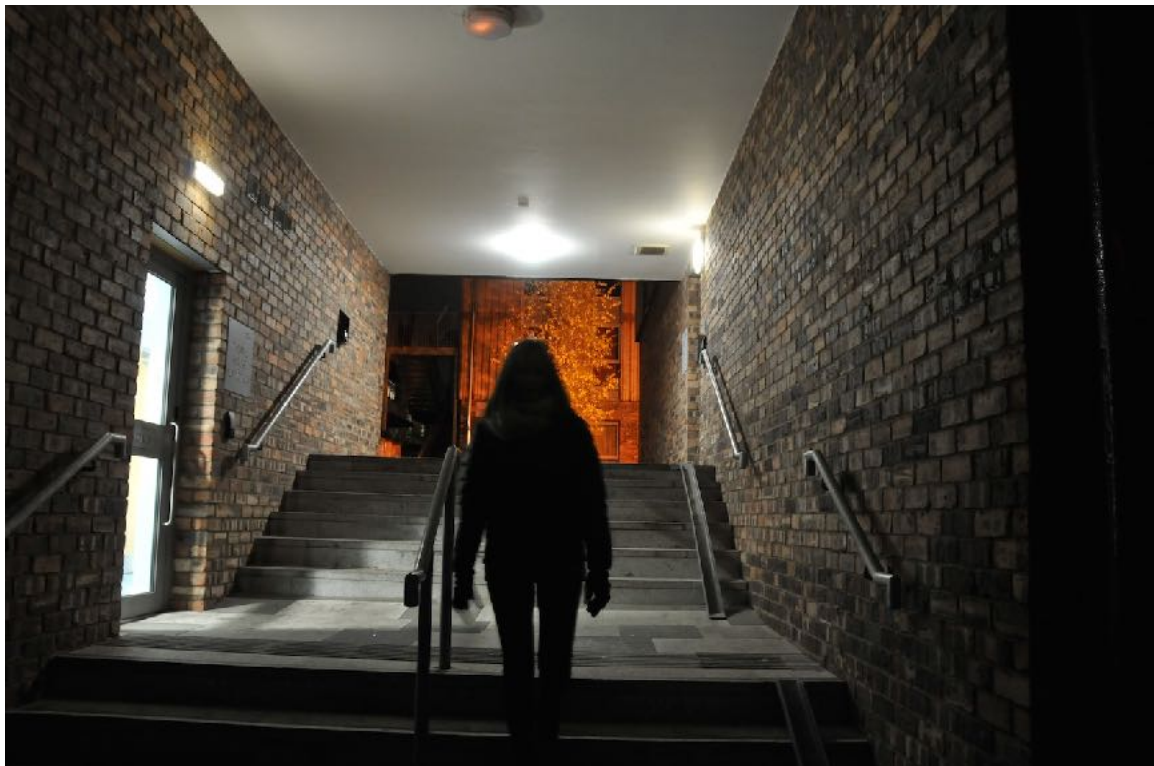

photo by Malcolm Innes

Artificial lighting forms an important part of the cultural identity of a city, with some designs of street lights being unique to one city or even one district. Many cities rely upon reproduction lanterns to maintain a historic look to the streetscape but, around one-third of the world's roads are still illuminated using technology from the 1960s (Cisco 2012). Research by Philips Lighting suggested a global move to LED street lighting could result in an energy saving of €10 billion every year (Cisco 2012). Although more efficient light sources could generate large cost savings and reductions in energy usage, these changes alone will not create a safer, more attractive environment or a more engaged population. Furthermore, efficient lighting is not nearly as useful as effective lighting (Gallego, 2016).

Vilnius Historic Centre, UNESCO World Heritage Site. photo by Malcolm Innes

Electric street lighting has developed wholly in the age of the motor car. Therefore, traditional models of urban lighting are based firmly on designing for vehicle traffic. Standards Documents (BSI 2012) and guidance (Boyce & Raynham, 2009) usually focus on lighting vehicle carriageways and often only indirectly consider pedestrian use of the same streets. Lighting for vehicle traffic is so dominant that, even in completely pedestrian environments, the same methodologies and lighting equipment are usually applied. Citizens of our cities deserve better pedestrian lighting and the increasing pedestrianisation of sections of the urban realm demands new methodologies to create inclusive street lighting.

Street lighting strives to create a sense of safety and security. Lighting should allow people to avoid hazards, recognise other people and create a pleasant environment. However, there is

much that is missing - those elements that can begin to address some of the challenges of urban living and encourage active participation. We deserve urban lighting that promotes fun and engagement; aids interpretation of the surroundings; provides visual enhancement or artistic interventions; lighting that creates a sense of place and lighting that creates a sense of time. Pedestrian areas, free of the need to light vehicle routes, provide a perfect opportunity to create engaging and exciting environments.

When a city decides to upgrade public lighting, we should be taking the chance to rethink traditional models of urban lighting to ensure that these vital urban systems produce the maximum benefit for both residents and visitors. We should also be engaging the residents in the process of designing a captivating night-scape for their city.

Edinburgh's 12 Closes Project takes a novel approach to the design of lighting schemes for pedestrian spaces in a historic city centre. Traditional norms of street lighting such as uniformity and static, featureless light are eschewed in favour of an approach that embraces the narrative potential of light, shadow, colour, pattern and movement after dark. These methodologies are driven by a process of community co-design - a genuinely collaborative process where the residents become creators of the experience.
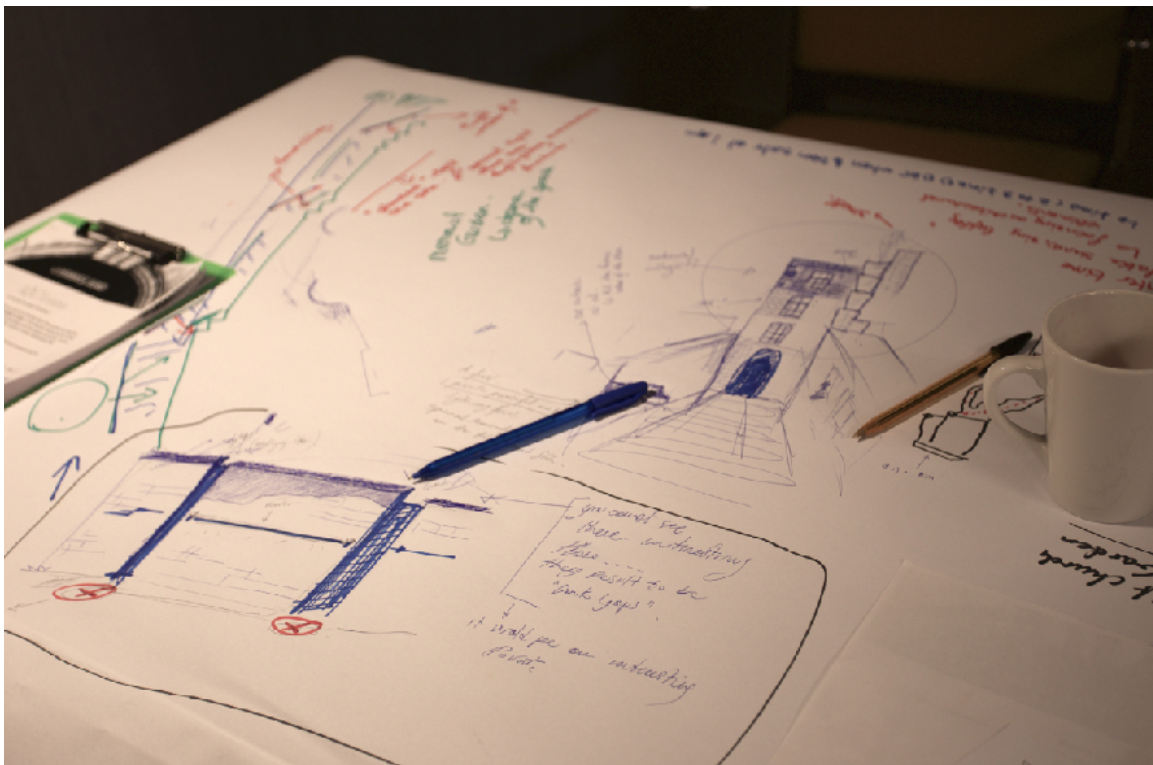
Community Co-Design Workshop, Carrubers Close

Process

Intuition is a core part of how a designer responds to problems and design intuition is built upon a foundation of many years of experience (Cross 2011). However, intuition is not the sole preserve of professionals because, 'We all behave intuitively at times, when we respond to situations that are familiar' (Cross 2001, p9). In urban planning, the designer is traditionally at the centre and uses experience based intuition to develop responses to the site. However, the designer's view is that of an outsider, our pool of experience may be geographically large and expansive, but our local experience may be relatively poor. The designer's intuitive response is constrained by lack of local knowledge. On the other hand, the residents may have no general design experience, but they do have a very broad range of local knowledge that can fill the gaps in the designer's experience. In a genuinely collaborative co-design process, knowledge is pooled from the broadest range of experience to provide more fertile ground to nurture 'intuitive' design responses.

People Centred or Human Centred Design (HCD) processes (IDEO(a)), provide powerful tools for designers to interrogate a problem. However, these tools ultimately deliver information for a designer who remains the expert at the core of the process. Like a Muse from Greek mythology, in HCD, the designer remains the personification of knowledge in the arts. As IDEO note, HCD helps you to, 'learn directly from the people you're designing for' (IDEO(b)). The key difference for us was that we wanted to design with the community, not design for them.

Methodology created for the 12 Closes Project departs subtly from the traditional practices of People Centred Design. For us, community co-design was about empowering the

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participants to be more than our inspiration, we wanted them to become active designers. Our workshop methodology engaged the expert level of design professional input at the last possible moment. Design expertise is applied in the final translation of co-design proposals into actionable drawings and specification to facilitate construction. Design professionals are still a

fundamental part of the process, but their earlier role is that of facilitators in the workshop process. The experience and expertise of the designer is still invaluable, but the designer becomes more reactive than simply the originator of creative ideas.

Workshops with residents were built around the use of torches to explore the sites at night. This proved to be revelatory and empowering for the residents. Our sense of sight enables us to touch at a distance and the torch extends our reach. As the beam pans around the scene in front of us, torchlight creates narration and animation through serendipitous interactions with architectural forms and materials. The torch supports a personal curation of space and allows for the personal development of meaning.

Guerrilla Lighting Project for European Researchers' Night 2015, Edinburgh Old Town UNESCO World Heritage Site:
In the hands of residents of the city, a simple torch becomes a powerful design tool that can uncover previously hidden details. What can remain unseen during the day can be made manifest at night. New narratives can be built from what the torch reveals and what is concealed by the shadow. At night, the user of the torch takes on the power of the story teller.

Reflection

Although this project is an excellent way of engaging residents in the design of their surroundings, it also empowers them to become co-authors and curators of the revitalised spaces. It gives them the overt permission to own and affect their city. The fact that it is the torch that delivers that freedom is revelatory to the residents and the designers. For the designer, it is humbling to see that for all the enthusiasm, skill or experience of the professional, it is sometimes the affordance of modest tools such as torches that truly releases the latent creativity and imagination of workshop participants.

Bakehouse Close mock-up, 12 Closes Project, Edinburgh:
If the design approach for the illumination of pedestrian streets begins from
darkness and adds only enough light for safe passage, then the outcomes can be
radically different from traditional uniform street lighting.

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