

# "In the dark, a taper is better than nothing"

## A One Year Follow-Up of a Successful Streetlighting and Crime Prevention Experiment

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### Introduction

Improvements to street lighting, as a means of preventing both crime and the fear of crime, have become remarkably popular in the last five years. Prior to 1990, most of this research was carried out by Kate Painter in London and frequently reported dramatic reductions in criminal victimisation following the installation of improved street lighting (1,2,3,4).

1991 was a watershed year in two senses. First, that year saw the publication of the reports from the five research studies, organised by the British Parliamentary Lighting Group, which were simultaneously conducted in different parts of Britain during 1990 and 1991 (5,6,7,8,9). Second, 1991 also witnessed the publication by the Home Office of the long-awaited Wandsworth study (10).

Results from the five simultaneous studies conducted independently during 1991 were more mixed than those from studies carried out by Painter. Whilst all discovered reductions in fear amongst affected populations following improved street lighting (with more emphatic reductions noticed by several for women and the elderly), some discovered reductions in criminal victimisation (5,6) whilst others encountered increases (7,8).

Probably the most significant limitation of both the early Painter studies and the British Parliamentary Lighting Group sponsored studies is the very short follow-up period - usually just six weeks. One American authority has claimed that the minimum period that should elapse before a follow-up survey should be contemplated is 12 months (11, p.24). Perhaps to take account of this view, Painter's most recent study (4) reports a return to the site of an earlier study (3) to carry out just such a 12-month review.

In that study, of 43 householders interviewed during February 1989, 40 were reinterviewed slightly over 12 months later in March 1990. Painter found very considerable improvements 12 months after, and because of, relighting (summarised on pp.107-9, of 4). This seems to deal at least partly with criticisms of short follow-up, although no effective assessment of the "taper-off effect is possible as Painter usually reports the 6-week-before data with the 12-months-after data without giving the original 6-week-after data. Full data is given for one score - the number of respondents who "felt safer" at home after relighting - which was 62% of them six weeks after relighting, and 77% of them 12 months after relighting. Understandably, Painter feels that the effect of street lighting "is consolidated and increased over the 12 month period" (4, p.48).

### Wandsworth Study

Most recently, Atkins et al. (10) reported the results of the huge Wandsworth study. Here, in stark contrast to the now conventional relighting of one or two dark alleys, the whole borough was relit with some 3,500 new street lights. The research team collected

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very detailed data on crimes reported to the police for all 39 separate zones, monitoring each for the 12 month period before and after each was relit. This was complemented with interviews (held seven weeks before and after relighting) with 248 householders in areas being relit, and with 131 householders in a control area.

A four-fold increase in intensity of street lighting was achieved, yet no evidence could be discovered to support the hypothesis that improved street lighting reduces crimes reported to the police. Interviewed householders reported a fall in personally remembered victimisations from 39 to 25, but the control group reported an even bigger percentage fall from 13 to 4. There was also very little evidence of general fear reduction, although "there was clear evidence that the perceived safety of women walking alone after dark had been improved in the treated area" (10, p.20).

### Glasgow Study

Initially, the study reported in this article looked at the effects of improved street lighting on crime and the fear of crime in two locations in and near Glasgow by examining residents' opinions and behaviour before lighting changes and three months after these improvements had been carried out. Several beneficial effects of lighting changes were identified (5,12,13). It has become clear, however, that a follow-up period of three months is insufficient fully to assess the continuing impact of improved street lighting (14). In order to investigate any possible 'taper-off effect in the results obtained from the initial study, it was decided to repeat the exercise, using the same methods and in the same sites, one year after the first interviews were carried out.

The two areas studied were at Bellgrove, in Glasgow's East End, and High Blantyre, some 14 miles to the south. Both were relit in December 1990, Bellgrove with white lights and Blantyre with orange. This follow-up study took place in December 1991, and used the same three research methods as before. A panel of adult householders was reinterviewed in their own homes. Pedestrians using the routes completed shorter street interviews. Finally, all pedestrian movements through designated "funnel routes" were logged each evening for a week.

Inevitably, at each stage of interviewing the original panel of adult householders is reduced in size by the unavailability of some respondents: in this one-year follow-up the panel of 184 resulted in 136 finally completed interviews. Reported victimisations actually rose in the three months prior to reinterview to a figure in excess of their pre-relighting levels (see Table 1), but this might in part be an artefact of the reduced size of the panel. The number of victims, as opposed to victimisations, is given in brackets in the Table. The pattern here is the same, with an immediate decline, later rising to a total in excess of that recorded before relighting; yet the size of effect, when measured this way, is not so great.

**Table 1.**  
**Number of Respondent Victimisations (and Victims)**

	Before	After 1	After 2
Sexual assault Outdoors	1 (1)	-	-
Non-sexual assault	2 (2)	-	5 (2)
Harassment	3 (2)	-	9 (6)
Sexual assault Indoors	-	-	-
Housebreaking	5 (4)	4 (4)	4 (3)
Other theft	-	-	-
<b>Total</b>	<b>11 (9)</b>	<b>4 (4)</b>	<b>18 (11)</b>

**Table 2.**  
**Number of Child Victimisations (and Victims)**

	Before	After 1	After 2
Sexual assault by adult stranger	-	-	-
Non-sexual assault by adult stranger	2 (2)	-	13 (2)
Harassment	1 (1)	-	2 (2)
Theft from	4 (2)	-	-
Being bullied	4 (2)	1 (1)	10 (4)
Finding used syringe	1 (1)	-	-
<b>Total</b>	<b>12 (7)</b>	<b>1 (1)</b>	<b>25 (8)</b>

**Table 3.**  
**Victimisations of other family members**

	Before	After 1	After 2
Sexual assault	-	-	-
Non-sexual assault	8	1	7
Threatened assault	5	2	6
Property vandalism	12	6	4
Car vandalism	6	2	5
Housebreaking	4	3	6
Attempted housebreaking	2	3	4
Personal theft	1	1	3
<b>Total</b>	<b>38</b>	<b>19</b>	<b>34</b>

**Table 4.**  
**Victimisation of friends**

	Before	After 1	After 2
Sexual assault	1	1	1
Non-sexual assault	5	4	10
Threatened assault	4	1	9
Property vandalism	8	6	14
Car vandalism	15	9	23
Housebreaking	9	14	19
Attempted housebreaking	1	2	16
Personal theft	1	2	3
<b>Total</b>	<b>44</b>	<b>39</b>	<b>95</b>

**Table 5.**  
**Car Victimisations (and Victims)**

	Before	After 1	After 2
Car theft	6 (3)	-	1 (1)
Theft from car	7 (5)	1 (1)	4 (4)
Vandalism to car	8 (8)	-	10 (5)
<b>Total</b>	<b>21 (16)</b>	<b>1 (1)</b>	<b>15 (10)</b>

**Table 6.**  
**Police Recorded Crimes and Offences**

	Before %	After 1 %	After 2 %
Non Sexual assault	2	2	2
Theft (opening lockfast place)	8	3	3
Receiving	-	1	-
Theft of Motor Vehicle	3	3	2
Theft	2	4	1
Theft by housebreaking	2	14	7
Vandalism	15	5	4
Drug Offences	3	3	1
Breach of the Peace	11	3	7
Petty assault	4	4	2
Road Traffic Offences	7	7	2
<b>Total</b>	<b>57</b>	<b>49</b>	<b>32</b>

This is also true of reported victimisations of respondents' children, where after a dramatic fall in the three months immediately after relighting, the number of incidents subsequently rose again to exceed original levels (see Table 2). Although, here again, when measured by number of victims, the pattern is identical but the effect less dramatic.

This pattern is repeated in respondents' reports of known victimisations of other people, both members of their own families and friends. In both cases, people known to respondents had suffered victimisations in the previous three months at a level comparable to that of the three months before relighting but in nearly every instance well above that of the three months immediately following relighting Tables 3 and 4 set out the detail of these reported incidents.

As Table 4 shows, there is a very considerable rise in victimisations of friends in the final phase of interviewing, although it should be noted that one widely discussed incident may of course be reported by several respondents. In fact, only in

the area of car crime do we find levels of incidence remaining below those reported in the initial interviews. As Table 5 shows, both thefts of and thefts from motor vehicles were less frequent in the three months prior to final interviews than in the three months before lighting improvements. This welcome decline is supported by police recorded crime data for the areas researched (see Table 6, but note that this data is for the whole population of the two areas researched, not just the sample of 136 which comprised the panel used for this study). Here, thefts of motor vehicles falls slightly, and the declines both in theft (opening lockfast place) and in vandalism probably include thefts from and vandalism to motor vehicles. When measured this way, both areas taken together show a sustained improvement on motor vehicle crime following relighting.

## Pedestrian Study

The logging of adult pedestrian traffic through the two key routes initially showed an overall rise from 949 pedestrian movements to 1121 immediately after relighting. However, one year later only 888 pedestrian movements were logged in the comparable time-span. In terms of their walking speed, pedestrians remained more relaxed than before relighting (see Table 7), but not as relaxed as immediately afterwards. Yet the distribution of pedestrian traffic over time, which had initially become more even, had once again become more concentrated in the earlier part of the evening. There had initially been a marked change in the demeanour of female pedestrians, with a 13% rise in those appearing confident. This was partly maintained over the subsequent year, with 89% of women still appearing confident at the final observation period (see Table 9).

Pedestrians were asked how much they felt 'things' had improved in the locality in the last three months. Tables 10a and 10b illustrate their answers for evening and midnight, and demonstrate that there is considerable similarity between the pattern of this subjective measure of change over time and that observed on more objective measures such as actual victimisations. Once again, the marked improvement registered in the short term is not sustained over the longer period, although the picture remains more favourable than that established before lighting improvements were carried out.

**Table 7.**  
**Speed of observed pedestrians**

	Before %	After 1 %	After 2 %
Slow	13	19	11
Moderate	45	57	58
Fast	42	24	32
<b>Total</b>	<b>100</b>	<b>100</b>	<b>101</b>

**Table 8.**  
**Times of pedestrian traffic**

	Before %	After 1 %	After 2 %
20:00-20:59	37	33	32
21:00-21:59	30	27	35
22:00-22:59	20	24	22
23:00-23:59	12	16	12
<b>Total</b>	<b>99</b>	<b>100</b>	<b>101</b>

**Table 9.**  
**Female demeanour**

	Before %	After 1 %	After 2 %
Confident	83	96	89
Nervous	17	4	11
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Table 10a.**  
**Local improvement – evening**

	Before %	After 1 %	After 2 %
Got worse	33	24	38
Stayed the same	61	57	51
Got better	5	19	11
<b>Total</b>	<b>99</b>	<b>100</b>	<b>100</b>

**Table 10b.**  
**Local improvement – midnight**

	Before %	After 1 %	After 2 %
Got worse	41	28	45
Stayed the same	54	52	44
Got better	5	20	11
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Table 11.**  
**Change in agency satisfaction**

	Before %	After 1 %	After 2 %
Housing Department	42	51	59
Social work	86	86	81
Education	86	87	86
Health	82	82	88
DSS	75	79	73
Cleansing	81	87	81
Police	46	45	61
Roads & Lighting	44	74	71

Finally, in order to assess pedestrians' satisfaction with lighting relative to services offered by other agencies, respondents were asked to evaluate a range of local services including the Roads and Lighting Department. As Table 11 shows, the considerable improvement in satisfaction with this Department recorded three months after lighting improvements was maintained over the subsequent months: over 70% of respondents remain satisfied with the service.

## Summary

Thus only in some cases was the marked short-term improvement noted in the original study maintained over the longer period. In general there has been a drift back towards the pre-lighting situation, sometimes, as with most actual victimisations, to figures in excess of original levels. However, pedestrians remain more relaxed and women in particular remain more confident in their

bearing when out and about on foot after dark, and the quite noticeable reductions in car crime have been sustained. Thus, although there are some indications of the expected 'taper off' effect, improved street lighting seems to have a long term beneficial effect in precisely those sectors - assaults on women and car crime - which crime surveys repeatedly show are the ones giving rise to most concern.

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