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RESEARCH PAPER

Lessons from nineteenth-century advocacy in the USA for urban parks as antidotes for ill health

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One of the forces which led to parks becoming an integral part of cities' infrastructure in the mid- and late nineteenth century in the USA was a widespread perception that they contributed to alleviating disease contagion and epidemics. This paper identifies six strategies that were effective in this successful movement which appear to have relevance in the contemporary context. Four of these contribute to the central challenge of positioning parks so parks are recognized as a component to be included in the multifaceted effort to address the obesity epidemic: conceptual alignment, cost-effectiveness, associative positioning and psychological positioning. The other two pertain to the tactical use of science to support advocacy and the need to secure influential champions.

Keywords: urban parks; nineteenth century; health strategies; disease contagion; miasmas

A previous paper published in this journal documented the health rationale articulated by physicians and sanitarians in support of urban parks in major US cities between 1845 and 1885 (Crompton, 2013). Large urban parks first emerged in the USA in the eastern cities. The case for investing in them was made in three reports on sanitation that were authored primarily by physicians which focused on New York City (Griscom, 1845), 13 large cities (American Medical Association [AMA], 1849) and Massachusetts (Commissioners for the Sanitary Survey of the State of Massachusetts, 1850). All three reports relied heavily in both content and process on the pioneering report of the Great Britain Poor Law Commission (GBPLC) published in 1842. This was primarily the work of the Commission's CEO, Sir Edwin Chadwick, and it is colloquial known as "The Chadwick Report."

Like their British counterparts, the US medical community believed that the squalor and filth which characterized living conditions in cities created miasmas (obnoxious gases) that were the source of all diseases. Urban parks were perceived to provide oxygenized oases that offered protection against miasmas. Thus, they were viewed by governmental entities as contributing to reducing societal costs associated with pauperism and lost labour productivity, while individuals viewed parks as offering a defence against disease contagion and epidemics.

The health rationale was only one of multiple forces that created the political momentum to invest in urban parks. Other prominent rationales included: raising real

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estate values, enhancing a city's image, sustaining workers' productivity, encouraging social cohesion, alleviating crime, exercising control over the behaviours of the working classes, facilitating democratic equality and social integration, promoting education and self-improving forms of leisure, stimulating tourism, protecting water supplies and creating enclaves for the rich so they were segregated from the poor.

A similar smorgasbord of rationales is used today to support the case for sustaining or increasing investment in urban parks. They can be classified into three main categories: (1) environmental sustainability which embraces protecting drinking water, controlling flooding, cleaning air, reducing energy costs and preserving biological diversity (Crompton, 2008a); (2) alleviating social problems such as reducing environmental stress, community regeneration, cultural and historical preservation, alleviating deviant behaviour among youth, raising levels of educational attainment and alleviating unemployment distress (Crompton, 2008b); and (3) enhancing a community's economic prosperity through attracting tourists, raising real estate values and improving quality of life so a community is better able to attract businesses and affluent retirees (Crompton, 2007).

Just as the health rationale was prominent among the multiple driving forces in the nineteenth century, so it is prominent in contemporary advocacy efforts for urban parks. The intent of this paper is to identify what can be learned from the successful effort in the nineteenth century to establish public parks as a core element of a city's infrastructure. The roles of parks are organic as they change to accommodate evolution in societal environments (Cranz, 1982). Thus, there are obvious dangers in taking strategies that were effective in the nineteenth century and applying them to a contemporary context. Four caveats are recognized.

First, there are contextual differences between campaigning for public parks to be accepted as a new government responsibility, and seeking resources to sustain existing twenty-first-century park systems when government's responsibility for them is well established. In rapidly urbanizing developing countries, the issue of investing in urban parks may be as significant as it was in the nineteenth-century North America and Europe. However, in many communities in these latter contexts, the focus is no longer on establishing new urban parks, rather it is on securing funds to: (1) renovate parks that have been allowed to deteriorate and then maintain them so such deterioration does not reoccur (in the context of this paper, debilitated parks impose health care costs); (2) invest in new park-like environments, such as trails; and (3) invest in programmes that stimulate active, as opposed to passive uses of them.

A second caveat is that the difference in macro-environmental conditions between the two eras makes it unlikely that strategies which led to success 150 years ago will produce a definitive "map" of specifics on how to proceed today. Prominent among these factors is the greater inclusiveness, and hence increased complexity, of contemporary society. In nineteenth-century North America "top down" political decision-making dominated, so a relatively small number of influential business interests, elected officials and senior bureaucrats could "make a difference." Increased democratization, fuelled in the past decade by the emergence of social media, means that "bottom up" influences now direct most actions.

This democratization has spawned a plethora of constituency groups and has made the negotiation of common agendas among them challenging. Thus, the multifaceted urban parks constituency may be comprised of lobby groups, such as large non-profits (e.g., in North America, Trust for Public Land, City Park Alliance, National Recreation and Park Association); municipal parks/leisure agencies; friends of parks support groups;

park-related professionals; academics; and sympathetic preventive health sector individuals and organizations. If there is to be a coherent message that resonates and gains traction in society, then all these groups have to "sing from the same sheet music." Similarly, if the health role of urban parks is to be effectively consummated, then the message has to translate into action by multiple health constituencies including the preventative health care sector, insurance companies and governments at all levels that are involved in funding health care.

As in the nineteenth century, health care is a central societal issue today. The dangers from miasmas were widely recognized, just as there is widespread acknowledgement of the contemporary costs of obesity. However, there is a distinction which constitutes a third caveat. In the nineteenth century only the wealthy could respond to miasmas, which they did by living close to open spaces. For the poor, no such option was available. Today, all segments of society have the option of engaging in behaviour that will prevent obesity but may decline to avail themselves of that opportunity.

The fourth caveat is that while the miasmatic theory of disease was widely embraced by the medical community, it was entirely erroneous. It was gradually displaced in the last quarter of the nineteenth century by germ theory. However, even after it had been discredited by medical authorities, its influence remained a part of society's conventional wisdom into the early decades of the twentieth century (Duffy, 1992). It may be thought by some that seeking historical lessons drawn from a flawed theory is opportunistic at best and cynical at worst. The argument being deployed could be seen as: it does not matter how dubious the case is, as long as people believe it.[1] However, this argument is countered by the widespread recognition that the physicians and sanitarians advocating for parks were not charlatans who were knowingly engaged in deceptive, dishonest quackery. They were sincere in embracing miasmatic theory. Indeed, their general instincts to remove filth and create clean open spaces were well-founded, because the excrement and putrefaction were breeding grounds for disease-carrying flies and air and water-borne germs.

Notwithstanding these caveats, there is merit in seeking insights from the past. There is an aphorism which states, "If we forget our history, we forever remain children." It recognizes that children have no institutional memory to guide their actions. This means much of their learning is trial and error, so they "reinvent the wheel." In contrast, knowledge of history may provide useful guidance for contemporary actions.

An analysis of how the health care rationale was used to justify urban parks in the USA in the nineteenth century (Crompton, 2013) suggested six strategies that appear to have relevance in the contemporary context. Four of these contribute to the central challenge of positioning parks so parks are recognized as a component to be included in the multifaceted effort to address the obesity epidemic. The other two pertain to the tactical use of science to support advocacy and the need to secure influential champions.

Positioning parks

A position refers to the place that parks occupy in the minds of the general public, elected officials and the media relative to other services that are competing for public tax dollars (Crompton, 2007). The failure of many city governments to provide sufficient funding to sustain and support urban parks suggest that in the minds of most contemporary stakeholders parks are perceived to be a relatively discretionary non-essential service.

They are nice to have, but resources allocated to them will be limited to what can be afforded after the important essential core services of a city have been funded.

In contrast to this prevailing contemporary perspective, nineteenth-century park advocates successfully positioned parks as essential facilities in which governments should invest because they were part of the solution to the major societal problem of alleviating disease contagion and epidemics. Four complementary strategies coalesced to establish this position: conceptual alignment, cost-effectiveness, associative positioning and psychological positioning. Each of these strategies is described in the following sections, together with a discussion of how they might inform current efforts to position parks as antidotes to ill health.

Conceptual alignment

The contention of medical authorities in the mid-nineteenth-century sanitation reports that parks reduced miasmas were conceptually and intuitively appealing. There was a clear conceptual linkage between filth, squalor and miasmas, and disease contagion and the societal costs associated with it. The linkage appealed to simple logic and was "common sense." Hamlin (1998) observed, "At least in principle, sanitation was an easy sell," noting that in the 1840s "one could no more object to the idea than we can to the idea of environmental sustainability" (p. 245). Hamlin's selection of environmental sustainability as his analogy is illustrative of the natural fit of parks with the contemporary political agenda.

In a contemporary context, there is similarly a clear conceptual linkage between health care costs, obesity, physical activity and parks. This linkage provides an opportunity to establish intuitive acceptance of the contribution of parks to alleviating ill health and health care costs among taxpayers and elected officials. Godbey (1991) observed:

> Citizens will be much more likely to willingly pay for [park] services if they understand that paying more for such services means paying less (saving) for health care. While documentating specific health care benefits is important, it is more important that the public and political decision-makers first understand the concept – public recreation, park and leisure services are health services. (p. 74)

Establishing conceptual linkages that offer pathways to resolving major issues is the potential common ground and platform which can be used by advocates to forge a partnership with elected officials. Policy-makers tend to be concerned with broad purposes and solution frameworks, rather than with specific details relating to implementation which properly should be the purview of staff. The emphasis in the past decade on ecological models of physical activity promotion that focus on "activity-friendly neighborhoods" (Lee & Moudon, 2004), rather than on specific programmes is the kind of conceptual platform that resonates easily with constituents and elected officials. It is reflective of the sanitation scenario in that, "Mid-nineteenth-century England's 'sanitary' idea made popular the notion that the physical environment exercised a profound influence over the well-being of the individual: that health depended on sanitation" (Melasi, 2000, p. 43).

The contemporary obesity epidemic is caused by poor lifestyle decisions, particularly poor diet and lack of physical activity, and its resolution depends on changes in behaviour rather than on medicinal drugs. There is widespread acceptance that a needed central

behavioural change is regular physical activity. This is an individual, not a societal, responsibility. Nevertheless, some tentative evidence has emerged in the past decade to support advocates' views that societal investments in infrastructure may have a role in facilitating physical activity. A review of studies that investigated the relationship between how close people live to a park and their level of physical activity concluded: "How close a person lives to a park or recreation opportunity has a great influence on whether or not they participate and how frequently they participate. Closer is better and more is better" (Mowen & Godbey, 2010, p. 28). The most frequently cited benefit associated with visiting local parks relates to exercise (Godbey, Graefe, & James, 1993). Hence, the general public's behaviour suggests that the linkage with health is already in place, but it has not been viewed within the health care framework: "While local recreation and park agencies are sometimes only beginning to think of themselves as health or wellness organizations, perhaps the public already does so" (Godbey et al., 1993, p. 111). This suggests there is dissonance between apparent lack of conscious awareness of the relationship between parks and health among large segments of the population, and their actions in using parks for exercise.

Like the ravages of cholera and other epidemics in the nineteenth century, overweight and obesity are recognized as an "epidemic" in the USA today (Lobstein, 2010). In a review of the empirical literature its authors concluded:

> Obesity, to a greater degree than smoking or problem drinking, has been found to be linked to chronic medical conditions and diminished quality of life. Furthermore, excess medical costs attributable to obesity have been found to equal or exceed those of smoking in the USA. (Withrow & Alter, 2011, p. 131)

The rate of increase in obesity in the past two decades is dramatic. According to the National Health and Nutrition Examination Survey, obesity prevalence in the USA in 2007–2008 was 32.2% and 35.5% among adult males and females, respectively. This represented a more than a 100% increase from 1976–1980 and a 50% increase from 1988–1994 (Flegal, Carroll, Ogden, & Cartin, 2010). Its prevalence among children is perhaps even more disturbing: "As with adults, adiposity among children has also reached epidemic proportions. Taking Europe as a whole, some 20% of children are overweight or obese, and in North America the figure is above 30%" (Lobstein, 2010, p. 12).

When Olmsted, together with respected physicians, "fathered" the transition of the antidote-to-miasmas case for urban parks so they were integrated into the infrastructure of cities throughout the USA in the 1850s, 1860s and 1870s (Crompton, 2013), his effectiveness was attributable to the nexus being both conceptually intuitive and consistent with the prevailing ideas and issues of the day. Clearly, there is an opportunity in contemporary society to replicate the success of Olmsted and the physician leaders of the nineteenth century in doing this.

The cost-effectiveness of achieving health outcomes through investing in parks

In the political arena it is almost always advantageous to frame an issue in economic terms when presenting a case to a legislative body and to taxpayers. The costs of providing and maintaining parks are relatively easy to derive. Without a calculation of approximate economic benefit, there is an inherent imbalance in the information used to make decisions.

Chadwick's entrée into the sanitation issue though the GBPLC was precipitated by the economic costs of ill health, not by altruism or humanitarianism (Crompton, 2013). He pointed out that much pauperism was caused by disease and emphasized the consequent cost to the middle- and upper-class taxpayers who were legally obligated to provide welfare support for paupers. Since these were the voting classes who controlled political action, this was an effective strategy in mobilizing national support. Throughout his report, Chadwick stressed the cost-effectiveness of prevention measures. Indeed, a major section of the report was exclusively devoted to making this case. This theme was reiterated in the USA in the Massachusetts Commission report (1850), which estimated the annual costs of disease in Massachusetts to be at least $7.5 million.

Chadwick suggested there were four types of health costs: (1) welfare for paupers; (2) treatment paid for by families if they had the means; (3) treatment costs absorbed by providers if they were destitute; and (4) lost productivity from workers. A contemporary taxonomy that classifies health care costs in the USA associated with obesity into five categories is broadly similar to Chadwick's:

(1) Government payments for senior citizens and the economically disadvantaged through Medicare, Medicaid and unemployment and disability benefits.
(2) Treatments paid by insurance premiums, if people have insurance, and deductibles people pay directly.
(3) Treatment costs of the uninsured which health care providers are required by law to absorb. In effect, these costs are passed through to those who are insured.
(4) Lost productivity from workers manifested by sub-optimal work and absences in the work place, and early pension payments.
(5) Costs of obesity which are not obvious and "under the radar" but are manifested in a host of contexts. For example, airlines in the USA spend more than $275 m annually in extra fuel as a result of the rise in average body weight among American adults. Burning this extra fuel releases nearly 4 million tons of CO_2 emissions along with other pollutants. Similar calculations can be assumed for Europe and other regions of the world (Lobstein, 2010, p. 13).

Dollar value estimates of the potential contribution of parks to reducing health care costs are likely to be relatively crude, imprecise and have large error margins, because such estimates involve isolating the impact of a single variable in the following set of interrelated complex causal relationships:

(1) Estimate how much levels of physical activity are attributable to the proximity of parks, since they may be influenced by multiple factors other than parks. This involves two steps: (i) how many people use a proximate park regularly and (ii) how many of these people exercise at the threshold level necessary to qualify as "physically active" during their park visits.
(2) Estimate the likely cost savings from increased physical activity in reducing obesity, recognizing that level of obesity is impacted by a plethora of other lifestyle actions and decisions.
(3) Estimate the savings from reduced obesity, attributable to physical activity, on the constantly expanding list of comorbidities. For example, over 40 medical conditions have now been associated with physical activity, and many of these are linked to obesity (Chenoweth & Associates Inc., & Health Management Associates, 2004).

The complexity of this issue means that scientists are ill-equipped to address it. The probability of them being able to provide definitive accurate dollar values on the role of parks in reducing health care costs is small. Hence, it is likely that reliance on the conceptual nexus, and gross scenario vignettes that illustrate it, is likely to remain primary. This is similar to the situation that prevailed in the nineteenth-century debate. The complexity of deriving costs made it difficult to challenge numbers put forward by advocates if they were based on intuitively reasonable premises, so as Hamlin noted (1998), "They could 'cook up' any 'bottom line' they wished" (p. 179).

Notwithstanding these limitations, the Centers for Disease Control and Prevention (CDC) reported that in 2008, obesity-related medical care costs were estimated to be as high as $147 billion; and that obese people on average spent $1400 more in medical care costs than did people at a normal weight (CDC, 2010, p. 2).

Embryonic efforts to estimate the cost savings attributable to parks in a format that conceptually resonates have been initiated by Harnik and his associates at the Trust for Public Land (Harnik & Welle, 2009). They have developed a Parks Health Benefits Calculator to measure the economic savings realized by engaging in physical activity in parks. A search of the scientific literature identified 12 studies that compared the direct medical and prescription costs incurred by active and inactive individuals in different populations (Chenoweth & Associates Inc., & Health Management Associates, 2004). Based on these empirical findings, a value of $350 was assigned as the cost difference in 2010 dollars between those who exercise regularly and those who do not. For persons over the age of 65 that value was doubled to $700 because seniors typically incur two or more times the medical care costs of younger adults. These numbers are reasonably consistent with the US$600 (2012 dollars) annual value of exercise used in Australia (cited in Veal, Toohey, & Frawley, 2012).

The key data input for determining medical cost savings in the calculator is the number of park users engaging in a sufficient amount of physical activity to make a difference. This is defined by the CDC as at least 150 minutes of moderate activity, or at least 75 minutes of vigorous activity, per week. Harnik's procedure involves conducting a telephone survey to identify activities in which residents participate and the frequency of their participation. Low heart rate activities such as picnicking, sitting, strolling and bird watching are omitted, as are those respondents who do not meet the 150 or 75 minutes a week of moderate or vigorous activity, respectively.

Table 1 shows the annual health care savings attributed to physically active users of Mecklenburg County Parks in North Carolina using the Trust for Public Land Approach (Harnik & Welle, 2009). The number of active park users was estimated at 280,626 of whom 265,503 were under 65 and 15,123 were 65 or older. The combined annual health savings attributable to the presence of parks was $103 million.

The potential of parks for enhancing physical activity lies in their familiarity, their ubiquity, and their use by most of the population. Even if their percentage contribution to reducing health costs is relatively small, when it is related to the immense costs of obesity reported by the CDC, and the relatively small cost of sustaining parks, the dollar return is large. If, for example, as a conceptual scenario, 15% of obesity costs identified by the CDC were reduced by additional physical activity in parks, this would amount to $22 billion which is approximately the aggregate annual expenditures on parks and recreation in all local communities in the USA. In short, at that level of alleviating obesity, parks would pay for themselves in health cost savings alone.

Table 1. Health care cost benefits of Mecklenburg County Parks.

Adults younger than 65 years of age	
Average annual medical care cost difference between active and inactive persons over 65 years of age	$350
Physically active in parks[a]	265,503
Subtotal of health care benefits	$92,926,222
Adults 65 years of age and older	
Average annual medical care cost difference between active and inactive persons	$700
Physically active in parks[a]	15,123
Subtotal of health care benefits	$10,585,949
Total annual value of health benefits from parks	$103,512,171

[a]Calculations based on persons engaging in moderate or vigorous activity as defined by CDC.

There is a growing recognition that the key to curtailing health care costs lies in the prevention of illness, so it does not have to be treated by the expensive medical system. Parallels with the mid-nineteenth century are obvious. The epidemics and diseases of that era were dramatically curtailed by investment in sanitation systems. The problem's solution was not improved treatment by the medical profession, it was preventing the diseases occurring through environmental changes. Similarly, while the consequences of obesity can be partially treated by the expensive medical system, the more efficient and effective alternative path is prevention and a key part of that is enhanced levels of physical exercise. There appear to be two ways in which the "parks-for-health" position could be presented so it may resonate with a generally apathetic and disinterested general public, and with sceptical legislative bodies.

A minimalist approach, following Chadwick's precedent of relying mainly on intuition, would be to present the projected various costs of Medicare, Medicaid and disability payments, and point out the intuitive potential of parks for reducing those costs. Godbey (1991) makes the intuitive economic case for investing in parks which is compelling and effective in capturing stakeholders' attention:

> The cost-to-benefit ratios are compelling. For an annual tax fee of $50 to $60 per person, a typical park and recreation agency provides a wide array of health-enhancing services. The amount paid for a typical heart bypass operation ($60,000, for example) would fund local government park and recreation services for approximately 1200 people for one year at $50 per person per year. Of those 1200 people, 948 would use such services, based on national data relating to the use of public park and recreation facilities; the nonusers would also derive considerable benefits. If you were in charge of improving health and wellness services for the American public and had a shrinking pool of money to do so, who ya gonna call? (p. 105)

Alternatively, and perhaps more convincing, would be Harnik's data-driven approach (Harnik & Welle, 2009), albeit embryonic, which provides a definitive dollar value for the preventative contributions of parks in a given city. If participation levels are not available, and the cost of a survey to determine number of physically active residents who participate in parks makes it non-feasible, then an alternative approach would be a "value transfer" whereby average participation data from other similar systems could be interpolated to illustrate the likely magnitude of health cost savings involved.

One of the challenges which inhibits the effectiveness of the economic case in the USA is the lack of a political nexus. In the nineteenth-century expenditures by a city on parks was perceived to reduce the risk of disease contagion for all its residents. In contrast, obesity is not contagious, so many in the contemporary context may not perceive they receive a "health premium" from investment in parks. Further, in the UK context there was a nexus between the costs of investment by a community of taxpayers in prevention measures and the savings accruing to them in the form of a reduced "poor rate" tax to support pauperism. In contrast, there is a disconnect in contemporary US society in the flow of dollars between government entities that invest and those which receive the financial savings. Much of the cost savings derived from encouraging physical exercise in parks is likely to accrue to hospital districts, and to state and federal agencies responsible for Medicaid and Medicare. Hence, city officials often are reluctant to invest in such programmes because they are being asked to incur the political costs of raising taxes to finance these programmes, while the political benefits go to other entities. This is a manifestation of the challenge identified in the introduction to this paper of having a multifaceted constituency all "sing from the same sheet music."

Associative repositioning through linkages with the medical community

Associative Repositioning is defined as, "Aligning with other organizations that already possess the desired position, and acquiring some of this position from the association" (Crompton, 2007, p. 87). Chadwick's sanitary initiative was spearheaded by three physicians: Thomas Southwood Smith, Neil Arnott and James Kay. All were well known for their strong beliefs in miasmatic theory and all were prominent leaders and spokesmen in society. Similarly, in the USA the role of John Griscom and many of his medical colleagues in the early years of the AMA were crucial voices in supporting the health care case for parks (Crompton, 2013).

The role of parks in sanitation reform was relatively peripheral, not central, but their positive contribution to alleviating the problem was recognized by the medical profession which was centrally involved, and thus it was embraced by policy-makers. In contemporary US society, health care professionals – nurses, pharmacists and physicians – are consistently identified as being among the people most trusted by the general public (Saad, 2010). If they were to publicly articulate the role of parks in health care, then their widely acknowledged professional credibility, believability and trust, and their social standing in communities would confer substantive credibility to the argument. An association with physicians would create a conceptual bridge for stakeholders and greatly strengthen their perceptions of the nexus between parks and health care.

Since the medical community generally recognizes the merits of physiotherapy and therapeutic recreation, extending vehicles for rehabilitation to embrace physical activity does not require additional conceptual justification. Moving from offering related but unconnected services to address health problems, to a mode of "joined-up thinking" where these complementary services collaborate closely, would appear to be a logical evolutionary stage.

Psychological positioning

Psychological positioning is intended to strengthen people's beliefs about the outcomes that emanate from services offered, so they better align with the desired position

(Crompton, 2007). In the contemporary context, it has been suggested that parks have a labelling problem (Godbey, 1993). The name describes a place, but it does not address the *purpose* of the place, that is, the benefits that accrue not only to individual users but much more importantly to the community at large since all residents are paying the taxes needed to subsidize the creation and maintenance of parks.

Four strategies have been suggested for effectively communicating benefit outcomes to the community to cement a position in people's minds: presentation of scientific information; offering testimonial evidence; meaningfully framing the issue; and the use of compatible nomenclature (Crompton, 2009). These strategies were effectively applied by nineteenth-century advocates.

Authoritative scientific information purporting to confirm miasmas as the source of disease was provided by the medical profession, while the potential role of parks in alleviating miasmas was demonstrated by Priestley's experiments in the 1770s which identified the oxygenization qualities of vegetation (Raven, Evert, & Eichorn, 2005).

Testimonial evidence in the form of anecdotes provided by literally hundreds of credible sources – most prevalently by physicians – was collated and disseminated in the Griscom and Massachusetts reports. They described the filthy and squalid conditions prevailing in New York City and Boston which both nurtured miasmas, and inhibited ventilation that open space would create to foster the clean air that was the perceived antidote to miasmas. Importantly, the anecdotes were evocative, emotional and compelling, so they provided a complementary affect dimension to the medical profession's learned cognitive explanations of miasmas. For many elected officials and taxpayers, explanatory stories are more convincing and memorable than statistical findings. As one commentator remarked, "it's not the evidence, stupid … it's the narrative" (Aschwaden, 2010, p. 32) and "powerful anecdotes trump data" (p. 37).

To secure support from the influential middle and upper classes who would determine the fate of any legislation, early park advocates framed the health issue in two ways. First, they stressed that the miasmas which launched epidemics in the squalid neighbourhoods would spread to wealthier enclaves. Second, these conditions were the source of costs in lost productivity and welfare that the wealthy would be required to pay. By conceptualizing and framing their plight in terms that adversely impacted the ruling class, advocates persuaded them that it was in their best interest to invest in infrastructure which would alleviate the problem. Reframing the issue to emphasize the political effectiveness of parks in reducing health care costs would be expedited if park professionals used the nomenclature of the health care professions in discussions of park use.

Using science tactically to support advocacy

One of the leading authorities on the use of evidence-based research in the political decision process summarizing the findings of others observed: "The reality of politics is that the only empirical evidence that actually surfaces in policy-making is cherry-picked and rose tinted." He went on to state "But I am uncomfortable with all this" (Pawson, 2006, p. xiii). Despite his discomfort, he recognized a reality of political practice. Disagreement and disputes among groups of impacted stakeholders are likely to accompany every substantive political decision. Invariably, all sides incorporate "scientific evidence" into their arguments. Indeed, an investigation into the use of research in the US Congress concluded: "The words 'research shows that' are the three most powerful words in the Capitol Hill vocabulary" (Farley, 1996, p. 774). Ostensibly, this is done to inform the discussion, but in

reality the science findings presented are likely to be "cherry-picked," since their purpose is to bolster such groups' self-interest and ideological or predetermined position on the issue.

As Hamlin (1998) pointed out, Chadwick's *modus operandi* in the UK was consistent with this approach. He was convinced that miasmas were the cause of epidemics and that sanitation improvements would solve the problem. Accordingly, he carefully selected credible experts who shared his views as his chief lieutenants (e.g., Drs Southward Smith and Arnott) and witnesses whose testimony and data would buttress his predetermined thesis. This model was dutifully followed in the three influential sanitation reports in the USA (Griscom, 1845; AMA 1849; Commissioners for the Sanitary Survey of the State of Massachusetts, 1850). Social scientists are mandated to adopt a dispassionate, disinterested, independent perspective to their work and to report their results objectively. A pervasive axiom in discussions of the implications of their work is "the brave" assumption that the "truth" will prevail and be used to guide political action (Pawson, 2006, p. 7). The model they implicitly follow is that good policy-making is a rational process driven by rigorous research and objective empirical analysis.

In contrast, elected officials, taxpayers and advocates, who are stakeholders in a particular political issue, selectively pick among science findings and use those that support their case. In their view, political decisions are driven by the value preferences of elected officials and their constituents, personal perceptions often derived from anecdotal experiences and political calculus. Their tactical use of research funding is intended to be ammunition for persuasively convincing others of the legitimacy of their previously held positions (Bogenschneider & Corbett, 2010).

Thus, there is often inherent conflict between science and advocacy. Many would argue that selective use of science by advocates is unethical. However, others would counter by suggesting that the use of science in this way by advocates is analogous to the role of courtroom lawyers whose obligation is to present findings that represent the issue in the best light, hopefully without being overtly misleading. Advocates are the messengers who shape the message. If this advocacy perspective is embraced, then to establish parks-as-health-care as a core position advocates will mould all the supportive evidence into a coherent argument and omit those science findings that are incompatible with it. This recognizes that empirical research findings to be influential in parks-as-health-care discussions have to be framed and reconciled with prevailing political value systems. This does not mean allowing bias to seep into research, but it does mean framing information in ways that comport with the underlying values of targeted political audiences. Irrespective of the moral position adopted, the reality of tactically and selectively using science findings for political ends will remain and will continue to be effective.

In addition to consciously selecting only supportive evidence, selectivity also takes place inadvertently through the way in which new information is processed. This results in those residents and elected officials who do not consciously "cherry-pick," being prone to doing it subconsciously. When they are provided with empirical evidence that is inconsistent with their existing perspective, it is often quickly dismissed. In contrast, when the evidence is compatible with their views, then it is embraced and used to reinforce that perspective.

Securing influential champions

In contemporary society, parks are not strongly aligned with the health care issue in most of the public's minds. Typically, they are neither part of the political narrative nor an

integral element in the repertoire of strategies debated when health care is discussed. This is not inconsistent with their status in the sanitary movement, where parks were a peripheral element in the overall reform strategy. However, their potential role gained momentum when influential individuals stepped forward to champion it. In the USA, the championing role was led by Olmsted, and locally influential leaders in the medical field such as Drs Holmes and Clarke in Boston, Griscom in New York and Rauch in Chicago.

The precedents of the reports led by Griscom (1845), AMA (1849), Commissioners for the Sanitary Survey of the State of Massachusetts (1850) and Raush (1869), and the local leadership in individual cities such as New York, Boston, Baltimore, Chicago and Minneapolis suggest that for parks to be perceived as part of the contemporary preventive solution to health care costs, it is imperative for their role to be embraced by both a small number of influential legislators and a few senior bureaucrats responsible for assembling major reports designed to guide policy decisions, so the parks case will be articulated in key legislative forums. At the local level, park professionals have the primary responsibility for positioning parks. Their role is not only evangelistic, it is also to identify and brief both key elected officials and influential local leaders on parks' preventive role in health care. A primary target group should be the local medical community.

Concluding comments

In the latter half of the nineteenth and in the early twentieth centuries, parks were pervasively prominent in the efforts to improve the quality of urban life. That eminent status contrasts strikingly with their standing in contemporary times where often they have been treated as a discretionary, and in some cases disposable, urban amenity. Most citizens and elected officials today view parks only as physical spaces and not as contributions to alleviating a community's health problems. The success of the strategies described here in moulding a perception that parks were contributions to alleviating the health problems of the mid-nineteenth century in the USA, suggests they might inform contemporary park advocacy efforts.

The central idea of positioning is that parks be aligned with what are perceived to be the major issues in a community. They are then likely to be perceived positively as part of the solution to a jurisdiction's problems, rather than as a discretionary service that is "nice to have" but which is a drain on a community's tax resources. Since priority issues differ among communities, salient positions adopted by park advocates will differ.

This should not lead to the concept of positioning being viewed as shallow and merely opportunistic. Rather, the position becomes a powerful organizing focus for park managers that guides their programmatic and facility priorities and the resource allocation decisions within an agency. Indeed, an agency has to be confident it can deliver the benefits it promises. If a position is superficial and not credible in the eyes of stakeholders, then it will adversely rather than positively impact perceptions of parks.

Consistent with this perspective, the introduction to this paper emphasized that in both the nineteenth-century and contemporary contexts multiple other rationales were/are used by advocates. Hence, the six strategies distilled from analysis of the pioneering health rationale which are discussed in this paper may serve as a template for advocates using other rationales.

For example, consider their application to the rationale of parks raising real estate values which enhance a community's tax base. There is an intuitive contextual nexus

exemplified by city residents paying a premium for homes abutting natural park areas. Cost-effectiveness of investing in parks stems from the property tax premiums that accrue to the city from these homes. Associative positioning could be achieved by referring to parks or golf courses voluntarily included in residential projects by developers because of their positive impact on lot and home prices. Psychological positioning could emphasize the enhanced quality of life residents enjoy. Together these strategies could coalesce to form a powerful position that resonated with stakeholders. Tactical use of science would involve reporting results of the many studies which have documented this impact of parks. Influential champions would be needed to successfully establish the position in stakeholders' minds.

Establishing a population's "mental fix" on a position for parks is a challenging task. Even with an intense focus it has been suggested that "agencies should think in terms of 10-year, rather than a 1-year, time horizons to accomplish repositioning" (Crompton, 2009, p. 110). This is reasonably consistent with the mid-nineteenth-century experience in that there was a lapse time of one or two decade between the case being articulated in a city and urban parks being developed.

Note

1. This point was raised by one of the anonymous reviewers of this paper.

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