A city in good shape
Town planning and public health

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In light of the matters raised by this issue of CONTESTI, within a necessary trans-disciplinary perspective on research and practices to conceive and implement healthier urban settings, we have chosen to republish a contribution by Michael Hebbert entitled "A City in Good Shape. Town planning and public health," which appeared in 1999 in The Town Planning Review. *A historian by training and an urban planner by vocation, Hebbert traces in this paper some of the milestones of the very close relationships that link the discipline of urbanism to*

Distantly related

In his book Flesh and Stone Richard Sennett (1995) explored the ancient affinity between society's understanding of health and urban form. He showed that the entire history of city planning can be written in the language of corporeal metaphor and medical analogy. The connections are more than metaphorical. In the professional family tree, public health and town planning are blood cousins, with common ancestry in the sanitary movement of the 1840s (Ashworth, 1954; Peterson, 1979). By the later nineteenth century both were taking root as fields of professional practice, linked to the local government sector and marked by a holistic ideology which set them apart from their distinguished parent discipline of, respectively, medicine and architecture. There was more than a passing family resemblance in their subsequent histories of professional marginalisation

that of public health, emphasizing how the centrality of the city and its characteristics in the health debate has been gradually lost over time, and therefore the fundamental need to find a way back to a shared path. Do town planning and public health now point towards a third paradigm?, *the Author asks.* If so, it draws dialectically upon what has gone before. *Let us learn, then, from the good practices and radical ideas of the past, to move toward an increasingly urban, but necessarily healthier, more sustainable and humane future.*

and reinvention. The 1960s found town planners and community physicians busy rebranding themselves as experts in rational process, the 1990s as managers of sustainability. Today, a 'New Urbanism' mirrors a 'New Public Health'. Despite their common ancestry and present symmetry, these cousins are out touch with each other (FitzPatrick, 1978; Ravetz, 1991). The literature of the 'Healthy Cities' movement has much to say about diet, exercise, delivery systems and inter-agency coordination, but very little on town layout. Town plans give detailed consideration to economic activity, shopping, recreation and amenity but rarely to health. The present paper reappraises the relationship between town planning and public health. It identifies two paradigmatic moments when their histories have intertwined, and puts an argument for a new convergence at the turn of the century.

Paradigm 1: the street-ventilation

The concept of 'public health' first appeared in the early nineteenth century as part of a wider rethinking of public and private in the turbulent new world of laissez-faire capitalism. Liberalism had individualised the pursuit of wealth. Edwin Chadwick and his colleagues deployed urban mortality and morbidity rates to show that the pursuit of health could not be left to the individual. They exposed the public dimension of the living conditions of the poor. The medical basis of Sanitarianism was the Pythogenic theory, known in America as 'filth theory', which attributed disease to the gas given off by decomposing organic matter. As the Health of Towns Association explained to the people of Manchester and Salford in its pamphlet Why Are Towns Unhealthy? (1846, 2) air loaded with putrid gases from decaying animal and vegetable substances was 'an actual poison'. Respiration was itself toxic: a breath exhaled was unfit to use again. Fresh air was a human necessity even more vital than fresh food (Parliamentary Papers, 1844, 68; 1845,

651). It was 'the very first element of civilization' (Winter, 1993, 154).

By the end of the nineteenth century filth theory would be undercut by bacteriologically-based concepts of public health but in its time it proved, as Lewis says, a fruitful error (Lewis, 1952, 43). It encouraged intensive surveys of the epidemiology of urban environments, such as the sanitary maps of Bethnal Green and Liverpool prepared by Edwin Chadwick, or the analytical tables of mortality rates by class of street and type of house in Chorlton-on-Medlock prepared by P. H. Holland for the Health of Towns Association (Health of Towns Association, 1846, 4). The reports of the Select Committee on the Health of Towns (Parliamentary Papers, 1840) and the Commission into the State of Large Towns and Populous Districts (Parliamentary Papers, 1844; 1845) contained hundreds of pages of detailed investigation of health and the urban environment. Comparable urban surveys in detail -lot by lot, street by street- were carried out by American sanitary reformers in the years immediately after the Civil War (Peterson, 1979, 89). Despite the word's later lavatorial connotations, the sanitary movement was as much concerned with air as with water and sewage. Illness came from breathing bad gas, health from ventilation. Fresh air was partly a matter of building design -a 'free blow through' could be obtained by fitting a closed room with sash windows, flues and ventilation bricks. One famous surgeon was said to carry round a stick in order to ventilate stuffy sickrooms by knocking out a pane of glass (Robertson, 1919, 39). But if a window opened onto a closed space, other remedies were needed:

> *Case 14* - Perpetual headache is observed in the lower and inner apartments of houses forming part of a court, surrounded on every side by lofty buildings, and accessible only by a very narrow entrance.
>
> *Answer* - This case is incurable except by opening the court so as to admit of free external ventilation, or by supplying these lower apartments with air by channels from without the court (Parliamentary Papers, 1845, 459; evidence of D. B. Reid).

Among Edwin Chadwick's unrealised projects was the Pure Air Company, a Public utility with towers taller than factory chimneys that would suck down fresh atmospheric oxygen for piped distribution to households (Finer, 1952). A more practicable remedy lay closer to hand: urbanism.

Public health pioneers were keenly interested in the question of urban layout.

The first decades of the nineteenth century had seen an unprecedented breakdown in the morphological relationship between streets, blocks and dwellings. As Stephan Muthesius writes in his classic history of the English terraced house, 'most houses were reached by all

Vision for a smart management of public buildings stocks
Fig. 1

sorts of bad streets or nonstreets. There were never-ending stories about their misuse, their filth and their holes filled with ash and rubbish' (Muthesius, 1982, 71). The new industrial proletariat had to sleep within walking distance of an intensely competitive labour market. Slum landlords met their demand for living-space by subdividing old houses, infilling back gardens and courtyards and developing dens courtyards around short alleyways off the main thoroughfare. In the feverish building speculations of the 1830s, developers would even throw up lines of houses across streets, stopping light, air and carriageway. Sanitary research confirmed the excess concentration of sickness and death in courtyards, dens, blind alleys, backs, culs-de-sac, turnings, winds and closes.

The solution lay in the open street-paved, sewered, swept, and open at both ends for the free through passage of air (Health of Towns Association, 1846, 5). 'Town site consciousness' was highly developed in the sanitarian movement (Peterson, 1979, 91). The questionnaire sent out by the 1844-45 Commission of Inquiry to all populous towns and districts asked if houses were 'laid out in wide streets; or are they built in narrow courts and alleys? Are many of the houses built back to back; are the courts closed at the end; and are there any, and what arrangements for cleansing?' (Parliamentary Papers, 1845, 141). The commision received copious information about problems of cul-de-sac development. Having no thoroughfare, dead ends were left in the hands of private owners who allowed filth to accumulate. There was hard epidemiological evidence that closed street tended to have higher death rates irrespective of their population density (Parlamentary Papers, 1844, 62; 1845, 50).

The paved street, open at both ends to the free passage of traffic and the free sweep of the winds, was both a medical and an architectonic paradigm. Sanitarians looked back to the classical authority of the Roman engineer Vitruvius, whose great textbook on archiecture stressed the importance of street alignement for ventilation (Parliamentary Papers, 1844, 372-92). Sir Christopher Wren's proposals to straighten up the crooked mediaeval streets of the City of London after the Great Fire of 1666 made him a hero of the public health movement. Chadwick calculated that the Wren plan would have cut London's death rate by one-third (Lewis, 1952). In living memory, the development of Bath, Cheltenham and Buxton had shown how health and elegance could be combined in town design. Sir William Fairbairn -inventor of the fire-proof mill, and Manchester's leading mill engineer- saw no reason why this dynamic industrial city should not also share the enjoyments of civilized life, the pleasing impressions of architectural decoration, and the advantages of free ventilation ... All these conveniences are attainable by extended thoroughfares, open squares, and

rounded corners of streets, adapted to the bustle of commercial life and the health, comfort and enjoyment of the inhabitants. (Fairbairn, 1836, ix)

Such principles could indeed be found in Richard Grainger's 13-acre Grey Street scheme in Newcastle-upon-Tyne, under construction in 1831-37. But that beneficial collaboration between municipal corporation and private developer was exceptional (Girouard, 1990, 185). As Newcastle's own Building and Ventilation Sub-Committee showed in Parliamentary evidence, closed streets and stagnant air were the norm in new development, and there was no way to prevent them (Parliamentary Papers, 1845, 572). The advantages of free ventilation were anything but free. Regularising the street environment implied public expenditure and curtailment of property rights, and would be stoutly resisted in the name of liberty. Sanitarianism's early Parliamentary victories-the Nuisances Removal Act (1846), the Towns Improvement Clauses Act (1847) and the Public Health Act (1848)- were permissive statutes. Their local implementation involved a 30-year war of attrition with vestrymen, ratepayers, landlords and municipal 'economisers' (Simon, 1890, 182-200; Ashworth, 1954, 54-64).

So, the improvement of urban health through building control and upgrading of street infrastructure was a slow process, but it gathered pace with the growing scale and confidence of local government. Expenditure on drainage, sewerage and street development formed the core of municipal action. Unruly development was drilled behind rigid building lines, courts cleared, street widths standardised, space ensured for air to circulate at front and back, and drains and sewers laid. Those self-contained, cellular worlds of poverty were broken open. Dead-ends became anathema. 'The cellular pattern gave way to an open layout where everything connected with everything else' (Daunton, 1983, 215).

Sanitary norms for the working class street became increasingly standardised, tough with local nuances that are memorably explored in the work of Muthesius (1982) on the English terraced house. The 1875 Public Health Act 'the zenith of environmental sanitation as a notionally complete scheme of health' (Mackintosh, 1953, 3) made regulation of dwelling form and street morphology a national requirement, imprinting the sanitary street paradigm on the British house-building industry just as it geared up for its great output peak of 1885-1910 (Girouard, 1990, 260; Parry Lewis, 1964). The centrepiece of the 1884 International Health Exhibition at South Kensington was a replica 'Old London Street'. This darksome congested environment, symbolising sanitary error was on the way to becoming a historic curiosity (Adams, 1994). By 1914, most British people lived in a home whose building plan had undergone a process of approval by the local board. And despite its false scientific

premises, the nineteenth century marriage of public medicine and urbanism achieved what is set out to do. Legal standardisation of new building and the statutory closure to old slums contributed to radical improvements in life expectancy for British town-dwellers (Wohl, 1983, 329).

The Garden City

The sanitary street was a victim of its own inordinate success. Contemporaries began to find fault with the immensity of byelaw housing development (Fig. 2). As the public health debate in late Victorian Britain shifted from simple mortality and morbidity rates to more complex indicators of psychophysiological vitality seemed that monotonous housing must produce mean, devitalised folk (Haley 1978, 23-45). Against a political backdrop of imperial competition, Social Darwinism put an entirely new and unfavourable complexion on the central achievement of the public health movement, the 18 per cent fall in the death rate between 1861 and 1901. Sanitary regulation began to be blamed for breeding a new generation of sickly urban survivor-what Charles Masterman called the 'New Town Type' (1911, 114). Army doctors seemed -wrongly, as it proved (Parliamentary Papers, 1904)- to provide statistical confirmation of race degeneracy when they rejected two out of five urban recruits during the Crimean and Boer War recruitments, with higher rates for some cities. Extreme Social Darwinists could be heard to argue that public health reform had been a dangerous interference in the iron law of natural selection, 'penalising the fit for the sake of the unfit' (Wohl, 1983, 329-34).

At the moment of its greatest physical influence on the environment of urban Britain, the street-based sanitary paradigm was an intellectually discredited force. Hard flagged pavements no longer conjured an image of health: t at required trees, shrubs, flowerbeds, grass and water. An index of shifting attitudes was the relocation of British middle-class development from thoroughfares to the seclusion of parks and gardens (Muthesius, 1982, 73). Reformers who disagreed on every other topic joined in condemning the street as the source of urban ills and devising ways to reunite the race with the land or spread antiseptic greenspace through the urban fabric (Winter, 1993; Aalen, 1992). The Earl of Meath, chairman of the Metropolitan Public Gardens Associations, was a passionate advocate for playgrounds, parks, gardens as the remedy for the urban malaise of 'pale faces, stunted figures, debilitated forms and ... low vital power' (Brabazon, 1886, 14). His 'healtheries' were plots of natural vegetation, his aim was to 'countrify' the town. Lord Rosebery said of him that he would happily have razed London and created a large garden in its place (Aalen, 1992). In chapter 13 of his famous garden city manifesto of 1898, Ebenezer Howard promised to do precisely

that (Howard, 1946; *Town and Country Planning,* 1998).

In 1909 a system of statutory town planning was introduced to Britain, with the formal objective of 'securing proper sanitary conditions, amenity and convenience in connection with the laying out and use of the land' (Housing, Town Planning etc. Act, s.54.1). From first to last, as Robertson stressed in his textbook *Housing and Public Health* (1919), the new town planning was inspired by public health considerations. The policy linkage was expressed administratively in the establishment of the Ministry of Health in 1919, uniting personal health services and medical care with planning, public health and sanitation. Hygiene now meant suburban layout. Under Garden City principies, density was axiomatic. Protection against vibration and noise dictated that buildings be widely set back behind grass verges. Thoroughfares were 'so opened up as to lose all characteristics of the traditional town street' (Girouard, 1990, 311), and an increasing proportion of the road network was deliberately contrived to lead nowhere in order to eliminate through traffic (Robertson, 1919, 70-77). Byelaws were redrawn to permit or encourage closes and dead ends.

In place of its old negative connotations as a 'cut' or 'entry', the cul-desac had become the most desirable setting for healthy living (Beaufoy, 1932, 1). The building line which had regimented nineteenth-century street development was relaxed to allow informal grouping around greenspace. Architects, responding to the new belief in the health-giving properties of sunlight, demanded flexibility in layout and orientation to allow each building to bask without regard to its neighbours or to street width (Royal Institution of British Architects, 1933, 23).

The new orthodoxy of healthful design did not go altogether unchallenged. In the July 1913 issue of the *Town Planning Review* the architect Arthur Trystan Edwards launched a personal crusade against the Garden City style which would continue for the next 55 years (Edwards, 1913; 1968). Edwards argued, quite correctly, that there was no need to abandon the basic principle of classic urbanism -alignment upon a common throughfare- to get healthy levels of sunlight and hygiene (Fig. 3). An award holder of the Chadwick Trust, he was one of the few people to challenge the assumption that 'open development' behind grass verges was somehow medically more correct than conventional urban layout along pavements:

> The form of lay-out exemplified in the Garden Suburb was the result of the acceptance of dogmas most of which had nothing to do with the honourable science of hygiene as expounded by Sir Edwin Chadwick and the housing reformers of the Victorian period who studied the real principles of hygiene as applied to urban building (Edwards, 1946, 8).

Trystan Edwards's attempt to champion the terrace was valiant but he was up against larger forces than he appreciated. Conventional corridor streets had become a universal symbol of the old order, of non-modernity. Garden City imagery and idealism were ubiquitous throughout the industrialised world (Ward, 1992). European artists caught this *zeitgeist* in recurrent images of street walls bursting apart and scattering their liberated elements to the sun (Fig. 4). American highway technology, real-estate knowhow and 'New Deal' idealism achieved the first practical demonstrations of streetless, greenheart urbanism, or as Lewis Mumford called it 'the Highwayless Town' (1938, 490) (see Fig. 5). With more historicism than history, Mumford's book *The Culture of Cities* (1938) offered an epic view of progress out of the urban confusions of the industrial era towards 'a town in which the various functional parts of the structure are isolated topographically as urban zones, appropriately designed for their specific use' (1938, 490). Its hallmarks were the differentiation of foot traffic from wheeled traffic in independent systems, the insulation of residential quarters from through roads; the discontinuous street pattern; the polarisation of social life in specially grouped nuclei, beginning in the neighbourhood with the school and the playground and the swimming pool (Mumford, 1938, 490). Note the swimming pool, a setting for courtship as well as physical exercise.

The Second World war gave the entrée for Mumford's 'powerful and city destroing ideas' (Jacobs, 1961, 28) to be applied in Britain, both in New Town design and in the reconstruction of existing urban areas. City districts with mixture of activities, main streets with busy concentrations of shopping, continuos streets of any kind, were condemned as unhealthy. Their conventional tissue of thoroughfares and blocks, whether bomb damaged or merely condemned as 'obsolete', was marked for replacement by planned enclaves within looping, landscaped distributor roads. The town planner deliberately exploited the cutting-up effect of dual carriageways and roundabouts to 'define communities and render them socially efficient' (Watson and Abercrombie, 1943, 78). Visual representations of this cellular design philosophy -most famously, in th *County of London Plan 1943,* or in the design of Harlow (Gibberd, 1953)- played upon the organic metaphor of healthy tissue. Here was an evocative new basis for the marriage of town planning and public health. But were the doctors interested?

Although Ebenezer Howard's Garden City initiative had been duly praised in the columns of the *British Medica[Journal* (Wohl, 1983, 337), the trends of mainstream medical opinion and town planning had diverged after 1900. The science of bacteriology made sanitarianism look old fashioned, favouring the status of clinical at the expense of preventative medicine (Vandenbroucke, 1944). Medical concern shifted

abruptly from the environment to the human body and its protection through isolation, quarantine, immunisation and health education.

In America the anti-sanitarian backlash was stridently sexist, setting the doctor (modern, male and scientific) against confused womanly notions of 'bad air' an 'good ventilation' (Hill, 1916; Platt, 1995).

But medical attitudes were on the move again in the late l 930s. In a document called *Basic Principles of Healthful Housing* of 1939, the American Association of Public Health threw the full weight of its authority behind the planners' vision of pedestrian segregation, culde-sac road systems, introverted layout, ample landscaping, and community design:

> Today, the health officer and the nurse must meet a new challenge, must acquire a new field of broadening vision as significant and revolutionary in its scope as the sea change which took place in 1910. Thirty years ago, our major emphasis was transferred from the physical environment to the individual. Today we must shift our gaze from the individual back to the environment, but in a broader sense than that of 1910 ... The public health of the future must be not only an engineering science and a medical science; it must also be a social science (Twichell, 1941, 14).

What was the stimulus to the new social environmentalism? It carne from an unexpected quarter, those old foes of the sanitarians, the eugenic movement.

Paradigm 2: the neighbourhood unit-procreation

The Eugenics Society had been founded by Sir Francis Galton in 1908 with the aim of improving human racial qualities by rational selection, namely the encouragement of natural increase among the well endowed and discouragement (through contraception) of propagation of inferior and subnormal stocks. The Family Planning Association was an offshoot, lodged in the Society's house. Contraception had a dramatic social impact, halving the birthrate of England Wales. But from the eugenic point of view it took the wrong half. The 1930-31 census results confirmed a downward trend of births throughout Europe, with the steepest decline among the better-endowed types. Depopulation replaced deterioration as the racial threat of the day (McCleary, 1937). In response, the Eugenics Society set up a Population Investigation Committee n under the chairmanship of Professor Carr-Saunders of the London School of Economics. The research turned scenarios of biological suicide and race extinction into social policies that would bear fruit in the postwar welfare state- such as the family allowance, already privately pioneered by the London School of Economics for its own employees (Glass, 1936).

Preventive medicine, centred on family welfare, lay at the heart of the new eugenics. The Peckham Health Centre offered the fullest example of the approach (Pearse and Crocker, 1943). Built

in 1934-35 to an inspired design by sir Owen Williams, the centre did not accept individuals as patients but entire families as 'members'. It had a proactive philosophy towards residents within pram-pushing distance, screening them with periodic 'overhauls' so that health would spread out through the population 'like an infection' (Pearse, 1950, 271).

Instead of the old consulting room -visited only in sickness- the centre offered community facilities for fitness and sound diet, a swimming pool, a gym, a theatre with a dance floor and allotment gardens. To support its eugenic philosophy of 'biological cultivation' the centre had its own laboratory where white-coated staff kept detailed records of family and environment. The holistic Peckham approach reunited the environmental and eugenic strands of public health debate. More, it reinserted a compelling medical rationale into town planning (Huxley, 1941). In the postwar world, community-based medical teamwork would replace the isolated doctor (Summerskill, 1944). Duly apportioned in relation to population numbers -the Reith Committee tried to calculate the thresholds- health centres would join schools, shops, meeting rooms and sports facilities in the basic infrastructure package of every new planned neighbourhood (Rowntree, 1950). Town planning and preventative medicine joined in a paradigm of rational, unitised welfare provision.

'The main purpose of town planning today is to secure the health of the people, in their homes and surroundings, and at their places of work' (Forshaw, 1943). So began the 1943 Chadwick Public Lecture of the Royal Sanitary Institute, entitled *Town Planning and Health*. The speaker was J. H. Forshaw, architect to the London County Council and collaborator with Sir Patrick Abercrombie on the archetypal 1943 plan to remodel the capital city on the cellular principle (Hebbert, 1998, 69). Forshaw showed how this design paradigm conformed to current medical theory on sunlight, noise, nervous stress and fatigue. Modern motor traffic required the complete reconstruction of urban street networks -a better alternative, he thought, than the imposition of speed limits in built-up areas. Likewise, the pre-1914 housing stock was altogether unsuited to modern standards of health: 'Recent medical researches'-he cited M'Gonigle and Kirby (1936)- 'have proved that nothing less than the complete planning and reconstruction of whole areas will suffice' (Forshaw, 1943, 5). He did not say that most of the fabric to be cleared had been built according to the precepts of Chadwick and his fellow pioneers of the 1940s. He did not know, and would have been astonished to learn, that most would in fact survive for a further 50 years: but more of that later.

The clean-sweep approach to reconstruction was permeated by eugenic values. Informed observers such as Michael Fogarty had no

doubts that planned, cellular development could be 'a powerful means of reversing the drop in the birth-rate' (Fogarty, 1946, 108). Replacement of conventional streets by residential clusters would nurture sociability and neighbourly interaction, dispelling the acquisitive, hedonistic individualism which had pulled down the birth rate in interwar suburbia (Titmuss, 1942; MacKintosh, 1949). Neighbourhoods would provide the basis for collective welfare support to working mothers, a factor highlighted in studies of birth-rate decline (Myrdal, 1940). Lawrence Wolfe, an energetic propagandist for the theory, expounded in detail the mechanisms through which neighbourhood living would transform courtship, mating, family life and thus fertility (Wolfe, 1945, 106-31). This paradigm of the cellular city was the most powerful synthesis of medical and architecture imagery in a hundred years.

Alas, the moment of shared vision was pathetically brief. J. M. MacKintosh, Professor of Public Health at the University of London, wrote in 1953 of e immediate sense of betrayal which community physicians had felt in the setting up of the National Health Service (NHS). Instead of developing and localising the health responsibilities of councils, the Labour Government had stripped Powers and facilities from them and entrusted its NHS to appointed bodies under ministerial control (MacKintosh, 1953, 180-84), a process of demunicipalisation taken even further in the later reorganisations (McKeown, 1979, 122- 24). The physical pattern of hospital provision within the NHS was consultant led and bore no relation to town planners', population-based targets and thresholds. Griselda Rowntree's forecast (1950, 269) that 'the general practi tioner will, in future, under a comprehensive NHS, operate largely from health centres provided with the necessary equipment and staff' was off the mark. Far from being a national prototype, Peckham's community-based health experiment was to be unique and short lived, proving incompatible with the t herapeutic ethos of the NHS after 1945 (Ashton and Seymour, 1988, 33-35). No longer a community-based screening and diagnostic technique, epidemiology grew into a sophisticated branch of statistics, developing in medical schools the expense of social medicine (Vandenbroucke, 1994). As for depopulation, the demographic worries of the postwar world were all to do with growth.

Things were no better with the town planners. The neighbourhood concept that had been set out so confidently in the *Dudley Report* (Central Housing Advisory Committee, 1944) simply did not work in practice. It was adminstratively impossible to match social infrastructure to discrete parcels of residential development. There was no agreement among providers on service thresholds, and the underlying *gemeinschaft* rationale seemed on closer inspection to be just 'a matter of *ex post facto* theorising' (Collison, 1954, 465) or as Jane Ja-

cobs put it more bluntly, 'a pseudo-scientific dish of mush' (Jacobs, 1961, 22-29). Epidemiological research undermined the presumed relation between urban density, layout and health (Hinkle and Loring, 1979, 309-10; Eyles and Woods, 1983, 94). As clean air legislation dispelled the smog and soot pollutions which had given urban streets so much of their bad character, even the clearance of slum districts became increasingly controversial, and its health justifications more dubious. Stung by criticisms of naive 'environmental determinism', town panning experts became reticent and incurious about the contribution of urban form to public health, or anything else.

At the end of the century it is time for fresh thinking. 'New Urbanism' and 'New Public Health', provide the opportunity.

Towards a third paradigm

'New Public Health' is the rallying call for a renaissance of health promotion and preventive medicine *(Lancet,* 1991). Just as birth-rate data spurred eugenicist in the 1930s, so preventative medicine has taken heart from long-run mortality studies showing that life expectancy in the modern world owes more to improved environmental hygiene than to the clinical interventions of doctors and hospitals (McKeown, 1979). Alarmed at the hospital sector's bottomless appetite for resources, politicians have been receptive to innovative public health approaches as a means of improving value for money in the NHS. There has been a brisk international traffic in policies since the World Health Organisation's (WHO) *Ottawa Charter* (1986) set out its model of health through community enablement, directly challenging the 'professional power and prestige' and 'mystified knowledge' of the clinical physician (Ashton and Seymour, 1988, 37). This discourse has matched preoccupations of the 1990s with global warming and sustainable development. Practitioners of the new public health need to have a good grounding in ecology and a vision of how to reconcile the natural and the built environments. They need to revisit all the topics of the old public health-housing, food, water, sanitation, education, occupation, transport, genetics and microbiology, and medical and social services-and re-examine them with ecological eyes (Ashton, 1991a, 190).

Ashton's challenge has been taken up by at least some health authorities through participation in Local Agenda 21. One practical manifestation of the movement is the WHO 'Healthy Cities' initiative, an international network for preventative medicine. Echoing the network and activities of the Health of Towns Association in the 1840s, it offers a direct link back to the professional origins of public health. Examining the parallels between new and old sanitarianism, Ashton and Ubido (1991, 180) omit one very significant contrast. The 'New Public Health' people seem to have little interest in urban morphology. Even when

writing specifically about towns, the focus of their literature is on delivery systems, financial and educational mechanisms (Allen, 1992; Ashton, 1991b). All 12 contributions to an edited collection of papers on the Healthy Cities project (Davies and Kelly, 1993) are procedural in tone -they deal with intersectoral collaboration, community ownership, managerial accountability, empowerment and participation, indicators, action strategies, 'interdisciplinary knowledge bridges', and postmodernity- but have nothing to say about town planning: 'Planning see Policy' is the index entry. Where, you wonder, are the streets and buildings? (See equally Schell and Ulijaszek, 1999).

Meanwhile, after half-a-century's mindless cloning of landscaped distributor roads and monofunctional development cells, the town planning profession has begun a tentative rediscovery of the street (Kunstler, 1993; Katz, 1994). Intellectual leadership in tackling the 'dish of mush' of conventional planning theory has come from the USA, where the crisis of urbanism is deepest, in the formation of the Congress for the New Urbanism (CNU) in 1995 and the publication of its manifesto, the CNU Charter, in 1996. Though not as strongly mobilised as the CNU, there are similar currents wherever planning is practised: as Nan Ellin (1996) has shown, the New Urbanism draws upon a dense international traffic in influences and examples. In essence, the movement seeks to revive or emulate the qualities of the compact, mixed-use urban street, Vitruvius is once again read and admired. Nineteenth-century instruments of design control -frontage line, cornice line, height control- have been revive in an effort to rebuild frontages and recover the density and mixture which characterise successful cities (Fig. 6). The New Urbanism has given rather more attention to the concerns of the New Public Health than *vice versa*. Many of the arguments for neo-traditional street design have a bearing on preventative medicine in its widest sense. Halpern's important work on mental health and building form suggests that, other things being equal, people are inclined to feel more confident and sociable in neighbourhoods which mesh together a variety of activities and tenures. Radburn-style pedestrian access layouts have proved to generate more fear and anxiety than community spirit (Halpern, 1995). The cul-de-sac gives privacy to the family but also -as Jane Jacobs (1961) observed, and recent research confirms- to the burglar and car thief (Hope and Shaw 1988; for ongoing work at the Bartlett School see *www.spacesyntax.com).*

Fifty years ago town planners tried to nurture social cohesion in the closed environments of culs-de-sac and neighbourhood units, today they seek it in open thoroughfares and public spaces. A growing body of research on 'civility' in public spaces -reviewed by Young (1995)-contrasts the privatised, segregated world of car-based suburbia with the democratic het-

erogeneity of high-street pavements, where ages, classes, genders and ethnicities mingle impersonally. Designers have rediscovered the many advantages of conventional terraced housing that fronts on to the street (Sherlock, 1991). The New Urbanism draws strongly upon arguments of environmental sustainability, put provocatively in the European Commission's *Green Paper on the Urban Environment* (Commission of the European Communities, 1990). Strands in the subsequent wide ranging debate have been the contribution of compact, mixed-use urban environments toward public-transport use and pedestrianism, and the energy efficiency of street-based building forms (Jenks et al., 1996). There has been a revival of interest in the Vitruvian concern of the early sanitary reformers with the contribution of street layout and tree planting to channel fresh air and create a good microclimate at ground level (Spirn, 1987; Platt et al., 1994).

Jane Jacobs used her home neighbourhood of Hudson Street, Lower Manhattan as an example of a functioning urban district. The New Urbanism draws similarly on big-city experience to argue the viability of the street-based neighbourhood. Paris dominates the extensive French literature, not least through the generation of architects and urbanists who rediscovered *la rue* in the events of 1968. London, thanks to the failure of J. H. Forshaw's ambitions for the clean sweep of the pre-1914 fabric, offers the main point of reference for British exponents of the mixed-use, mixed-class urban district (Sherlock, 1991; Tibbalds, 1992; Aldous, 1997). The medical historian Roy Porter of the Wellcome Institute writes of the city's deeply livable quality... a customary urban texture, small-scale, cheek-by jowl, with houses close to shops, small factories and school, and open spaces and centres of business and community life, and people who like the feel of the streets. (Porter, 1994, 387)

London is instructive for the purposes of this paper. With an overall 4300 persons to the square kilometre, it is the densest metropolis in Britain. Large tracts of the capital show up in national maps of social deprivation, poverty and unemployment: but the profile for health and illness is immediately different (Forrest and Gordon, 1993). Making due statistical allowance for social and demographic factors, London districts have consistently and significantly lower levels of mortality on almost all counts and lower morbidity rates than comparable urban areas elsewhere in Britain (Benzeval et al., 1992). While the national suicide rate rises, the capital's is falling (Congdon, 1996). Since 1992 the government has set 28 'Health of the Nation' indicators for health authorities, with target dates for achievement. Most of London's 16 authorities are set to achieve most of the targets, and for some performance measures -notably the accident rate for children and young adults- London as a whole had already achieved in 1995 the national targets for the year 2005 (Hamm et al., 1997).

Despite significant differences between inner and outer parts of the conurbation (Bardsley and Morgan, 1997) the strength of London's overall performance invites further investigation. What is the contribution of New Urbanist factors? A study of *London's Urban Environmental Quality* (Tibbalds et al., 1993) commissioned by the London Planning Advisory Committee found Londoners appreciative of the human scale and legibility of their streets, and despite high residential densities, remarkably unaffected by a psychological sense of overcrowding. On issues like road safety the connection between health and urbanism is clear and direct. London's density allows it to sustain a uniquely high level of public transport provision, comparably low levels of car dependency, and a markedly better accident rate. Other dimensions -between high liveability and low suicide rates, for example, or between diet and the capital's exceptional endowment of local shops and street markets- deserve to be explored (Hebbert, 1998, 93). Perhaps they soon will be. The White Paper *A mayor and Assembly for London* (Parliamentary Papers, 1998, 75) called for an elected leader whose duties, for the first time in 50 years, would combine planning and public health within a single strategic portfolio, with sustainability as its overriding objective. Every one of the general and specific powers vested in the Mayor of London comes with a duty attached to have regard to the health of persons in London (Greater London Authority Act 1999, Part II, *passim).* There has never been a better opportunity to mesh the agendas of the New Public Health and New Urbanism.

Conclusion

Many other stories can be told about flesh and stone, medicine and urbanism. This paper has said nothing about Haussmann's incisions *(percements)* or Mussolini's guttings *(sventramenti)* or how cleverly Le Corbusier harnessed the existing international momentum of hygienism to the agenda of architectural modernism. We have focused on two paradigms of urban layout with a basis in public health: one open, the other closed. In reaction to the dense cellular infill of the industrial revolution, the sanitarians of the 1840s put their trust in a connected grid of open paved thoroughfares. A hundred years later, in reaction against the decentred sprawl of byelaw terraces and interwar semis, their successors sought to rebuild the city as a cluster of closed cells planned, as Lewis Munford would put it, for 'fecundity'.

Do town planning and public health now point towards a third paradigm? If so, it draws dialectically upon what has gone before. The New Urbanism has returned to the thoroughfare. The connecting street, prized by the sanitarians but abandoned in Garden City design, is again in favour (Cowan, 1998) and the reverse applies to closed culs-de-sac (Department of the Environment, Transport and the Regions,

1998). What remains most strongly of the middle paradigm within the New Urbanism is the value attached to the natural environment. The manifesto of the Congress for the New Urbanism (Congress for the New Urbanism, 1998) retains many of the basic policy ideas of the Garden City movement in its emphasis on the control of metropolitan expansion through green belts, and on treeplanting and landscaping within the home neighbourhood.

But then it says, and this is the key, that the primary task of all urban architecture and landscape design is the physical definition of streets and public spaces as places of shared use (Congress for New Urbanism, 1998): a very old idea, but also radically new and, surely, healthy.

References

AALEN, F. H. A. (1992), 'English origins' in S. Ward (ed.), *The Garden City-Past Present and Future,* London, E & FN Spon, 28-48.

ABERCROMBIE, SIR P. (1943), *Town and Country Planning* (Second edition), Oxford, Oxford University Press.

ADAMS, A. M. (1994), 'The healthy Victorian city: the old London street at the International Health Exhibition of 1884' in Z. Celik, D. Favro and R. Ingersoll, *Streets: Critical Perspectives on Public Space,* Berkeley and Los Angeles, University of California Press, 203-12.

ALDOUS, T. (1997), *Urban Villages: A Concept for Creating Mixed-Use Urban Development on a Sustainable Scale* (Second Edition), London, Urban Villages Forum.

ALLEN, P. (1992), *Off the Rocking Horse: How Local Councils can Promote Our Health and Environment,* London, Green Print.

AMERICAN ASSOCIATION OF PUBLIC HEALTH (1939), *Basic Principles of Healthful Housing,* Washington, DC, American Association of Public Health.

ASHTON, J. (1991a), 'Sanitarian becomes ecologist: the new environmental health', *British Medical Journal,* 302, 189-90.

ASHTON, J. (1991b), 'How to "do" health', *Town and Country Planning,* December, 328- 29.

ASHTON, J. and SEYMOUR, H. (1988), *The New Public Health,* Milton Keynes, Open University Press.

ASHTON, J. and UBIDO, B. (1991), 'The healthy city and the ecological idea', *Journal o/ the Society for the Social History of Medicine,* 41**,** 173-80.

ASHWORTH, W. (1954), *The Genesis of Modern British Town Planning,* London, Routledge Kegan Paul.

BARDSLEY, M. and MORGAN, *D.* (1997), 'Deprivation and health in London: an overview of health variations within the capital', *London Journal,* 22, 142-59.

BEAUFOY, S. L. G. (1932), *Six Aspects of Town Planning,* London, P. S. King & Son-)

BENTON, T. and BENTON, C. (1975) *Form and Function: A Source Book for History of Architecture and Design 1890- 1939,* London, Crosby Lockwood Staples.

BENZEVAL, M., JUDGE, K. and SOLOMON, M. (1992), *The Health Statllo Londoners: A Comparative Perspectzve,* London, King's Fund Institute.

BRABAZON, LORD, EARL OF MEA (1886), *Social Arrows,* London, Longrnans, Green.

CENTRAL HOUSING ADVISORY COMMITTEE (1944), *Design of Dwellings* (report by the Design of Dwellings Subcommittee of the Central Housing Advisory Committee, and report of a Study Group of the Ministry of Town and Country Planning and Layout in Relation to Housing), London, HMSO.

COLLISON, P. (1954), 'Town planning and the neighbourhood concept', *Public Administration,* vol, 463-68.

COMMISSION OF THE EUROPEAN COMMUNITIES (1990), *The Green Paper of the Urban Environment,* Brussels, Commis sion of the European Communities.

CONGRESS FOR THE NEW URBANISM (1998), *Charter for the New Urbanism,* San Francisco, Congress for the New Urbanism.

CONGDON, P. (1996), 'The epidemiology of suicide in London', *Journal of the Royal statistical Society,* 159, 515-33.

COWAN, R. (1998), *The Connected City,* London, Urban Initiatives.

DAUNTON, M. J. (1983), 'Public place and Private space: the Victorian city and the working-class household' in D. Fraser and A. Sutcliffe (eds), *The Pursuit of Urban History, London, Edward Arnold, 212-33.*

DAVIES J. and KELLY, M. (1993), *Healty Cities: Research and Practice,* London, Routledge.

DEPARTMENT OF THE ENVIRONMENT, TRANSPORT AND THE REGIONS (1998), *Places, Streets and* Movemen: *A Companion Guide to Design* Bullettin *32,* London, Department of Environment, Transport and the Regions.

EDWARDS, R. T. (1913), 'A criticism of the Garden City movement', *Town Planning Review,* 3 150-57

*ED*WARDS, R. T. (1946), *Modern Terrace Houses: Researches on High Density Development,* London, John Tiranti for The Chadwick Trust.

EDWARDS (1968), *Towards Tomorrow architecture,* London, Phoenix House.

ELLIN N. (1996), *Postmodern Urbanism, Oxford, Blackwell.*

EYLES J. and WOODS, K. J. (1983), *The* Social geography *of Medicine and Health, London, St. Martin's Press.*

FAIRBAIRN, SIR W. (1836), *Observations of improvements of the Town of Manchester,* Manchester, Robert Robinson.

FINER, S. E. (1952), *The Life and Times of Sir Edwin Chadwick,* London, Methuen.

FITZPATRICK, M. S. (1978), *Environmemal Health Planning: Comnmnity Development Based on Environmental and Health Precepts,* Cambridge, MA, Ballinger.

FORSHAW, J. H. (1943), *Town Planning and Health* (A Chadwick Public Lecture, held under the Bossom Gift, delivered at The Royal Sanitary Institute on 11 November 1943), Westminster, P. S. King & Staples Ltd.

FOGARTY, M. P. (1946), *Town and Cotmtry Planning,* London, Hutchinson.

FORREST, R. and GORDON, D. (1993), *People and Place-a 1991 Census Atlas of England,* Bristol, School for Advanced Urban Studies, University of Bristol.

GIBBERD, F. (1953), *Town Design,* London, Architectural Press.

GIROUARD, M. (1990), *The English Town,* New Haven and London, Yale University Press.

GLASS, D. V. (1936), *The Struggle for Population,* Oxford, Oxford University Press.

HALEY, B. (1978), *The Healthy Body and Victorian Culture,* Cambridge, MA, Harvard University Press.

HALPERN, D. (1995), *Mental Health and the Built Enviromnem,* London, Taylor & Francis.

HAMM, J., MORGAN, D., JACOBSON, B. and BARDSLEY, M. (1997), *Will London Meet Health of Nation Targets? Projecting Health of the Nation Mortality Indicators* (Discussion Paper 2, The Health of Londoners Project), London, East London and The City Health Authority, Directora te of Public Health.

HEALTH OF TOWNS ASSOCIATION (1846), *Address to the Inhabitants of Ma11chester and Salford: W'hy are Towns Unhealthy?,* Manchester, Care and Sever.

HEBBERT, M. (1998), *London: More by Fortune than Design,* Chichester and New York, Wiley.

HILL, H. W. (1916), *The New Public Health,* New York, Macmillan.

HINKLE, L. E. and LORING, W. C. (1979), *The Effect of Man-Made Environment on Health and Behaviour,* Tunbridge Wells, Castle House Publications.

HOPE, T. and SHAW, M. (eds) (1988), *Community Crime Reduction,* London, HMSO.

HOWARD, SIR E. (1946), *Garden Cities of Tomorrow,* London, Faber.

HOWE, G. M. (1972), *Man, Environment and Disease in Britain,* Harmondsworth, Penguin.

HOWE, G. M. (1980), *Environmental Medicine,* London, William Heinemann Medical.

HUXLEY, J. (1941), 'Health for all,' *Picture Post,* (special edition, 'A Plan for Britain'), 10, 32-35.

JACOBS, J. (1961), *Life and Death of Great American Cities,* New York, Random House.

JENKS, M., BURTON, E. and WILLIAMS, K. (eds) (1996), *The Compact City-A Sustainable Urban Form?,* London, E & F N Spon.

KATZ, P. (1994), *The New Urbanism,* New York, McGraw-Hill.

KUNSTLER, P. (1993), *The Geography of Nowhere,* New York, Simon & Schuster.

LANCET (1991), 'What's new in public health?' (editorial, 8 June), *The Lancet,* 337, 1381-82.

LEWIS, R. A. (1952), *Edwin Chadwick and the Public Health Movement 1832-1854,* London, Longmans.

McCLEARY, G. F. (1937), *The Menace of British Depopulation,* London, Allen & Unwin.

M'GONIGLE, G. C. M. and KIRBY, J. (1936), *Poverty and Public Health,* London, Gollancz, the Left Book Club.

McKEOWN, T. (1979), *The Role of Medicine: Dream, Mirage or Nemesis?,* Oxford, Blackwell.

MACKINTOSH, J. M. (1949), 'Housing and the home-the new outlook' in A. Massey (ed.), *Modern Trends in Public Health,* London, Butterworth, 249-73.

MACKINTOSH, J. M. (1953), *Trends of Opinion about the Public Health 1901-1951,* Oxford, Oxford University Press.

MASTERMAN, C. (1911), *The Condition of England,* London, Methuen.

MUMFORD, L. (1938), *The Culture of Cities,* London, Martin Secker & Warburg.

MUTHESIUS, S. (1982), *The English Terraced House,* New Haven and London, Yale University Press.

MYRDAL, G. (1940), *Population: a Problem for Democracy,* Cambridge, MA, Harvard University Press.

PARLIAMENTARY PAPERS (1840), *Select Committee on the Health of Towns,* Parliamentary Papers, XI, London, HMSO.

PARLIAMENTARY PAPERS (1844), *First Report of the Commission of Inquiry into the State of Large Towns and Populous Districts,* Parliamentary Papers, XVII, London, HMSO.

PARLIAMENTARY PAPERS (1845), *Second Report of the Commission of Inquiry into the State of Large Towns and Populous Districts,* Parliamentary Papers, XVIII, London, HMSO.

PARLIAMENTARY PAPERS (1904), *Report of the Inter-Departmental Committee on Physical Deterioration* (Cd 2210), Parliamentary Papers, London, HMSO.

PARLIAMENTARY PAPERS (1998), *A Mayor and Assembly for London: the Government's Proposals for Modernising the Governance of London* (Cm. 3897), Department of the Environment, Transport and the Regions, Parliamentary Papers, London, HMSO.

PARRY LEWIS, J. (1964), *Building Cycles and Britain's Growth,* London, Macmillan.

PEARSE, I. H. (1950), 'Planning for health' in J. Tyrwhitt (ed.), *Town and Country Planning Textbook,* London, Architectural Press, 271-83.

PEARSE, I. H. and CROCKER, L. J-1. (1943), *The Peckham Experiment: A Study in the Living Structure of Society,* London, George Allen & Unwin.

PETERSON, J. A. (1979), 'The impact of sanitary reform upon American urban planning', *Journal of Social History,* 13, 84-89.

PLATT, H. J. R., ROWNTREE, R. A. and MUICK, P. C. (eds) (1994), *Ecological City: Preserving and Restoring Urban Diversity,* Amherst, MA, University Press.

PLATT, H. L. (1995), 'Invisible gases: smoke, gender and the redefinition of environmental policy in Chicago 1900-1920', *Planning Perspectives,* 10, 67-97.

PORTER, R. (1994), *London, A Social History,* London, Hamish Hamilton.

RAVETZ, A. (1991), 'The lost promise *of* the healthy city', *Town and Country Planning,* 60, 323-34.

ROBERTSON, J. (1919), *Housing and Public Health,* London, Cassell.

ROWNTREE, G. (1950), 'Statutory health and education services' in J. Tyrwhitt, *Town and Country Planning Textbook,* London, Architectural Press, 257-83.

ROYAL INSTITUTION OF BRITISH ARCHITECTS (1933), *The Orientation of Buildings* (Report of the RIBA Joint Commitee on the Orientation of Buildings), London, Royal Institution of British Architects.

SCHELL, L. M. and ULIJASZEK, S. (1999), *Urbanism, Urbanisation, Health and Human Biology,* New York, Cambridge University Press.

SENNETT, R. (1995), *Flesh and Stone: The Body and the City in Western Civilization,* London, Faber & Faber.

SHERLOCK, H. (1991), *Cities are Good for Us,* London, Longman.

SIMON, SIR J. (1890), *English Sanitary Institutions,* London, Cassel.

SPIRN, A. W. (1987), 'Better air quality at street level: strategies far urban design' in A. V. Moudon (ed.), *Public Streets for Public Use, N*ew York, Van Nostrand Reinhold, 310-20.

SUMMERSKILL, E. (1944), 'Planning for health' in Rt. Ron. Lord Horder (ed.), *Health and Social Welfare 1944-45,* London, Todd Publishing.

TAUT, B. (1920), *Die Aujlosung der Stadte, H*agen, Folkwang Verlag.

TIBBALDS, F. (1992), *Making People-Friendly Towns,* London, Longman.

TIBBALDS, COLBOURNE, KARSKI, WILLIAMS, MONRO (1993), *London's urban Environmental Quality,* London, London Planning Advisory Committee.

TITMUSS, R. M. (1942), *Parents' Revolt: A study of the Declining Birth Rate in* Acquisitive *Societies,* London, Secker & Warburg.

TOWN AND COUNTRY PLANNING (1998), 'One hundred years of tomorrow' (Special supplement), *Town and Country Planning,* October.

TWICHELL, A. (ed.) (1941), *Housing for Health* (Committee on the Hygiene of Housing, American Public Health Association), Lancaster, Pennsylvania, The Science Press Printing Co.

VANDENBROUCKE, J. P. (1994), 'new public health and old rhetoric', *British Medical Journal,* 308, 994-95.

WARD, S. (ed.) (1992), *The Garden City Past, Present and Future,* London, E & F N Spon.

WATSON, J. P. and ABERCROMBIE, SIR P. (1943), *A Plan for Plymouth,* Plymouth, Underhill.

WINTER, J. (1993), *London's Teeming Streets,* London, Routledge.

WOHL, A. A. S. (1983), *Endangered Lives: Public Health in Victorian Britain,* London, Dent.

WOLFE, L. (1945), *The Reilly Plan: A New Way of Life,* London, Nicholson & Watson.

WORLD HEALTH ORGANISATION (1986), *The Ottawa Charter for Health Promotion,* Washington, World Health Organisation.

YOUNG, K. (1995), 'Public space and civility' in A. H. Halsey, R. Jowell and B. Taylor (eds), *The Quality of Life in London,* Aldershot, Dartmouth, 47-63.