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PROFESSIONAL THEORETICAL ARTICLE

The body and physiotherapy

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ABSTRACT

In recent years, physiotherapists have been increasingly interested in defining their professional identity. At the heart of this interest lies a fundamental question about the role that the body plays in defining physiotherapy practice. Given the importance of the body to physiotherapy, it is surprising how under-theorized the body is in existing physiotherapy literature. With a few notable exceptions, the body as a philosophical/theoretical construct has been almost entirely bypassed by the profession. In this paper the authors argue that a renewed interest in the meaning given to the body by physiotherapists is timely, and offer a sociohistorical critique of the role the body has played in defining physiotherapy practice. We challenge physiotherapists' longstanding affinity with a biomechanical view of the body, arguing that whilst this approach may have been critically important in the past, it is now increasingly clear that a more diverse and inclusive approach to the body will be needed in the future. The authors explore the notion of embodiment and suggest ways in which embodiment theory might be applied to physiotherapy practice.

INTRODUCTION

In recent years, physiotherapists have been increasingly interested in defining their professional identity (Bithell, 2005; Noronen and Wikström-Grotell, 1999). Whether this has been sought through greater awareness of philosophy and theory (Trede, Higgs, Jones, and Edwards, 2003), models of practice (Higgs, Refshauge, and Ellis, 2001; Walker, 2002), professional roles and identities (Santy, 1999; Smith, Roberts, and Balmer, 2000), relationships with other health professionals (Bartlett, Lucy, Bisbee, and Conti-Becker, 2009; Higgs, Hunt, Higgs, and Neubauer, 1999), curricula and educational development (Higgs, Hunt, Higgs, and Neubauer, 1999; Mercer and Jones, 2002), in relation to health care reform (Katavich, 1996; Nicholls and Larmer, 2005), or historical analyses (Darnell, 2007; Dixon, 2003), it is clear that a growing body of literature is emerging around what physiotherapy is in theory and in practice, and that this literature is revealing a complex, multifaceted professional identity.

Given this increasing interest, it is surprising how little attention has been paid to the important role that the body plays in physiotherapy practice (Broberg, et al, 2003; Darnell, 2007; Jorgensen, 2000; Thornquist, 1994). The body is, in many ways, central to the profession's identity because it is the site upon which much of our therapeutic work takes place, and it provides the sociopolitical focus through which physiotherapists compete with other professions to assert our unique identity and our professional character (Cregan, 2006; Crossley, 2001; Davis, 1997; Frank, 1991; Lupton, 2003; Nettleton, 2005; Shilling, 2003; Turner, 2008; Williams, 2003). Physiotherapists spend many years educating themselves in a view of the body that distinguishes them from other practitioners, and they acquire their professional status, financial support, and legislative protection, in part, because of their expertise in managing health problems that have as their core the function and dysfunction of the body.

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It is surprising to see then how vastly undertheorized the body is in existing physiotherapy literature. With a few notable exceptions (Broberg, et al, 2003; Darnell, 2007; Jorgensen, 2000), the body as a philosophical/theoretical construct has been almost entirely bypassed by the profession. The body, it seems, has assumed a historical 'obviousness' to physiotherapists, who appear to practice somewhat absent-mindedly, unaware of the body's theoretical complexity. Physiotherapy appears to maintain a paradoxical relationship with the body, since the body is everywhere in practice, but nowhere in theory (Williams, 2003). The body is woven into the very fabric of our professional identity, but its threads are invisible to the naked eye.

The body's theoretical invisibility is made more striking by the fact that there now exists a wealth of new writings about the body in health and illness that has emerged over the last two decades. Writers in the social sciences like Kate Cregan, Nick Crossley, Kathy Davis, Arthur Frank, Deborah Lupton, Sarah Nettleton, Chris Shilling, Brian Turner, and Simon Williams have written extensively on our emerging understanding of the body, and mapped out the increasingly complex terrain upon which health professionals operate.

For these authors, the body has lost much of its apparent stability, and their writings sketch out the uncertainty of (post)modern bodies:

> *The "fact" that we are born, have a body, and then die is of course something that does seem to be beyond question. It is something that we can hold on to, as we live in a world that appears to be ever more uncertain and risky. But is this fact so obvious? Ironically, the more sophisticated our medical, technological, and scientific knowledge of bodies becomes the more uncertain we are as to what the body actually is* (Nettleton, 2005, p. 43).

Here Nettleton refers to an expanded view of the body that extends beyond its biological and physiological boundary to encompass an idea that the body is, in part, socially constructed; that cultural, economic, political, and social forces shape how people see their bodies and how they are used. Social theorists like Nettleton, Shilling, Turner, and Williams are interested in mapping the myriad ways in which people are now transforming their bodies and increasingly seeing their bodies as means of self-expression, cultural capital, and political resistance. Each and every one of us is using our body to express our unique individual identity. And our increasing awareness of this—coupled with greater sophistication in the way we now understand how people are using their bodies—has led to a growing body of work that is challenging the view of the body offered to us by anatomy and physiology.

The postmodern body is thus not an invention of philosophy, but a term used to coin the everyday practices of ordinary people seeking to take control over their bodies, to move beyond the body's perceived limits, to achieve optimal health, long-lasting happiness, and personal efficiency (Pryce, 2000; Rose, 1988; Williams, 2006). To this end, consumer culture, technological innovation, and a desire to see one's bodies as a project, has opened up some remarkable ways to challenge beliefs that were once thought inviolable (Bunton and Burrows, 1995; Miller and Rose, 1996; Seale, Cavers, and Dixon-Woods, 2006). Assisted fertilization and genetic manipulation, for example, have challenged our conventional notions of when life begins; mechanical ventilation, cryogenics, and cyborg technology now question the finality of death; prosthetics, sports engineering, and xenotransplantation trouble the limits of bodily adaptation; and reconstructive surgery and hormone replacement therapies force us to rethink the traditional gender binary. In an increasingly complex, uncertain and secular world, it may be a source of comfort or anxiety that we can take such control over bodies;

> *We now have the means to exert an unprecedented degree of control over bodies, yet we are also living in an age which has thrown into radical doubt our knowledge of what bodies are and how we should control them* (Shilling, 2003, p. 3) ... *Investing in the body provides people with a means of self expression and a way of potentially feeling good and increasing the control they have over their bodies. If one feels unable to exert influence over an increasingly complex society, at least one can have some effect on the size, shape and appearance of one's body* (Shilling, 2003, p. 6)

This view of the body is, for many, profoundly unsettling. In 1984, Brian Turner wrote in the introduction to his seminal text *The Body and Society* that "In writing this study … I have become increasingly less sure of what the body is" (Turner, 1984, p. 7). Writers on the postmodern body have given up trying to define what the body 'is' (Shilling, 2003), and have largely abandoned attempts to define subcategories of bodies in society (the sexualized body, the medicalized body, the spiritual body, etc.). Instead, writers are concentrating on understanding the body as a 'blank screen' or 'sign receiving system' (Shilling, 2003, p. 35); an admixture of social discourses and physical matter (Bunton and Burrows, 1995; Frank, 1991; Shilling, 1993; Turner, 1992); an assemblage of

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concepts, objects, and structures that can no longer be understood simply through an anatomy textbook or by studying the physiology of homeostasis (Armstrong, 1994; Butler, 1989; Williams, 2003).

It is no surprise that our growing awareness of the diverse possibilities of the body accelerated after the social and cultural upheaval of the 1960s. Since then, people's bodies have become sites for any number of transformative, expressive 'projects' (Butler, 1994; Powell and Gilbert, 2007). New understandings of 'social' bodies have been the focus of political action by marginalized groups who have exposed discrimination directed at the bodies of women, ethnic minorities, and disabled people. And technological innovation has brought the voice of marginalized masses into the mainstream media through expressive writing, blogging, and political lobbying.

Importantly, the emergence of these new voices and commentaries on what the body is and might be have thrown into relief those practices associated with certain professions that traditionally saw the body through a predominantly biomedical lens (medicine, nursing, and physiotherapy, for example). These professions have traditionally dominated western health care, appealing to their practices of objectivity, reason, and logic as the basis for their elevated social status. They are reliant, to a large part, upon their ability to define what is normal and abnormal, and thereby offer a remedy. Philosophically, this is at odds with a postmodern view of the body that values diversity, inclusiveness, and heterogeneous understandings of what constitutes 'normal.' Postmodern writers have, not surprisingly, criticized the biomedical disciplines for their reluctance to move beyond the limits of the biological body (Anderson, 2004; Armstrong, 1994; Brieger, 2004; Gillett, 2004; Kelleher, Gabe, and Williams, 1994; Kennedy, 1981; Lupton, 2003; Rose, 1994). Physiotherapy, as a profession that has been closely aligned with medicine and its strong affinity with the physical body, is very much a part of this debate (Darnell, 2007; Jorgensen, 2000; Nicholls, 2008).

What is the incentive then for professions like physiotherapy, to embrace a postmodern view of the body? Why should professions like physiotherapy reassess their long-held belief in the primacy of the biological body and consider difference frames of reference? Clearly, the answers to this question are complex, but at the most basic level, physiotherapy may be forced down this route by a public will to see greater diversity and inclusiveness from the health professions it supports through public funding (Nicholls and Larmer, 2005; Nicholls, Reid, and Larmer, 2009).

In this paper we therefore set out to add weight to the arguments for a reappraisal of the role the body plays in constructing physiotherapy's theoretical and practical identity. We do this by first mapping out the role biomechanical discourses have played in the historical construction of physiotherapy practice. From here we explore some contemporary notions of the body emerging in the sociological literature, and finally we examine the notion of embodiment as a theoretical construct that holds distinctive possibilities for the future of physiotherapy theory, practice, and professional identity.

THE BODY IN PHYSIOTHERAPY HISTORY

Physiotherapists first moved to adopt a biomechanical view of the body in response to what became known as the 'Massage Scandals' in late Victorian England (Nicholls and Cheek, 2006; Society of Trained Masseuses, 1895). At the time, prostitutes masqueraded as masseuses in order to avoid prosecution, and threatened to derail the plans of nurses and midwives who were seeking to develop the therapeutic possibilities of massage (Barclay, 1994; Wicksteed, 1948). To prove to the public and the medical community that their actions were legitimate, the founders of the Society of Trained Masseuses (STM) (the forerunner of the Chartered Society of Physiotherapy and many of the massage regulatory bodies that were subsequently developed within the Commonwealth) established a series of profoundly important strategies. These included forming close bonds with the medical community, advertising only in medical papers, establishing a code of conduct, establishing an examination system that governed the quality of practitioner, and operated as a vetting agency for prospective patients (Dixon, 2003).

The most potent device deployed in the Society's quest for legitimacy was its adoption of a biomechanical view of the body (Nicholls and Cheek, 2006). Although only ever referred to tangentially by the early Society members themselves, the adoption of a view of the body-as-machine was vital in establishing the Society as the provider of legitimate physical rehabilitation services leading up to the outbreak of World War I (Nicholls, 2006; Nicholls and Cheek, 2006).

The biomechanical body was emphasized in the Society's registration examinations (Incorporated Society of Trained Masseuses, 1911, 1914), in the texts used by students (Ellison, 1898; Palmer, 1901; Stretch Dowse, 1906; Symons Eccles, 1895), and in communications with the medical profession (Incorporated Society of Trained Masseuses, 1894–1912). In every case, it was the body-as-machine (Morus, 1999; Synnott, 1992) that gave the early masseuses their advantage in a congested marketplace. As Margaret Palmer (one of the

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first nurse-masseuse to publish a text for Society students) commented,

> *The shampooing done in a Turkish bath is not massage; it is pleasant and useful, but it is not scientific, and is done by persons who have no knowledge of anatomy; nor is it necessary they should have, but to do massage properly and to be able to follow intelligently the directions of the medical man, some knowledge of anatomy is essential* (Palmer, 1901, p. 3).

Here, we see a particular biomechanical discourse that encompasses a 'Cartesian' view of the body[1] and favors an objective, bioanatomical, depersonalized approach. Adopting this discourse enabled the early masseuses to separate themselves from the untrained masseur, to bring them closer to the medical practitioner, and to gain the trust of the public.

The unspoken purpose of this approach towards the body (and we should remember that this was not the only possible view of the body available to the founders of physiotherapy at the time) was to regulate a particular attitude towards the patient—an attitude that stripped away any association between touch and sensuality. Massage students undertook to be trained to view the body dispassionately, to remove any association between touch and eroticism and put distance between themselves and prostitutes (Nicholls and Cheek, 2006). Viewing the body-as-machine was a supremely important and highly effective strategy for the founders of modern physiotherapy practice, since it played a large part in establishing the profession's legitimacy. Equally, it was a system that was easily translated to other emerging massage systems around the world, because it took no account of the cultural context in which masseurs operated. This 'English' model of massage practice was therefore easily exported to Australia, Canada, New Zealand, South Africa, and other Commonwealth countries, and still represents one of the defining features of practice in those countries (Anderson, 1977; Barclay, 1994; Bentley and Dunstan, 2006; Bowerbank, 2000, 2001; Cleather, 1995).

Biomechanical discourses endured for more than a century and appeared as a consistent reference point for the identification of physiotherapy practice throughout textual records of physiotherapy practice in Commonwealth countries (Anderson, 1977; Barclay, 1994; Bentley and Dunstan, 2006; Cleather, 1995; Scrymgeour, 2000). Darnell makes this point with particular reference to physiotherapy education:

> *The most obvious support for the view of the corpus [body] as machine is the structural and functional elements of the profession. In education, the number of hours spent on physics, anatomy, kinesiology, biomechanics, and pathology support the pathokinesiological orientation when compared to the emphasis on psychosocial and cultural factors* (Darnell, 2007, p. 12).

Biomechanical discourses surface in many places in contemporary physiotherapy. They appear in the profession's preference for objective, value-neutral research paradigms (Ekdahl and Nilstun, 1998); and they lie at the heart of physiotherapy's theoretical and practical approach. Broberg et al (2003) argue that the body is at the 'core' of physiotherapy; that "(t)he body is the starting point for physiotherapy" (Broberg, et al, 2003, p. 163). Others who have explored models of physiotherapy practice in recent years have also identified biomechanical notions of the body at the core of physiotherapy practice (Bassett, 1995; Cott et al, 1995; Hislop, 1975; Schmoll and Darnell, 1990; Sim, 1985).

Some argue, however, that the machine metaphor that lies at the heart of the biomechanical body has contributed to, or even precipitated, a perceived quality of care crisis in health care (Marcum, 2004; Morris, 2000). In establishing our status as legitimate health professionals, we may have inadvertently reduced the subtle complexities of health and illness to a narrow set of biological principles. And although we have always argued for the need to see each of our patients as unique individuals, and have always engaged in the culture of health care, we have never fully embraced a notion of health and illness that fundamentally challenges the body-as-machine. The body has been fragmented into systems, standardized through comparisons to clinical norms, and estranged from the patient as person (Marcum, 2004). As both everybody and nobody, it is devoid of life, depersonalized; becoming little more than an object or a 'corpse' (Leder, 1990).

Although this approach to the body has been both necessary and extraordinarily productive for physiotherapy practice, it has almost certainly limited physiotherapists' ability to fully account for, and respond to, the breadth of health and illness experienced by embodied persons (Marcum, 2004; Williams, 1996). Aside from tentative commitments to embrace theoretically 'thin' notions such as client-centered care (Dalley, 1999), (w)holism (Doring,

[1] A 'Cartesian' view of the body derives from René Descartes (1596–1650), who argued that the body ought to be considered separate from the mind: the mind being the seat of the soul; sacred and God-like; the machine-like body being profane and prone to failure. This view was very powerful in the early renaissance and in the separation of the natural sciences, particularly medicine, from religion and its association with superstitious beliefs about the causes of illness.

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1976; Stephenson, 2002), the biopsychosocial model (Borrell-Carrio, Suchman, and Epstein, 2004; Engel, 1978; Hau, 2004; Jones, Edwards, and Gifford, 2002), or some under-theorized strands of disablement models such as the International Classification of Functioning Disability and Health (World Health Organization, 2001), physiotherapy, and physical rehabilitation more broadly, have more or less accepted the body as a taken-for-granted natural entity.

A biomechanical view of the body has played, and continues to play, a powerful role in defining physiotherapy's professional identity and it has done much to solidify the profession's position within the health care professions. It is possible, however, for powerful discourses like this to have an enabling and constraining effect, and we should not forget that in order for the founders of physiotherapy to normalize certain attitudes towards the body, other attitudes towards the body needed to be marginalized. In other words, the adoption of a biomechanical discourse ought not to be seen as unquestionably positive.

Approaches to the body that appear to have been jettisoned by the profession, almost from the very outset, have been fertile territory for the development of other health practitioners. Where physiotherapy has focused primarily on objective, dispassionate forms of touch, nurses have colonized the notion of caring science (Fealey, 2004; Lawler, 1991); where early masseuses took a Cartesian view of the body as separate from the mind, psychologists have developed psychotherapies directed at somatization (Rose, 1985, 2003); where physiotherapists have retained a largely depersonalized, clinical approach to their practice, alternative and complementary therapists have explored its margins (Dew, 2003; Fournier, 2000; Goldstone, 1999); and where physiotherapists have concentrated on movement at a biological level, social scientists have explored movement in all its myriad societal, cultural, existential, and philosophical forms (Armstrong, 2002; Crossley, 2002; Freund and Martin, 2004; McCarthy, 1998; Stoller, 2003; Sullivan, 2005).

Physiotherapy practice may be defined as much by the 'negative space' that surrounds the profession—by that which is marginal or that which the profession is not—as much by what the profession actually claims itself to be. What has been historically marginalized appears to be a concern for the subjective elements of human experience, the phenomenological dimensions of health and illness, and an active engagement with the social institutions that bear upon the health and well-being of our patients/clients (Higgs, Refshauge, and Ellis, 2001; Roberts, 1994). Consequently, physiotherapists have largely ignored the social, political, cultural, economic, geographical, and psychological dimensions of health and illness (Higgs, Refshauge, and Ellis, 2001). Only recently have we seen the emergence of practice models that promote the idea of a more inclusive form of physiotherapy practice (Broberg, et al, 2003; Higgs, Hunt, Higgs, and Neubauer,1999; Jorgensen, 2000; Trede, 2007; Trede, Higgs, Jones, and Edwards, 2003). Importantly, these models have emerged at a time when the profession is under pressure to reform, and they show that the profession is considering new models of practice and responding to the demands of future health care (Hao and Tan, 1999; Hunt, Adamson, Higgs, and Harris, 1998; Katavich, 1996; Nall, 2006; Nicholls and Larmer, 2005; Richardson, 1999; Santy, 1999; Smith, Roberts, and Balmer, 2000).

Our argument, therefore, may be summarized as follows: physiotherapy owes its present professional identity, social standing, and authority in large part to the adoption of a particular view of the body that allowed early masseuses to legitimize their practice. This biomechanical discourse has had an enduring effect upon the profession that must also be understood for what it has made impossible, as much as for what it has enabled. Rather than taking a holistic view of the body, physiotherapy has always been highly selective, concentrating on certain (largely biomechanical) understandings of the body, whilst marginalizing others (cultural, economic, political, social, for example). Physiotherapists have been slow to adopt the more 'holistic' dimensions of health care that are now being demanded by funding agencies and the public alike, but these dimensions are now vital if the profession is to thrive. Physiotherapists' historically dispassionate approach to patient care is now being challenged and there is some evidence that new approaches to practice are being sought (Kerry, Maddocks, and Mumford, 2008; Nicholls and Larmer, 2005; Parry, 1997; Trede, 2007).

In the remainder of the paper, we concentrate on sketching out an alternative, reformed relationship between physiotherapists and 'the body'; one that may hold promising possibilities for the profession in the future. Drawing on the extensive writings of sociologists of the body over the last half-century or more, we will first outline how the body has been thought and rethought in recent years, and then elaborate on a dimension of this work that might satisfy some of the profession's present and future needs.

THE BODY IN SOCIAL THEORY

For more than 80 years, the body has been a subject of particular interest to social scientists. Sociologists have moved through analyzing the body functionally

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(differentiating and categorising people based on their social functions) (Durkheim, 1933; Parsons, 1937, 1951), to more radical, structurally critical feminist and Marxist critiques of social power and its effects on the body (Butler, 1993; Davis, 1997; Grosz, 1994). The body has been explored phenomenologically (Merleau-Ponty, 1962; Van Manen, 1990), through a symbolic interactionist's lens (Goffman, 1961), ethnomethodologically (Garfinkel, 1967), and in recent years, by a growing body of postmodernists/ poststructuralist writers (Armstrong, 1994; Parker, 1997; Shildrick and Price, 2002; Silvers, 2002).

Generally speaking, the sociology of the body has moved through two relatively distinct phases or waves, and is now entering into a third. The first wave preceded the social reform movements of the 1960s. Here, social scientists applied a naturalistic lens to their analyses of the social operation of the body. The body was thought of as 'real,' as an entity upon which society became layered. As Chris Shilling explains,

> *Naturalistic views are not identical, but they share an analysis of the body which views it as the pre-social, biological basis on which the superstructure of the self and society are founded … Naturalistic views hold that the capabilities and constraints of human bodies define individuals, and generate the social, political and economic relations which characterize national and international patterns of living. Inequalities in material wealth, legal rights and political power are not socially constructed, contingent and reversible, but are given, or at the very least legitimized, by the determining power of the biological body* (Shilling, 2003, p. 43).

Broadly speaking, this naturalistic view of the body corresponds closely to the approach taken historically in physiotherapy in that the body is solely constituted in terms of its biology. During the latter half of the 20th century a second wave emerged in the social sciences, arising from a growing critique of the naturalistic view of the body, and led primarily by marginalized and disenfranchised groups of activists who found a voice in the social reform movements of the 1950s and 1960s. These groups criticized the focus on the 'natural' body, arguing that it placed too much emphasis on purely biological capacities, and not enough on relations of power and the ways that social institutions affected people's individual and collective lived experiences. Social constructivists, as they became known, argued that too little attention had been paid to the medicalization of women's bodies, to the bodily effects of poverty, to social isolation and poor education, to institutionalized racism and discrimination against disabled people, for example (Nettleton, 2005, 2006; Shilling, 2003; Williams, 2006). Social constructivists argued that the material body was an 'effect' of social relations; that an awareness and understanding of the body's physicality was an outcome of discourses that made it possible to think of bodies in particular ways and not others. As Donna Haraway stated, "[B]odies are not born: they are made" (Haraway, 1989, p. 10).

This view of the socially constructed body carried an implicit criticism of biomedical discourses of the body, and not surprisingly, the medical profession came in for particular critical scrutiny for what was perceived to be its self interest and oppression of nonbiological explanations for health and illness[2] (Annadale, 1998; Freidson, 1970; Gabe, Bury, and Elston, 2005; Light, 2000). In recent years, however, this view has been tempered by a concern that the socially constructed body fails to adequately account for the biological aspects of health and illness, and some authors have argued that a complete rejection of the anatomical, physiological and pathological aspects of the body risks a very one-sided appreciation for all the body's subtleties and nuances:

> *It is as if the body itself either does not exist, or is constantly pushed to one side by this perspective in its focus on other phenomena. Consequently, we learn little about why it is that the body, whatever it is, is able to assume such importance* (Shilling, 2003, p. 63).

The social sciences then, may be as guilty of reinvigorating a Cartesian separation of mind and body as the orthodox medical professions, including physiotherapy. Both Margaret Shildrick (Shildrick and Price, 1996, 2002) and Barbara Gibson (Gibson, 2006; Gibson, Upshur, Young, and McKeever, 2007) have made this point in revisiting the biomedical and social 'models' of disability, arguing that these two models operate as opposing poles of the same axis, since both operate on the notion that the disabled person is 'different' or 'other.' The medical model, for its part, bases its definition of disability on the existence of a physical impairment (in keeping with a traditionally naturalistic view of the body), whereas the social model needs to retain the notion of disability as a distinct identity category in order that its proponents can advocate for social reform (in line with social

[2]Some authors have argued that medicine promoted the idea of 'the quack' as a way of demonstrating the profession's authority and professionalism (Fournier, 1999, 2002). Medicine, like all orthodox professions, has no doubt benefit from the idea that it is different to, and by extension better than, homeopathy, osteopathy, and chiropractic, for example.

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constructivist notions of health and illness). These are powerful models that play an important role in shaping contemporary health care (see, for example, ICF, WHO, and NAGI models). What Shildrick and Gibson argue is that both of these models reproduce the notion of the disabled person as marginal, unusual, and separate, rather than acknowledging the profound connections between all embodied individuals, disabled or nondisabled. (Gibson, 2006; Shildrick and Price, 1996, 2002).

Shildrick and Gibson's work is very much in line with a third wave now emerging in the social sciences. This approach emphasizes the need to coalesce naturalistic and social views of the body around the notion of embodiment (Fox, 1999; Williams, 1996). Embodiment theory is an attempt to reconcile the seeming differences between naturalistic views of the body (common to both biomedical health professions and first-wave sociologists of the body), and second-wave ideas of the body as an effect, or product, of social discourses. In the following section we will sketch out the principle arguments surrounding embodiment theory and consider its relevance for future physiotherapy practice.

EMBODIMENT AND PHYSIOTHERAPY PRACTICE

Thus far we have argued that physiotherapists have paid little attention historically to the way we have learned to view the body. We have also argued that physiotherapists do not take account of all the facets of embodiment; that we privilege a mechanistic view of the body at the expense of 'other' views. Although this has been important, and indeed valuable, for the profession in the past, we believe it is now hampering our progress as the profession searches for new ways to respond to the rapidly changing economy of health care. In the remainder of this paper we will propose an alternative image of the body for physiotherapists, one that encompasses physiotherapy's historical affiliation with the body-as-machine, but also pays attention to the cultural, economic, ecological, political, philosophical social, and spiritual dimensions of health and well-being.

Firstly, embodiment, as we are using the term here, is not a 'theory' or a 'model,' but a lens through which physiotherapists might view their approach to practice. At its heart, embodiment emphasizes an orientation towards the whole person (an attitude towards the full richness of human life), and a rejection of singular, reductionistic views of the body common to the biomedical sciences (Agdal, 2005; Mizrachi, Shuval, and Gross, 2005; Samson, 1999). Embodiment is about respecting diversity, eclecticism, deviation, and difference, and having an inclusive attitude to the ways people view their own embodiment.

There are at least three distinctive strands to an embodied view of health and illness: (1) an awareness of the objective reality of a person's illness (the anatomical, physiological, and pathological fact of osteoarthritis, breast cancer, or diabetes, for example); (2) an orientation towards the subjective meaning given to the person's lived experiences of health and illness; and (3) a consideration for social 'institutions' (political, social, structural, etc.) that mediate people's bodily experiences and behaviors (Fox, 1999; Williams, 2003, 2006). These three dimensions, when taken together, offer a much more inclusive way of viewing how people experience health and illness than is offered by a purely biomedical view. In the following examples, we illustrate how these three dimensions of embodiment might frame future physiotherapy practice.

The management of acute injury exemplifies physiotherapists' traditionally biomechanistic view. To all intents and purposes, acute injuries exist at the tissue level. They are caused by an exaggerated load on bodily structures, they bring about a disruption in the person's normal patterns of movement, and they can be understood objectively. Although all of this is often true, it represents only one dimension of what can be a much more complex problem. Taking an embodied view of acute illness might, for instance, encourage physiotherapists to explore the broader social and cultural effects of acute injury and its treatments on family and work life; tailor interventions to people's individual circumstances, preferences, and realities; unpack the reasons why the notion of care has been underexplored by the profession; or examine the paradox that exists between the profession's dependence on sickness and its desire to promote health and wellness (Swain, French, and Cameron, 2003). These dimensions of acute illness are currently under-theorized by physiotherapists who may feel they lack the knowledge, or license to pose these questions and examine these issues.

The case for an embodied view of chronic illness is more straightforward because unlike acute illness, the very definition of chronic illness implies that the person will live an altered life rather than return to their pre-injury/illness state (Bury, 1982). Thus the role of the health professional is one of functioning alongside the person. In certain facets of physiotherapy practice (particularly musculoskeletal practice), the desire to maintain a biomechanistic view of the problem remains strong. Patients may be subject to repeated, short bouts of treatment in which they are the passive recipients of procedures designed to

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temporarily alleviate exacerbations of symptoms and restore function, rather than a holistic, person-centered, ongoing process of care and support.

An embodied view of chronic illness would see movement as a fundamental facet of remaining well and being embodied. Movement, as Cott et al (1995) and Broberg et al (2003) have argued, can be applied from a microscopic cellular level (to an understanding of the inflammatory process, for instance), to a macroscopic social level (where movement may be analysed as a social 'glue' that binds communities), and include all dimensions of embodied movement in between. Physiotherapy has a role to play here. As specialists in the analysis, promotion, and support of human movement, we could be directing our interventions to any location where movement needs to be liberated: working to remove any and all constraints (be they cultural, emotional, environmental, governmental, physical, or social). Physiotherapists should be the principal advocates for an embodied science of movement that draws on a diverse set of theoretical approaches, and we are perfectly placed to take advantage of people's growing need for more person- and community-centered approaches to rehabilitation.

As physiotherapy practice has become more scientifically sophisticated, it has drawn on more and more sophisticated understandings of pain. Much of this work centers on the neurophysiology of pain at a cellular and structural level. Yet pain also offers a metaphor for how an embodied approach might look for physiotherapy in the future. Drawing on the three dimensions of embodiment mentioned above (the biological body, the self, and society), it may be possible to articulate a new form of physiotherapy practice that holds currency in future health care. Physiotherapists must be able to understand, assess, and ameliorate acute and chronic pain. But in future, physiotherapists must also be able to understand the 'phenomenological' dimensions of pain; the unique, individual, person-specific experiences that give each person's pain a unique character. Added to this, an understanding of the social institutions that exist to support the management of pain (social determinants of pain, government institutions, legislation, etc.), and some of the prevailing social discourses around pain (i.e., malingering, sick roles, recovery), would feed back into physiotherapy practices and embody a more holistic approach to the problem.

The final example relates to quality of life. In much of the health care literature, quality of life has been equated with physical (dys)function and objectively measured health status (Gill and Feinstein, 1994). Quality of life is assumed to be present where people experience functional independence, freedom from pain and impairment, and high levels of so-called 'self-efficacy' (May, 2006; Miles, Loughlin, and Polychronis, 2008). Here, the subjective dimensions of health and illness are commonly reconfigured to fit the constraints of a bias-free, value-neutral measurement scale (see, for example, visual analogue scales, breathlessness scores, or health status measures such as the SF- 36). Such approaches fail to capture the fullness, variability, and idiosyncrasies of people's experience of the quality of their lives. They fail, for example, to acknowledge the connection between physical function and other (embodied) aspects of life, such as personal relationships, life goals and dreams, personal coping strategies, traditional family and community values, socioeconomic determinants of health such as gender and age discrimination, poverty, and access to high-quality education (Hunt, 1997; Kelleher and MacDougall, 2009; Koch, 2000; Leplege and Hunt, 1997). Embodied approaches to quality of life bring these dimensions to the surface and do not allow them to be marginalized by the more dominant discourses of biomedicine. Physiotherapists here become advocates for wider individual and community understandings of what constitutes a quality life (with or without acute or chronic illness, pain, or disability). Thus physiotherapists have the opportunity to free themselves from the constraints imposed by a biomechanistic view that allows them only to speak about the physical body.

Clearly, these examples are only sketches designed to provoke the reader into imagining the possibilities for physiotherapy if it were to embrace an embodied view of health and illness. There are myriad other possibilities that relate to all spheres of practice that cannot be examined here. Our view is that embodiment is entirely complementary to physiotherapy practice, and that it reflects, in many ways, what many physiotherapists have learned to do in order to achieve meaningful results with their clients. At present, however, we suggest that physiotherapists are working with an embodied view of health and illness despite their training not because of it. This is an important point because we believe that physiotherapy's traditional affinity for the body-as-machine is getting in the way of a more inclusive view of health and illness; that it is stifling creativity and running the risk of marginalising the profession or some of its members at a time of profound change in health care. We suggest that what is needed is a robust theoretical framework around which future physiotherapy practice can emerge. Such a framework need not jettison physiotherapists' historical expertise in understanding the physical body, nor should it threaten the profession's hard-won social status. An alternative approach should be entirely complementary with these ideals, whilst creating a space to think differently

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about future practice. We believe embodiment does this, and holds enormous possibilities for physiotherapy.

DISCUSSION

Although physiotherapy practice has always existed within a social context, we suggest that historically it has treated the body as a machine. In many ways this view has been to the benefit of the profession, lending it legitimacy and orthodoxy, and creating a stable, tangible identity in the eyes of the profession and the public. Until recently physiotherapy has been able to largely ignore the cultural, economic, political, and social forces in society at large and in orthodox health care in particular (Nicholls and Larmer, 2005). In recent years, however, the decline of traditional state welfare, and growing economic and social instability in Western countries, have induced an unease within the profession that has been manifested in part by calls for the profession to establish its evidence-based credentials (Bithell, 2005; Helders, Engelbert, van derNet, and Gulmans, 1999; Swinkels et al, 2002), explore its theoretical and educational basis (Cott et al, 1995; De Souza, 1998; Ekdahl and Nilstun, 1998; Noronen and Wikström-Grotell, 1999; Roberts, 1994; Tyni-Lenne, 1989), and develop new ways of knowing and understanding its practices (Broberg et al, 2003; Edwards and Richardson, 2008; Jorgensen, 2000). These appeals suggest that physiotherapists are exploring new territory beyond the margins of conventional practice that have traditionally been associated with "the assessment and treatment of injury, disease, and associated physical impairments in an individual by 'hands on' practitioners" (Edwards and Richardson, 2008, p. 184).

What has traditionally limited the analytical utility of many of these approaches is their limited philosophical and theoretical breadth, and their inattention to the reasons why physiotherapy has arrived at this point in its history. This inattention is symptomatic of a profession that largely has not previously needed to explore the social world that exists beyond the biomechanical boundaries of the body. Physiotherapy finds itself, therefore, in a rather invidious position where it now needs to adapt to a rapidly changing world without a theoretical basis inclusive enough to meet the challenge. Despite a historical reticence to broadly analyze the philosophical assumptions underpinning the profession, the time is right to contemplate how the profession might be thought of otherwise.

This paper makes tentative steps towards our own professional rehabilitation, by mapping out one of the critical discourses that has historically informed physiotherapy practice, and proposing a theoretical framework that would allow physiotherapy to adapt to the changing world of practice. Embodiment provides physiotherapy with a theoretically robust framework around which it may map out its future course. A note of caution, however; we are not advocating for the wholesale adoption of embodiment as the theory of physiotherapy practice (since this would only serve to constrain physiotherapy practitioners in a different way to the body-as-machine). Rather, we are advocating the deployment of embodiment as one contingent response to our present professional dilemmas. By adopting an embodied approach to physiotherapy practice, we believe physiotherapists will be able to remove the shackles of our Victorian forebears and to see that our legitimacy as a profession is no longer tied only to a biomechanical discourse.

No doubt challenging the centrality of the body-as-machine will be seen by some within physiotherapy as a heresy. In many ways, this response is entirely understandable, since it would seem we are making an argument that we should now be undermining a way of thinking that has been historically necessary and extraordinarily productive for physiotherapy. Our view is, however, that embodiment offers the profession a theoretically robust response to the necessities of future health care in that it allows for the profession's authoritative knowledge of the biomechanical complexity of the physical body, while exposing physiotherapists to the much broader sociopolitical context in which people live out their lives, and without making the mistake of simply layering one theoretical concept on top of another. By approaching people as embodied, we believe we can go a long way towards liberating physiotherapists to practice in the fullness of their capabilities and realize their full potential as leaders in the field of physical rehabilitation.

CONCLUSION

In this paper we have argued that a biomechanical view of the body lie at the heart of physiotherapy practice and that if the profession is to adapt to the changes taking place within health care, it needs to first understand how the body has framed physiotherapy practice historically, philosophically, and socially. Some of this understanding can come through a greater awareness of the writings now emerging around health care and the body, and we have argued that work into the notion of embodiment may hold particular relevance to the profession. Certain aspects of embodiment offer physiotherapists enormous possibilities for growth. If embodiment is about understanding the reality of being embodied and not just having a body, then physiotherapists, with their unique

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appreciation for movement and the effect of illness and impairment on function, have a vital and enormously significant part to play in developing a new science of embodied movement. Little work has been done in this area to date, and there is a pressing need for more theoretical work into the way physiotherapists engage with the body. This paper offers some ideas to prompt debate amongst those with a concern for the future growth of the profession.

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