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**Towns on the Television:
Closed Circuit TV Surveillance In British Towns and Cities**

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"You used to watch TV. Now it watches you" (Patton, 1995;125)

INTRODUCTION

Closed circuit television (CCTV) camera systems are rapidly becoming a taken-for-granted element of the British urban landscape. Increasingly, such systems are being seen as a new and cost-effective part of the local policy 'tool kit' for dealing with a range of urban problems - cutting crime, improving consumer and business confidence in town centres, and underpinning the economic competitiveness of urban areas in the UK. Such systems integrate state-of-the-art surveillance cameras - often with remarkable resolution and infra-red night time capability - via microwave or cable telecommunications links into systems for continuously surveying towns and cities. Video recorders are used to record the images from all cameras for use in criminal prosecution and police investigation. Often, such systems now include sophisticated computer-assisted scanning operations, motion-detection facilities and zoom capabilities. They mean that the activities of a particular individual, or a "person of interest" in the police parlance, can now be tracked through many town and city centres day or night from a single control room, creating a full profile of contacts made and activities undertaken.

The rate of growth in CCTV is stunning. Over forty local authorities now have CCTV systems installed in town and city centres. More than 200 CCTV schemes in public places are currently being started. And by November 1994, around 95% of local councils were claimed to be considering such schemes (Davies, 1994). Britain now has more wide-area CCTV systems geared towards surveying the public behaviour of citizens in public places than any other advanced capitalist nation. This is part of a broader boom in the surveillance and security industries which makes them the fastest-growing industrial sectors in both the UK and the United States. The British market for such systems has doubled since 1989 from £170 m to £300m. When private systems are included, it is estimated that there are over 150,000 professionally-installed CCTV cameras in British towns and cities ; over 500 more are installed each week (Graham and Marvin, 1996). Overall, 300,000 security cameras are sold each year in Britain, with some £300 million being spent annually on video alone (Campbell, 1995).

Public CCTV networks covering large public areas often 'fill in' the spaces left between a myriad of *private* CCTV systems which have developed even further. Private systems now cover everything from football stadia, banks, pubs, cash machines, shops, shopping malls,

transport networks, buses and trains to schools and universities, hospitals, housing and office blocks, workplaces, fast-food restaurants, garage forecourts, industrial areas, business parks and even domestic houses. Real and mock CCTV cameras are a fast growing element of the trend towards the 'fortressing' of many individual houses and elite neighbourhoods. In London, Belgravia and Hampstead Garden Suburb have recently set up privately-operated CCTV systems. In some neighbourhoods, CCTV has been joined by physical walls and entry restrictions so as to exclude strangers from neighbourhoods - a trend that is much more developed in the USA (see Davis, 1990; Dillon, 1994). It is increasingly the case that citizens are under the gaze of an army of electronic eyes at virtually every moment of their daily routine through the landscapes of town and cities (Squires, 1994). People leave a continuous stream of 'electronic images' on a range of CCTV systems as they go about their daily lives.

This paper critically explores the local policy issues surrounding this rapid shift towards CCTV surveillance in British towns and cities. It has four parts. First, we review the rhetoric and debate that has surrounded the shift towards CCTV amongst local authorities, politicians, the police and the media. Second, we develop a case study of the many CCTV systems that are currently developing in Tyneside - the UK conurbation which perhaps provides the most dramatic example of the explosive growth of these systems. Through this we aim to explore and illustrate the wide *variety* of applications of CCTV technology that are emerging and to map out the diverse agencies and policy makers that are shaping them. In part three of the paper we develop a critical policy perspective which highlights the possible dangers involved in the current approaches to CCTV - often dominated as they are by the assumption that the technology can provide some 'quick technical fix' to the complex social problems surrounding crime, disorder and the need to 'regenerate' places. Finally, we draw some conclusions and suggest ways in which the debate on CCTV and urban policy can be broadened through a more critical appraisal of both the promises and pitfalls of new surveillance technologies.

THE 'FRIENDLY EYE IN THE SKY' : THE RHETORIC AND DEBATE SURROUNDING CCTV

There seems to be a remarkable degree of consensus that the pervasive installation of 24 hour electronic surveillance systems in our towns and cities is a 'Good Thing'. Whilst long-term tendencies of rising crime provides a key motivation for CCTV systems, a more powerful motivation seems to be the overwhelming *fear of crime*, which reaches the status of a moral-panic, whipped up by the media in many cases (Lovering, 1995). This is encouraged by widely publicised 'success stories' in the media ; both Jamie Bulger's murderers and the first Oklahoma bomber, for example, were caught through CCTV systems designed for other purposes. A council officer from King's Lynn, home of the first and one of the largest systems, admitted recently that "what it comes down to, is there's a perception of crime, a fear of crime, rather than actual crime. The surveillance system has grown because of the "feel-good" factor it has created among the public" (quoted in Davies, 1995; 60).

In this climate, CCTV is being viewed by many sectors within society and by many policy agencies as a quick fix technical solution to many of the crime-related problems faced in towns and cities - "video surveillance seems to be the ultimate technical fix" (Naughton, 1994). Powerful local coalitions and 'partnerships' are emerging supporting this view. These draw elements from the press, the media, the police, local authorities, retailers, insurance companies, surveillance industries and property interests. In some cities, insurance companies provide a powerful incentive by offering 30% discounts on premiums to those retailers who contribute towards the costs of wide-area CCTV systems (Davies, 1995).

Few venture to criticise CCTV. When criticism does emerge it is usually deflected with the claim of technological neutrality which implies that any critic to be somehow pro-crime : "if people have nothing to hide they have no need to fear these systems". The general police response to the small number of civil liberty groups that have expressed worries about the presence of cameras on the street is that "CCTV surveillance *increases* public freedom, enhancing opportunities for people to enjoy public places" (Arlidge, 1994). For example, David Crossthwaite of Northumbria Police argued recently that "it is a much greater infringement on civil liberties getting beaten up or mugged, than being filmed walking down the street."

But there is a growing body of research which purports to show that, in general, citizens actually have remarkably few concerns about the privacy and civil liberties aspects of these

systems (Honest and Charman, 1992). This suggests that "surveillance systems are helping cut crime and the public appears to welcome being watched" (Geake, 1993). At most, such research suggests nothing more than a vague unease about 'being watched' and the effect it may have on the quality of urban life (Honest and Chapman, 1992; Campbell, 1995). For example, research conducted by the Home Office in 1992 showed that very few people - 6% of all respondents - were worried about the presence of CCTV cameras. A recent survey in Glasgow - where one of the largest systems, a 32 camera network, was switched on in November 1994 - showed that 90% of people supported the project, 66% believed the system would make the city centre a better place and 40% said it would make them visit the city centre more regularly.

The authorities in Liverpool, meanwhile, are so happy with the public response to CCTV, that they plan to extend their system to 65 cameras covering a wider section of the city. Since the Bulger case, Liverpool residents have given the cameras almost universal approval (Davies, 1994). In the Scottish Town of Kirkcaldy, Town Centre Manager Ian Dumper said, "it is difficult to say how much contribution CCTV has made to the regeneration of the Town, but retailers in areas covered by cameras are very happy with the system"; this view can be heard nationwide in towns and cities with cameras. Glasgow's assistant chief planning officer said about the Glasgow system, "CCTV is already creating a feel-good factor in the City Centre" (Planning Week, 10th November 1994).

But these aggregated statistics need to be treated with caution. They are likely to mask a complex picture of public reaction. For example, young men are much more suspicious of the systems because they feel more at risk from the potential negative effects of CCTV (Honest and Charman, 1992; Centre for Research on Crime, Policing and the Community, 1993). Karen Evans found recently that many black males *already* feel excluded from shopping malls where they experience intense scrutiny from security guards (Evans, 1995). In many shopping malls and other 'private public spaces' there is already "a heavy concentration on the exclusion of 'undesirable' young people" (Sparks, quoted in Mihill, 1993). Women have also been found to be more concerned than men about the civil liberty implications of CCTV. Moreover, whilst they may support CCTV in reducing petty crime, young women have also been shown to doubt the effectiveness of CCTV in actually preventing physical and sexual assault compared to other measures such as improved street lighting or increased police patrols (Honest and Charman, 1992; 11).

Apparently remarkable cuts in crime figures are now widely being attributed to CCTV systems to back up their effectiveness. For example, an early 47-camera system in Bournemouth was

reported to reduce the cost of vandalism from £220,000 to £36,000 between August 1986 and August 1987 (Liberty, 1989). In Sunderland, police claim that between June and August 1994 there was a 30.5% fall in crime since the installation of the CCTV system (Look North, 4th November 1994). In Airdrie it is claimed that crime figures fell by 75% because of CCTV (Dawson, 1994). Court costs are also reduced dramatically because videotaped offenders tend to plead guilty and so speed up the prosecution process. It seems to be the *deterrence* effect of CCTV that is its strongest feature. The Police Research Group say that, "the effect of CCTV is 95% deterrent, 5% detection" (Geake, 1993). This has led to false cameras being produced which can be bought for as little as £40.

The notion of CCTV as a 'technical fix' meshes well with the language and approach of the national 'fight' against urban crime. The Home Office Minister calls CCTV the "friendly eye in the sky", arguing that "there is nothing sinister about it and the innocent have nothing to fear. It will put criminals on the run and evidence will be clear to see" (quoted in Campbell, 1995). Bureaucratic hurdles to CCTV have been kept to a minimum - there is no licensing system and no regulation at all of who can operate such systems (Home Office, 1994). John Major, meanwhile, has personally but his support behind CCTV as part of the planning response to rising crime. Pledging that he has "no sympathy" for civil liberties objectors, he stated that "anything that helps people and hinders the criminal is fine by me" (Quoted in Planning Week, 3 March, 1994). Sir Paul Beresford, the Environment Minister, urged local authorities recently to take crime prevention into account when drawing up development plans. In a speech he said that, "CCTV can bring enormous benefits to towns and cities" (Planning Week, 13th October 1994). In line with this view, the Government has removed the need for planning permission for CCTV installations and has, through the Home Office, recently given out £2m for funding CCTV schemes through a competitive, 'CCTV Challenge' programme. This received 480 bids from urban regeneration partnerships in England and Wales. A detailed guidance document, *CCTV - Looking Out for You*, was recently published by the Home Office to give advice on the siting, design and running of systems (Home Office, 1994).

TOWARDS THE SURVEILLANT CITY: THE TYNESIDE CASE

In the larger cities, different public CCTV systems are now developing in parallel. As Table 1 and Map 1 show, Tyneside presents an excellent example of how many very different CCTV systems are developing to rapidly cover large portions of metropolitan areas in a piecemeal and incremental way. There are currently at least 8 separate wide-area CCTV systems either existing or proposed in and around Tyneside. Importantly, these systems are operated by different organisations, use different technologies, have different objectives and have had different effects. Table 1 provides a detailed breakdown of the characteristics of the systems in terms of the number of cameras involved, the area covered, the main objectives, the costs and financing, the technology used, and the monitoring agency and initiators of the system.

In this part of the paper, brief case studies will be presented of six of these schemes: Newcastle City Centre, the Newcastle West End Scheme, Newcastle Business Park, the Metro Centre out of town retail centre, Darras Hall estate and North Shields. Illustrating the 'stories' behind these systems in this way provides a useful way in which to highlight the varied development trajectories of urban CCTV systems in Britain as a whole.

CCTV in a Regional Capital: The Newcastle City Centre System

The system in central Newcastle was installed in 1992 and has 16 cameras, covering all areas of the city centre which are linked back by microwave to the city's monitoring room in the main police station. The system is aimed to monitor the city centre during the day, acting in the main as a deterrent to petty crime. At night the cameras concentrate on the drinking and nightlife 'hot spots' - where tens of thousands of people drink simultaneously within the 1.25 square mile covered by the system - so improving the reaction time of police to fights and general disorder. The recordings are used for evidence in convictions, a form of 'pro-active' policing that is explicitly recognised in new policing strategies for the city centre.

The system was paid for by the businesses of the City and the Government; in total £400,000. All the businesses covered by the proposed scheme were approached by Northumbria Police at the outset of the scheme, contributing a total of £270,000. The other £130,000 was provided by Central Government through the Urban Programme. On the Quayside, where two cameras are placed, the Tyne and Wear Development Corporation provided the funding. The running cost of

the system is between £120,000 - £130,000 per annum, this being paid for by Northumbria Police.

Newcastle City Council Planning Department, together with Northumbria Police and the cameras manufacturers, decided upon the location of the cameras in the city centre. The Police knew which parts of the City Centre they wished to cover with the surveillance system and the planners knew in which parts they were prepared to allow the cameras (on aesthetic grounds). The Planning Department did not see the need to grant planning permission for the attachment of cameras to non-listed buildings, as the cameras did not materially alter the buildings. However, the Police did apply for planning permission so as to 'rubber stamp' the whole system.

A police superintendent remarked recently that the system "gives me effectively 16 full-time police officers on the beat 24 hours a day all taking notes" (BBCTV, 1993). Reported crimes of all types in the City Centre decreased from 14,500 in 1991, to 9,800 in 1993. By the end of 1994, the Northumbria Police claimed that the system "will have effectively reduced crime in the City Centre by some 6,000 offences over the last 3 years. The provision of CCTV has enabled us to make quite literally hundreds of arrests covering a wide range of offences including public order, theft from the person, robbery, auto crime and even arrests involving the possession and supply of drugs" (Durham, 1994). The system is linked to a parallel radio-based alert system linking the security guards in city's main retailers. In combination, the systems provide a real time tracking and alert capability for monitoring 'interesting persons' moving through the city centre.

Beyond the detection and deterrent aspirations of the system, Northumbria Police stress the need to build up consumer and visitor confidence - "the feel good factor" (Centre for Research on Crime, Policing and the Community, 1993). This emphasis on the use of CCTV as an economic development tool is increasingly explicit. Newcastle City Council recently introduced specific policies on developing CCTV to "reduce crime levels in the city and assist business" in its Economic Development Strategy (Newcastle City Council, 1994).

CCTV and Inner City 'Regeneration': The Newcastle West End System

The Newcastle West End scheme, which is presently being implemented, covers the Newcastle City Challenge area - a largely residential area to the West of the City which faces some of Tyneside's worst poverty, crime and unemployment problems. It will be the first large scale

residential CCTV system in the UK. Presently the proposal is for 15 cameras. One of the main objectives of the system will be to regenerate local shopping facilities - which are presently blighted by vandalism - and thus improve the general area. The system will therefore be centred primarily around the three shopping centres of Benwell, Cruddas Park and Armstrong Road. In connection with the retail regeneration, 100% grants for new shop fronts and secure car parking for workers will be sought, via the City Challenge initiative. The other objectives of the system are to reduce burglary, vandalism and joyriding.

When the proposals for the system were being finalised by the City Challenge Board local community sub-committees were approached by the City Council to see if they had any objections to the system (e.g. people being worried about the cameras looking into their homes). The Council found that, in general, the local population voiced few objections to the scheme and generally expressed only support. The Housing Department was contacted by the Planning Department so that 'problem' areas within the West End could be identified and monitored more closely by the CCTV system. The Housing Department proposed safe 'corridors' where CCTV coverage would be extensive; this it was hoped would lessen crime rates, which in turn would reduce the fear of crime.

The initiation of the system can be attributed to one City Council Planner, who compiled a report discussing the possibility of installing a system in the Newcastle West End and presented that report to the City Challenge Crime Sub Group. Apart from a small contribution from Newcastle College, all of the scheme's funding will come from Newcastle West End City Challenge funds. Due to the late arrival of the initiative (i.e. after the initial plans for the area were finalised), other proposals had to be scaled down to accommodate the CCTV system. The justification for this switching of funds arose from a survey which highlighted the residents fear of crime.

Due to the large size of the area to be covered, greater technical problems will be encountered in comparison with the Newcastle city centre scheme. These problems relate to the cameras themselves and the transmission of signals; primarily caused by micro-wave transmission over long distances (i.e. the longer the distance the weaker the micro-wave signal) and the physical nature of the area. The area has far less tall buildings and far fewer opportunities for wall-mounted cameras than Newcastle City Centre. This has led to pole-mounted cameras being proposed, protected by bollards and spikes. These cameras are effective, but not over such a wide distance as generally higher-placed wall mounted cameras. A company called ICS won the tender to install the system, worth £400,000.

Early anecdotal signs suggest that in parts of the West End resistance by some parts of the community to the surveillance of their home areas is more fierce than the public consultation suggested. Following the initial installation of one of the first pole-mounted cameras in Scotswood, for example, some local residents angrily attacked the local community centre. This they (wrongly) assumed to be the site where their neighbourhood was being monitored (Personal communication). Clearly, one possible negative effect of the system in the long term is that Police - community relations will be damaged in what has been a notoriously difficult area in the past. Policing may become more remote as cameras on fortified poles replace bobbies on the beat. This could lead to falling levels of trust between the Police and the community. But the ultimate effects of CCTV in stemming the persistent problems of neighbourhood deterioration, high levels of crime and fear of crime, and declining commercial fortunes in such a large and complex residential area as the West End are yet to be seen.

CCTV in a Flagship Office Development: The Newcastle Business Park System

The Newcastle Business Park sits on the banks of the Tyne next to Scotswood & Elswick, two of the most run down and poorest neighbourhoods in Britain (see Map 1). Developed with assistance from the Tyne and Wear Development Corporation (TWDC), the park is the most prestigious blue-chip business park in the North East of England. It has attracted back offices from blue chip companies (e.g. British Airways & IBM) due to the high quality office space and now has a daytime workforce of 5000. The park's location, cheek by jowl with a deprived and stigmatised inner city area, meant that security was seen as a priority and CCTV was given an important role.

When the idea was first mooted for a large scale development, it was felt that big companies would be unlikely to move to one of the worst parts of Newcastle to open up new offices. Even with the promise of grants and subsidised rents, the local crime rates presented a public relations problem. The solution was judged to be a "fortress approach," whereby the Business Park attracted clients on the basis of its high security.

The developer of the Business Park viewed CCTV as an integral part of the high security approach. By peppering the Park with cameras, the view was that potential criminals would steer clear of the rich pickings to be had for fear of being caught on camera and subsequently apprehended. CCTV proposals met well with the need to maintain the aesthetic quality of the park. Decisions to develop CCTV were taken by the developers at an early stage behind closed doors. Security was further enhanced by creating only 3 access roads, one at either end and

one in the middle. This limited the number of vehicular escape routes for criminals who could be easily intercepted. The Riverside walk, linking the Quayside and the Business Park is another point of access but only for pedestrians and is constantly monitored, primarily because windows open onto it.

Northumbria Police's Crime Prevention Officer was impressed with the design and lay out of the buildings on the Park when he was asked for his opinion on security. He then advised the developers on where to site cameras and where they would be most effective. Along with the developer's own knowledge of security, a plan for the site was quickly established. Safeguard Electronics were chosen as the company to install and maintain the system which was bought outright by the Business Park's Management. The same company also monitors the images, but the contracts are different. In the event of any impropriety by the guards monitoring the system, the Estate Managers can employ another security company. This has not been necessary so far, indeed Safeguard Security conforms to BS 5750 which is one of the few quality controls that Security companies can achieve.

Ducting for cables and fibre optics were put in during the development and landscaping of the site and these were later used to link the cameras with the control room, reducing the capital costs. The image from the camera linked by radio waves is not as razor sharp as the one linked by microwave but still of more than acceptable quality. The control room was built to an extremely high specification with walls 14 inches thick and was set on the first floor to avoid the threat of ram-raiders. Pictures from all the cameras are constantly recorded onto special video tapes (not compatible with domestic players) and archived for one week. Alarms are fitted to most premises and some feed back to a central computer in the control room. The cameras are moved to watch different areas at different times of the day. For example, they monitor the shop at lunch time when school children have been known to pilfer Mars Bars. At night, a camera can check on the safety of people waiting for buses, particularly useful when 90% of British Airways staff are women.

The bill for the running costs is picked up by the Management Committee, of which membership is compulsory for tenants. Their remit is to provide security 365 days a year and other services like snow clearing. The charge to the Management Committee can be offset thanks to one company which is now offering reduced insurance premiums to tenants of the Park, differentiating from the high rates charged as standard in the NE4 postal district. Initially the system had 12 cameras, however after some months, several blind spots were noticed and 2 more cameras were added to the system.

The operators of the Park's system are extremely proud of the low levels of crime. There have been 5 break-ins and 3 attempted break-ins since the Park opened almost 4 years ago. Out of the 2000 cars which come onto the Park daily, only 3 cars have ever been stolen. The Park is now 99% let and the good statistics mean that security is not perceived as a problem by some tenants who leave doors & windows open in the summer.

CCTV and Out of Town Retailing: The Metrocentre System

Covering 2.2 million square feet, the Metrocentre is the largest single retail and leisure development in the UK and Europe. It offers over 360 shops, over 50 cafés, restaurants and bars, an indoor funfair, bowling alley and cinema. Six thousand people work in the Centre; the Centre has twelve thousand free parking spaces ; and 10.5 million vehicles visit the Centre every year.

The CCTV system in the Metrocentre is the largest on Tyneside. The idea for the Metro Centre came from Canadian shopping malls of a similar style, and the developer, Sir John Hall, copied all the features including CCTV. He knew that cameras were an integral part of the Canadian malls but he did not have a specific knowledge of how they operated or how they could be used.

First and foremost, the system was designed to protect the landlord's investment and the safety of everybody in the Metrocentre. Staff in the control room can monitor any part of the Metrocentre at any time. The system is not aimed specifically at stopping shoplifters, which are the responsibility of individual stores. However, the deterrent effect exists because people feel they are constantly being watched.

The cameras were installed at the Metrocentre as it was fitted out, but there was no special provision for them in the initial design. In the precincts, firstly the street furniture was put in (plants, benches, etc) and finally the cameras, leading to problems such as blind spots, which were resolved by moving the street furniture around. For positioning the cameras, security consultants were not used, rather the Metrocentre managers relied on Police advice and common sense. There is a Police station within the Metrocentre and pictures can be sent directly to it from the control room. Indeed, Police have liaised closely with Metrocentre security throughout the evolution of the scheme.

The control room cost £500,000 and is staffed by 2 people who can monitor all parts of the centre. There are now 73 cameras in total, with 21 outside and 52 inside. 2 people monitor the 11 screens, some of which are split to show pictures from 12 cameras simultaneously. Images

from each camera are shown briefly before being replaced by another. Eight videos were installed last year to record what the cameras are seeing and this facility will enable more crimes to be detected. However, the cameras still need to be pointing in the right direction.

Retailers can alert the control room by telephone and there is a radio link between security guards and the control room. However, there is no compatibility between the camera systems in the shops and the Metrocentre's system, thus preventing integration. Combining the systems was not an area Metrocentre management was interested in, because of the technical and financial obstacles.

Different cameras have been added over the years to cover different parts of the Centre as they were required. In a bid to combat car crime, moving cameras were installed outside, capable of zooming in on car number plates and people. These cameras can cover the outside car parks but it is impossible to cover every level of a multi storey car park due to the costs of installing the equipment and monitoring the images. The Metro Centre is now interested in a project which 'recognises' cars entering and leaving and checks to see if the drivers are different.

There have been 2,200 crimes reported in the Centre which is defined as Gateshead West by the Police. The total cost of security is £1M year. The main aim of this expenditure is to protect the people using the Centre and protect the property for the landlord. The system has quite a low profile but has generally reduced crime by deterring shoplifters who need to pass several cameras before leaving the building, unsure whether they are being monitored. Car crime in the Metro Centre is still much lower than in other areas - in 1994 there was only 1 car stolen out of every 12,400 that visited.

CCTV and Affluent Protectionism : The Darras Hall Estate Proposals

Darras Hall Estate, an affluent suburb of around 8000 people, lies just outside Newcastle Upon Tyne. Crime on the Estate rose sharply during the late 1980s and early 1990s, blamed mainly upon thieves travelling to the estate from other parts of the region, often in stolen cars. Petty vandalism was also escalating. In 1993, concerned residents' groups pushed security to the top of the agenda, highlighting the role that CCTV could play in cutting crime.

Security was a serious cause for concern and was top of the agenda at the 1994 Annual General Meeting of the residents association. The Chairman of the residents' Estate Committee - which has regulatory powers because of restrictive legal covenants on the land - was elected on the premise that he would improve security on the Estate. His first action was to produce a short questionnaire with the help from the police and distribute it to each house asking which

measures people would like to see. Over a third of residents responded. Whilst two thirds of these were in favour of "certain strategic road closures in the evening", 78% wanted "surveillance cameras in discrete locations" on the estate. A small system with 5 cameras was then suggested, backed by £20 a house support from the estate residents. Proposals to install such a CCTV system, however, have recently stalled because it is unclear whether the Committee has formal powers to implement such a strategy and because the installation and running costs would probably prove prohibitive.

CCTV in a Declining District Centre: The North Shields System

North Shields was once the 'ram raiding' capital of the North East; for a six month period two years ago it averaged one ram raid per week. Other forms of crime, such as shoplifting and car theft were also high in the town. The crime rates and subsequently increasing insurance premiums were bankrupting businesses and causing confidence in the Police to plummet. A bid was therefore submitted to the Government's Urban Crime Fund for a CCTV system for the Town. The bid was successful with the present system comprising 22 cameras comprehensively covering the town centre and fish quay. The most unusual aspect about the North Shields system is that it is monitored by a private security firm not in the town's Police Station.

The primary objective of the system being to reduce crime rates and thus restore business confidence into the area; prior to the installation of the CCTV system stock losses in North Shields' shops were running at 5% per annum (compared to normal rates of stock loss of 1-2%). The initial cost of the scheme was £250,000, this being paid for by the Government out of its Urban Grant Fund. The Government only paid for the hardware (i.e. cameras, cabling and monitoring equipment), the arrangement being that the businesses of North Shields would pay for the running costs of the system. This money was collected by 'Episcope', a private company run on a voluntary basis by people from the Chamber of Trade; 'Episcope' would then pay 'Lockhart Security', the monitoring agency.

On paper this funding arrangement looked as though it would work, with the businessmen of the town collecting money from their colleagues to pay for the running of the CCTV system. Two thirds were required to pay in order to ensure viability of the scheme. However in reality, there were difficulties in collecting money from the businesses and only 120 businesses paid for the operation of the system and 280 businesses did not; despite deriving benefit. Pressure mounted on the Local Authority to fill the £20,000 shortfall in revenue since they owned property in the

town centre. They eventually supported Episcopa by making the one off payment but the problems emerged once again the following year.

The refusal of insurance companies to lower premiums in North Shields was instrumental in the downfall of Episcopa. Apart from the reduction in crime, traders were not seeing any financial rewards for their investment and were even more reluctant to put up further cash when so many were avoiding the levy. The directors of Episcopa became demoralised with their job of chasing other traders for money, many of whom were friends and colleagues, because it was not the reason they agreed to do the job in the first place. This eventually caused such severe problems for 'Episcopa' that they went into receivership. North Tyneside District Council then took over from Episcopa and they now fund the system's running costs.

'Lockhart Security', the company chosen by Episcopa to monitor the system, works in close conjunction with the Police. They have strict guidelines for the operation of the system. For example, guards are not permitted to 'track' people around the town unless they are acting 'suspiciously'. The Police have access to the tapes at any time and they can perform random checks on tapes to make sure the system is not being abused. Lockhart wipes the tapes after 1 month but the Police withdraw tapes which show people acting suspiciously, or crimes taking place, and store them separately. No tapes or still photos are allowed to leave the control room without Police permission.

There has been a very real drop in crime levels in the North Shields area since the introduction of the CCTV system. The number of burglaries has fallen in the town centre; in 1992 the figure, before the cameras, stood at 163, by 1994 this figure had fallen to 45. Also no ram raiding has occurred in the town since the camera system was introduced. The reduction in crime levels has now had a beneficial effect on businesses' insurance premiums in the Town, premiums falling on average by between £150-£600.

As serious crime has fallen in North Shields, the guards have picked up more diverse cases, one being a lorry driver who crashed into a shopkeepers car and drove off without leaving his insurance details. CCTV pictures traced the vehicle to Manchester and the driver is now being prosecuted.

TOWARDS A CRITIQUE OF CCTV

The experience and effects of CCTV are clearly more diverse than the rhetoric which surrounds it suggests. A 'patchwork quilt' of different CCTV systems is developing in Tyneside and other British metropolitan areas. CCTV is being used by a wide variety of agents in a diverse range of ways to address a complex set of problems. Even so, at first glance, there is much circumstantial evidence to support the rhetoric which surrounds CCTV in the UK currently : CCTV on Tyneside seems to have had some early success in addressing the very real problems surrounding urban crime effectively and with remarkable speed. But is the story really this simple ? Is the rapid wiring up of our urban landscapes with 'electronic eyes' really such a benign and unproblematic development ? Are current debates about CCTV really balanced, or is there a tendency to glamourise the capabilities of the technology at the expense of a more critically-informed debate ?

We would argue that, whilst CCTV does have its uses and can be associated in certain circumstances with reduced crime, when it is scrutinised in more detail, it has several worrying aspects. These are subtle and easy to overlook when seduced by the language of the quick technical fix. Four of these can be highlighted: overspill or displacement effects, threats to civil liberties and the erosion of the democratic public sphere, threats caused by rapid advances in surveillance technology, and the threat that CCTV is actually ineffective and leads to the neglect of broader and longer-term policy options.

Overspill or Displacement Effects

First, although it is very difficult to measure, there is some evidence that CCTV systems can simply lead to an 'overspill' of crime as criminals shift elsewhere to less protected areas. A recent Home Office (1994;9) report on CCTV conceded that, when a CCTV system opens, "it is possible that there will be some displacement of crime to another town or to another area of *your* town, but it is likely that much opportunist crime will not be displaced". In one Scottish town - Airdrie - a CCTV system in the centre cut crime but crime levels rose in the peripheral areas (Dawson, 1994). After the installation of CCTV in the town centre reported assaults fell from 171 to 79, but crime overall in the whole district rose 20% (Davies, 1995).

This raises the very real prospect of a scramble by all areas to get CCTV systems, leaving crime concentrated in those places without the resources to gain any cover. Because there is no metropolitan-wide planning of the 'roll out' of different CCTV systems across cities, this process is likely to be piecemeal, unplanned and unpredictable. And because it tends to be the richest commercial and residential centres who are 'wiring up' with CCTV first, such overspill effects are likely to displace crime from rich to poorer parts of cities, so exacerbating the social and spatial processes of polarisation already underway (Davies, 1995). There is already some evidence that car-crime is moving to rural areas, driven by the more sophisticated surveillance and prevention measures now taken in cities (Parking Review, 1993).

Threats to Civil Liberties and the Erosion of the Democratic Public Sphere

Second, there are very real threats to civil liberties, the democratic rights of certain citizens and the public nature of town and city centres. Whilst CCTV systems are not yet developing to give their controllers the power of some all-seeing, Orwellian 'Big Brother', they may support the emergence of a large number of 'Little Brothers'. These systems now give many unregulated individuals or agencies considerable, largely invisible, powers to decide who has free and unhindered access to an area and who deserves closer scrutiny and control. These powers are inevitably based on their own prejudices about the links between the visual appearance and the behaviour of people. Subconsciously, split-second decisions about guilt may be decided *by association* rather than by *evidence* - because people who 'look like that' who were in 'those places' before may have been seen to commit crime. Indeed, some argue that the whole *style* of CCTV may inevitably infer suspicion and guilt to the guiltless. From the American standpoint, Phil Patton (1995; 127) argues, only half-jokingly, that "we all look as guilty as hell on black and white video; it's a moving mug shot. Mother Teresa buying a granola bar at the Gas 'N' Go would appear felonous on such tapes".

The exercising of these powers brings the spectre of social control and growing segregation to previously-public spaces where people used to mix more or less freely. Marc Rotenberg, of the US Privacy International Group, argues that "no society which values freedom should permit the creation of this surveillance infrastructure. One of the responsibilities of living in a free society is to resist policies of 'crime control' that may one day become tools of social control" (quoted in Davies, 1994).

Even more worrying, this process may be driven by the commercial and economic development imperatives of today's city centre policy makers - backed up by insurance discounts and 'booster'

coalitions of retailers, property developers and urban marketing organisations. Here, the perceptions and stereotypes that the operators have of those who are seen not to 'belong' in these commercial places become crucial in determining the day-to-day, incremental effects of CCTV. As Majorie Bulos suggests, this effort to use CCTV to concentrate solely on the commercial 'regeneration' of town centres, by appealing to the needs (and pockets) of 'partnerships' of large retail chains, town centre managers and shopping mall operators, may be "contingent on the removal, control or displacement of groups and activities that have no commercial value" (Bulos, 1995). They may therefore be used to exclude social groups not seen to be befitting to a 'commercial' space, so changing for good the public, democratic nature of public spaces in town centres.

Thus, people seen not to 'belong' may be monitored and harassed, losing rights as citizens just because they aren't seen to be lucrative enough as consumers. One commentator wrote recently that CCTV systems are already "used as a means of anticipating trouble. See that crowd of boisterous teenagers over there on camera nine ? Let's get someone there before they get out of hand'. Or 'What's that guy with dreadlocks going into Watches of Switzerland for?". The technology will become a way of singling out those who 'do not belong' in a particular environment, and of taking preemptive action to exclude them" (Naughton, 1994). Often, petty offences may become the means of enforcing this subtle exclusion. In King's Lynn, for example, the state-of-the-art 60 camera CCTV system has been used to combat what council officials loosely term "anti-social behaviour" - including offences such as littering, underage smoking, evading parking meters, urinating in public and drunkenness (Davies, 1995).

The civil liberties pressure group Liberty (1989; 1) note the ambivalence of CCTV when they ask : "is it simply to deter and/or catch criminals, or are there wider purposes such as checking any behaviour regarded [by the controllers of the systems] as objectionable ?". There is some evidence to support these wider fears. Liberty quote the motivation of the Wolverhampton town centre scheme, when the Local Consultative Committee was instrumental in pushing for the system, arguing that "large groups, usually of young single people, simply assemble in places that happen to catch their fancy. Their mere presence is a nuisance to people who want to use the streets and shopping centres in a more conventional way...".

An explicit objective of the Newcastle city centre system, meanwhile, is the "early detection of gatherings likely to result in public disorder" ; between 1993 and 1995, 9% of the 655 'incidents' with which the system was used involved dealing with 'begging and vagrants' and 19% involved 'suspicious youths' (Centre for Research on Crime, Policing and the Community, 1993).

From these 126 'incidents' only 9 arrests were made. Commenting on these uses, a recent independent evaluation report argued that:

" the data concerning incidents suggest that the primary function of CCTV relates to issues of public order. Cameras were frequently focused on young people who are identified as 'suspicious' by either operators or police officers. The low arrest rate among this group may question the extent to which such suspicions are warranted. the cameras are also employed for surveillance of crowds, especially football supporters and political demonstrations" (Centre for Research on Crime, Policing and the Community, 1993; 130).

As a result of the explicit application of CCTV in this way, there seems little doubt that democratic freedoms of assembly and freedom of demonstration are being eroded. This has implications not just for the civil liberties of those involved, but for the wider importance of the public spaces in towns and city centres as the key 'democratic public realm' of contemporary society. The Local Government Information Unit recently warned that there is a potential for CCTV to cause a "chilling effect' on otherwise legitimate activity, such as trade union demonstrations outside the town hall (quoted in Campbell, 1995).

With such exclusion and marginalisation, the critical role of the urban public realm in sustaining democracy may even be undermined. There may, in short, be a subtle *privatisation* of the public space of cities that is no less damaging than the much-criticised encroachment of private, gated malls and themed leisure environments in recent years. In fact, public spaces may be replaced by pseudo-public spaces like those in shopping malls, where commercial imperatives dominate and what goes on, and who participates, is intensely regulated and tightly controlled so that profitable consumption is maximised. CCTV may thus be part of a broader transformation of our city centres into what Michael Sorkin calls "substitutes for the democratic public realm" by "appealingly stripping troubled urbanity of its sting, of the presence of the poor, of crime, of dirt, of work" (Sorkin, 1992; xv). This is particularly the case when the application of sophisticated surveillance technologies is seen in parallel with new developments in physical development and architecture such as private shopping malls and 'themed', 'heritaged' and corporately-controlled urban districts. Because the public spaces of towns and cities are so critical to the functioning of democratic society, Sorkin argues, their erosion and privatisation actually threatens democracy itself. "The effort to reclaim the city", he writes, "is the struggle of democracy itself" (Sorkin, 1992; xv).

Rapid Advances in Surveillance Technology

Thirdly, there are the risks brought by rapid advances in surveillance technologies. Microcameras and facial recognition technology are developing fast, both for in-store security systems and wider city-centre networks. Cameras on microchips of less than 100 square millimetres have already been developed which can link to images of finger or face prints for 'ubiquitous surveillance' (Watts, 1991). BT has recently developed a CCTV system which can use ordinary telephone lines rather than expensive optic fibres, allowing remote and universal surveillance over any distance (Crime Prevention News, 1993). In a new experimental project, BT is also working with the Massachusetts Institute of Technology (MIT) and the major British retailer, Marks and Spencer's, on digital image and television-based computer system to be installed in its stores (McKie, 1994). Real-time cameras linked to image databases of convicted shop-lifters will alert security staff of the arrival of the presence of convicted shoplifters in their stores through advanced facial-recognition software. Accuracy is said to be "greater than 90%" (McKie, 1994). In the long run, BT anticipate major new telecommunications markets. For example, "all commercial outlets in a town could be linked and an alarm be set off the moment a person who has been seen shoplifting in one store enters another" (McKie, 1994).

When backed by digitised face prints of the type now being developed by the UK's Driver and Vehicle Licensing Agency (DVLA), the potential for a national face-recognition and monitoring systems through CCTV seems a lot more than some paranoid dystopia (Davies, 1995). Already, in the United States, electronic anklet transponders are affixed to low-level convicted offenders ; they can be tracked through mobile cellular telephone systems so that convicted shoplifters emit silent alarms in the CCTV control rooms of large stores (Winckler, 1993; 35). Correlating the actual travel routines of convicted criminals with recorded crimes is also of the cards as such systems become further advanced.

While some way from some all-pervasive Orwellian 'Big Brother' or total electronic 'panopticon' (Lyon, 1994), such rapid technological development and standardisation might lead to comprehensive and centralised urban CCTV networks or even nationally-integrated surveillance networks. As the BT-MIT-Marks and Spencer example shows, mixing image data base, facial recognition and information data base technologies (possibly based on the proposed national identity card) will soon provides a cheap and potent way of developing systematic surveillance systems for a whole populations, with severe civil liberty implications.

It also seems likely that contingent or adjacent CCTV systems will coalesce, driven by economies of scale and the need to standardise technologies. In fact, the wide variety of very different technological CCTV systems now developing in places like Tyneside closely mirrors the early days of other technologies like telephone, gas, electricity and water networks. All of

these have long merged into massive, standardised technical networks covering large areas which we largely now take for granted and ignore. Could CCTV develop in the same way in the next fifty years?

Finally the growing automation of CCTV systems also seems likely, as they extend their coverage and as software and computing power advances exponentially. Software is already being developed which can automatically warn of 'unusual situations' or certain pedestrian densities on large CCTV systems, which are then brought to the attention of the monitoring staff (Patel, 1994). Steps are also being taken to register CCTV cameras in the UK. A camera registration scheme in London has been proposed recently by the Metropolitan Police (Davies, 1995). This would include details of the coverage, capacity and controlling organisation of cameras which would allow reported crime to be matched with known coverage of the whole of London in the investigation process.

Ineffectiveness and the Neglect of Better Policy Options

Finally, there are dangers in assuming that CCTV offers a simple, 'technological-fix' to what are in fact very complex problems. CCTV is all-too-often wheeled out as a neat, high-technology package - an off-the-shelf, state-of-the-art electronic panacea for crime. But there are reasons to believe that many, if not all, of the claims made for the success of CCTV's behalf are inflated - the rhetoric is largely promulgated by those who have a stake in promoting the schemes (Police, security companies and consultants, politicians, urban regeneration agencies etc.).

As Davies (1995; 62) argues, "feeling good about crime prevention and actually achieving something may turn out to be two different things". The figures claimed to vindicate the success of CCTV are extremely dubious. There are methodological worries, both about research on the public support for CCTV and its claimed effects. Simple 'market research'-style methods asking people their responses to the systems may also lead to an exaggeration of the degree to which all social groups feel that CCTV offers some simple and unproblematic solution to the incidence and fear of urban crime. Jason Ditton, Director of the Scottish Centre for Criminology, argued recently that "all evaluations and statistics we have seen so far are wholly unreliable" ; The British Journal of Criminology recently called them "post-hoc shoestring efforts by the untrained and self-interested practitioner" (quoted in Davies, 1995;62). Such statistics, they argued, tend to be collected over too brief a period, in dubious circumstances and without regard to the methodological rigours necessary in collecting crime statistics. Analyses of possible overspill effects are rarely undertaken. Figures on different types of crime tend to be

lumped together, concealing possible uneven effects and the displacement effects mentioned above.

Not only does this make critical debate about the promises and pitfalls of CCTV difficult, it also tends to obscure other policy solutions for dealing with urban crime problems. As Nigel South (1987; 142) has argued, strategies like CCTV aimed to keep crime out of a particular place may, in fact, "have negative consequences for the 'defended' community itself. Accompanying attitudes and demands for conformity can promote a climate of fear of crime which works against positive community participation as people adopt a siege mentality".

There are, in fact, a range of possible policies which often get ignored in the recourse to CCTV as a technical fix. These may be more effective, longer term, and more progressive solutions which have fewer damaging side-effects. South (1987; 151) has argued that "the problem is that in the short term it is cheaper and quicker to physically and socially construct an environment which is more suggestive of a fortress than a comfortable, safe and secure environment [...]. Currently in the United Kingdom, [...] policy seems inclined toward the palliative rather than the curative or positively transformative" in dealing with urban crime.

For example, land use, housing, cultural, design and transport policies need to be developed which encourage mixed uses and *natural* surveillance of citizens over each other (Oc, 1991). Housing over shops in town centres, high-quality, safe public transport, better street lighting, and '24 hour city' policies to animate and enliven streets and public spaces on a continuous basis are good examples. It is clear, for example, that the major problems of fear felt by women in city centres at night can be better addressed by making sure they are in the direct 'visual range of others' (Oc, 1991; 238) on the streets than by CCTV. It is interesting to note that Manchester or Leeds - big cities with serious crime problems - have been less-quick in wiring up their city-centres with CCTV systems than other comparable cities. Both cities are developing comprehensive '24 hour city' strategies which mix better street design and lighting with mixed use planning, licensing relations, improved public transport and proactive cultural 'animation' policies. As one Leeds reveller remarked recently, "the more places that open late the safer it is; it means you've got plenty of people around in the middle of Leeds" (quoted in Mulgan and Wilkinson, 1995; 3).

In fact, by encouraging people to have faith in some disembodied electronic eye, CCTV may actually *undermine* such natural surveillance in towns and communities. The suspicion embodied in wide area CCTV may simply breed more suspicion on the street. Landry and

Bianchini (1995; 7) recently argued that CCTV "technology is becoming a substitute for people and the natural surveillance that comes from human interaction". By trusting technology so implicitly to do a fundamentally social job, we are in danger of further absolving personal and collective responsibility for each other. The result may be a further spiral of social fragmentation and atomisation which leads to more alienation and even more crime.

Steps are also needed to overcome *fear of crime* - which is often as destructive as crime itself. Finally, broader social and economic development policies are required which attack the root *causes* rather than the *symptoms* of crime - for example, unemployment, alienation and poverty (South, 1987). City centre strategies must be developed which offer a range of services, activities and spaces to the whole spread of a city's citizens, rather than being driven by a narrow commercial logic which marginalises, excludes and alienates those unable to consume because of low incomes or poverty.

CONCLUSIONS : TOWARDS A BROADER POLICY DEBATE

CCTV systems are currently 'rolling out' to cover increasingly large patches of urban Britain. This is happening on a piecemeal, fragmented and unregulated basis. A wide variety of interests are backing the schemes, which are being variously designed to reduce fear of crime, deter opportunist crime, improve consumer and business confidence in out of town and city centres, boost urban economic development, overcome barriers to successful property development or help 'fortress' affluent communities from unwanted incursion. This variety, and the many worrying possible effects of CCTV suggest clearly that debates about CCTV need to be considerably broadened beyond the current rhetoric of the standardised 'quick technical fix'. CCTV needs to be seen not as some simple, standardised panacea for urban crime or as some technology which seems to somehow *acts on its own* as an 'autonomous technology' (Winner, 1978) to apparently 'solve' complex problems. Rather, more attention needs to be paid to the *wide variety* of ways in which CCTV may be socially shaped, designed and used, to the complex and often ambivalent effects of CCTV, and to the ways in which it may be adopted most positively as an integral part of broader strategies aimed at resuscitating town and city centres. We are not calling for some wholesale Luddite rejection of the technology ; we merely argue for a more sophisticated appreciation of, and debate on, the complex and poorly-explored effects of CCTV systems on urban life.

CCTV on its own is not the solution. It may, in fact, lead to longer term problems. It may simply shift crime elsewhere. It may help transform the public and democratic nature of public spaces into 'fortressed' commercial ghettos where access is based not on the notion of rights to citizens but on arbitrary visual judgements about whether people 'belong' in such commercial spaces . And it may undermine the already-precarious civil liberties of socially powerless groups and individuals. There are also clear dangers that existing and emerging surveillance technologies will be implemented by powerful interests set to gain most without the visibility and democratic debate that such applications clearly warrant.

The use of 'technical fix' assumptions about CCTV also seem likely to engender an over-developed faith in the possibility of narrow technical solutions to complex social problems. Planners and town centre managers, in particular, need to deepen their understanding of the promises and pitfalls of CCTV. A sophisticated and critical stance is required and the simple 'we want one too' imitation of the approaches in other places needs to be avoided. Above all, there is an urgent need for planners and others involved in town centre management and urban crime

policy to start developing a much broader and more critical debate about CCTV if the promise of the technology is to be realised and the pitfalls minimised.

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