



Title: Theorising physical activity health promotion: Towards an Eliasian framework for the analysis of health and medicine

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Theorizing Physical Activity Health Promotion: towards an Eliasian framework for the analysis of health and medicine

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Abstract

This article seeks to advance our understanding of the convergence of physical activity and public health through a novel theorization drawing upon, applying and developing figurational sociological principles of Norbert Elias. More specifically, we focus on four core aspects of Elias' theoretical corpus: interdependencies; forethought (as an aspect of civilizing processes); the interaction of "fact" and emotion in socially determining knowledge; and the hinge. As such, we argue that contemporary interest in physical activity health promotion (PAHP) can be attributed to the amalgamation of: distinctive figurations of interdependency ties; an associated development in the internalization of human self-control; conceptions of 'truth' which derive from a combination of scientific evidence, ideological desires, and the gratification brought from the 'holding' of such beliefs; and the intersection of social and biological processes on the human body. This paper advances existing figurationally-informed theoretical analyses of health and medicine, in highlighting the essential interconnectivity of Elias's key ideas. This approach is, in turn, more faithful to Elias' advocacy of a radically relational sociological perspective. The result is both an original conceptualization of this increasingly significant social phenomenon, and a more explicit elucidation of the distinctive Eliasian framework

through which future theoretically-informed empirical research into contemporary health and medicine can be developed.

Introduction

The medicalization of physical activity is a significant development within the contemporary health landscape. While belief in the health promoting properties of movement can be traced back as far as Hippocrates and Galen (Berryman 2010), the notion of public fitness as a proxy for health gained significant momentum in the Anglo-American context through a range of late-twentieth century cultural shifts (McKenzie 2013). For example, the incidence of heart attacks amongst male white-collar workers in the late 1950s and early 1960s (the so-called ‘cardiac crisis’) fuelled Cold War paranoia regarding the physical preparedness of the American population. The ‘jogging boom’ of the 1970s and the emergence of the fitness industry in the 1980s (Glassner 1990) were subsequent manifestations of these beliefs. Today physical activity not only sits alongside alcohol, food consumption and tobacco as one of the ‘big four’ themes of health promotion, but is claimed to be ‘today’s best buy in public health’ (AMRC 2015). *Exercise is Medicine* (EiM), a programme initially developed by the American College of Sports Medicine and American Medical Association but adopted in 39 nations across the globe (Lobelo et al. 2014) is indicative of the ubiquitous and sometimes literal advocacy of this paradigm.

These developments resonate with, and need to be understood in relation to, wider changes in the social conceptualization of both sport and health. In *Quest for Excitement*, Elias and Dunning (1986) explore the etymological roots of the English word ‘sport’ to reveal how emotional arousal was initially central to the development of modern sport forms, and further chart how the generation of tension-excitement was ingrained and facilitated through the construction and dissemination of codes of rules. During the Victorian era the notion of *mens sana in corpore sano* (or a healthy mind in a healthy body) first linked physical and mental health and subsequently became both domestically popular and globally diffused through the British Empire. While by the end of the twentieth century Waddington (2000) could speak of

a sport-health ideology (the idea that sport is a fundamental and necessary part of a healthy lifestyle), the steady accumulation of scientific research has culminated in claims that ‘the idea that “Exercise is Medicine” is more or less beyond dispute’ (Nesti 2016: 138). Thus, over time we see a drift from the predominance of sport as playful, arousing physical contests, to a more amorphous notion of physical culture in which the tension excitement generating properties of competitive activities have increasingly been replaced by utilitarian health-promoting practices. More specifically, physical activity health promotion (PAHP) refers to ‘information, education and communication’ (Nutbeam 2008: 439) initiatives aimed at raising awareness of the effects of physical (in)activity and promoting recommended physical activity guidelines such as the Change4Life campaign in the UK (Evans, Colls, and Horschelmann, 2011) and the aforementioned EiM. These entail preventative interventions that advocate increasing physical activity levels to ameliorate the non-communicable disease (NCD) burden. The Daily Mile (Chesham et al., 2018) and 10,000 Steps a Day are well known examples. The *Lancet’s* series of reports highlighting what is described as a global pandemic of physical inactivity (Anderson et al. 2016) suggests that while these ideas may be more pronounced in certain contexts, they are essentially universal in scope.

In somewhat parallel developments, health has become (re-)defined as a state which can and *must* be individually achieved, and thus its pursuit has become integral to contemporary notions of character, identity and citizenship (Crawford 1980). Lupton (1995: 11) further theorized the role of public health discourse in the reproduction of power relations and described health as a social *imperative* which constructs and normalizes citizens who are ‘autonomous, directed at self-improvement, self-regulated, [and] desirous of self-knowledge ... seeking happiness and healthiness’. Health thus becomes more than simply the obverse of illness and, *pace* Beck’s (1992) seminal analysis of the rise of risk as a key component of contemporary society, social norms require us all to maintain vigilance against, and accept

responsibility for, markers of (poor) health. Such processes are broadly in line with neoliberal ideologies (Ayo 2012). However, the medical profession is also active in fuelling these developments. As deaths from contagious diseases have been increasingly effectively managed (particularly in the West), medicine has expanded to meet the ‘new’ NCD risk. The increasing identification and treatment of asymptomatic but relatively high-risk pre-disease states (Aronowitz 2009) – obesity being a notable and apposite example – further blurs the health-illness distinction. Through the mass pharmaceuticalization of populations, the ability to self-manage becomes a defining feature of ‘health’. Consequently, physical activity, health, and fitness have become synonymous, both conceptually and as socially embodied practices (cf. Bauman, 2000).

This article seeks to advance our understanding of the convergence of physical activity and public health through a novel theorization drawing upon, applying and developing the core figurational sociological principles of Norbert Elias. We argue that Elias’ work regarding the place and influence of human bodies in shaping social processes of power and control sensitizes us to important facets of physical activity and health and therefore has the potential to advance the relatively nascent critical study of PAHP. To develop a more robust understanding of PAHP, we argue that:

- 1) contemporary manifestations of health have emerged as part of the lengthening of social interdependencies in more complex societies and epitomize both the actual and the growing consciousness of the relational basis of human existence.
- 2) PAHP further exemplifies the trajectory of embodied social regulation which underpins Elias’s notion of the civilizing process, as rationalistic forethought comes to play a greater role in the presentation of our physical selves in increasingly complex societies and becomes physically manifest in the ‘civilized body’.

- 3) the social valence of PAHP can be understood according to the principles of Elias's sociology of knowledge in that scientific evidence intermingles with the emotional appeal of PAHP for a range of key players (politicians, professions, publics).
- 4) the relationship between biological, sociological, economic, and political processes at play in PAHP necessitate examining how our bodies and bodily potentials are shaped, and in turn shape, knowledge, identity, agency, emotions, and power. As such, we highlight the potential for Eliasian theorizing of the hinge to understand embodiment beyond conceptualizations of civilized bodies currently found in the literature.

Our approach is to utilize PAHP as a vehicle through which Elias's theoretical principles can be delineated and developed and thus for a kind of co-production of empirical and theoretical knowledge. Before embarking on that analysis, however, it is necessary to review the extant literature on health that has been informed by Elias's corpus of ideas.

Figurational Sociology and Health

Elias's 'central theory' (Dunning and Hughes 2013) of civilizing processes (Elias 2000) provides an 'analysis of the historical development of emotions and psychological life ... in relation to the connections ... with larger scale processes such as state formation, urbanization and economic development' (van Krieken 1998: 353). In so doing, it necessarily if only briefly touches upon health-related issues. His analysis of the internalization of social regulation speaks to the historical variability of the 'deviance' of mental illness and the potential for the generation of psycho-somatic disorders in more 'civilized' societies, while his analysis of the relationship between social structure and shame/embarrassment speaks to the link between socio-economic and health inequalities (Freund 2015). Additionally, his work on technization in contemporary life informs public health concerns related to car ownership (Elias 1998).

While Elias (1985) most explicitly addresses the medical profession in relation to structuring relations of death and thus exacerbating *The Loneliness of the Dying*, arguably his most fundamental contribution is through the analysis of hygiene in civilizing processes as indicative of broader changes to affect regulation and the internalization of self-control.

Consequently, the foundational principles of a figurational sociological approach have been most explicitly developed in analyses of *public* health. Goudsblom's 'Public Health and the Civilising Process' (1986) contains an analysis spanning the fourteenth to nineteenth centuries and, specifically, responses to lepers, the Bubonic Plague, syphilis and cholera. Goudsblom (1986) identifies at least three enduring trends across these public health interventions: the link between ill-health and lack of cleanliness; attempts to ostracize the victims of illness; and the ability of the socially advantaged to distance themselves from the unhealthy/disadvantaged and so avoid 'social pollution'. This developmental analysis demonstrates that while humans largely depict their health-related behaviour as logical extrapolations of scientific and experiential knowledge about disease, such beliefs are invariably ex-post facto rationalizations of behaviour driven by the interdependence of what Elias calls psychogenic and sociogenic changes. In other words, rather than biomedical science simply identifying and implementing healthy behaviours, the behaviour of the elite becomes scientifically validated and culturally diffused. The extension of public health interventions thus stems from processes of individualization and democratization, with 'the individual ... [increasingly] compelled to regulate his [sic] conduct in an increasingly differentiated, more even and more stable manner' (Elias 1982: 232, cited in Goudsblom 1986). Pinell (1996) subsequently depicted the public health response to cancer as a 'new phase' in health and civilizing processes. As successful treatment came to depend on 'the social organization of early diagnosis' (Pinell 1996: 12), public health campaigns focussed on educating individuals into greater bodily self-vigilance and the development of a 'peculiar psychic disposition' that

enables today's patients to become actors in their own treatment and thus embody medical auxiliary roles.

These ideas about public health and civilizing processes are developed by Abram de Swaan (1989) and Dorothy Porter (1999) in relation to state-initiated and commercially-led developments respectively. De Swaan (1989) positions the development of modern medicine as a project fundamentally predicated on the desire to render the human body and its various functions more rationalized (see section on Exercise and Foresight) and more malleable. He argues that the development of healthcare within the broader welfare state (especially as targeted at the control of infectious diseases) represents an extension of the external regulation of intimate embodied lives which, in turn, stems from the growing awareness of our fundamental interdependence as a population. Porter (1999) however emphasizes the role of the market, arguing that interaction between preventative medicine through lifestyle choices and emergent commercial interests, has fuelled introspection, fetishization and missionary health evangelism. While for Porter the right to be a free market consumer exceeds and drives the duty to be healthy, 'the designer body ... is a designer commodity, which can be purchased by those with sufficient resources. [But] It is also a moral achievement, because you have to purchase it with your own labour' (Porter 1999: 312).

There are perhaps four further aspects of health research in which Elias' ideas have been applied that should sensitize PAHP research. In the analysis of body weight issues, Stuij (2011) argues that Elias's theory of civilizing processes points us towards understanding population weight gain in relation to more complex and differentiated forms of self-control which necessarily develop in environments characterized by calorific abundance rather than scarcity. She notes that the 'differential acquisition of new forms of self-control' not only enables social stratification based on corporeal appearance, but facilitates the praise or blame of individuals relative to their (in-)ability to conform (Stuij, 2011). Relatedly, Barlosius and

Philipps (2015) draw on Elias's work on stigmatization in established-outsider relations (Elias and Scotson 1994) to understand how the internalization of a personalized conception of blame directs the self-presentation of obesity in everyday life. Secondly Elias's ideas have been used to understand the organizational dynamics of healthcare, including the problems of implementing bureaucratic change (Dopson and Waddington 1996; Mowles 2011), the decline of medical dominance (Brown et al. 2015), the complexity of multiagency working in health and social care (Allen et al. 2004; Powell et al. 2014), compassion in healthcare (Flores and Brown, 2018), and the propensity for such webs of interdependence to result in what has been termed 'lifestyle drift' (Powell et al. 2017). Thirdly, Malcolm et al. (2017) examine the way in which illness narratives are mediated through a combination of biographical contingencies, embodied experience and emotional engagement and ontological security. Finally, the recent emergence of figurationally-informed studies exploring the aforementioned sport-health ideology is indicative of both the expansion of this perspective and the growing social significance of PAHP. Work in this vein includes the development of sport-health policy (Stuij and Stokvis, 2015), and specific exercise-related health interventions (Evans et al. 2016; Henderson et al. 2017; Thing et al. 2017).

As indicated by the above review (see also Malcolm and Gibson 2018), , the empirical bias within the sociology of health and illness (Nettleton 2007) frequently leads to the partial and somewhat de-contextualized use of (figurational sociological) theory (Atkinson, 2012). This thwarts the essential promise of the Eliasian perspective, one of the distinctive features of which is its '*radically* relational ... character' (Dunning and Hughes 2013: 50). Rather, a more effective application of Elias's ideas entails an analysis that is as comprehensive and broad in scope as is feasible, in order to demonstrate the essential interconnectedness of both Elias's thinking and the contemporary social world he sought to understand. Our contention is that Eliasian theorizing of the reciprocal relationships between power, habitus, knowledge and

bodies, significantly advances the capacity to develop a theoretically guided empirical research agenda applicable to PAHP and, by extension, health and medicine more generally.

Consequently, in the remainder of this article we seek to demonstrate how core aspects of Elias' theoretical corpus can be integrated to better understand the contemporary significance of physical activity in health. For heuristic reasons we treat each in turn, but this should not be interpreted as giving primacy to any individual concept. Rather we stress the importance of their interrelationship and seek to make this explicit where possible. This is, however, most apparent in our central argument, namely that the contemporary interest in PAHP can be attributed to the amalgamation of distinctive figurations of interdependency ties, an associated development in the internalization of human self-control, conceptions of truth which derive from a combination of both evidential 'fact' and the emotional gratification brought from the 'holding' of such beliefs, and the intersection of social and biological processes on the human body. In the conclusion we argue that the framework we develop through this exploration of the essential inter-connectivity of Eliasian concepts provides the segue to move the analysis of PAHP beyond individual and compartmentalized studies to a more radically relational approach to studying health and social phenomena in the round.

Interdependencies

As befits a perspective that places distinct emphasis on the processual and relational character of social life, an understanding of PAHP must be rooted in an awareness of the distinctive set of human interdependencies that constitute the figurations in which such policies have emerged. Reduced to its essence, Elias presented a conceptualization of power as a 'structural characteristic of all human relationships' (Dunning and Hughes 2013: 66). For Elias such interdependence has fundamentally biosocial roots, embracing everything from the need for

reproduction to needs for security and sociability. Notably, however, Elias identifies how the balance between the biological and the social changes over time; humans are linked at first mainly through biological need and latterly, and increasingly, through socially learned behaviours. PAHP epitomizes the biosocial character of interdependence as Elias conceived. Biological longevity has long been linked to the socially desirable behaviours, but Elias further links human fears of mortality to the tendency towards process-reduction in human thought; suggesting that the relatively transitory nature of individual existence makes consideration of the inevitably processual character of human societies discomfiting which, in turn, leads to strategic avoidance or outright rejection (Elias 1985).

Thus, extending de Swaan (1989) who saw healthcare in the welfare state as driven by the increasing recognition of human interdependence, PAHP should be seen as emerging from particular forms of temporally specific social interdependencies. Initially this enables reflection on the way changing conceptualizations of health, the medicalization of social life, or the rise of the health imperative have been conceived. Crawford (1980), for instance, explains the rise of healthism in terms of the protestant work ethic, inter-class status rivalries, the rise of neoliberal ideologies, etc., while Lupton (1995) locates public health discourse within Foucauldian notions of power relations. Although not fundamentally disagreeing with either of these interpretations, an Eliasian sensitivity both deepens our understanding and obviates the need to evaluate between them. In other words, an Eliasian reading positions these as partial accounts of a singular (overarching) social transformation; as (falsely) abstracting processes which are better understood as radically interdependent.

Specifically, Elias argued that societies become increasingly complex as a consequence of functional democratization. Functional democratization - or 'the emergence of larger, more differentiated, and denser "chains of interdependence"' (Dunning and Hughes 2013: 67) - occurs where specialization (especially in the field of production), increases the mutual

interdependence of humans. Such changes in the nature of human relations characteristic of ‘advanced’ societies, lead to a long term equalization of social power but, more significantly, to a particular expression of the development of what Elias termed the ‘we-I’ balance; the expression of how our perceived individual uniqueness relates to a broader cultural universe. Fundamental to understanding Elias here is his contrast between the *homo clausus* and *homines aperti* view of humans. While the latter – the view of humans as products of their pluralities/interdependence – rises in prominence as more reality-congruent forms of knowledge come to be used to make sense of the human condition, the former - the view of humans as closed off or unique – becomes increasingly salient as civilizing processes develop (because through such developments we come to increasingly value the exertion of *self* control). A related development is the economization of human relations (hence the description of PAHP as ‘the best buy in public health’), as the increasing myriad of interdependencies is reduced and simplified through quantification to facilitate comparison. We do not need to see these as antithetical or paradoxical developments. Rather, characteristic of Elias’s broader approach, we conceptualize a concomitant relationship existing between these two perspectives.

As noted, Goudsblom (1986) attributed the extension of public health interventions to a combination of democratization and individualization processes. Relatedly, the emergence of PAHP should be seen as an expression of the developing ‘we-I’ balance which entails a specific mixture of *homines aperti* and *homo clausus* thinking, but ultimately a bias towards the latter. Functional democratization leads to specialization in healthcare, while notions of egalitarianism lead to pressures for certain levels of healthcare provision to be made available to humans irrespective, e.g., of their personal wealth. Additionally, the development and diffusion of *homines aperti* thinking leads people in contemporary societies increasingly to reflect on the uses made of the taxes and premiums used to fund healthcare (hence, e.g., calculations that physical inactivity cost of \$330 per person per year in the US, Sallis 2009).

Indicative of this is the view of the expenditure derived from ‘our’ taxes/insurance premiums, rather than conceptualizing this revenue as a contribution made to societal functioning. ‘We’, as a plurality, express socially shaped concerns about both society’s healthcare costs *and* the productivity of all/other members of society, leading to growing expectations about the duty of citizens to be economically active rather than dependent on the state. The perceived problems underpinning the introduction of PAHP therefore – the ‘need’ to reduce health care expenditure because of the increasing demands posed in managing NCDs – are consonant with the *homines aperti* perspective.

But, ultimately, the proposed resolution for this essentially social issue rests rather more firmly on a *homo clausus* model, in that the isolated and closed ‘I’ is presented as the only affective agent of social change. The narrative of morality is indicative of the underlying prominence of *homo clausus* thinking; not only is the resolution of these concerns located in the ‘self’, but the *responsibility* for so doing is also a matter of ‘I’. Tensions in the ‘we-I’ balance and the growing individualization of social relations similarly shape the tendency towards the ‘psychologization’ of public health (Horrocks and Johnson 2014) and ‘lifestyle drift’ (Popay et al. 2010). Seen in this light, explanations which invoke neoliberalism to critique public health are not, as Bell and Green (2016) argue, extraordinarily flexible nor ‘downright contradictory’, just restricted by a failure to consider these interdependencies ‘in the round’. If we seek to understand developments in public health in relation to changes in the underlying character of human interdependencies in contemporary societies, a less partial picture emerges and the apparent tensions are resolved.

Foresight and Exercise

PAHP initiatives are rarely based on realising immediate health benefits by alleviating *symptoms*, but primarily offer long-term reductions in the *probability* of being ill in the future. By inference, illness resulting from physical *inactivity* is largely positioned as a product of (poor) choice. As noted above, a cornerstone of PAHP rhetoric is the deployment of individually-focused behavioural change strategies that systematically and programmatically ignore material and structural factors that inhibit opportunities for activity (Kay 2016). While PAHP, therefore, is grounded in homo clausus thinking, it is also founded on the conceptualization of disease as predictable and consistently knowable. Elias agrees that (perceptions of) increasing predictability and consistency both enable *and* require individuals to deploy foresight, reflection and self-control. Extending Pinell's (1996) analysis of public health responses to cancer, people are increasingly expected to know and act on the understanding of the potential consequences of failing to behave 'correctly'. More than just prediction, foresight is entwined with reducing irregularities in behaviour to develop greater, and more permanent, self-control. This relates, of course, to habitus; that is socially-learned 'second nature' (see section on PAHP and bodies).

Elias (2000) identified how the growing predictability of social life is linked to the process of state formation and the twin monopolies over taxation and violence. This does not mean that violence disappears from societal, interpersonal, or inter-group interactions but, rather, as self-control increases, threats (and ultimately acts) of violence become relatively more predictable, and daily life becomes relatively calculable. Calculability of risk reduction, while contentious, is a central platform of encouraging physical activity as a healthcare practice. Social, political, economic, and physiological will for PAHP emerges in part because the likelihood of traumatic and unexpected death due to communicable disease (analogous to acts of violence in civilizing processes) has reduced significantly, albeit to be replaced by the growth of NCDs. An unintended consequence of extending lifespans through improved

diagnosis and screening, more efficacious treatment of acute injuries, increasingly successful management of chronic diseases, better health and safety measures etc., is the growing premium placed on having the foresight to live according to socially proscribed and increasingly epidemiologically evidenced lifestyles (cf. Goudsblom 1986). PAHP exemplifies how people are not only expected to rationally respond to the signs of ill-health but actually pre-empt their manifestation.

For Elias (1978, 2000), foresight is a synthesis of three processual developments: psychologization; rationalization; and advancing thresholds of shame and embarrassment. Elias's notion of *psychologization* involves considerable emphasis on our observation, experience and understanding of how our behaviour is interpreted by others. However, the recognition of competitive pressures requiring action to maintain social position within figurations differentiates psychologization from parallel concepts (e.g. Cooley's looking glass self). Thus physical activity is intimately tied to the culturally assumed relationship between how bodies look and how they function in relation to each other. Contra to the aforementioned tendency for the psychologization of public health, Elias (2000) positions psychologization as an inherently social process which exhibits historically variable characteristics (van Krieken, 1998). It is in light of this that we must understand how PAHP is intertwined with conspicuous displays of morally worthy behaviour.

Rationalization is a similarly well-worn sociological concept (e.g., Weber, 1968) which Elias seemingly follows by positing rationalization as actions guided by symbolic representation between present means and future ends. However, Elias rejects rationality as revealing of "understanding or "reason" which had not existed hitherto' (Elias, 2000: 402) and instead frames rationality as involving, at least in part, the denial of *biological and learned* impulses. For Elias, therefore, rationalization is the translation of dominant conceptual models and explanations of observable reality into patterns of individual behaviour. Furthermore, as

the risk of life-threatening acute illness reduces, the more ‘rational’ becomes the investment of time and money into preserving health (de Swaan 1989). As such, to be physically active is to recognize and enact a moral duty and political responsibility for our own health based on the belief that disease is avoidable for those with compliant lifestyles (Pronger, 2002). The (re-)conceptualization of sport into physical culture into, primarily, a healthcare practice in exercise (cf. Neville, 2013; Smith, 2016) means that from both public health and individual perspectives being inactive is irrational. This has profound implications in the “health education” initiatives taken which operate from a common central assumption that raising awareness of the benefits of activity and the concomitant dangers of inactivity will compel all rational people into, quite literally, action (Wen and Wu 2012). To be active is to be healthy, to be healthy is to be (statistically) normal, yet ironically (or irrationally) the very premises of PAHP show that being active is not normal (statistically). In projecting inactivity as a ‘deviant’ response to contemporary social developments (growth of the internet, automated transportation, etc.) PAHP represents rationalization, in the Eliasian sense, as self-control over biologically driven and/or learned behaviours.

Finally, transgressions of social norms in the framework of foresight reveal *advancing thresholds of shame and embarrassment*. For Elias (1991a, 2000), shame is the feeling of anxiety due to the transgression of internally-valued social norms, while embarrassment is the perception that others have transgressed social norms. Shame and embarrassment are significant components of Western, middle-class habitus and concomitantly social control mechanisms (Binkley, 2009). And, of significant importance in PAHP, shame is rooted in the body, which, according to Smith (2001: 49) ‘makes the person who occupies the body vulnerable. When the body plays its tricks, he or she will get the blame for transgressing the rules of “correct” behaviour. Ironically, the feeling of shame triggers many of the same bodily reactions (blushing, trembling, sweating . . .) that cause shame in the first place’. The realization

of social advantage through the moderation of affect in new social interdependencies (Elias 2000) is analogous to the realization of social advantage through the symbolic representation of exercise presented by our bodily appearance. Stigmatization, discrimination and the associated embarrassment of fat-shaming (Stuij 2011; Barlosius and Philipps 2015) are entwined with beliefs that self-restraint denotes not only higher status – in terms of civilizing processes - but, correlatively, health. Thus, theorizing PAHP meaningfully requires understanding social experiences and socially-generated emotions. The morality, praiseworthiness and social acceptability of these activities are at least as important as the realization, or otherwise, of the health benefits of activity. As such, the exercise-health imperative is dialogical with evidence of benefits articulated in terms of the probabilities which structure changing conceptualizations of health. PAHP, then, reflects in no small way the process of civilizing bodies described by Shilling (2013: 175) whereby, ‘the normative character of rationalized body management and behaviour ... has become so strong within contemporary Anglo-American society that an army of psychological “technicians” is on hand for those who struggle to achieve this goal’. We contend that the PAHP movement extends this ‘army’ of technicians, as the sport and health sciences become fundamentally implicated in the sociological development of knowledge of (in)activity. We explore this further in the next section.

PAHP and Elias’s Sociology of Knowledge

Elias’ sociology of knowledge is intertwined with the conceptualizations of interdependence and the development of human forethought noted above. Specifically, Elias argued that human knowledge has become less influenced by immediate self-interest, egocentrism and strong emotions, while correlatively humans have increasingly expanded their capacity to distance

themselves from their objects of study and become reflexive about their role as producers of knowledge. Human knowledge, concepts and ideas exist/persist if they survive ‘reality testing ... in the crucible of experience’ (Elias 1987a: 56). Because Elias perceived this ‘reality’ as inherently social, these ideas do not simply imply a march towards a modernist conception of truth. Subjectivity and objectivity (or involvement and detachment as Elias termed it) is not a zero-sum game. Rather, relative power, emotional resources (a sense of security and/or well-being), etc. continue to fundamentally shape human knowledge. Elias (1987a) therefore explored ‘magical-mythical’ ideas or superstition as a source of comfort, and the ‘group charisma’ and ‘group disgrace’ that dominant and subordinate groups could hold about themselves and others (Elias and Scotson 1994). A fundamental principle of Elias’s sociology of knowledge is the observation that, while the balance may be historically variable, the truth/falsehood of particular beliefs are not necessarily more important than the emotional gratification derived from holding said beliefs. In understanding the contemporary ubiquity of PAHP therefore, we explore the ‘appeal’ of its principles for the various parties involved in the creation of these polices and the execution of their social practice.

First, PAHP has an emotional appeal to public policy makers. This is largely due to its congruence with broader neo-liberal (health) trends; extolling the public to exercise is seen to facilitate the withdrawal of the state from the provision of healthcare. A necessary adjunct is the belief that exercise has no or minimal health-harming consequences. This, of course, is neither intuitively nor empirically correct, but frequently PAHP documents provide no assessment of the statistically probable costs including, for example, the direct medical cost of treating sports injuries (Malcolm 2017). While (as noted) economization is a tool to simplify the increasing complexity of interdependent social relations in contemporary societies, the reductionism to which PAHP is subject invariably contains fundamentally biased accounting identifying costs for the state, while obscuring the gross cost for both individuals and the

society as a whole. PAHP has further emotional appeal to policy makers in that it reproduces ideas about health as self-management. In a context where it is increasingly difficult to distinguish between those who are ill and those who are not *yet* ill (Aronowitz 2009), emphasis shifts to differences in ability to self-manage. Exercise as health self-management is thus an exemplar of contemporary policy makers' notions of health (Pullen and Malcolm 2018).

Second, PAHP has a strong emotional appeal for those who are targets of this public health intervention. PAHP serves as a counter to the existential uncertainties of contemporary social life. As we have seen, in highly interdependent societies the individual is fundamentally unable to control many aspects of their daily life. For instance, the increasing medicalization of pre-disease states forces growing sections of the population to be defined and self-define as ill and, ultimately, to become subjected to pharmaceutical control (Aronowitz 2009). PAHP holds out the promise of averting the existential uncertainty inherent in 'knowing' that you have a condition beyond your individual control. In contrast to the largely pharmaceutical alternatives exercise is an active rather than reactive approach to health management (Porter 1999), predicated on a sense of agency contra to the structure of corporate exploitation. While corporate sponsorship of PAHP may serve to subvert this somewhat (for critiques of the involvement of businesses such as Nike and Coca Cola see Jane and Gibson, 2017), public scepticism of these associations is not (yet) widespread.

Third, in contrast to alternative approaches to managing illness and pre-disease states exercise as medicine offers tangible consequences. While the statin taker experiences no significant embodied change (outside of periodic blood test readings) the exerciser experiences physical stress (Nesti 2016) evident in, amongst other things, breathlessness. Exercisers frequently undertake real time quantification of the markers of health (measuring steps, distance covered, energy output, etc) and, in the longer-term, may achieve the socially valued leaner body shape (see next section for an expansion of this point).

Finally, PAHP has an equivocal emotional appeal to medical practitioners and their constituent scientific communities. While PAHP represents an extension of medicalization, here such processes are highly uneven, for while laboratory-based medicine has shown a considerable willingness to be involved in this developing agenda, the biomedical actors charged with its implementation are distinctly divided. Thus, the development of the EiM paradigm is partly predicated on the existing failure of family practitioners to ‘prescribe’ physical activity (Sallis 2009), while PAHP provides considerable scope to grow the social influence of the sport and exercise medicine community, which has traditionally been relatively marginal within the profession (only attaining UK state license in 2005). The emotional gratification offered to the sports science community, particularly in relation to enhancing its status as an academic subject is, though, unequivocal (Williams and Gibson, 2017). Such pressures have both been evident in the transition towards a more health-oriented sport (and exercise) science, and supportive of the increasing social prominence of PAHP.

Thus, on multiple levels, the marriage of physical activity and health generates the kind of emotional gratification which, Elias’ sociology of knowledge predicts, is fundamental to the acceptance and development of what is socially validated as ‘truth’. Ultimately the ‘market’ for PAHP (the ‘crucible of experience’) lies in its correlation with core developments in broader medicine. In this respect one can draw parallels with the ‘new medical pluralism’ evident in the increasing popularity of complementary and alternative medicines (Baarts and Pederson 2009). While the availability of new forms of medicine is indicative of social differentiation or even functional democratization, the demand that they meet can best be explained with reference to Elias’ concept of the ‘double-bind’ (Elias 1987a), where the insecurities posed by one set of circumstances (increasing awareness of the limitations of biomedical knowledge) enhance commitment to a set of equally (if not more) empirically unsubstantiated/questionable approaches (e.g. complementary and alternative medicines). The

commitment is, however, sustained by the emotional comfort brought by a sense of ‘doing something’ positive. In the final substantive section we explore the fundamental role of the body to this notion of agency.

PAHP and Bodies

As should have been evident so far, the body (Shilling 2013) and the emotions (Burkitt 1999) are fundamental to Elias’ sociological approach. We have seen this, for example, in relation to the biosocial roots of human interdependence, and between foresight and habitus. These ideas have informed the study of health more broadly. Lupton (1995), for instance, views the imperative of health as fuelled by the social value of the ‘civilized body’, and invokes Elias and Dunning’s (1986) aforementioned study of the *Quest for Excitement* in modern sport and leisure to highlight the contradictions between somewhat utilitarian health promotion policies and the desires and motivations of sports participants.

But to illustrate the potential value of Elias’ theorization we must move beyond the tendency to disconnect Eliasian concepts, and the civilized body in particular, to transplant them into other conceptual frameworks. Following Elias’ theoretical lead more closely entails studying PAHP with participants’ bodies not as mediators of experience and meaning, but as a biologically significant sources of meaning and practice (Atkinson, 2018). In this vein there are two key considerations to be taken from Elias’ thought that could gain more traction in discussion of ‘the body’ in PAHP specifically. First, as Atkinson (2018) points out, Elias grounds his sociological analyses in bodily functions and comportment. Second, bodies are people. Both points reflect Elias’ (1978) analytic disdain for dualisms through intricate amalgamation of natural and social processes.

Following Elias (1987b: 348), to study PAHP requires ‘connecting human nature with society’ through recognition that *people* (in their physical, existential, cognitive, and affective dimensions) are situated and the centre of a relationship between their biological make up and their social environment. Thus, for Elias, both biological evolution and social development are structural processes where unlearned (i.e., physiological functioning) and learned (i.e., social practices) traits are intimately connected (see section on Foresight and Exercise). Elias (1987b, 1991b) articulated this perspective as the *hinge* (see also Atkinson, 2012, 2018). The hinge is at the core of Elias’ theorization of the mutual, and irreducible, dependence of personality and social structures (see section on Interdependencies above) through empirical examinations of state formation (Elias, 1989) manners (Elias, 2000) death (Elias, 1985), and the development of habitus (Elias, 1991b, 1996). It is an underlying premise for his call for analyses of the social to be fundamentally multi- and interdisciplinary. As such, Elias’ sociological analyses engage deeply and directly with the narratives and expectations of individuals and the ways in which particular bodily practices, such as exercise as currently promoted through PAHP, are developed in and through both biological and social processes about the hinge, not simply the body as a barometer of civilizing processes. Indeed, in his description of the formation of habitus Elias is careful to identify not only socialization processes that naturalize ‘habits’ (e.g. of doing and interpreting physical activity), but also that, ‘learned self-control has bodily requirements too’ (Elias 2018: 283).

Consider, for example, the aforementioned discussions of fat-shaming. From the perspective of the hinge, understanding shaming must be grounded in the reality of both body composition and feeling. Shame therefore is not simply discursive, but essentially also *corporeal*. Furthermore, Stuij’s (2011: 797) analysis of self-control in relation to body weight, differentiated patterns in trends in body weight between social groups, and the ‘slenderness code’, demonstrates how particular body shapes quite literally embody particular historically

and culturally specific values. Within the so-called obesiogenic environments of contemporary developed nations, slender bodies are valued as markers of self-control (Porter 1999).

But visually manifest anatomical changes cannot be wholly divorced from the underlying health implications of developing particular kinds of bodies. The hinge highlights the interdependency of our social practices and physiological functions. Simply put, those who are relatively overweight find the uptake of physical activity relatively challenging because their embodied power to weight ratio is likely to be lower. By refining focus onto the hinge rather than civilized body we can begin to explore the multitude manifestations of emergent PAHP for so-called ‘special populations’ (e.g. the elderly, those with chronic illnesses). Such groups may not necessarily reflect the social status normative assumptions of civilized bodies, yet are rich in potential for theorizing through the hinge, for the concept enables us to conceive of them as not simply excluded from the social mainstream, but as having unique and specific embodied experiences as a result of changing social practice. Such a shift in emphasis reveals the fallacy of an axiom of PAHP that exercise is inherently and always good for *everybody* (Williams et al. 2018).

Ultimately, what demarcates Elias’ conceptualization of the hinge in understanding the physical or material reality of the human body as entwined with social and cultural processes is a reflection of his thinking more generally: steering between the Scylla of bodies in PAHP as barometers of social values and trajectories and the Charybdis of PAHP as (yet another) social construction of the body (vis-à-vis civilizing processes). Foregrounding the hinge requires critical theorizing of PAHP to be attentive to the physiological evidence of the impacts of physical activity, and anatomical changes that result from engaging (or not) in physical activity. While biomedical technological understandings are revealed, understood, shaped, and impacted by social, political, and economic elements (Gibson, 2018; see also the section on PAHP and Elias’ Sociology of Knowledge), physical (in)activity has relatively predictable

physiological outcomes. Understanding the relationship between such ‘biological evolution on one hand and social development under the name of history on the other’ (Elias, 1987b: 350) reflects Elias’ (1987b, 2018) observant analysis of how bodily potentialities are reciprocally and recursively dialogical with social institutions and socio-historical structuring processes (Atkinson, 2012, 2018). Thus civilized bodies and civilizing processes must be understood through the interdependence of the biological and social as expressed through Elias’ concept of the hinge.

Taken together, an approach linking human bodies and social worlds presents a mutually reinforcing case for addressing the interaction of the learned and unlearned in PAHP. In other words, the organization of PAHP and the act of physical activity itself is learned (Atkinson, 2008), but the adaptations and changes our bodies undergo are not. The hinge provides a conceptual opening to understand the malleability of the body as shaped by cultural values. In turn, the reality of the body - which means we have to accept ‘fat’ bodies are not just discursive constructions but potentially relatively difficult to move – provides a foundation for understanding the efficacy and effectiveness of PAHP. Elias enables us to consider how the unlearned and learned are brought together to mediate the outcomes of PAHP.

From the conceptual standpoint of the hinge, PAHP entails the *pursuit and demonstration of real changes in our bodies*. Pace Porter (1999) the ‘designer’ body is not simply a moral achievement purchased through our labour (a manifestation of our awareness of socially ‘correct’ knowledge, and our ability to use forethought to pursue these truths), but actually enhances our potential to live a prolonged life (relative to other humans) and thus plays on our fears of mortality (Elias 1995). Elias’ notion of the hinge provides a sensitizing concept to investigate the underlying technical processes at play within PAHP as a constitutive and reflective element of dominant Western contemporary physical culture beyond social differentiation.

Conclusion

As advocates of the value of utilizing an Eliasian sociological approach we take inspiration from and welcome both those analyses of health which are explicitly figurationally-oriented, and those which incorporate its individual concepts within a broader, sometimes theoretically more eclectic framework (e.g. Lupton 1995). Moreover, it seems a logical extrapolation of contemporary developments in health and medicine that there has been a noticeable recent growth in figurationally-informed studies of both medicine per se and health and physical activity in particular. While in some respects this paper is designed as an aid to those scholars as they seek to advance their theorization of these increasingly prominent social developments, it is also recognized that the convergence of exercise and medicine through PAHP offers a unique segue to identify the benefits of the application of Elias in the study of health and illness more generally. What can we take from the analysis undertaken here?

It might be worth starting by considering limitations. First, while consistently seeking to spatially and culturally contextualize our thesis, there are necessarily limitations to the degree of rigour which can be achieved in this context. We are conscious that the developmental trajectory of sport into physical culture depicted at the outset has an Anglocentric bias which, while representing the globally dominant paradigm, has more limited or different applicability across Asia, Africa and even parts of Europe (i.e. Scandinavian traditions of physical activity). Albeit a significant source of cultural diffusion (evident in the global uptake of EiM), we must be sensitive to differences in the timing and degree of incorporation of different sport-exercise models in various cultures. Second, we are keen to avoid accusations that this work embodies the kind of abstract theorisation of social phenomena of which Elias was critical. While the balance between empiricism and theory in this article is

intentionally toward the latter, we stress the need for theoretically-informed empirical research in future.

What might future research entail? In light of the limitations, we note that the framework we have sketched needs testing. That must be done at both a higher level of theoretical generality, and in narrower, more empirical and necessarily de-limited case studies. Preferably such studies will enable cross-cultural comparison. Equally we call for a more consistent awareness of the importance of process, both in terms of contextualising contemporary sport-exercise and medicine-health in the broader development of human societies and in respect to the transitions individual humans experience in the course of their lifetime. Consideration of PAHP within the development of civilizing processes and public health as described by Goudsblom (1986) will be an important step in providing this kind of processually-oriented research that Elias advocated, and so avoid the tendency for researchers to produce programme-focused evaluations which necessarily entail a retreat into the present (Elias 1983). Existing PAHP policies consistently fail to recognize that: sport has historically been the most popular form of physical activity; motives for the uptake of sport, exercise and physical activity extend beyond and are sometimes contrary to the pursuit of health; and each individual has a personalized history of sport-exercise which strongly influences their current practice. In failing to recognize that endogenously motivated physical activity appears to be a cultural universal, and that enjoyment and sociability appear to be central ‘benefits’, these policies frequently misunderstand their target audiences and, worse, have the potential unintended consequence of driving people away from physical activity (Pullen and Malcolm 2018).

Fundamentally, however, we argue the implication of this analysis is that future research should seek to connect rather than compartmentalize Elias’ concepts and, in so doing, provide a relational response to social problems. Following this guide would enable us to see

that it is something of an over-simplification to chart the metamorphosis of competitive physical activities into regimes of exercise-based health care which, in turn, may be avoided if we understand how political interests and scientific knowledge feed off and fuel these transitions. Similarly, it will enable us to go ‘beyond’ networks and game models (e.g. Evans et al. 2016, Powell et al. 2017) and ‘into’ bodies to explain the failure of many exercise-related health interventions. Significant here is not simply the conflicts within interdependent networks of professionals charged with the implementation of such schemes (Henderson et al. 2018), but the varying embodied experiences of participants as some experience a notably enhanced sense of physical wellbeing, and others a greater degree of physical distress and discomfort. This necessitates a multidisciplinary approach, forging alliances between social science and physiology and medicine. Thirdly it will enable us to explain how certain groups with heightened sensitivities towards the importance of forethought and self-regulation are more amenable to these policies and how the corporeal manifestations of successfully following PAHP advice feed into social status and stratification. The logical conclusion is that such policies are necessarily more likely to work in relation to particular social demographic groups, and thus the goals of universal adoption can never be achieved.

As Elias (1985: 46) argues, ‘the dream of the elixir of life and of the fountain of youth is very ancient. But it is only in our day that it has taken on scientific, or pseudo-scientific, form’. Here we conceptualize the historical specificity of PAHP. The demands of contemporary higher education environment and the structure of publishing means that specific, narrowly focused studies are likely to predominate. The high level of political commitment to PAHP means that monitoring and implementation studies are likely to be relatively well funded. But the greatest advances of knowledge come through a being cognizant of the bigger, interconnected, picture which enables us to correlate various pieces of the PAHP jigsaw to understand these phenomena ‘in the round’, and to what has more recently been termed a bio-

psycho-social approach.

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