# Off the couch and on the move: Global public health and the medicalisation of nature

Tim Brown , Morag Bell

*Geography Department, Loughborough University, Loughborough, UK*

## Abstract

In May 2004 the World Health Organization officially launched the '*Global Strategy on Diet, Physical Activity and Health*'. Lying at its heart is the recognition that many of the risk factors associated with non-communicable diseases, particularly poor diet and physical inactivity, have begun to move beyond the confines of the West. It was this apparent shift in the epidemiological boundaries of such diseases, along with fears over the so-called 'double burden' that they presented to some nations, that finally prompted the WHO to develop such a far reaching strategy. This paper adds to the on-going debate surrounding this important issue by drawing on the concepts of medicalisation, governmentality and the spatiality of scientific knowledge to explore one particular element of it: namely, the identification of nature as a setting for the promotion of physical activity. We adopt this perspective because we are concerned to understand the ways in which the knowledge and practice of the new public health travels. As our analysis reveals, in many Western nations the natural environment has emerged as an important 'transactional zone' where the governmental imperative for the production of fit and active bodies coalesces with the individual desire to be healthy. However, while it is apparent that this physical activity discourse increasingly operates throughout the globe, there is less evidence of an equivalent discourse that promotes the health-related benefits of nature. We argue that this is significant because it helps us recognise that contemporary public health discourse has a distinct geography.

## Introduction

> "The time is right for health promoters to take a close look at the evidence of the impacts nature has on the health of individuals and communities. Why? Because we may actually be able to achieve more appropriate and sustainable conditions that support health than if we only address interventions that focus on a particular health issue…" (St Leger, 2003: 174).

The above quotation is taken from an editorial, published in the journal *Health Promotion International*. As implied, the editorial sought to encourage health promotion experts to re-examine the scientific evidence surrounding the links between the natural environment and health. In an earlier article, another advocate of nature's health-related benefits presented a similar argument when he suggested that environmental, and by association public, health needs to move beyond its current focus on toxicity: "If people have regular contact with flowers or trees, do they report greater well-being, better sleep, fewer headaches, reduced joint pain? Do inner city children who attend a rural summer camp have better health during the next semester at school than their friends who spent the summer in the city?" (Frumkin, 2001: 238).

For many geographers, the idea that nature should be thought about in this way will come as little surprise. In his highly influential paper on therapeutic landscapes, Gesler identified some of the ways in which health and wellbeing have come to be associated with the natural environment; "whether this entails materials such as medicinal plants, the fresh air and pure water of the countryside, or magnificent scenery" (1992: 736). The response to Gesler's initial account has been an extensive examination of the relationship between landscape or place and health (see Williams, 1998). A key feature of this literature is its recognition that the connection between therapeutic landscapes and human health is a relational one. As Conradson (2005) suggests, an interest in the relational dynamics of therapeutic landscapes has been present in geographical research on gardening (Milligan, Gatrell &

Bingley, 2004), walking (Palka, 1999), and exercise and play (Kearns & Collins, 2000).

While such studies vary both in the approaches they adopt and the scales at which they operate, they often take as their starting point the idea that contact with nature "affords a range of personal, social and health benefits" (Milligan *et al*., 2004: 1785). The purpose of this paper is to reflect a little more critically on this belief because we are interested to explore how this discourse relating to nature and health has been captured by the new public health. In order to do so, we refer to literatures that sit outside of the therapeutic landscapes tradition; namely, those relating to medicalisation, governmentality and the spatiality of knowledge. We begin with the former because, as Nye (2003) indicates, medicalisation is not only understood in terms of the "nefarious collaboration of experts and state authority" imposing their will from above. Rather, it is also thought of in less pejorative terms, as a "process whereby medical and health precepts have been embodied in individuals who assume this responsibility for themselves" (2003: 117).

Central to this interpretation is the notion of "governable space" (Rose, 1999: 31*ff*.). Here, regulated freedom, as a form of neo-liberal rule, is seen to operate through the alignment of governmental objectives with personal life-projects. This process is argued to occur within certain spaces, or particular micro-locales, "where authorities of all types exercise their powers over the conduct of others" (Rose, 1999: 36). We suggest in this paper that the natural environment has emerged in contemporary public health discourse as such a

micro-locale. As we go on to demonstrate, this is in part related to the intuitively held belief that health and nature are intricately linked; what Arnold (1996) terms the 'environmentalist paradigm'. However, it is also closely associated with the production of active rather than sedentary bodies within related physical activity debates. Following this, we turn our attention to a discourse that promotes nature as a setting within which the governmental and personal desires for good health can be translated into embodied practice.

There is, however, one further issue that we seek to address. In the preface to the World Health Report, 2002, the then director-general of the World Health Organization (WHO), Dr Gro-Harlem Brundtland, stated that "the world is living dangerously, either because it has little choice or it is making the wrong choices" (WHO, 2002a: 4). Made in light of epidemiological evidence suggesting that a global "risk transition" is currently underway, this statement identifies unhealthy patterns of food consumption and physical inactivity as two of the major risk factors for premature death. Such a threat is not new to many countries in the West. Indeed, until recently chronic or non-communicable diseases were referred to as 'diseases of affluence' and were seen to reflect problems associated with the 'Western lifestyle' (Trowell & Burkitt, 1981; McKeown, 1988). The response of the WHO to this 'crisis' was to establish a *Global Strategy on Diet, Physical Activity and Health* (see WHO, 2004).

Officially launched in May 2004, the Global Strategy was described by Brundtland's replacement, Dr Lee Jong-Wook, as a "landmark achievement in global public health policy" (WHO, 2004). In many regards, the Director-General's triumphant remarks do not appear too far off the mark. While only in its infancy, the strategy is already extremely wide-ranging and has been endorsed by most national governments, especially those in the West. There is, however, one aspect of the discourse surrounding the strategy that is of particular interest; that is, the belief that risk behaviours "*travel across countries and are transferable from one population to another like an infectious disease*…" (WHO/FAO, 2003: 5. Emphasis added). What is significant here is the parallel movement of ideas and practices associated with the management of these risk behaviours. Put differently, we seek to explore how public health knowledge and practice *travels* (see Shapin, 1998).

We finish, then, by reflecting on the ways in which ideas about the natural environment and physical activity have been engaged with in different national contexts. We do so because we recognise that surprisingly there has been neither a sustained attempt to explore the spatiality of such knowledge nor the difference that place makes to it. Given the current prominence attached to the Global Strategy there is an urgent need to explore how this differs according to the "domains that constitute its geography and transform its meaning" (Davies, Day & Williamson, 2004: 293). By examining some of these differing domains, we are able to highlight the spatiality of this particular form of knowledge and, at the same time, locate and problematise

contemporary debates regarding the inter-relationship between nature and health.

**The medicalisation of nature**

According to the medical sociologist, David Armstrong, "[a] body analysed for humours contains humours; a body analysed for organs and tissues is constituted by organs and tissues; a body analysed for psychosocial functioning is a psychosocial object" (Armstrong, 1994: 25). In this statement, Armstrong suggests that knowledge of the body has altered as the medical gaze has shifted both in terms of the perspective that it adopts and the objects upon which it is focussed. A similar argument might be made in relation to the medicalisation of nature, for, like the body, neither the idea of nature nor its relationship to health is constant. Given this, we begin our analysis by briefly mapping out some of the differing ways in which this relationship has been expressed.

The 'environmentalist paradigm', the belief that the natural environment impacts on human health, can be located within a philosophical tradition that dates back to the Hippocratic treatise *On Airs, Waters and Places* (see Glacken, 1967; Arnold, 1996). While its origins lie in antiquity, the Hippocratic tradition began to flourish from the early modern period and informed studies conducted throughout Continental Europe and North America, but also to a lesser extent in Britain (Valenčius, 2000). In many of these accounts, the inter-relationship between nature and health was presented in a less than

positive light, with disease the focus of attention and the natural environment pathologised, particularly in a deeply ingrained imaginative geography of ‘the tropics’. Moreover, for many scholars, it was not simply disease that was conditioned by “topography and climate” but “everything from human physiology to religion and mortality” (Arnold, 1996: 21).

Closely intertwined with this pathologising discourse were contrasting ideas about the therapeutic qualities of nature. As Porter (1997) explains, during this period the size and number of spa towns increased throughout Europe, the therapeutic properties of the seaside were widely acknowledged and the idea of “good air” was invoked in remedies to improve the constitution and “strengthen the nerves”. In addition, these were ideas that were translated into the colonial context (Jennings, 2002). According to Kenny (1995), the British hill stations in India were perceived to be healthy environments because of their cooler climate and the apparent lack of diseases, particularly malaria. Similar observations were made in other colonial settings; for example, early representations of the East African highlands have been shown to promote the climate as “healthy and invigorating” (Kennedy, 1981) and nineteenth century tourism and settler patterns are believed to have been influenced by the “healthiness of the ‘temperate’” climate in the Cape Colony (Deacon, 2000).

These theories regarding the symbiotic relationship between the environment and health were pursued by a wide range of individuals, including historians, geographers, medical physicians and colonial administrators (Arnold, 1996).

Furthermore, they often drew upon the knowledge and understanding of other disciplines in an attempt to enhance their own scientific standing (see Rupke, 1996; Harrison, 2000). Despite this, the challenge from new epistemological frameworks appeared too difficult to withstand. Alternative theories, most notably germ theory, supported as it was by modern laboratory research, began to challenge the central tenets upon which the environmentalist paradigm was based: “[c]limate and vegetation had been reduced, disarmed, and exonerated; “nature” appeared ever less determinate and implacable” (Anderson, 2000: 147). However, while environmental determinism was on the wane at the beginning of the twentieth century, the idea that nature and health are intricately linked has remained.

There are many examples where this is the case. For instance, in the 1950s and 1960s medical biometeorology sought to establish itself as “the science studying the influence of *weather* and *climate* on the living organism” (Tromp, 1963). Where this particular body of inter-disciplinary research continues on the margins of contemporary scientific explanation, another area of scholarship has become central to the ways in which the environmental paradigm is currently imagined; namely environmental psychology. Closely associated with Wilson’s (1984) ‘biophilia hypothesis’, the idea that people feel an innate connectedness with the natural environment, such research has sought to explain how contact with, and appreciation of nature, contributes to a person’s health and wellbeing. According to Frumkin, the evidence for this inter-relationship is extremely widespread. For example, where some scholars suggest that simple contact with nature has a restorative effect (Ulrich, 1979,

1984; Kaplan & Kaplan, 1989), others point to the social and psychological benefits of horticulture (Sempik, Aldridge & Becker, 2002), pet ownership (Wood, Giles-Corti & Bulsara, 2005) or the 'wilderness experience' (Cumes, 1998).

The importance of the environmental psychology literature, to this paper at least, is that it has played a prominent role in (re)positioning the natural environment at the centre of contemporary public health debates, particularly in the West. Indeed, it was because of this literature that St Leger (2003) called upon health promotion experts to review the evidence regarding the health-related benefits of nature. However, despite some examples to the contrary, there remains a tendency within this discourse to equate either the observance or experience of the natural environment with the "unproblematic receipt of its therapeutic influence" (Conradson, 2005: 338). Given this, in the following section we turn to a parallel discourse which offers a more embodied vision. More specifically, we focus our attention on a discourse which presents nature as a 'setting for health', not simply because of the physical qualities of a particular landscape, although this remains important, but because of the health-related activities that take place within it.

**Health on the move**

In order to think through this notion of an 'embodied vision' of the nature/health relationship we turn, albeit very briefly, to a further set of debates that took place in the early modern period. As Sennett explains,

enlightened planners in the eighteenth century "sought to make the city a place in which people could move and breathe freely" (1994: 256). In contrast to other theories associated with the environmentalist paradigm, Sennett's analysis focuses on individuals like William Harvey and Thomas Willis who contributed to the destabilising of the Greek medical legacy rather than to its continuity (Porter, 1997: 211, 242). More specifically, he argues that Hippocratic beliefs that defined health in terms of the four bodily humours were replaced by ideas about "motion and circulation". It was this understanding, Sennett explains, that became embodied in the urban landscape, "[t]he city taking form in the eighteenth century helped translate that internal paradigm into a picture of the healthy body in a healthy society" (1994: 261).

According to these principles of circulation, the "healthy" city was defined as one where nature represented a space in which urban inhabitants could be revitalised in much the same way that blood was seen to be refreshed by the lungs. This analogy of natural spaces as the "lungs of the city" continued well into the nineteenth century and beyond. As Hughes (2004) notes, public health concerns regarding urban sanitation were matched by an emergent 'open air' movement which believed that the lack of fresh air in urban environments was as equally deleterious to health (see also Bryder, 1992; Pomfret, 2001). One response to this was the rapid expansion of parks and other green spaces throughout Britain's urban landscape (see Conway and Lambert, 1993; Bunce, 1994). Another was the more general valorisation of the countryside as a place of "physical and spiritual regeneration" (Williams,

1973: 252) or, similarly, a “mental and physical refuge from urban life” (Bunce, 1994: 141). More importantly both were intimately linked with the idea that exposure to nature *and* exercise were of crucial importance to the maintenance of good health.

This last point is illustrated especially well in Matless’s (1998) examination of landscape and identity in inter-war England. As he reveals, exposure to nature through such spatial practices as walking, hiking, orienteering or climbing were seen to be closely allied to the development of a healthy, “open-air body”. Moreover, these were ideas that were replicated in a more widespread national campaign which sought to promote the value of physical fitness: “The aim of Government is… to inculcate a wider realisation that physical fitness has a vital part to play in promoting a healthy mind and human happiness” (National Fitness Council, 1939 cited by Matless, 1998: 91). Within such discourse we move away from the idea that the mere presence within a landscape affords therapeutic value to the notion that health and wellbeing is derived from the practices that take place within it (see Conradson, 2005: 338). However, we wish to bring our analysis forward in time because this connection between physical activity and nature has re-emerged in contemporary public health debates.

The refocusing on physical activity is, in part, related to the recognition that a moderate level of exercise is conducive to good health. Clearly, this has been known for some time. However, the relationship between the two was given greater scientific authority with the publication of the U.S. Surgeon General’s

report, *Physical Activity and Health*, in 1996. Widely regarded as a benchmark in the field, the report suggests that a "regular, preferably daily regimen of at least 30-45 minutes of brisk walking, bicycling, or even working around the house or the yard" will drastically reduce the risk of developing chronic diseases such as coronary heart disease, hypertension, certain cancers, and diabetes (US DHHS, 1996: 1). The report's importance here lies with its helping to capture everyday spaces, including spaces of nature, as sites for the maintenance of good health. Indeed, even a cursory glance at current literature reveals a considerable interest in the role that nature plays in the promotion of physical activity (for example, see Giles-Corti & Donovan, 2002; Owen, Humpel, Leslie, Bauman, & Sallis, 2004).

One of the reasons for this interest is the scientific desire to better understand the determinants of physical activity and obesity. Initially the focus of this interest was placed on individual beliefs and motivations regarding diet and exercise. However, as Giles-Corti and Donovan (2002) suggest, such research was criticised because of its failure to consider the geographical context within which health-related behaviour occurs. In other words, it was too individualistic. This lacuna has been addressed in more recent studies which identify those features of the natural environment that encourage physical activity: including trees, lakes, rivers and bird life (see, Owen *et al*., 2004; Bedimo-Rung, Mowen & Cohen, 2005). While not exclusively urban in focus, this research highlights the value that urban populations place on the aesthetic qualities of their surrounding natural environments. As Krenichyn

(2005) argues, while cities demand a degree of physical activity, urban parks are “special places” which allow a “sense of escape and restoration”.

Of interest, then, is the idea that this body of research connects varying levels of physical activity with the aesthetic preferences for, and the psychological benefits of, the natural environment. As such, this physical activity discourse appears to be intimately related to debates taking place within environmental psychology. More significantly, it is this connection which has been enthusiastically adopted by agencies responsible for maintaining natural spaces in many countries, particularly those in the West. Indeed, in Britain governmental and non-governmental agencies increasingly make reference to the health-related benefits of the natural spaces that they manage or promote (see English Nature, 2002, 2003, 2004; National Urban Forestry Unit, 2002a, 2002b). For example, the Forestry Commission, which was initially established in 1919 to protect the nation’s wooded areas, recently replaced its ‘Forest Fitness’ campaign with the notion of ‘Active Woodlands’. Perhaps responding to the fact that many people do not identify positively with the idea of fitness (Henwood, 2002), the latter campaign uses an array of slogans and symbols to promote physical activity and mental health: as it states, “Woods are great places for exercise and, as well as being good for the body, they are good for the soul” (Forestry Commission, 2005).

The ‘Active Woodlands’ campaign draws on standard public health messages relating to the benefits of moderate levels of exercise. According to this discourse, people are encouraged to view woodlands and forests almost as

outdoor fitness centres or ‘green gyms’: “A brisk 30-minute walk will burn more calories than 30 minutes of badminton”, “Aerobic exercise is most commonly thought of as an instructor-led class in a gym or hall, but walking (briskly), cycling and running are all forms of aerobic exercise”, “Once you've reached a good level of fitness why not pick up the pace” (Forestry Commission, 2005). In this process, the aesthetic value of natural landscapes, while retained, is altered as the gentle rhythms of nature are given a more upbeat tempo. However, as previously noted, this focus on the health-related benefits of natural spaces is not limited to the Forestry Commission. Indeed, it is perhaps fair to suggest that the Countryside Agency stands out in its desire to promote ‘spaces of nature’ as ‘spaces for health’.

In 1998 the Countryside Agency, then referred to as the Countryside Commission, joined forces with the British Heart Foundation to establish the ‘Walking the way to health’ initiative. This initiative followed the success of a pioneering walking scheme in the village of Sonning Common, Oxfordshire (see Bartlett, Ashley & Howells, 1996) and differed from many other forms of public health practice at the time because it actively promoted the use of the natural environment both in the town and country (Walking the way to Health, 1999). Since these relatively modest beginnings, the initiative has grown into a nationwide programme and forms a significant part of the broader public health campaign to get the nation on the move (see DoH, 2004a, 2004b). However, we draw attention to it here because the relative success of the initiative is, in part, based on the fact that it promotes ‘healthy walking’ within environments that many people already identify as being aesthetically

pleasing. The power of nature in this regard, is reflected in the fact that most walks utilise the natural settings that are local to them, whether an urban park, riverside walk or the countryside itself.

In a more recent development the 'Walking the way to health' initiative has linked up with The Tree Council to promote the 10th anniversary of 'Walk in the Woods', the health benefits of which are made quite apparent: "Trees not only offer attractive settings for a good, brisk walk but just being around them is known to help reduce stress and the risk of illness (The Tree Council, 2006). Thus, while a natural setting is not required for a healthy walk scheme to be established, many operate to a greater or lesser extent within such environments. Moreover, much of the literature used either to attract walkers or to guide them once they have joined draws heavily on the natural scenery that people will encounter. In this way, the therapeutic values associated with nature in the environmental psychology literature are implicitly, if not necessarily explicitly, signalled as being an important feature of the walks. Perhaps this should come as no surprise given that the organisers of walking schemes are encouraged to "focus on the benefits of walking which are most likely to appeal to people… [for example] the pleasure of being out in the countryside…" (Walking the way to health, 1999).

**Governing the walking body**

We note above that the 'Walking the way to health' initiative forms part of a much broader governmental campaign to get the nation on the move. This

campaign, like those in other countries, regards recreational physical activity as an efficient and cost effective public health strategy because it locates the responsibility for health with individuals rather than governments (Brown & Duncan, 2002; Fullagar, 2002). A key issue for health promotion experts, however, is how the ideals associated with the new public health can be translated into individual practice. Clearly, one way in which this has been achieved is through campaigns that emphasise the aesthetic appeal of nature; a manoeuvre which appears to 'hide' the health-related message that is being promoted. In this sense, the natural environment might be considered as a 'transactional zone' where political concerns over the nation's fitness are shown to correspond with individual desires, including those related to the care of the self (Rose, 2001).

The importance of Rose's conceptualisation here is that it highlights the mechanisms by which certain constructions of active living are grafted on to other forms of physical activity. In the case of walking, individuals are required to adopt a regime that "is of sufficient intensity, is carried out with sufficient regularity and is performed for a sufficient length of time" (Walking the way to health, 1999: 9). Such a regime, with its emphasis on intensity, regularity and duration, appears far removed from other walking practices that are more closely aligned with the pursuit of pleasure than the quest for health (Urry, 1995; Macnaghten & Urry, 1998; Edensor, 2000). Indeed, according to Kay & Moxham, walking in the countryside is regarded as "one of the more passive, pleasurable and consequently popular forms of outdoor recreation" (1996: 174). However as we have already demonstrated, the calculative techniques

associated with physical activity discourse are promoted alongside such pleasurable pursuits. The point we are making, then, is that different forms of walking are 'captured' within this medicalising discourse.

Yet, as we mention above, a key issue for health promotion experts is the need to persuade people to walk in a way that benefits their health: "in the case of walking for health the crucial message to get across is the need for walking to be brisk" (Walking the way to health, 1999: 44). Some of the problems associated with achieving this goal were illustrated in a report published in the first issue of the 'Walking the way to health' newsletter. As the report states, "[t]he brisk walking message should be used carefully to avoid discouraging sedentary people from taking part…" (Walking the way to health, 1998). This clearly is a dilemma and it is one that physical activity programmes have sought to overcome by adopting an encouraging and developmental tone in their discourse: "[a]ny walking is better than none", "[b]risk walking is the best but …gentle strolling is a good start", "start slowly then build up to walking faster…". As is apparent, each of these statements highlights the belief that the simple act of walking, whatever its speed or intensity, is better than nothing.

It is in this way that 'risky' groups, particularly those identified as being sedentary, are brought under the purview of this physical activity discourse. However, the key point here is that people are encouraged to view walking in developmental terms; as the initiative's website suggests, "[w]here you start from isn't important - *it's where you're going that counts*!" (Walking the way to

health, 2006. Emphasis added). This developmental ethos is in evidence elsewhere in the literature surrounding the ‘Walking the way to health’ initiative. For example, potential walkers are provided with details of a ten week strategy, the aim of which is to enable them to adopt walking as a part of their everyday lives; to make it habitual. What is interesting about the strategy is that it draws heavily on well-established motivational techniques and, as such, splits the strategy into three stages – ‘Starting off’, ‘Getting going’ and ‘Staying with it’ – each of which moves the walker closer towards the desired goal of regular, brisk walking.

There are other calculative techniques that walkers are encouraged to adopt in order to manage the movement of their bodies through space. One such technique involves the adoption of a “How it Feels” scale which enables people to assess whether their levels of exertion are ‘appropriate’. This scale measures the affects of physical activity on the body using terms such as ‘no problem’, ‘beginning to feel puffed’ or ‘exhausted’. A similar example relates to the translation of the metabolic equivalent level or MET, the unit used to estimate the amount of oxygen used by the body during physical activity, into the following message: “Walk at an intensity which makes you: breathe a little faster, feel warmer, have a slightly faster heart beat” (Walking the way to health, 1999: 10). These examples involves the conversion of often complex medical notions regarding the physiology of the body into a language that lay individuals can more readily understand and therefore adopt in their everyday walking practices.

Another, and perhaps more well known technique, is the adoption of the ‘step counter’, which as the name suggests enables people to count the number of steps that they take in a day. These devices were adopted by the ‘Walking the way to health’ initiative for its ‘Step-O-Meter’ campaign, which was launched in 2002. This campaign was initially “[d]esigned to raise people's awareness of the amount (or lack of) physical activity they do in the course of their normal day” and to provide “motivational guidance” to walkers (Walking the way to health, 2006). In a more recent development, the campaign has been extended into a nationwide programme, in partnership with Department of Health, and includes the provision of a log book in which walkers can monitor their progress towards achieving the recommended goal of 10,000 steps per day. Whatever the technique employed, as we suggest their purpose is to enable responsible citizens to more effectively calculate and judge their activities and those of others (Rose, 1999).

In much of the above the connection to nature lies in its valorisation as a setting in which a largely sedentary population might be motivated to perform techniques of self care (see Giles-Corti & Donovan, 2002; Pikora, Bull, Jamrozik, Knuiman, Giles-Corti & Donovan, 2002). What should also be apparent is that this process involves the privileging of a particular kind of nature: “Big trees and small trees, glistening water, chirping birds, budding bushes, colorful flowers – these are important ingredients in life” (Kaplan, 1983. Cited in Frumkin, 2001: 234). While this conceptualisation of nature and health is an enduring one, it is important to recognise that it remains contingent both upon time and space; as Macnaghten and Urry (1998)

suggest, there is no single nature only a diversity of contested natures. Given this, we use the final section of this paper to explore one further aspect of this discourse; namely, the idea that public health knowledge and practice travels. More specifically, we seek to identify whether this particular understanding of nature as a setting for health has shifted beyond the West.

**Moving beyond the West**

As noted in the introduction, a key feature of the '*Global Strategy on Diet, Physical Activity and Health*', and of the science that underpins it, is the idea that the risk behaviours associated with non-communicable diseases have begun to travel. This re-spatialisation of the global burden of disease has been recognised for some time (see Murray & Lopez, 1997), however it was not until the publication of documents like the World Health Report, 2002 that the implications of this shift were broadcast more widely. As the then General Secretary of the WHO announced in the report: "The real drama now being played out is that they [non-communicable diseases] are becoming more prevalent in the developing world, where they create a double burden on top of the infectious diseases that still inflict poorer countries" (Brundtland, 2002: 4). It is at this juncture that we re-connect with the principal concerns of this paper because we are interested to explore whether this risk transition has resulted in the more widespread mobilisation of nature as a setting for health.

Our starting point for achieving this lies with an initiative that pre-dates the official unveiling of the Global Strategy. The initiative, entitled 'Agita São

Paulo' (Move São Paulo), was developed in response to growing evidence that the rates of non-communicable diseases in this region of Brazil were increasing rapidly, a rise that was partly blamed upon low levels of physical activity. As Monteiro and colleagues explain, a national survey, conducted in 1996-1997, revealed that only 13% of the adult population performed any regular exercise (Monteiro, Conde, Matsudo, Matsudo, Bonseñor & Lotufo, 2003). Moreover, of this group, fewer than 5 percent actually met current public health advice regarding appropriate levels of physical activity. The initiative sought to overcome this problem of sedentarianism by establishing a community-based programme whose key aim was to promote the message that all adults should conduct at least 30 minutes of moderate intensity exercise per day (Matsudo, Matsudo, Andrade, Araújo, Andrade, Oliveira *et al*., 2004).

What is interesting about 'Agita São Paulo' is that it helps us to consider the spatiality of public health knowledge and practice. As Livingstone argues, the idea that "scientific knowledge has a geography goes against the conventional image of science as a transcendental undertaking…" (Livingstone, 2000: 285). While Livingstone was referring to debates about the location of scientific endeavour, this statement serves to remind us that knowledge is both socially constructed *and* the product of discursive communities operating within and through a variety of social and spatial settings. In the case of 'Agita São Paulo' it is evident that international public health expertise played a crucial role in the development of the initiative: "[a]ll the activities and messages are supported by epidemiological and scientific information

available in the international literature of the last decades" (Matsudo *et al*., 2004: 83).

This knowledge and understanding, which was based largely on the experience of, and response to, non-communicable diseases in the industrialised West, was not only communicated by means of international literature. Rather, a wide array of (inter)national experts, from organisations such as the WHO, the US Centers for Disease Control and the UK Health Education Authority, were included on the programme's scientific and executive boards (Matsudo, Matsudo, Andrade, Araújo, Andrade, Oliveira *et al*., 2002). Clearly, the input of these various actors cannot be easily assessed without more detailed research. It is apparent, however, that prevailing ideas regarding the link between physical inactivity and health were mobilised in the discourse surrounding the initiative. Yet, the universality that such an observation implies does not necessarily reflect the ways in which public health knowledge and practice travel for, like other forms of scientific understanding, it has the potential to be transformed as it moves from place to place.

Indeed, Matsudo and colleagues reveal that, while the knowledge and experience of other countries was important, traditional physical activity programmes were seen to be unsuited to a "hot, tropical country" such as Brazil and needed to take into account the region's "ethnic, economic, geographic and cultural diversity" (Matsudo *et al*., 2002: 255). Put differently, this meant translating internationally accepted practice into a locally

acceptable programme. In the case of ‘Agita São Paulo’ the activities and settings that were promoted reflected the social and cultural preferences of the region. For example, in addition to targeting the everyday spaces of the home and the workplace, spaces of leisure were also identified as targets for the promotion of physical activity: “Dance became the most important inclusion message among leisure activities because children, adolescents, adults and the elderly can dance, *Brazilians love to dance*” (Matsudo *et al.*, 2002: 255. Emphasis added).

It is this emphasis on practices that were both appropriate to the local environment and culturally significant to the region that interests us here. While the epidemiological facts underpinning ‘Agita São Paulo’ are presented as universal truths, the programmes that are developed to counter these problems highlight a greater attention to the power of place in shaping their content and significance. If we return to contemporary physical activity discourses emanating from the West, it is evident that the natural environment has emerged as an important setting for health in part because it is a space that has been long associated with the pursuit of wellbeing. In this sense, the medicalisation of nature through programmes such as ‘Active woodlands’ or ‘Walking the way to health’ appears to build on already established cultural beliefs and patterns of behaviour rather than seeking to impose new ones.

Although it is possible to identify similar references to the health-related benefits of nature in other national contexts outside the West – as the website for the National Parks Board, Singapore reveals, “wake up to the morning

sounds of birds chirping and come down to the parks for your morning exercises" – the scale and scope of this discourse is extremely limited. This paucity in the countries of the South might reflect the complexity of the physical and social environments concerned: "In the rapidly growing cities of the developing world, crowding, poverty, crime, traffic, poor air quality, a lack of parks, sidewalks, sports and recreation facilities and other safe areas make physical activity a difficult choice" (WHO, 2002b). It is also possible that it is related to a newly emerging climatic discourse which encourages people to escape the natural environment rather than to dwell within it, especially in urban "hotspots" where populations are already "at risk from climate extremes" (Patz & Kovats, 2002: 1095). Whatever the explanation, the lack of a parallel discourse appears to emphasise that public health debates about the physical activity, nature and health reflect peculiarly Western cultural values.

**Conclusion**

Our findings raise many questions which provoke further investigation. In order to prompt this discussion we make three observations. The first of these concerns our understanding of the relationship between nature and health. Following Arnold (1996), we have located contemporary debates about the therapeutic properties of nature within a much broader set of ideas relating to the 'environmentalist paradigm'. We did so because we wanted to highlight our belief that the association between nature and health is, like our understanding of nature itself, something that is made or constructed (Castree

& Braun, 1998). Put differently, it is both historically and spatially contingent. Clearly, this is not an original or novel observation. Yet, when set in the context of the new public health, it helps us to make sense of a discourse that appears universally to valorise nature as an antidote to the stresses and strains of modern life.

In so doing, our purpose is not to undermine research that highlights the importance of the natural environment in the space of people's everyday lives (Burgess, Harrison & Limb, 1988). Rather, we would argue that by adopting a constructionist position we can begin to raise questions about the re-emergence of this discourse and the kinds of heath-related practices associated with it. This leads us on to our second observation. The medicalisation thesis has been employed in an array of differing ways (Lupton, 1997). In this paper, we have drawn on a reading of it that builds upon the Foucauldian interpretation of the positive and productive ways in which disciplinary power operates on the human body (see Foucault, 1977, 1984). More specifically, we have suggested that the natural environment is currently being promoted as a 'space for health' both because of its supposedly aesthetic and therapeutic properties and because it provides an everyday space within which individuals can perform techniques of self-care.

Thus, the connection to Foucauldian notions of power lies in the ways in which all individuals are encouraged to use such spaces in the regulation and maintenance of their un/healthy bodies. As we have identified in this paper, physical activity discourse promotes nature as a setting within which the

governmental desire for a fit and active population can best be achieved. The importance of the natural environment in this regard is that it acts to mask the health-related messages being promoted because it is recognised that individuals have other desires and motivations for being in nature. As Henwood (2002) suggests, “even if physical activity is not the main reason for people’s interest, it can be encouraged as an additional benefit of other leisure pursuits and interests”. It is in this sense that we might regard the natural environment as a ‘transactional zone’ where governmental and individual desires coalesce (Rose, 2001).

Our third observation emphasises the need to question the ability of this discourse to travel. In order to think through this question we turned to the WHO’s ‘*Global Strategy on Diet, Physical Activity and Health*’. We did so because the strategy is premised on the belief that the risk factors associated with non-communicable diseases are becoming increasingly prevalent in the countries of the South. Given this shift, and the subsequent announcement of the Global Strategy, we anticipated that there would be a similar movement in public health knowledge and practice. To this end, we set out to discover whether ideas about the natural environment were as important to physical activity discourses outside the West. As we revealed in our brief analysis of the Agita São Paulo initiative in Brazil, while the issue of physical inactivity is increasingly important there is little emphasis placed on nature as a setting for the promotion of health and wellbeing.

It is apparent that a new public health discourse relating to the individual responsibility for maintaining a healthy and active body increasingly operates throughout the globe. This is significant because few, if any, studies have sought to explore the spatiality of such discourses. However, the settings within which this sedentary body is encouraged into action appear to differ as this discourse travels. This was particularly apparent in the case of Agita São Paulo where both the practices and the settings being promoted were inspired by the locality within which they developed, rather than by programmes that were formulated elsewhere. Indeed, it was made clear that this was a distinctive feature of the programme. Such an observation helps us to recognise that the understanding of nature being promoted in public health discourses resonate with Western cultural values and social practices and that knowledge and practice is transformed in the different domains in which it is “produced, practised, contested, consumed, embodied, and stored” (Davies, Day & Williamson, 2004: 293).

**References**

Anderson, W. (2000). Geography, race and nation: Remapping “tropical” Australia, 1890-1930. In C. Valenčius (Ed.), *Medical geography in historical perspective: Medical history, supplement 20* (pp.146-159). London: The Wellcome Trust Centre for the History of Medicine at UCL.

Armstrong, D. (1994). Bodies of knowledge/knowledge of bodies. In C. Jones & R. Porter (Eds), *Reassessing Foucault: Power, medicine and the body* (pp. 17-27). Routledge, 1994.

Arnold, D. (1996). *The problem of nature: Environment, culture and European expansion*. Oxford: Blackwell.

Bartlett, H., Ashley, A. & Howells, K. (1996), *Evaluation of Sonning Common Health Walks Scheme.* Oxford: Oxford Centre for Health Care Research and Evaluation, Oxford Brookes University.

Bedimo-Rung, A., Mowen, A., & Cohen, D. (2005). The significance of parks to physical activity and public health. *American Journal of Preventive Medicine*, 28(2S2), 159-168).

Brown, T., & Duncan, C. (2002). Placing geographies of public health. *Area*, 34(4), 361-369.

Bryder, L. (1992). ‘A health resort for consumptives’: Therapeutic landscapes and immigration to New Zealand, 1880-1914. *Medical History*, 40(4), 453-471.

Bunce, M. (1994). *The countryside ideal: Anglo-American images of landscape*. London: Routledge.

Burgess, J., Harrison, C., & Limb, M. (1988). People, parks and the urban green: A study of popular meanings and values for open spaces in the city. *Urban Studies*, 25, 455-473.

Castree, N., & Braun, B. (1998). The construction of nature and the nature of constructionL Analytical and political tools for building survivable futures. In B. Braun & N. Castree (Eds), *Remaking reality: Nature at the millennium* (pp. 3-42). London: Routledge.

Conradson, D. (2005). Landscape, care and the relational self: Therapeutic encounters in rural England. *Health & Place*, 11, 337-348.

Conway, H., & Lambert, D. (1993). *Public prospects: Historic urban parks under threat*. London: The Garden History Society and The Victorian Society.

Cumes, D. (1998). *Inner passages, outer journeys: Wilderness, healing and the discovery of self*. Minneapolis: Llewellyn Publications.

Davies, G., Day, R., & Williamson, S. (2004). Editorial: The geography of health knowledges. *Health & Place*, 10, 293-297.

Deacon, H. (2000). The place and space of illness: Climate and garden as metaphors in the Robben Island medical institutions. *History in Focus: Medical History*. http://www.history.ac.uk/ihr/Focus/Medical/deacon.html. (accessed 9 February 2005).

Department of Health (2004a). *At least five a week: Evidence on the impact of physical activity and its relationship to health*. London: Department of Health.

Department of Health (2004b). Choosing health? Choosing activity: A consultation on how to increase physical activity. London: Department of Health.

Edensor, T. (2000). Walking in the British countryside: Reflexivity, embodied practices and ways to escape. *Body & Society,* 6(3-4), 81-106.

English Nature (2002). *People and wildlife – working together*. Peterborough: English Nature.

English Nature (2003). Nature and psychological well-being. Peterborough: English Nature.

English Nature (2004). *Nature for people: The importance of green spaces to East Midlands communities*. Peterborough: English Nature.

Forestry Commission (2005). Active woods. http://www.forestry.gov.uk/activewoods (accessed 24 May 2006).

Foucault, M. (1977). *Discipline and punish: The birth of the prison*. London: Allen Lane.

Foucault, M. (1984). Space, knowledge, and power. In P. Rabinow (Ed.), *The Foucault reader* (pp. 239-256). New York: Pantheon.

Frumkin, H. (2001). Human health and the natural environment. *American Journal of Preventive Medicine*, 20(3), 234-240.

Fullagar, S. (2002). Governing the healthy body: Discourses of leisure and lifestyle within Australian health policy. *Health*, 6(1), 69-84.

Gesler,W. (1992). Therapeutic landscapes: Medical issues in light of the new cultural geography. *Social Science & Medicine*, 34(7), 735-746.

Giles-Corti, B., & Donovan, R. (2002). Socioeconomic status differences in recreational physical activity levels and real and perceived access to a supportive physical environment. *Preventive Medicine*, 35, 601-611.

Glacken, C. (1967). *Traces on the Rhodian shore*. Berkeley, Los Angeles: University of California Press.

Harrison, M. (2000). Differences of degree: Representations of India in British medical topography, 1820 – c.1870. In C. Valenčius (Ed.), *Medical geography in historical perspective: Medical history, supplement 20* (pp.51-69). London: The Wellcome Trust Centre for the History of Medicine at UCL.

Henwood, K. (2001). *Exploring linkages between environment and health: Is there a role for environmental and countryside agencies in promoting benefits to health?* Unpublished report to the Forestry Commission, February 2001.

Hughes, D. (2004). Just a breath of fresh air in an industrial landscape? The Preston Open Air School in 1926: A School Medical Service insight. *Social History of Medicine*, 17(3), 443-461.

Jennings, E. (2002). Curing the colonizers: Highland hydrotherapy in Guadeloupe. *Social History of Medicine*, 15(2), 229-261.

Kaplan, R., & Kaplan, S. (1989). *The experience of nature: A psychological perspective*. Cambridge: Cambridge University Press.

Kay, G., & Moxham, N. (1996). Paths for whom? Countryside access for recreational walking. *Leisure Studies*, 15, 171-183

Kearns, R., & Collins, D. (2000). New Zealand children's health camps: Therapeutic landscapes meet the contract state. *Social Science & Medicine*, 51(7), 1047-1059.

Kennedy, D. (1981). Climatic theories and culture in colonial Kenya and Rhodesia. *The Journal of Imperial Commonwealth History*, X(1), 50-66.

Kenny, J. (1997). Climate, race, and imperial authority: The symbolic landscape of the British hill station in India. *Annals of the Association of American Geographers*, 85(4), 694-714.

Krenichyn, K. (2005). 'The only place to go and be in the city': Women talk about exercise, being outdoors, and the meanings of a large urban park. *Health & Place* (in Press).

Livingstone, D. (2000). Making space for science. *Erdkunde*, 54(4), 285-296.

Lupton, D. (1997). Foucault and the medicalisation critique. In A. Petersen & R. Bunton (Eds), *Foucault, Health and Medicine* (94-110). London: Routledge.

Matsudo, V., Matsudo, S., Andrade, D., Araújo, T., Andrade, E., Oliveira, L., & Braggion, G. (2002). Promotion of physical activity in a developing country: The Agita São Paulo experience. *Public Health Nutrition*, 5(1A), 253-261.

Matsudo, S., Matsudo, V., Andrade, D., Araújo, T., Andrade, E., Oliveira, L., & Braggion, G. (2004). Physical activity promotion: Experiences and evaluation of the Agita São Paulo program using the ecological mobile model. *Journal of Physical Activity and Health*, 1, 81-97.

Macnaghten, P., & Urry, J. (1998). *Contested natures*. London: Sage.

Matless, D. (1998). *Landscape and Englishness*. London: Reaktion Books.

McKeown, T. (1988). *The origins of human disease*. Oxford: Blackwell.

Milligan, C., Gatrell, A., & Bingley, A. (2004). 'Cultivating health': Therapeutic landscapes and older people in northern England. *Social Science & Medicine*, 58(9), 1781-1793.

Monteiro, C., Conde, W., Matsudo, S., Matsudo, V., Bonseñor, I., & Lotufo, P. (2003). A descriptive epidemiology of leisure-time physical activity in Brazil, 1996-1997. *Pan American Journal of Public Health*, 14(4), 246-254.

Murray, C., & Lopez, A. (1997). Mortality by cause for eight regions of the world: Global Burden of Disease Study. *The Lancet*, 349(3 May), 1269-1276.

National Parks Board, Singapore (2006). Activities: Fitness. http://www.nparks.gov.sg/activities/act-fit.shtml (access 4 May 2006).

National Urban Forestry Unit (2002a). *Urban forestry in practice: Health walks*. Wolverhampton: National Urban Forestry Unit.

National Urban Forestry Unit (2002b). *Urban forestry in practice: Hospital greenspace as a aid to healthcare*. Wolverhampton: National Urban Forestry Unit

Nye, R. (2003). The evolution of the concept of medicalization in the late twentieth century. *Journal of History of the Behavioral Sciences*, 39(2), 115-129.

Owen, N., Humpel, N. Leslie, E., Bauman, A., & Sallis, J. (2004). Understanding environmental influences on walking: review and research agenda. *American Journal of Preventive Medicine*, 27(1), 67-76.

Palka, E. (1999). Accessible wilderness as a therapeutic landscape. Experiencing the nature of Denali National Park, Alaska. In A. Williams (Ed.), *Therapeutic landscapes: The dynamic between place and wellness* (pp. 29-51). Maryland: University Press of America Inc.

Patz, J. & Kovats, R. (2002). Hotspots in climate change ad human health. *British Medical Journal*, 325, 1094-1098.

Pikora, T., Bull, F., Jamrozik, K., Knuiman, M., Giles-Corti, B., & Donovan, R. (2002). Developing a reliable audit instrument to measure the physical environment for physical activity. *American Journal of Preventive Medicine*, 23(3), 187-194.

Pomfret, D. (2001). The city of evil and the great outdoors: the modern health movement and the urban young. *Urban History*, 28(3), 405-427.

Porter, R. (1997). *The greatest benefit to mankind: A medical history of humanity from antiquity to the present*. London: Harper Collins.

Rose, N. (1999). *Powers of freedom: Reframing political thought*. Cambridge: Cambridge University Press.

Rose, N. (2001). The politics of life itself. *Theory, Culture & Society*, 18(6), 1-30.

Rupke, N. (1996). Humboldtian medicine. *Medical History*, 40, 293-310.

Sempik, J., Aldridge, J., & Becker, S. (2002). *Social and therapeutic horticulture: Evidence and messages from research*. Reading: Thrive (in association with the Centre for Child and Family Research).

Sennett, R. (1994). *Flesh and stone: The body and the city in western civilization*. New York: Norton.

Shapin, S. (1998). Placing the view from nowhere: Historical and sociological problems in the location of science. *Transactions of the Institute of British Geographers*, 23, 5-12.

St Leger, L. (2003). Health and nature – new challenges for health promotion. *Health Promotion International*, 18(3), 173-175.

The Tree Council (2006). *Walk in the woods*. London: The Tree Council.

Tromp, S. (1963). *Medical biometeorology: Weather, climate and the living organism*. Amsterdam: Elsevier Publishing.

Trowell HC, Burkitt DP, editors (1981) Western diseases, their emergence and prevention. Cambridge (Massachusetts): Harvard University Press.

Ulrich, R. (1979). Visual landscapes and psychological well being. *Landscape Research*, 4, 17-23.

Ulrich, R. (1984). View through a window may influence recovery from surgery. *Science,* 224, 420-421.

U.S. Department of Health and Human Services (1996). Physical activity and health: A report of the Surgeon General.

Valenčius, C. (2000). Histories of medical geography. In C. Valenčius (Ed.), *Medical geography in historical perspective: Medical history, supplement 20* (pp.3-28). London: The Wellcome Trust Centre for the History of Medicine at UCL.

Walking the way to Health (1998). *Walking the way to health: Newsletter Issue 1*. Horsley: The Countryside Commission.

Walking the way to Health (1999). *Practical Guidelines for Developing Walking for Health Schemes.* Unpublished report for the British Heart Foundations and the Countryside Agency.

Walking the way to Health (2006). Walking and you. http://www.whi.org.uk/ (accessed 23 March 2006).

World Health Organization (2002a). *World Health Report, 2002: Reducing risks, promoting healthy life*. Geneva: WHO.

World Health Organization (2002b). World Health Day, 2002. http://www.who.int/docstore/world-health-day/2002 (accessed 25 May 2006).

World Health Organization (2004) Global strategy on diet, physical activity and health. *World Health Assembly, WHA 57.17*.

World Health Organization/Food and Agriculture Organization of the United Nations (2003). *Diet, nutrition and the prevention of chronic diseases: Report of a joint WHO/FAO expert consultation*. *World Technical Report Series 916*. Geneva: WHO.

Williams, A. (1998). Therapeutic landscapes in holistic medicine. *Social Science & Medicine*, 46(9), 1193-1203.

Williams, R. (1973). *The country and the city*. London: Chatto & Windus.

Wilson, E. (1984). *Biophilia: The human bond with other species*. Cambridge (MA): Harvard University Press

Wood, L., Giles-Corti, B., & Bulsara, M. (2005). The pet connection: Pets as a conduit for social capital? *Social Science & Medicine*, 61(6), 1159-1173.