

Critical Commentary

The Student Journal
of Newman University College

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Critical Commentary

The Student Journal of Newman University College

Newman University College

Volume 3 Number 1 (Summer 2010)

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POSTGRADUATE EDITION -EDITORIAL

This edition of *Critical Commentary* is a landmark edition. It brings together a range of contributions from the full-time PhD student group at Newman University College. As might be expected the articles cover a range of academic disciplines. I am sure you will find them interesting and intellectually challenging. They capture, in a very succinct way, the high quality research work that is currently being generated. They should of course be read as 'work in progress'. It is anticipated that a series of follow up articles will be published at a later date. As our postgraduate community grows and matures we can expect to see a significant contribution being made to academic knowledge and understanding.

The first article from Federica Caruso takes us into what is a relatively new area of academic study. It reflects the considerable change that has been experienced in the organisation and delivery of services for children and their families. The focus of the second article, written by Jonathon Atherton, examines the Priestly Riots that occurred in the eighteenth century. A detailed summary of research work provides the reader with a fascinating overview of 'popular disturbances' during that period. Georg Walser is the author of the third of the contributions. He provides us with a detailed comparison of two key biblical texts and poses some interesting questions around their age and originality. The next contribution from Peter Burgess is concerned to explore psycho-physiological responses to competition. Differences in the stress and anxiety levels engendered are examined from both individual and team perspectives. In the penultimate contribution, Peter Collins explores the relationship between the built environment and children's level of physical activity. Consideration is given to the need to encourage children to actively commute between home and school and the importance of using open spaces such as parks for recreational purposes. In the final contribution Richard Fisk looks at postcolonial representations of the wild landscapes of India in global literature. Through the discussion he points to the need to give careful consideration to a variety of literary representations that can help us to examine 'the problem and possibilities of ecocriticism'.

I am due to retire from Newman later this year. I have enjoyed editing this fledgling journal. It has come a long way in a short space of time. I wish to thank Claire Smith the Assistant Editor, all members of the Editorial Board and Carol Millington for their help support and guidance. I wish *Critical Commentary* well for the future.

Professor Stan Tucker
Editor
Newman University College
June 2010

The Making of Method: Developing an Ethnography of a Children's Centre

Federica Caruso

ABSTRACT

In this article, I discuss the main theoretical and methodological aspects of an investigation into inter-professional collaboration in an urban children's centre in central England. The article examines the policy context in which the reconfiguration of child care services has been undertaken in England and offers an overview of the main theoretical approaches to inter-professional work, with a specific reference to two perspectives that have come to dominate the discourse of professional collaboration: Communities of Practice and Activity Theory. I then set out a theoretical rationale for the development of an ethnographic approach to this study, while illustrating the adoption of linguistic ethnography as a principal methodological tool in the study of a children's centre in a regional urban setting.

KEYWORDS

Inter-professional Collaboration, Linguistic Ethnography, Discourse, Genre.

Introduction

The past two decades have seen a period of intense transformation of public sector services on an international and national scale. In many western countries, policy themes of 'accountability' and 'performativity' have emerged as 'the product of a globalised discourse' (Bottery 2003: 192). On a general level, this approach promotes freer movements of goods, resources and private enterprises and a distinctive openness to trade and investment in order to maximise profits and efficiency (Cole 1998). These political and economic imperatives coupled with an aggressive market philosophy have re-shaped not only the structure of the private sector agencies, but more crucially have promoted a market model of educational provision (Walford 2001; Ball 2003). The increased competition through performance measurement, more demands for public

accountability in achieving set goals and targets, and tighter regulation by central government have now become common European trends.

In the field of child and family care, current UK government policies have resulted in substantial changes in the nature, the structure, and the operation of education, welfare and health systems. While some English policies, such as the introduction of school performance tables, have been designed to stimulate inter-school competition, other recent initiatives (e.g. the requirement of collaborative and new learning networks between schools; the introduction of community representatives on the forums that run the Education Action Zones programme), have been aimed at fostering collaboration between schools and with other educational agencies (Gewirtz 2002; Harris and Muijs 2005). The extent to which the current policy mix represents a coherent package to tackle social exclusion, while simultaneously promoting competition to raise the levels of academic attainments, has yet to be explored (Walford 2001; Ball 2003). As part of a broader strategy to address poverty and social exclusion, the emphasis on integrated working practices in England marks an unprecedented attempt by the State to respond to the fragmentation of social services for children, young people and their families, whose needs had previously been the concern of separate compartments within single agencies. This approach is part of a complex and ambitious programme of reform underpinned by the Children Act 2004. Through these initiatives, the English educational reform agenda has focused on the need to provide a single point of access to a range of services and activities beyond the school. This has laid the foundations for positioning extended schools and integrated children's services as 'new multi-professional partnerships...allied to the fields of health and welfare' (Trotman 2009: 342). More specifically, local authorities are required to ensure the cooperation between different agencies through the creation of a National Safeguarding Delivery Unit, a local Safeguarding Children's Board, and a children's service directorate. This assumes that partnerships, collaboration and networking are to be welcomed as key-factors in delivering more effective services for families and guaranteeing improved educational outcomes. However, the effects of these initiatives on educational practice have yet to be fully established and researched (Hargreaves 2004). Moreover, while the evidence base from multi-agency working continues to burgeon (Anning et al. 2006; Daniels et al. 2007; Fitzgerald and Kay 2008), the literature around inter-professional

work remains in its infancy. In particular, theoretical frameworks related to professional learning have given limited attention to the situated culture of collaboration that enables those changes to be enacted. While marking a significant shift in New Labour social policy, this also has several problematic implications in the relationship between educational policy, research and professional practice.

Policy Background: the New Labour Agenda

In 1997 the Labour electoral victory led to a profound reform of the public sector that the then Prime Minister Tony Blair outlined in terms of high standards of provision and tighter accountability as well as the devolution of decision-making about service delivery at the local level to promote creativity and diversity (Anning et al. 2006).

This highlights an internal tension between the (apparent) power and autonomy given to both the providers and the users of services at the local level; and the control of the public sector professionals through the imposition of external targets and central systems of monitoring and inspection. These two competing imperatives have contributed to create a general sense of uncertainty and confusion among professional sectors concerning how to coherently implement government policies, and also a pervasive tension between the local level (Local Authorities) and central government. This contradiction in the legislation appears even more significant with regard to the Every Child Matters (DfES, 2003) legislation. While searching for and extensively promoting collaboration, partnership and integration of services, the new agenda also carries a strong accountability framework with a wide range of targets for which evidence, specific inspection arrangements and top-down monitoring are required.

Following the high profile and tragic examples of child abuse cases (e.g. the death of Victoria Climbié), the UK system of provision for young people was accused of failure. This was exacerbated by a period of intense media interest, in which child protection and low standards of literacy were considered to be the main contributing factors in each of the cases. After the publication of Lord Laming's report (2003) on the circumstances surrounding the death of Victoria Climbié, public opinion strongly demanded a radical reform of the way in which social exclusion had been addressed.

On the one hand, New Labour ideology recognised a deep interrelatedness between the social and the economic paradigms in terms of deprivation and the need to reshape public services. On the other hand, it emphasised the liberalisation of the choices for consumers and the marketisation of the school. In this sense, the reforms of the public sector proposed by the New Labour initiatives seemed to reflect those promoted by the previous Conservative Party (Anning et al. 2006; Gewirtz 2004). At the macro-policy level, this entailed the perpetuation of the interests of the capital and the market - a distinctive hallmark of previous Conservative policy. One of the main priorities that policy makers identified was to address social exclusion by creating new forms of flexible, joined up, collaborative-oriented practices in order to deliver improved and organised services for children and young people (Glass 1999).

Social exclusion is typically described as resulting from the lack of possibilities to connect individuals to participation in social life (Warmington et al. 2004). This phenomenon is thought to be particularly pronounced when the local community suffers from a combination of high rates of unemployment, under-developed skills, low incomes, poor housing and schooling, crime and poor health. While strongly advocating joined up welfare services and agencies as the key-driver of social inclusion (Social Exclusion Unit 2000; 2001), the New Labour Social Policy has been less clear in providing guidance about how to establish and deliver those services. In this respect, from a review of contemporary policy documents, the prevalence of strategic literature that emphasises *good practice-based models* may risk assuming a simplified notion of collaborative work as the ideal solution for service delivery; as well as failing to offer a deep conceptualisation of the processes involved in professional settings. In addition to this, the *good practice-based models* tend not to take into account the pressure placed on professionals by external performance targets, while being heavily contradicted by the complexity of the practice in terms of local solutions.

In this sense, the relationship between the policy rhetoric on *joined up thinking* on the one hand, and the reframing of services on the other, can be particularly problematic, since it requires both a shift in (re)conceptualising inter-professional work and understanding the highly contextualised activities and situated culture (Ball 1997) of professional practice. The evidence base from multi-agency working is still very much in its infancy, yet early anecdotal evidence suggests that a crucial revision of child care

practice is needed. This may result in a change in focus from the investigation of tragic abuse incidents (and the subsequent government intervention), to the development of a more holistic, consistent, and multi-agency driven approach in the assessment of children and families' needs (Jones and Gallop, 2003).

Every Child Matters: implications for inter-professional work

In order to meet both the demands and the inspection criteria of the Every Child Matters (DfES 2003) agenda, statutory local authorities are required to restructure themselves in order to create new children's services that may respond to inter-related problems. In particular, the Children Act 2004 not only aimed at encouraging partnership arrangements through a reconfiguration of the services and the integration of funds, infrastructure, goals and ways of working. More crucially it sharpened the accountability frameworks through the creation of a National Safeguarding Delivery Unit, a Local Safeguarding Children's Board, and a children's service directorate. Secondly, it required a process of sharing information, entailing a joint system of assessment protocols and record keeping that has to be accessible by all the professionals involved in the creation and the delivery of services and action plans orientated to specific cases. Whilst this feature can reveal subtle differences in the conceptualisation and evaluation of children's needs, it is also contingent on competing professional values and identities. Finally, the 'Every Child Matters' agenda also compelled engaging in a prevention agenda: involving what government literature increasingly describes as a 'core offer' of activities (DfES 2003) that should seek the wider local community's participation, by giving the children's centre a crucial role to play, while ensuring high levels of accountability and performativity for the different professionals involved.

Studies of inter-professional work collaboration: the dominant theoretical approaches

Inter-professional work represents a relatively new area of research (Fitzgerald and Kay 2008), which frequently involves different terminologies, understandings and meanings

of collaborative practice. Whilst a multiplicity of perspectives has rapidly evolved, there is an absence of systematic research on how professional expertise is acquired, enriched and applied to emerging issues around practice in these contexts. The picture offered from the studies that have been conducted (Hargreaves 2004; Roaf 2002), suggests that professional practice in the field of child welfare is not sufficiently sustained by the institutional system and that professional expertise has to be constantly renegotiated in the relationship with clients, other agencies, and members of the same professional area (Leadbetter et al. 2007). These negotiations imply a wide range of commitment by practitioners, who have to engage in new professional problems, new ways of sharing information and evaluating families' needs, new ideas and resources to be introduced and harmonised into already well-established practices.

In terms of conceptual models, the review of the literature conducted by Warmington et al. (2004), proposes four main approaches to the analysis of interagency and cross-professional collaboration. The first approach is grounded in research expressly based on socio-cultural perspectives (Wertsch 1985; Daniels 2001; Wells and Claxton 2002), and encompasses two main theoretical frameworks: Communities of Practice (Lave and Wenger 1991; Wenger 1998) and Activity Theory (Engeström 1999). The former model adopts the study of participation and identity transformation as a construct of the community of practice (Frost 2005; Anning et al. 2006). It is specifically used to transcend terms such as teams and organisations and describes the process of developing a community that shares accountability, discourses and tools. The latter has been used in several projects (Engeström 2005, 2007; Puonti 2004; Warmington et al. 2004), which adopt an interventionist method called DWR (Developmental Work Research). This framework presents joint human activity as the main unit of analysis and aims to trace the historicity of organisational and professional tools by analysing the changes embodied by the new forms of knowledge and learning (Daniels et al. 2007).

The second approach is informed by different variations of bureaucratic and organisational theory (Meyers 1993; Farmakopoulou 2002), as well as investigations based on discourse analysis (Brown et al 2000), and on the Foucaultian concept of the institution-subject relations of power (Allen 2003).

The third approach includes research that offers narrative or evaluative accounts of specific initiatives within a grounded approach (Coles et al 2000; Secker and Hill 2001; Pavis et al. 2003).

The last of these approaches consists of strategic documents that offer models of interagency work and provide examples of good practice (DfES 2002; Frye and Webb 2002; Whittington 2003). However, two dominant theoretical approaches around inter-professional collaboration have emerged: Communities of Practice and Activity Theory.

The Community of Practice Approach

The concepts articulated by Lave and Wenger in their work 'Situated Learning: Legitimate Peripheral Participation' (1991), and the most recent development of the account by Wenger (1998), have undoubtedly contributed to a considerable body of research that has explored the relationship between learning and the social situation in which it occurs. In their view, Community of Practice is defined as social mechanism for sharing and developing knowledge and expertise. The central concept that describes this particular mode of engagement is the *legitimate peripheral participation* (LPP): the social process by which a learner enters a community of practitioners, by gradually moving from an initial peripheral position towards a full participation in the social practice of the community. The need to progressively master the knowledge and the practice required by the community entails a delicate process of understanding the situated nature of the activity, which means being able to use, shape and negotiate meanings, artifacts, and tasks. One of the major contributions of the Community of Practice framework to the study of professional settings is the enriched perspective on learning that they provided. This view takes into account the recognition of evolving dimensions such as membership, relation of power, identity, and a focus on participation as a collaborative and dialogic production, which takes place within a complex set of activities and practices.

However, despite being a flexible and dynamic concept, the notion of a Community of Practice raises a number of problems in relation to the types of learning that are described in social practice. Hedegaard (1998: 117) states that 'no qualitative differentiation between knowledge and practice of different communities' has been taken into account

by Lave and Wenger and 'adult's activities (...) are regarded as unquestioned standards for the goals of development'. Similarly, Edwards (2005: 57) highlights some limitations in the way in which 'the community of practice metaphor deals with learning something new', by suggesting that researchers turn to the concept of 'expansive learning' developed by Engeström (1987; 2001). In fact, while the Community of Practice perspective offers useful examples of how knowledge is appropriated in the apprenticeship model, the ways in which new knowledge is created and transformed by articulating new tools and concepts is not fully explored.

Another significant problem in the original notion of Communities of Practice is the lack of a theoretical construct to analyse mechanisms of rejecting, breaking away, or simply expanding the given activity, as highlighted by Linehan and McCarthy (2000), and more recently by Engeström (2007). Wenger (1998) considers identity as a pivotal concept in our understanding of communities of practice in which a sense of trajectory is established through a negotiation of meanings that derive from our experience as members of a community. However, this concept lacks an adequate framework for theorising how professionals with different knowledge, values and perspectives participate in new social settings. In order to enrich the concept of participation, Hodges (1998) points out the existence of moments of nonparticipation and dis-identification, which reveal the tension between normative practice, sense of membership and of difference.

In their account of participation, Lave and Wenger (1991) stress the constitutive role of practice in determining and shaping the possible locations for participation. However, conceptualising practices as pre-existing social structures that make participation in a community of practice possible, risks undermining two crucial aspects of inter-professional work: agency and activity.

On the one hand, agency plays a crucial role in unveiling the tension between perception and position. That is to say, between an institutionalised form of practice (the implementation process of a policy), and the way in which a professional positions herself/himself. This can be in terms of identification with, or differentiation from, the role s/he perceives, as given by the institution. On the other hand, the activity is carried out in a space that is negotiated in between practice and discourse, where normative constraints, institutionalised practices, agentic response, and emerging possibilities are developed.

The Activity Theory Approach

An attempt to offer a more encompassing perspective on professional practice is represented by the Activity Theory framework. Engeström (1999) highlights five principles that have been also utilised to analyse multi-professional contexts.

The first is represented by the *unit of analysis*: an artefact-mediated and object-oriented activity system, seen in its relation to other activity systems. The activity system is conceptualised as a community that develops a specific micro-culture characterised by *multivoicedness*. Each practitioner participates in the activity with different professional perspectives and linguistic repertoires. The activity system itself carries multiple layers of history, embodied in artifacts, rules and conventions. The division of labour also creates different positions for the professionals involved in the community, who employ symbolic (the discourse) and material (e.g., the Common Assessment Framework) tools to mediate their activities and negotiate new goals.

The third key-principle is the concept of *historicity*: where an activity system takes shape and is transformed over time. Its history needs to be studied not only as local history of evolving activities and objects, but also as history of the theoretical ideas and tools that have shaped their activities. *Contradictions* then have a central role as a source of change and development. They are conceptualised as structural tensions within and between activity systems, that arise when responsibilities, tasks and goals are redefined and redistributed between changing organisations and institutions (e.g. across a local authority). The capacity of participants in an activity to interpret and expand the object of activity is defined as *expansive transformation*. This involves a reconceptualisation of existing tools, meanings and possibilities for learning, in creating new knowledge and new practice.

In particular, the Activity Theory perspective offers two powerful concepts that can help to explore inter-professional work: co-configuration and boundary-crossing. The former is a form of work emerging from complex multi-professional settings in children's services. It implies a collaborative and discursive construction of tasks, solutions and visions. The latter refers to constructive forms of rule-bending in a team of different professionals. New expertise is developed when practitioners collaborate across the different sectors by transforming tools and ways of working together.

Both perspectives described above are helpful in identifying the ways in which the artifacts of a community of practice (or an activity system) become tools of mediation that shape practices and processes. Particular emphasis is placed on the historicity of the community as the dominant aspect of social and cultural organisation that has been established and transformed over time in a specific set of relations in which the practitioner's participation is immersed. In my view, this sense of historicity needs to be re-conceptualised when the policy mandates and the normative practice are restructured in a new system. This is particularly significant in researching new practices that involve different professionals working together. As a result of this, more developed theoretical and methodological tools to describe, interpret, and evaluate the complexity of the practice and the shifting relation between activity, subject-positioning and discourse are needed.

Both Community of Practice and Activity Theory approaches offer a possible theoretical and analytical framework as means to interpret ways in which organisational and professional learning can evolve in a system that comprises tensions and powerful relationships between professionals, local authorities and clients (Edwards et al. 2009). In this perspective, the development of innovative practices is fostered by the creation of tools that could help the process of re-configuration of professional expertise and institutional roles such as boundary-crossing and rule-bending. The Socio-cultural approach offers also a powerful account of both construction and maintenance of a shared object of activity through the creation of new tools and the use of shared resources to expand, negotiate, and shape the collaborative task. However, the analysis of a changing system as conceptualised in the Socio-Cultural Approach limits the complexity of the process of meaning making since it focuses on the division of labour and the symbolic (or material) artefacts specific to different professional categories. Less importance is given to the tensions between the situated practice of collaboration and the institutional discourse that constraints the professional activities. In addition to this, there is lack of methodological focus on the struggle between different discourses and different voices within a joint activity. However, a recent attempt to expand the rather fixed conceptualisation of the elements that compose the activity system, is represented by the study of interactional dynamics and social positions in discursive practice within a Socio-Cultural approach (Hjörne and Säljö 2004; Mäkitalo and Säljö 2002).

A way of further enriching the methodological tools offered by the Socio-cultural framework can be to focus on a deeper exploration of the relationship between micro-contexts in which the policy is 'entextualised' (Blommaert 2005) within the wider institutional context. This will entail not only a vivid description of the implementation of collaborative practices but also an inner and deeper interpretation of the ways in which meanings, actions, and discourse combine to define the particular roles and rules in which that culture is inscribed.

Moreover, the identification of divergent cultural models and social positioning cannot be separated from a closer investigation of the type of discourse that underlie them, since different professionals will possess and use a different professional talk (and text), which will have identifiable linguistic features (Sarangi and Roberts 1999). Any investigation of collaborative practice therefore involves an ethnographic move between interactional and institutional features in order to depict the construction, negotiation and contestation of professional categories and attributes. As Mäkitalo (2003) points out, categorisation in institutions not only affects the everyday management of professional practice but also pinpoints a wider context of historically and politically generated institutional procedures and evaluative processes.

An alternative approach to the study of inter-professional work: Linguistic Ethnography

Linguistic Ethnography (Blommaert 2005; Rampton et al. 2004) can be a suitable methodological tool to investigate inter-professional work because it allows the exploration of the interplay between the complexity of the policy implementation and the different professional discourses encapsulated in talk and practice. In this sense, it represents a point of convergence of my interest in the situated culture of a children's centre, my engagement with the problem of the representation of voices, and the intention of not only describing, but also attempting to interpret, the different variations of welfare practice.

The point of departure in both my theoretical and methodological orientations has been the idea of voice as the formal representation of more implicit forms of cultural

agency. In a linguistic anthropological perspective (Hymes 1996), the concept of voice is defined as constrained by particular cultural codes that will determine the kind of performances and genres in which that voice will attempt to be heard or impose itself. Translating the metaphor into the policy and multi-professional context of my research, the performances and the genres can be seen as the deployment of professionally organised narrative patterns that can represent, or misrepresent, particular voices, dependent on whether or not they fit into specific codes of behaviour and language. In this sense, norms are encoded in social (and professional) configurations that are reflected in language codes and styles of performance. Ethnography, therefore, is adopted as both descriptive theory and an interpretative perspective with a specific focus on language as culturally embedded practice, which helps to conceptualise, describe and interpret language and practice as specific communicative resources that are organised in repertoires and performed in genres.

In order to shed light on the contextual factors that frame inter-professional work, I have turned to the notion of ‘discourse’ as a semiotic and mediational web in which dispositions, identities and practice shape, and are shaped by, the social and institutional contexts in which they occur (Hasan 2002; Bernstein 1990). My key point of departure is the conceptualisation of discourse as ‘language in action’ (Blommaert 2005: 2), which ‘comprises all forms of meaningful semiotic human activity seen in connection with social, cultural, and historical patterns and development of use’ (ibidem: 3). In this sense, my initial interest in investigating the role of discourse within inter-professional collaboration was prompted by the need to combine a close focus on the patterns of micro- interactions, in which the practice of the children’s centre unfolds, with a wider analysis of the macro- features that frame the context: from the organisational structure of the children’s centre itself, through the demands of the Local Authority, to the external policy mandates. In epistemological terms Linguistic Ethnography (LE) maintains that ‘language and social life are mutually shaping, and that close analysis of situated language use can provide [...] insights into the mechanisms and dynamics of social and cultural production in everyday activity’ (Rampton et al. 2004: 2). More specifically, the three empirical foci that LE intends to explore are individuals, situated encounters and institutions, and networks and communities of practice. In the first of these, individuals are considered in terms of their semiotic repertoires, use of resources,

habitual practices and dispositions. In situated encounters events, genres and types of activity in which the subjects interact are the subject of attention. Material settings and physical arrangements are also taken into account, as well as the negotiation process in which subjects engage to understand or influence each other. Finally, how institutions shape, sustain and get reproduced through texts, genres and practices are considered through the prism of institutions, networks, and Communities of Practice.

LE approaches have then provided a descriptive and analytic orientation to address the relationship between structure, practice and agency. This offers a powerful tool in the exploration of the interplay between the voices of the professionals involved in the children’s centre, the situated practice that they create in shared activities (e.g., Common Assessment Framework or Team Around the Child meetings), and the institutions to which they relate (e.g., schools linked to the children’s centre, the Local Authority).

The concept of “genre”

The concept of genre represents the analytical link between situated events and social structures, and between individual differences and institutional patterns. Despite the situated nature and the individual variability of a communicative act, the genre still follows relatively stable forms of communication and structure (Bakhtin 1986). In other words, the genre creates a set of conventionalised expectations that members of a social group or network use to construct and shape the communicative activity that they are involved in (Bauman 1986; Bakhtin 1986). These expectations also give a sense of the specific elements that are constitutive of that activity, such as possible tasks, roles, relationships, ways of carrying out the activity and ways of using resources. The concept can be used as a methodological tool to analyse specific instances of communication in the process of sharing information and constructing meanings within an inter-professional community.

In particular, the twofold quality of the ‘genre’ concept, both descriptive and interpretative, can guide the analysis through the set of different formal and informal types of collaborative arrangements employed by an inter-professional team, because it can help to distinguish different communicative events (official meetings, telephone conversations, correspondence) in terms of type, purpose and relation to the context.

Following Bakhtin's notion of genre, it can be seen as belonging to particular communities: among medical doctors the doctor-patient interview will be the common genre. Likewise, in a children's centre context, sessions with parents, subgroup meetings, staff meetings and telephone conversations with professionals from other agencies, will be part of that genre repertoire. The process of socialisation is also a matter of acquiring the specific patterns that are required by a genre. Specifically, in the context of a child's case review, a family support worker needs to be able to recognise and become familiar with the specific genre related to how to assess the family's needs, which perspective to be held during the meeting with the rest of the team, what kind of activities to be put in the plan, etc. This, in turn, will help the family support worker to establish his/her credibility as being a professional working in that specific children's centre within that specific Local Authority.

In order to analyse the data, transcriptions from the participant's interviews and the actual interactions within staff and partnership board meetings will be considered through the specific features that the genre entails. These are: the function of a genre (to persuade, demonstrate, describe a personal point of view on the object of analysis), its specific structure (e.g. a narrative would entail an opening, a storyline and a coda), and its linguistic patterns (use of passive form, personal or impersonal expressions, complexity of syntax, and use of specific terminology).

On the same level of analysis, the function of a genre can be connected to a particular social domain, that is; how genres organise specific parts of communication according to well-established social contexts. For example, analysing to what extent a report compiled by a maternity support worker, after visiting a family, fits in the institutional genre can offer new insights into the recontextualisation process. In fact, it can help the recognition of the interplay between a standardised institutional practice (e.g. a Common Assessment Framework form to assess a child's case) and the professional's position, in terms of agency and role. In this sense, it is crucial for the analysis to focus on the recognition of the organised and patterned forms that an inter-professional team uses, as both language and semiotical means, when discussing a child's case during a review meeting. The communicative forms that belong to that specific professional register may reveal: a particular professional identity, a particular epistemic orientation, a particular mutual position between the participants of the meeting.

On an interpretative level, these instances around genre converge with a fundamental idea put forward by Bakhtin (1986): the *heteroglossia*. This entails the multi-variedness and multi-voicedness of every discourse; the fact that different parts of a discourse reflect multiple voices in terms of social positions, orientation towards what is being said, articulation of expectations and roles in the interaction. On a similar level, the transmission of a set of policies (in terms of texts, protocols and forms) can be conceptualised as a process through which an institutional discourse is decontextualised, elaborated and recontextualised (Silverstein and Urban 1996; Blommaert 2001) in the situated culture of a children's centre professional team.

In this sense, the LE method can unravel two lines of inquiry, both of which are fruitful for the progression of the proposed research: the level of congruence between the genre and the institutional context, and the level of meaning or effect that the genre entails. The first aspect is related to a promising domain of exploration: the connection between genre and normativity; the second aspect refers to the layered nature of the genre, which entails the co-occurrence of different genres in real communicative events. The former line of inquiry can shed light on the way in which a production of a particular register is intertwined with the normative expectations about it. The latter opens up possibilities to investigate not only the complex structures of a macro-genre (such as the TAC meeting), but also the level of agency of an individual (how a professional manages the sub-genres, whether he/she is able to act in an effective way in order to make his/her point of view on the child's case visible), on a micro-level. These orientations can potentially lead to new ways of researching issues of identity and the relationship between the individual and the institution, by revealing the hidden tensions between agency and normativity. For example in the sharing of information (e.g. the CAF format), how inscribed in the policy mandates it is, or the degree to which the professional judgment can be exercised in relation to given protocols, and so on. Returning to the example provided above, if we analyse a TAC meeting as a macro-genre, we should also take into account the different sub-genres within it: question-answer sequences, narratives, reading aloud the minutes of the previous meeting, the presentation of each professional's review, conversational interpositions. In negotiating the balance between rules, processes, and professional contributions, there may be a significant movement between the multiple sub-genres that different professionals

develop (or in which they try to perform). This can potentially lead to finding new ways to negotiate the object and the aims of the activity in collaborative practice.

Conclusion

In this article, three main theoretical and methodological frameworks for the study of inter-professional work have been illustrated. It highlights that the complexity of the research site cannot be reduced to a descriptive account of the features that constitute membership and cannot be exclusively analysed through the conceptual lenses of Community of Practice and Activity Theory Frameworks. In fact, although both of them are useful to depict the elements that characterise the situated culture of activity and participation within the children's centre, they do not allow the recognition and more in-depth exploration of the interplay between structural organisation, social positioning and agency. In particular, both perspectives have not developed a focus on how discourse negotiates and shapes the relationship between structure and agency in practice. In order to do so, more sophisticated and refined tools are needed in order to investigate the process of policy mediation. In this sense, Linguistic Ethnography can powerfully elaborate on the concept of contextualisation by developing an enhanced sensitivity towards a situated practice through understanding both the tension and the possibility of (re) creating and transforming an external mandate through an interpretative activity. This is made possible with a fine-grained analysis of discursive patterns by the articulation of specific genres that reflect the negotiation between local practices and institutional orders.

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The Priestley Riots and the 18th Century Riot in History

Jonathan Atherton

ABSTRACT

The study of rioting and popular disturbances in the eighteenth century has attracted substantial scholarly attention. This has served to enrich our understanding of the make up of the eighteenth century crowd and the motives of those participating. Considering their scale and significance in the context of eighteenth century popular disturbances, historians have written much about the Priestley riots. The article begins by providing a brief narrative of the riots. The major purpose is to summarize the status of research conducted thus far on the Priestley Riots. In addition, a secondary objective is to summarize the most significant research conducted into eighteenth century popular disturbances. In doing so this helps place the research conducted into the Priestley Riots into its wider context.

KEYWORDS

Riots, the crowd, eighteenth century, Joseph Priestley, Birmingham Dissenters.

Introduction

The immediate precedent for the four nights of rioting was a dinner celebrating the second anniversary of the fall of the Bastille which had been organised by local supporters of the French Revolution. The lead up this dinner provided some warning of the violence that was to follow. The dinner was advertised in *Aris's Birmingham Gazette* on the 11th July with the menacing implication that a list of those attending would be published in a subsequent issue (Rose, 1960). This coincided with the dissemination of an inflammatory handbill around Birmingham. Included in this handbill were complaints about taxes, civil and ecclesiastical impositions and some coarse expressions of disloyalty against King George III (Creasey, 1963). Whilst organisers of the dinner

quickly denounced this handbill as totally unrepresentative of their own views, there is no doubting that its presence served to further inflame an already tense situation.

At this point, some of those who were responsible for organising the dinner considered calling it off. The dinner, however went ahead as planned on the afternoon of the 14th July 1791. Around eighty diners met at Dadley's hotel in Birmingham to celebrate the second anniversary of the start of the French Revolution. They were greeted by a crowd of around sixty or seventy protestors who shouted abuse before dispersing. Joseph Priestley, having been made aware of the potential trouble his presence may cause was not in attendance. The meeting was chaired by James Keir. A total of nineteen toasts were drunk, none of which could be described as revolutionary (Martineau, 1995). Upon leaving, diners were greeted by a larger crowd who threw dirt and stones. This crowd maintained its presence for sometime, breaking the windows of the hotel and looting it. The crowd then moved on, having momentarily threatened the Quaker meeting house on Bull Street, the crowd then proceeded on to the Unitarian New Meeting, which they set on fire. The next target of the crowd was the Old Meeting which was ransacked, with its contents being burned in the street. Joseph Priestley's house at Fairhill in Sparkbrook was then attacked. Priestley had been warned about the approaching rioters and was able to escape with just minutes to spare. Upon arrival, the crowd plundered Priestley's house before burning it to the ground. Over the course of the next three days the houses of a number of prominent local dissenters were attacked, including the dwellings of John Taylor, John Ryland and William Russell. Non dissenters were also to fall victim to the rioters. The historian William Hutton lost both his stationers shop and his house in Washwood Heath. The rioters also broke open the town prison, releasing all the occupying prisoners. By now, the magistrates had become concerned by the ferocity and extent of the riots and swore in a number of 'special constables'. They confronted the rioters at the house of John Ryland but were easily overpowered. The final act of the rioters was to attack the house of the moderate Anglican, William Withering on the 17th July. Withering had taken the liberty of hiring some 'famous fighters from Birmingham' (Rose, 1960 p75), who were able to successfully repel the rioters. The evening of the 17th signalled the arrival of the dragoons from Nottingham and the last of the rioters quickly dispersed.

During the riots the houses of some twenty-seven individuals were attacked or threatened, whilst around twenty buildings were destroyed or severely damaged. In addition the riots led to a number of fatalities and cost in some contemporary estimates, hundreds of thousands of pounds worth of damage. A number of the victims were to leave Birmingham permanently. Joseph Priestley himself was never to return to the city he had settled in for ten years. Whilst some members of Priestley's Birmingham congregation implored him to come back, it was the unanimous view of Priestley's London friends that this would be unwise (Griffith, 1983). With some reluctance Priestley settled in London, before eventually emigrating to America in 1794. The ramifications of the riots were to be felt far beyond Birmingham and were to influence the conservative reaction against political and religious radicals which took place during the 1790s (Wykes, 2008).

The Priestley Riots in History

Early studies of the Priestley Riots tended to take a rather limited approach to the Riots, dealing, for the most part with Priestley's personal role in the riots. This is characterised by the lively and vociferous debate between Bernard Allen and Ronald Martineau Dixon that occurred in the *Transactions of the Unitarian Historical Society* in the early 1930s. The focus of debate was the single issue of Priestley's culpability in organising the infamous dinner celebrating the second anniversary of the fall of the Bastille. Dixon denied Priestley had played any significant part in organising the dinner or encouraging others to attend (Dixon, 1927). To this, Allen provided a somewhat more credible repudiation. By using Catherine Hutton's recollection that Priestley encouraged her father William Hutton to attend as well an extensive enumeration of Priestley's other activities, Dixon successfully argues that Priestley did indeed have a more extensive involvement in the organisation of the dinner than initially perceived (Allen, 1932). Eric Robinson provided further support to this argument in his short but not insignificant article. Robinson demonstrated, despite Priestley's claims to the contrary, he was actively recruiting for the planned Warwickshire Constitutional society in the lead up to the Priestley Riots. The society was intended to campaign for parliamentary reform but plans for its creation were abandoned in view of the hostility experienced during the Priestley Riots (Robinson, 1960). The conclusion that can be drawn from this, is that

Priestley was evidently far more active in political movements in Birmingham than either he cared to admit or his contemporaries perceived.

Whilst Joseph Priestley's role in the riots proved to be a subject of dispute, the question of the impact of the riots upon Priestley has proved far less contentious thanks largely to the work of R. E. W. Maddison and Francis Maddison. In a succinct examination of the trials and subsequent claims for compensation, sufficient contemporary evidence is presented to suggest that Priestley was forced to suffer considerable hostility on both of these occasions (Maddison, 1956). Of greater significance is that this article marks the first attempt to explain the origins of the riots in Birmingham. The authors' assert religious tension as one of the primary motivator's of the rioters. Whilst the analysis here is largely superficial, based solely on the memoirs of Joseph Priestley and Catherine Hutton, the connection of the riots with religious tensions caused by the agitation for repeal over the Test and Corporation acts is of some consequence. This interpretation was to find favor with some later historians of the riots who expanded on this concept more lucidly.

It is readily apparent that before 1950, the Priestley Riots had received only cursory attention from historians. Such disinterest in rioting was not confined to the Priestley Riots, the archetypal historian up until this point considered popular disturbances unworthy of serious attention. This attitude was to undertake a great sea change with the development of 'history from below' that led to the historiographical ascent of rioting and popular disturbances, among other topics. Paramount to this new found interest in rioting were the identity and motives of individual rioters. Whilst such research was initially pioneered by George Rude in studies of popular protests in Paris and London in the eighteenth century (Rude, 1959), it was first applied to the Priestley Riots by Barrie Rose.

Rose's synthesis remains the most comprehensive study of the Riots. Displaying extensive use of primary sources, Rose provides a detailed narrative of the riots before moving on to briefly examining the ensuing trials and finally attempting to explain the origins of the riots. Perhaps Rose's most significant achievement is to absolve, beyond doubt, the ministry of William Pitt the younger of any complicity in causing the riots. Instead three local magistrates are accused of collusion. Neither of these points have been subsequently challenged. In addition, in line with the methodological approach

advocated by Rudé, Rose, through the use of collections from the public record office (including Home Office papers and documents relating to claims for compensation), successfully determines the identity of some crowd members, suggesting they were primarily made up of industrial artisans and other members of the city's working classes. This forms the basis of his conclusion, that the riots were essentially 'an explosion of latent class hatred' (Rose, 1960 p84)

This conclusion, entrenched as it is in class conflict theory, has caused much controversy among subsequent historians of the riots. Fundamentally, to see the riots purely as systematic of developing class tensions is a largely anachronistic approach. The arguments surrounding class conflict are primarily based on those who were tried at the Worcestershire and Warwick assizes. Considering the unsatisfactory nature of the trials, it must be questioned whether those tried were truly representative of the rioters. In addition, Rose's contention regarding the magistrates culpability in the riots sits uneasily with the notion of class conflict, for the magistrates do not necessarily represent the unprivileged underclass that Rose pictures rising up against their social superiors. If Denis Martineau's conclusions, which will be discussed shortly, regarding the role of the magistrates in instigating the riots are to be believed, then this only casts further doubt on Rose's conclusions (Martineau, 1996).

The most convincing rebuttal of Rose's interpretation has come from John Money's subtle and wide ranging analysis of the political culture of the West Midlands. Money's arguments are complex, essentially centring around the notion that in his view, Rose's interpretation is overly simplistic because it takes the presence of the Birmingham rioting crowd 'for granted' (Money, 1977 p271). Instead it is suggested that if the riots were as Rose suggests, caused by a combination of traditional prejudices and new social and economic tensions, then it is necessary to understand how these tensions were able to manifest in the consciousness of those individuals who rioted.

Money succeeds in doing this, by linking the initially seemingly abstract concepts of political upheaval and the decline of the local buckle trade. Specifically, it is contended that rising unemployment caused by the decline of the buckle trade could easily have led to disillusioned workers turning on the intellectuals of Birmingham as the imagined instigators of their plight (Money, 1977).

Money also makes an interesting contribution regarding the impact of the riots, a subject hitherto largely ignored by historians of the Priestley Riots. Whilst accepting that the riots undoubtedly severely damaged the reform movement within Birmingham, it is suggested that it was not brought to a complete standstill. According to Money, the continuing existence of the Birmingham book club is regarded as even more significant than the burning of the New Meeting house (Money, 1977).

In attempting to understand why the riots took place, Arthur Sheps provides a fascinating insight into the public perception of Joseph Priestley and other leading dissenters who were to be the main victims of the riots (Sheps, 1989). This is in part achieved through an extensive examination of contemporary satires and caricatures of Priestley and his fellow dissenters. Shep's study inclines towards the materialist interpretation initially advocated by Rose, which stresses the importance of social factors in explaining why the riots took place. Sheps argues that leading dissenters 'constituted the vanguard of the bourgeoisie' and 'they were the new industrial master class and thus were the natural targets for popular resentment' (Sheps, 1989 p47). In examining the public perception of the Birmingham dissenters, the author however stresses the unique role played by Joseph Priestley and his cohorts in creating tension within Birmingham.

In the aftermath of the riots Joseph Priestley expressed surprise that he personally was seen as a threat to the constitution. Sheps argues that this surprise should be considered at the very least naïve. Priestley underestimated the political character of some of his earlier publications and ignored the equation, which most contemporary newspapers, pamphlets and prints made between dissent and political radicalism (Sheps, 1989). The author traces Priestley's activities in Birmingham from his arrival in 1780 through to the riots in 1791. He pinpoints Priestley's heated and prolific debate with Anglicans such as Samuel Horsley and Edward Burn as well as the attempts to repeal the Test and Corporation acts as serving to increase Priestley's notoriety among the public (Sheps, 1989). The repeal movement in particular attracted more widespread condemnation, including that of the political satirist James Sayers. In his print 'The REPEAL of THE TEST ACT' published in February 1790, Sayers draws direct parallels between dissent and French irreligion and republicanism. Sheps argues that Priestley's letters to the Reverend Edward Burn are equally significant (Sheps, 1989). It was on this occasion when Priestley used his notorious gunpowder metaphor. This infamous

quotation was taken out of its original context by members of the Anglican clergy and used to portray Priestley as seditious and a dangerous member of society (Sheps, 1989). This and other derogatory publications and satirical prints were then circulated throughout the Birmingham neighborhood by the clergy. Sheps argues that this served to increase hostility against Priestley before the riots (Sheps, 1989). Sheps believes that the depiction of Priestley in a number of satirical prints was especially significant. In his view they allowed negative depictions of Priestley to reach segments of the public that were otherwise untouched by newspapers and tracts (Sheps, 1989).

Arthur Shep's study is certainly of considerable value to the historian of the Priestley Riots. It explains, to an extent why Priestley was to face such widespread hostility during the Birmingham Riots and indeed in their aftermath. It must be noted that any explanation as to why the riots took place should not limit itself to the role of Joseph Priestley alone. This is perhaps one drawback of Sheps' study. The research of other aforementioned historians such as Rose and Money reveals the importance of considering wider social and religious tensions that existed within Birmingham during 1791 if a reliable interpretation on the origins of the Priestley Riots is to be achieved.

The 1991 bi-centenary of the Priestley Riots provided the perfect opportunity for historians to re-examine the main debates surrounding the riots. In a review of literature, Ditchfield returned to the questions surrounding the origins of the Priestley Riots, before asserting that the riots were not so much caused by class tensions but religious tensions instead (Ditchfield, 1991). There is little doubting that the author shows an admirable knowledge of the historiography of Priestley Riots as well as the more general discussions surrounding the 18th century riot. To support his arguments, Ditchfield relies and quotes heavily from the aforementioned work of John Money. However, the extensive quoting of Money by Ditchfield to support his arguments can be seen as deceptive. Ditchfield argues that the religious animosity that existed within Birmingham 'did not require a conjunction...with other grievances to take a riotous form' (Ditchfield, 1991 p5). In reality this directly contradicts Money's arguments surrounding the role of the decline of the buckle trade in creating the presence of the crowd in Birmingham. Whilst it is difficult to disagree with the contention that the dissenters attempts to repeal the Test and Corporation acts heightened religious tensions within the town, (indeed, Money sees the agitation for repeal as highly significant in the context of the riots), it

would be quite wrong to suggest that this alone could have compelled the people of Birmingham to riot.

Ditchfield also uses Colin Haydon's study of London's 1780 Gordon riots as a template to support his assertion's surrounding the importance of religious issues in explaining the tumultuous events of 1791 (Haydon, 1991). In his study, Haydon persuasively argues that those targeted in the Gordon Riots were so because they were Catholic, not because they occupied a higher social position as argued by Rude . Whilst there is little doubting that the Gordon Riots and the Priestley Riots share a number of similarities, to use them as a single point of comparison as Ditchfield does here is questionable. Having shown an acute knowledge of the historiography of 18th century rioting, the decision to discuss only a single study of a single 18th century riot is unfortunate. Indeed, if Ditchfield's arguments were to be in any way persuasive, then his study would have benefited from a much fuller comparison with other 18th century riots, especially other Church and King riots. Fundamentally, Ditchfield's approach entirely trivialises the role of the French Revolution in creating and exacerbating tensions of varying sorts in the lead up to the Priestley Riots. Such a criticism is not unique to Ditchfield but in actuality plagues the entire historiography of the Priestley Riots. This is somewhat ironic considering it was a dinner celebrating the anniversary of the fall of the Bastille that triggered the events of July 1791.

It is readily apparent that the question of what caused the Priestley Riots has attracted substantial interest from historians over the years. It must be noted that such interest has not extended to the impact and legacy of the Priestley Riots. Whilst Rose touched briefly upon the trials and claims for compensation and Money has argued that the riots did not bring the reform movement to a complete standstill, these are mere footnotes in the context of much wider studies on the origins of the riots. Francis and R. E. W. Maddison discussed the impact of the riots upon Joseph Priestley but showed little interest in their wider impact. The first serious attempt to examine the impact of the Priestley Riots was undertaken by David Wykes.

Wykes reverses the trend advanced by Money and also John Stevenson in playing down the significance of the Priestley Riots. It is instead argued that the Priestley Riots were responsible for encouraging Church and King feeling not just in the West

Midlands but across the nation (Wykes, 1991/1996). Displaying an adept handling of primary source material, Wykes is able to cite examples of increased Church and King feeling in locations as far apart as Stourbridge, Nottingham, Manchester, Newcastle, and Exeter. On the basis of his research there seems little doubting that the effect of the Priestley Riots were felt across England.

Perhaps, the most significant drawback of these studies is the narrowness of their focus. Wykes is primarily (if not exclusively) concerned with the impact of the riots upon Unitarians. An increase in Church and King feeling would not just affect those of the Unitarian faith. Therefore, if Wyke's arguments concerning a nationwide increase in Church and King are to be upheld then the focus of the research needs to be expanded to include non Unitarian branches of dissent.

A further minor criticism that can be made of Wyke's work is that it sometimes lacks cohesion. Whilst the decision to extend the focus of the research across England is creditable, it is implemented in a relatively haphazard manner. In support of his argument that the Priestley Riots helped to heighten Church and King feeling across the country, Wykes draws on numerous examples from around England, but none of these are expanded upon in any detail. Clearly, considerably more work is needed on the national impact of the Priestley Riots.

Denis Martineau's aforementioned study took up Rose's arguments regarding the role of the magistrates in the Priestley Riots and provided further scrutiny as to their culpability. In a detailed examination of the events leading up to and during the riots, Martineau concludes that the magistrates played a crucial part in instigating and managing the riots. It is suggested that the controversial advert in Aris's *Birmingham Gazette*, which threatened to identify those who attended the dinner was, in fact, placed by the magistrates. Martineau contends that this was an attempt to cancel the dinner (Martineau, 1996). Having failed to cancel the dinner, it is suggested that the magistrates attempted to disrupt the dinner, hence the gathering of a crowd outside the hotel at around 7pm. This also failed, because the dinner finished early at around 6pm. Martineau believes that the magistrates were unwilling to let the dissenters 'get off scot free' so instructed the crowd to attack the Unitarian meeting houses (Martineau 1996 p13). However, when the crowd extended its attention to Priestley's home and the

homes of other leading dissenters, the magistrates realised they had lost control and made their first attempts to quell the disturbances.

In some ways, this study is quite sophisticated. Martineau recognises that those participating in the Birmingham disturbances did not consist of a single crowd. Instead, it is suggested there may be several groups of rioters, each with their own aspirations and reasons for participating. In general however, it must be noted that whilst most of Martineau's arguments are plausible, they should be approached with some caution. Firstly, the reliability of some of the author's source material must be questioned. For example, Martineau cites the memoirs of James Amphlett, who at the age of sixteen participated in the rioting, yet his recollections of the riots were not written until he was eighty-five years old. This must raise serious doubts over the reliability of Amphlett's memories of the riots. Secondly, whilst there is considerable evidence of primary reading, it must be noted that many of Martineau's arguments seem to be based more on conjecture than available source material. Martineau does not cite sufficient evidence to suggest that the magistrates placed the advert in Aris's *Birmingham Gazette*, warning that names of attendees would be printed. Likewise, there is insufficient evidence cited to suggest that the crowd that gathered outside the dinner was there at the behest of the magistrates. Whilst these notions should not be disregarded, more evidence is required for them to be considered anything more than speculation.

It is perhaps unsurprising that Priestley's biographers continue to show great interest in the riots. Robert Schofield, in his comprehensive two volume biography of Joseph Priestley, paid particularly close attention to Priestley's arrival in Birmingham and provided a detailed account of his activities in Birmingham in the lead up to the riots (Schofield, 2004). The result is an overly sympathetic account. Whilst Schofield's criticism of Priestley's opponents may not be unjustified, to describe Priestley as merely defending himself against those who chose to criticise him would appear to be a somewhat naive. Fundamentally, it underestimates the level of controversy Priestley's choice of words could cause, especially when put in the context of Priestley's famous Gun-Powder speech.

Of greater interest is the level of criticism directed by Schofield towards Prime Minister William Pitt the younger. Whilst not attempting to contradict Rose's contention that Pitt

had no direct role in organising the riots, Schofield instead argues that Pitt sponsored adverse propaganda in the press which drew parallels between the radicals of the French Revolution and the dissenter's agitation for repeal of the Test and Corporation acts (Schofield, 2004). Such conclusions would benefit from a more comprehensive study of the press during this period. Whilst the debate surrounding the origins of the riots is not directly engaged with, the inference of the role of Pitt and Burke in the anti-dissenter movement along with the complete avoidance of social issues would at least suggest that Schofield supports the idea that the riots were fundamentally religious.

The fact that the Priestley Riots continue to attract interest from historians is testament to the fact that they remain a formative event in the history of Birmingham. In his wider discussion of 'Industrial Enlightenment' in Birmingham between 1760-1820 (Jones, 2008), Peter Jones revisits the debates surrounding the origins and impact of the Priestley Riots. The resulting discussion of the Priestley Riots is perhaps the most balanced assessment of their origins yet.

Instead of examining the riots in isolation, Jones places them in the context of growing tensions between churchmen and dissenters that existed in Birmingham from the 1780s onwards. These include disagreements over the establishment of a Unitarian Sunday School and Birmingham library's decision to stock Priestley's *History of the Corruptions of Christianity*, before moving on to the dissenters attempt to repeal the Test and Corporation Acts which was to cause so much controversy between Anglicans and dissenters. John Money had previously argued that the growing religious hostility would have existed regardless of Priestley's presence in Birmingham. Jones however considers Priestley's arrival in Birmingham as crucial in exacerbating religious tensions.

In regards to the origins of the riots, Jones believes 'we should prioritise the reawakening of religious tensions as the main causal factor' (Jones, 2008 p192). In particular Jones, like Money and Ditchfield, regards the agitation for repeal over the Test and Corporation acts as of fundamental importance to this. Like Money however, Jones is careful not to disregard the importance of political and social factors and does not believe the riots can be explained in the context of religious tensions alone. He is careful to acknowledge that although Unitarians were obviously the primary target, this could be due as much to their 'resentment of institutional dominance' as their 'indignation at theology' (Jones, 2008 p194).

Jones also discusses the impact of the riots upon Birmingham. The tendency of historians such as Money and Stevenson to play down the long term significance of the Priestley Riots is reversed. Jones argues that the riots severely weakened and thinned the ranks of Presbyterians. Similar to David Wykes, Jones argues those members of the dissenting family who elected to stay, continued to suffer marginalisation in the following decade as a direct result of the riots. Furthermore, those dissenters who had campaigned so resolutely for the removal of the barriers to civil equality were, ironically to suffer, considerable disempowerment at the local level. Birmingham meanwhile, having been one of the countries leading areas of dissent before the riots, was to remain 'steadfastly Church and King throughout the 1790s' (Jones, 2008 p198).

The 18th Century Riot in History

It was not until the late 1950s that historians considered popular protest and popular disturbances worthy of scholarly attention. Over the next forty years the subject has developed a vibrant and elaborate historiography. This is thanks largely to two historians who arguably founded the study of 'history from below', George Rudé and E. P. Thompson (Sharpe, 1991 p25).

George Rudé's approach to the crowd was initially developed in a study of the Parisian crowd in the French Revolution before being expanded to cover popular disturbances in 18th century London and eventually a history of popular disturbances in France and England during the 18th century (Rudé, 1959/1964). Rudé's work was heavily influenced by the work of Georges Lefebvre, who was the first to see those participating in the popular disturbances of the French Revolution not as a single entity but as a group of individuals each with their own logical reasons for protesting (Lefebvre, 1967).

Rudé's aim was to understand the crowd 'from within', in essence, its behaviour, composition and how individuals were drawn into its actions (Krantz, 1988 p4). Abandoning the previously hostile categorization of the crowd, Rudé's research revealed that those participating in popular disturbances were not of the criminal underclass or the dregs of society. Instead they were 'ordinary' people of settled employment with rational beliefs and value systems (Krantz, 1998). This was in part achieved through the use of extensive primary source material including criminal, police and judiciary records that had previously been largely ignored by historians.

The major success of Rudé's research was that by successfully identifying the 'faces of the crowd', he was able to restore the reputation of those participating in popular protests. Protestors are now seen as individuals each with their own identity, interests and aspirations. This simultaneously demonstrated that negative insinuations regarding the eighteenth century crowd such as Burke's 'mob' or 'swinish multitude' were no longer appropriate.

There is little doubting that Rudé's work on the eighteenth century crowd has proved to be hugely influential, however his conclusions surrounding why people participated in popular disturbances has caused controversy and attracted much interest from historians. As a result, critiques of Rudé's theses on the eighteenth century riot are numerous. Perhaps, the most significant criticism that can be made is that Rudé's Marxist perspective led him to privilege events that supported the notion of a developing class conflict, thus those incidents of protest that did not directly demonstrate this concept were often ignored. Such an approach can now be seen as anachronistic.

One of the most wide ranging critiques of Rudé's discussion of the eighteenth century crowd can be found in the work of Nicholas Rogers (Rogers, 1998). Whilst Rogers acknowledges the importance of Rudé's research to our understanding of the eighteenth century crowd, he successfully identified certain difficulties with some of Rudé's broader generalisations about crowd action. Rogers attacks Rudé's very definition of the crowd as being at once too elastic and restrictive, for example allowing the inclusion of street gangs but omitting electoral crowds, despite the fact that many political demonstrations were a by product of the electoral process (Rogers, 1998). Furthermore, it is argued that Rudé's preoccupation with the most dramatic forms of social and political protest led him to explain popular disturbances in an overly simplistic manner. Rogers suggests that to categorize popular disturbances as simply reactive to events such as economic hardship underestimates other factors including the significance of 'ideological configurations' and the 'crowds own relations with authority' (Rogers, 1998 p11). Fundamentally, Rudé's decision to focus on the crowd in its most confrontational mode divorces the crowd from its 'deeper historical context' which should, in Rogers's opinion include non violent as well as violent forms of popular protest (Rogers, 1998 p12).

Individual studies of specific eighteenth century riots have also had significant ramifications for Rudé's convictions surrounding the importance of class conflict in explaining the outbreak of eighteenth century riots. Colin Haydon (Haydon, 1994) has provided a convincing refutation of Rudé's conclusions surrounding London's 1780 Gordon Riots (Rudé, 1956). Crucially, Haydon demonstrates that Rudé's sources, in particular his use of claims for damaged property are misleading, in that they portray rich Catholics as the main targets of the rioters, when in reality it was always far more likely that attacks against the rich rather than the poor would be recorded. Whilst attacks upon a wealthy persons property are likely to show up in claims for compensation, attacks against those impoverished were not considered worthy of going to court and thus do not appear in Rudé's sources.

Whilst Rudé's decision to regard class conflict as the primary motivator in eighteenth century popular disturbances has attracted criticism, there can be little doubt that the interpretation of the crowd as 'rational' remains the real value of his work. In many ways his concept of the 'rational' crowd was built upon by E. P. Thompson (Thompson, 1971). Thompson's approach to eighteenth century popular disturbances is considerably more subtle than that of Rudé. By analysing eighteenth century food riots, Thompson rejected the notion that individuals simply rioted due to hunger. Instead, he argued that participants in food riots were informed by a clear and sustained value system, which he entitled the 'moral economy'. This included not only a willingness to react to rising prices, but also a sensitivity to legitimate and illegitimate practices in marketing and milling. The result was a readiness to react if the customary rights of the community were perceived to have been discarded in favor of the self-centered desires of a minority (Thompson, 1971).

The concept of a moral economy has proved to be highly durable. Not only has it been used by historians of British food riots but also has been adapted to explain food riots in other countries such as France, America and South East Asia. The 'moral economy' has also been applied to other types of disturbances including political and industrial conflicts (Randall, 2006). Despite this, criticisms of Thompson's moral economy thesis remain extensive.

Those economic historians who Thompson accused of 'gross economic reductionism' (Thompson, 1971 p76) have countered that Thompson's model is built on economic ignorance of the era he was studying. It has also been pointed out that Thompson's model is constructed in a rural society, thus misunderstanding the comparatively different world of eighteenth century urban society. Adrian Randall has, however, contended that such differences should not be overstated, arguing that inhabitants of the eighteenth century countryside should not be seen as 'culturally static' (Randall, 2006 p4). Further criticisms have centered on Thompson's neglecting of the role of women, religion and the absence of a leading role for the middling sort (Randall, 2006).

Perhaps the most convincing criticism that can be made of Thompson's moral economy thesis is the difficulties in attempting to utilise a single inclusive model to explain events as complicated as popular disturbances, which can often have very complex and diverse causes. Whilst it should be noted that the notion of a moral economy has proved flexible, it should not in any way be seen as all encompassing. Attempts to apply the moral economy model to non food riots have proved problematic. A typical example is Colin Haydon's previously discussed study of the Gordon Riots. Whilst Haydon's deconstruction of Rudé's arguments surrounding the riots is convincing, his attempt to apply the notion of a moral economy to the Gordon Riots (Haydon, 1991) is much less so. Such an application is based on Haydon's contention that the rioters were fundamentally conservative, yet this alone seems insufficient reasoning to invoke Thompson's 'moral economy' and reveals the dangers in employing the term too loosely. It is significant that whilst the Priestley Riots (and other Church and King riots) are seen as fundamentally conservative, no historian has attempted to apply the 'moral economy' in this way.

There is little doubting that the subject of eighteenth century popular disturbances in general and the Priestley riots in particular have generated considerable scholarly interest. Thanks largely to the work of Rudé the 'rioting crowd' is no longer stereotyped as made up of felons or the 'dregs of society'. Studies of popular disturbances in the eighteenth century have revealed that participants in crowd actions came from a variety of different backgrounds. Whilst such research has extended our understanding of the make-up of the crowd, the question over what compelled people to riot remains a contentious issue. The social interpretation advanced by Rudé and more eloquently

by Thompson remains steadfast in the study of some riots, especially food riots but has increasingly been abandoned in the study of other riots. This is certainly true of the Priestley riots, where the recent historical trend places religious and to a lesser extent political grievances as the primary motivator for four nights of rioting in July 1791. Despite these developments, no conclusive agreement has been reached on the causes of the Priestley riots, this is something that looks likely to continue to be debated by historians.

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A comparison between the Masoretic text and the Septuagint of Jer. 31.31–34 (LXX 38:31–34)

Dr. Georg Walser

ABSTRACT

Jeremiah 31.31–34 is the longest quotation in the New Testament and it is quoted twice in Hebrews: 8.8–12 and 10.16–17. As most quotations in Hebrews the quotation from Jeremiah is taken from the Greek translation of the Hebrew Scriptures. What makes this quotation especially interesting is the fact that the Hebrew version differs a great deal from the Greek version quoted in Hebrews. In the present article the differences between the Hebrew text and the Greek text quoted in Hebrews will be discussed. The starting-point for the discussion is the observations made by Adrian Schenker in a short monograph published in 2006, which suggested chiefly that the differences between the two versions is not due to the translation, but to different Hebrew texts, of which the one translated into Greek is older and more original.

KEYWORDS

Jeremiah, Letter to Hebrews, Septuagint, Greek, Use of OT in NT.

Introduction

Jeremiah 31.31–34 (in the Greek translation, which is called the Septuagint or just LXX, and was finished in the last centuries BCE, the text is found in Jer. 38.31–34) is the longest quotation in the New Testament and it occurs in two versions in Hebrews 8.8–12 and 10.16–17. As with most quotations in Hebrews the quotation from Jeremiah is taken from the Septuagint. What makes this quotation especially interesting is the fact that the Hebrew version found in the Masoretic text (MT), i.e. the version of the Hebrew text preserved by the Jewish community and definitively established in the first centuries CE, differs a great deal from the Greek text found in the Septuagint and in Hebrews. Not only do the versions differ a great deal, but the contents of the versions appear to be incompatible with each other. The Greek version, which appears to be

more original than the Masoretic one, seems to be quite odd in the overall context of the Old Testament, while the Masoretic version would fit poorly in the letter to the Hebrews.

The background of the present article is the short monograph of Adrian Schenker 'Das Neue am neuen Bund und das Alte am alten: Jer 31 in der hebräischen und griechischen Bibel' published in 2006. According to Schenker:

The promise of a new covenant in the prophet Jeremiah in the version of the Greek Bible of the Septuagint has never been systematically compared with the Hebrew version, except in the excellent but short study by Pierre-Maurice Bogaert, Louvain-La-Neuve, and the contradictory investigation by Bernard Renaud (Schenker, 2006: 11, translation by the present author)

Strangely enough, it seems as if Schenker is right, that the differences between the two versions have been discussed only occasionally before. Further, the differences between the versions rarely seem to have been taken into account in the interpretation of the quotation in Hebrews. This is even more surprising since, according to Schenker, there are substantial differences between the text of the Septuagint and the text of the Hebrew version, and that these differences appear to be caused not by the process of translation, but rather because the text of the Septuagint is a translation of a different Vorlage (i.e. the Hebrew text which was subsequently translated into Greek), which appears to be older and more original than the version preserved in the Masoretic Hebrew text. Moreover, the different versions of the text seem to represent two different theologies about the covenant. It is also noticed by Schenker that both versions are found in most modern translations of the Bible, since Jeremiah is usually translated from the Hebrew text, while the quotation in Hebrews is a quotation from the Greek text.

In the present article the differences between the Masoretic text and the text of the Septuagint will be discussed, and the starting-point for the discussion is the observations made by Schenker. The character of most of these differences appears to be of the kind that they are very unlikely to be attributable to scribal errors or textual corruptions, since the translation of Jeremiah from the Hebrew is very literal. In fact, the translation of Jeremiah is one of the most literal in the whole Septuagint. This might seem a contradiction, since the difference between the Masoretic text of Jeremiah and the text of the Septuagint of Jeremiah is more obvious than in any other book of the Old

Testament. The Greek text is actually 15% shorter than the Hebrew version. However, the differences are mostly quantitative, and where the two versions correspond to each other, the Greek translation is extremely faithful to its Hebrew equivalent. Thus, it has been argued that the Vorlage of Greek Jeremiah differed from the Hebrew text known today as the Masoretic Hebrew text (Schenker, 2006). That there actually existed a different Hebrew version of Jeremiah, with affinities with the Greek version, has been confirmed by the manuscripts found at Qumran (e.g. 4QJer^b and 4QJer^d). It has also been argued that the differences between the two versions should only be attributed to the translator when textual variation can be excluded (Aejmelaeus, 2002). The following survey will especially take the arguments put forward by Schenker into consideration.

v. 31

הַיָּמִים בָּאִים נְאֻם־יְהוָה וְכָרַתִּי אֶת־בְּרִית יִשְׂרָאֵל וְאֶת־בְּרִית יְהוּדָה בְּרִית תְּדַשָּׁה׃ The days are surely coming, says the LORD, when I will make a new covenant with the house of Israel and the house of Judah. (NRSV)

ἰδοὺ ἡμέραι ἔρχονται φησὶν κύριος καὶ διαθήσομαι τῷ οἴκῳ Ἰσραὴλ καὶ τῷ οἴκῳ Ἰουδα διαθήκη καινὴν ‘See days are coming’, speaks LORD, ‘and I will covenant a new covenant with the house of Israel and the house of Judah.’

V. 31 of the Septuagint appears to be a very literal rendering of a text very close to, or identical with, the Masoretic text. Every word in the Hebrew text is represented by an equivalent word in the Greek text, and the equivalents appear to be standard equivalents. The only minor difference is the rendering of the Hebrew participle בָּאִים (coming) by the finite verb ἔρχονται (they come), a difference which hardly affects the content of the verse. Neither are there any variants in any Hebrew manuscripts of this verse indicated in the standard editions. For the text of the Septuagint there are only a few insignificant variants: ἡμέρα ἔρχεται (a day comes) for ἡμέραι ἔρχονται (days come), λέγει (he says) for φησὶν (he speaks), and Ἰακώβ (Jacob) for Ἰσραὴλ (Israel).

v. 32

לֹא כְבָרִית אֲשֶׁר כָּרַתִּי אֶת־אֲבוֹתָם בְּיָוֶם הַחֲזִיקִי בְיָדָם לְהוֹצִיאָם מֵאֶרֶץ מִצְרַיִם אֲשֶׁר־הֵמָּה׃ It will not be like the covenant that I made with their ancestors when I took them by the hand to bring them out of the land of Egypt—a covenant that they broke, though I was their husband, says the LORD. (NRSV)

οὐ κατὰ τὴν διαθήκην ἣν διεθέμην τοῖς πατράσιν αὐτῶν ἐν ἡμέρᾳ ἐπιλαβομένου μου τῆς χειρὸς αὐτῶν ἐξαγαγεῖν αὐτοὺς ἐκ γῆς Αἰγύπτου ὅτι αὐτοὶ οὐκ ἐνέμειναν ἐν τῇ διαθήκῃ μου καὶ ἐγὼ ἠμέλησα αὐτῶν φησὶν κύριος Not according to the covenant which I covenanted with their fathers in day when I took hold of their hand to lead them out of the land of Egypt, for they did not abide by my covenant, and I neglected them’, speaks LORD.

In verse 32 there are several major differences. All these differences appear in the relative clause at the end of the verse. First the relative particle ἣν (which) is rendered by ὅτι (for). ἣν is usually rendered by relative pronouns in the Septuagint, but there are a couple of parallels in Jeremiah, where ἣν is rendered by ἰδοῦ: Jer. 11:17 and 20:17. In neither of the examples are there any textual variants (in 11:17 both Aquila and Symmachus, who produced alternative translations of the Hebrew Scriptures, render ἣν by a relative pronoun, but in 20:17 Symmachus retains ὅτι, while Aquila has a relative pronoun). Here in verse 32 Aquila has ὅτι, while Symmachus has γάρ (for) (apparently also changing the word order, since γάρ cannot be the first word in a clause!). Thus, though the rendering is rare, it seems likely that it was acceptable both to the original translator of Jeremiah and to subsequent readers. Thus no textual corruption has to be assumed, but the rendering ὅτι most probably should be attributed to the original translator of Jeremiah.

Next there is a difference between MT הִפְרוּ אֶת־בְּרִיתִי (they broke my covenant) and LXX αὐτοὶ οὐκ ἐνέμειναν ἐν τῇ διαθήκῃ μου (they did not abide by my covenant). The verb ὠνέμμε (abide) is found another 20 times in the Septuagint. In 11 of these ἔμμενω appears to be a rendering which has an equivalent in MT. Nine of these are renderings of the Hebrew root קָוַם (stand) (Num. 23:19; Deut. 19:15; 27:26; Is. 7:7; 8:10; 28:18; Jer. 51:25bis (MT 44:25) and 51:28 (MT 44:28)). As can be seen, three of the examples are found in Jeremiah. Thus, given the literal rendering in Jeremiah, it is not unlikely that ἐνέμειναν too is a rendering of קָוַם. Schenker discusses all examples except Is. 7:7, and also adds one example from 1 Macc. 10:27–27. He notices that in some examples (Deut. 27:26 and Jer. 51:25 (MT 44:25)) there are contextual similarities, and he comes to the conclusion that the Vorlage of αὐτοὶ οὐκ ἐνέμειναν ἐν τῇ διαθήκῃ μου was לא הקימוּ (they stood by my covenant) rather than the text found in MT (Schenker, 2006). It should be noted that there are no variants neither of the Greek nor of the Hebrew

text. Aquila reads διασκέδασαν (they scattered), while Symmachus has διέλυσαν (they broke up). Apparently, both are following a text similar or identical to MT. Again it seems as if the text of the Septuagint is a rendering of a text which differs from the Masoretic Hebrew text. Schenker also points out the difference in meaning between the two versions; in MT the covenant is broken by Israel since the exodus from Egypt, while in LXX Israel is described in a more passive sense, as not having the endurance to stay in the covenant (Schenker, 2006).

The following difference is perhaps the most striking in the whole passage. While MT has **בָּרַחְתִּי בְּעֵינֵי אֲנֹכִי** (though I was their husband), LXX has **καὶ ἐγὼ ἠμέλησα αὐτῶν** (and I neglected them). Schenker points out that in Jer. 3.14 a very similar expression **בָּרַחְתִּי בְּעֵינֵי אֲנֹכִי** (for I am your master (NRSV)) is rendered by **διότι ἐγὼ κατακυριεύσω ὑμῶν** (for I will rule you), and thus draws the conclusion that it is very likely that the text of the Septuagint is a rendering of a different Hebrew text than the Masoretic text (Schenker, 2006). Unfortunately the verb ἀμελέω is only found one more time in the Septuagint, where it has an equivalent in the Masoretic text, viz. Jer. 4:17. In 4:17 ἀμελέω is a rendering of the Hebrew root **הרמ** (rebel). However, according to Schenker in the context of Jer. 31:32 it would not be possible to have the the verb **מרה**, and he thus suggests that ἀμελέω in Jer. 31:32 could be a rendering either of **מאס** (reject) or of **נלש** (send away, let down (Schenker, 2006)). Schenker also points out that it has been suggested that the reason for the difference between the two versions could be a textual corruption in the Vorlage of the Septuagint, where **בעלתי** (I was their husband) has been corrupted into **געלתי** (I abhorred them). However, though the difference between **בעלתי** and **געלתי** is quite small, Schenker argues that it is less likely that the difference between the versions is due to textual corruption, since the change in the text has a major impact on the meaning of the text. Instead Schenker argues that the reason for the difference is a literary/redactional modification of the text (Schenker, 2006). There seems to be good reason to believe that Shenker is right, since there are no variant readings neither for the Hebrew nor for the Greek text. Aquila has **ἐκυριεύσα** (I was master), and Symmachus has **κατείχων** (I ruled), thus following a text like the Masoretic text.

The modification of the text changes the whole meaning of the text. According to the Masoretic text the covenant is broken by the Israelites, but it is not broken by God, who still is the master or husband of Israel. According to the Septuagint, on the other hand,

the covenant was not kept by the Israelites, and God did not care for the Israelites. According to Schenker in the LXX version the covenant is not only neglected by God, but it is even broken by God. Schenker argues that ἀμελέω is a rendering of a verb of rejection ‘ein Verb der Verwerfung’, e.g., **מאס** (reject) or **נלש** (send away, let down) (Schenker, 2006). However, it is not clear how he comes to that conclusion, since the only way to know anything about this ‘Verb der Verwerfung’ is by its rendering, which is ἀμελέω. As noted above the only example in the Septuagint, where the Vorlage of ἀμελέω is known, is Jer. 4:17, and that Vorlage, **מרה** (rebel), would not fit in the context of Jer. 31:32. Thus the Vorlage of ἀμελέω can only be retrieved by its rendering, viz. ἀμελέω. The meaning given by the dictionaries of ἀμελέω is ‘have no care for, be neglectful of’ (Liddell, Scott, 1996: 80), ‘to neglect, to be neglectful’ (Lust, Eunikel, Hauspie, 1992: 23), ‘to have no care for, to neglect, be unconcerned’ (Danker, 2000: 52), to be unconcerned and indifferent to’ (Muraoka, 2002: 23). Apparently, the meaning given by the dictionaries is quite diverse from ‘break’. But how did the translator of Jeremiah understand the meaning of ἀμελέω? One possible clue to that is the Vorlage of ἀμελέω in Jer. 4:17, viz. **מרה**. Though **מרה** is not possible in the context of Jer. 31:32, it was still possible for the translator of Jeremiah to render it by ἀμελέω, thus the meaning of **מרה** can tell something about how the translator of Jeremiah understood ἀμελέω. According to the dictionaries the meaning of **מרה** is ‘be contentious, refractory, rebellious’ (Gesenius, 1910: 598), ‘to be recalcitrant, rebellious’ (Koeler, Baumgartner, 2001: 632). The meaning given by the dictionaries appears to be closer to ‘break’ than the meaning given for ἀμελέω, but is still not the same as ‘break’ (The verb **מרה** in qal is rendered by various Greek words: **ἀνθίστημι** (resist), ἀμελέω (neglect), ἀπειθεῖω (disobey) (2), ἀπειθής (disobedient) (2), ἀσεβέω (be impious), ἐρεθίζω (provoke) (2), ἐρεθιστής (rebellious person), **μη εἰσακούω** (disobey), **παραβαίνω** (transgress), **παραπικραίνω** (provoke) (8), **παροξύνω** (irritate), **πικρός** (bitter)). Hence, there appears to be good reason to call Schenker’s conclusion into some doubt, since there seems to be no ground for supposing a Vorlage of ἀμελέω with a meaning different from ἀμελέω itself. Consequently, Schenker is right that the meaning of the Masoretic text differs substantially from the meaning of the Septuagint, but he pushes the evidence too far by assuming a Vorlage of ἀμελέω with a meaning quite different from ἀμελέω itself. Thus the conclusions drawn by Schenker about how the two versions differ substantially from each other from a theological perspective is doubtful. According to Schenker the

Masoretic perspective presupposes that the covenant still exists between God and Israel due to the faithfulness of God, even though the covenant is broken by Israel. From the Septuagint perspective the covenant no longer exists, since it is broken both by Israel and by God. Schenker rightly points out that such a perspective, with God breaking the covenant, has very few counterparts in the Old Testament. Instead God is usually presented as faithful to his covenant. Schenker's conclusion of his interpretation is that, since it is very unlikely that someone has changed the Hebrew text according to the Greek text, the Greek text is more original and it has been changed towards the text found in the Masoretic Hebrew version. In other words: the original text, which is preserved in the Septuagint, has a theology which is directly contrary to the theology of the rest of the Old Testament, and was thus changed in accordance with the common theology of the Old Testament, and is today preserved in the Masoretic text (Schenker, 2006). However, if the verb ἀμελέω does not have the meaning of 'breaking', Schenker's conclusion falls to the ground, and the covenant exists in the Septuagint version as well as in the Masoretic version. It should be noted, however, that there still are differences between the two versions; in the Masoretic version the Israelites are actually breaking the covenant, while God is faithful to it, in the Septuagint version the Israelites are not able to keep the covenant, while God is neglecting it.

v. 33

כִּי זֹאת הַבְּרִית אֲשֶׁר אֶכְרֵת אֶת־בֵּית יִשְׂרָאֵל אַחֲרֵי הַיָּמִים הָהֵם נְאֻם־יְהוָה נְתַתִּי אֶת־תּוֹכָתִי בְּקִרְבָּם וְעַל־לִבָּם אֶכְתָּבֶנָּה וְהָיִיתִי לָהֶם לְאֱלֹהִים וְהָמָּה יְהִי־לִי לְעָם:
But this is the covenant that I will make with the house of Israel after those days, says the LORD: I will put my law within them, and I will write it on their hearts; and I will be their God, and they shall be my people. (NRSV)

ὅτι αὕτη ἡ διαθήκη ἣν διαθήσομαι τῷ οἴκῳ Ἰσραὴλ μετὰ τὰς ἡμέρας ἐκείνας φησὶν κύριος διδοὺς δῶσω νόμους μου εἰς τὴν διάνοιαν αὐτῶν καὶ ἐπὶ καρδίας αὐτῶν γράψω αὐτοὺς καὶ ἔσονται αὐτοῖς εἰς θεόν καὶ αὐτοὶ ἔσονται μοι εἰς λαόν 'For this is my covenant, which I will covenant with the house of Israel after those days,' speaks LORD. 'Giving I will give my laws into their mind, and on their heart I will write them, and I will be to their GOD and they will be my people.'

Verse 33 contains several differences between the two versions, some of which have a major impact on the interpretation of the passage. The first one, however, is only a

small detail. In a few manuscripts of the Septuagint μου (my) is added after διαθήκη (covenant). The same addition is found in a few manuscripts of Heb. 8:10.

The next difference is more important. It has been noticed that the perfect form of the Masoretic text נָתַתִּי (I have put) almost without exception is rendered by future forms in modern translations and commentaries (Schenker, 2006). According to Schenker, there are three reasons for this rendering: first, it is an adjustment to the following parallel clause, which has the verb in the imperfect, אֶכְתָּב (I will write), second, the whole context suggests that it is a future event, and third, the fact that Hebrew perfect forms sometimes refer to the future (Schenker, 2006). However, Schenker calls this interpretation into doubt. According to Schenker, it is not possible that נָתַתִּי (I have put) refers to the future, since a.) there is no semantic or syntactic indicator of future (Schenker, 2006); b.) there is no good reason to use two different verb forms to express the same meaning; c.) the perfect form makes good sense in the context (for which, see further below); d.) several manuscripts have added a consecutive ו before נָתַתִּי (I have put), thus changing the meaning of the verb form from past to future. If this consecutive ו is secondary (according to Schenker the manuscripts with consecutive ו have no textcritical value, but all important manuscripts have the perfect form without consecutive ו), it confirms that the readers had some problem in interpreting the perfect form as referring to the future without the consecutive ו.

The Septuagint has διδοὺς δῶσω (giving I will give) for נָתַתִּי (I have put). The future form δῶσω (I will give) looks like just another example of a rendering of נָתַתִּי (I have put) on a par with modern renderings of the perfect form, i.e., adjusting tense to the context. However, according to Schenker, ωσῶδ is rather a rendering of an imperfect form תָּן (I will put). There seem to be several reasons for assuming a Vorlage of the Septuagint different from the Masoretic Hebrew text, rather than assuming that the translator adjusted the tense to the context. First, Greek future forms are regularly renderings of Hebrew imperfect forms. This is true not only in these verses, but in the whole chapter, and in the whole book of Jeremiah. If δῶσω were a rendering of a perfect form, this would be an improbable exception (Schenker, 2006). Second, the participle διδοὺς is very likely to be a rendering of an infinitive absolute followed by a finite verb of the same root, thus forming a figura etymologica. Schenker rightly points out that there are no examples in MT of the verb נתן (put) forming this kind of figura etymologica, where

the finite verb is a perfect form of נתן (put). However, though Schenker's observation is correct, the conclusion should be called into doubt. Given the fact that there are several examples of this construction (infinitive absolute + finite verb of the same root) of other verbs than נתן (put), where the finite form is in the perfect tense (at least seven in Jeremiah), there is no reason to assume that the verb נתן (put) could not have formed such a figura etymologica (Schenker, 2006). Third, Schenker refers to Jer. 3:14, where the Masoretic text has a perfect form בַּעַלְתִּי (I am your master), while the Septuagint has a future form κατακυριεύσω. According to Schenker this shows that here too the Vorlage of the Septuagint differs from the Masoretic Hebrew text, and that the changes in the Hebrew text have been systematic, following some theological agenda. However, it seems as if it could also be argued that this is just another example in Jeremiah, where the translator rendered a Hebrew perfect form by a Greek future form, thus using the example to argue the other way around (Schenker, 2006). Fourth, and this is Schenker's main argument, this is not the only difference between the two versions here. In MT it is the law (singular), אֶת־תּוֹרָתִי (my law), which is the object of the verb, while in LXX it is the laws (plural), νόμους μου (my laws), which are the object of the verb (for the difference between the object in singular or plural, see below) (Schenker, 2006). Fifth, Schenker refers to the parallel text in Jer. 44:10 (LXX 51:10) וְלֹא־הָלְכוּ בְּתוֹרָתִי וּבְחֻקֹּתַי אֲשֶׁר־נָתַתִּי לִפְנֵיכֶם וְלִפְנֵי אֲבוֹתֵיכֶם (nor have they walked in my law and my statutes that I set before you and before your ancestors (NRSV)), καὶ οὐκ ἀντείχοντο τῶν προσταγμάτων μου ὧν ἔδωκα κατὰ πρόσωπον τῶν πατέρων αὐτῶν (and they have not been cleaving to my orders, which I gave before their fathers). Apparently, the 'law' and 'before you' are missing in the Septuagint, i.e., there was (and is) a public proclamation of the law in the MT, quite contrary to the putting it 'within' them of Jer. 38:33 in the Septuagint. It is rather unlikely that someone should have removed such a central part of Israel's creed as the giving of the law, but it is quite likely that it should have been added where someone thought that it was missing (Schenker, 2006). Therefore, the Greek version appears to be more original than the Hebrew version, and there appears to be some kind of coherence both in the Greek and in the Hebrew version. Sixth, according to Schenker, it is unlikely that there would have been a change from 'law' (in singular) to 'laws' (in plural), since the singular form is the common and easily understandable form, while the plural is very rare and anything but easily understandable. On the other hand, the change from 'laws' to 'law' appears to be very likely. Thus Schenker concludes: first, the Greek

version is a literal rendering of a Hebrew Vorlage, which differs from the Masoretic Hebrew text, second, the Vorlage of the Septuagint is more original than the version found in Masoretic Hebrew text, and third, the two versions differ significantly from each other (Schenker, 2006). It should be noticed that there is some variation in the Greek manuscripts and in the versions; some have only δώσω (I will give), some have only διδούς (giving), which is the reading in Hebrews, and some have διδούς δώσω (giving I will give). Most important, however, is the fact that there are no examples of past tense in the Greek manuscripts (Ziegler, 1957).

Schenker's interpretation of נָתַתִּי (I have put) also has consequences for his interpretation of the close context, viz. the meaning of קרב. According to Schenker קרב can be interpreted in two ways, either it means 'midst, among', i.e., it is a sociological term referring to a place within a group of people, or it can mean 'middle, within', i.e., it is an anthropological term referring to a place within a person. The latter interpretation forms a good parallel to לב (heart) in the following clause, but it requires that נָתַתִּי (I have put) refers to the future, i.e., God will put his law within them, and he will write it on their hearts. A meaning referring to the past is not possible, because if God has put the law within them, it is no longer possible to put it into their hearts. The first interpretation, on the other hand, only makes sense if נָתַתִּי (I have put) refers to the past. The difference in meaning between the two versions is apparently founded on the assumption that Schenker is right that the perfect form נָתַתִּי (I have put) should be taken in its common sense, denoting a past action. If this is right, the meaning of the Hebrew text is approximately: in the past, at Mount Sinai, God gave the Torah to be in the midst of (or among) the people, but in the future he will write the (same) Torah on their hearts (Schenker, 2006).

In the Septuagint εἰς τὴν διάνοιαν αὐτῶν (into their mind) apparently is a rendering of בְּקִרְבָּם, and since the verb δώσω (I will give) is in the future form it makes good sense and forms a nice parallel with the following ἐπὶ καρδίας αὐτῶν (on their heart). The meaning of the Greek text is approximately: giving I will give my laws into their mind, and on their heart I will write them.

The last major difference between the two versions in this verse is the difference between the law (singular), אֶת־תּוֹרָתִי (my law), and the laws (plural), νόμους μου.

Schenker has a short but detailed discussion about this difference and comes to the conclusion that νόμους μου is a rendering of a אֶת־תּוֹרָתִי (my laws), i.e., νόμους is a rendering of the plural of תורה (law). The reason for this conclusion is that it is very unlikely that someone would change a text with the very common singular of הַרְוֹת into the extremely rare plural form, while it is equally likely that someone would change the extremely rare plural into the common singular. Thus he also draws the conclusion that the *Vorlage* of the Septuagint read a plural at this point, and that it is more original than the version found in the Masoretic Hebrew text (Schenker, 2006). As can be seen the difference between the Hebrew and Greek versions is only on the level of vowel pointing, while the translator of Jeremiah, of course, had an unpointed text. However, though the change between singular ‘law’ and plural ‘laws’ is only on the level of vowel pointing, the difference between the two versions also includes the following noun referring back the law either in the singular or in the plural, which also implies a change of consonants.

There are only twelve examples in MT of the plural of תורה, none of which is found in Jeremiah: Gen. 26:5 (LXX τὰ νόμῳα (the statutes)); Ex. 16:28 (LXX τὸν νομόν (the law)); 18:16 (LXX τὸν νομόν (the law)); 18:20 (LXX τὸν νομόν (the law)); Lev. 26:46 (LXX ὁ νόμος (the law)); Is. 24:5 (LXX νομόν ὄν (the law)); Ezek. 43:11 (LXX τὰ νόμῳα (the statutes)); 44:5 (LXX τὰ νόμῳα (the statutes)); 44:24 (LXX τὰ νόμῳα (the statutes)); Psa. 105:45 (LXX 104:45 τὸν νομόν (the law)); Dan. 9:10 (LXX ὡ νόμῳ (the law)); Neh. 9:13 (LXX νόμους (the laws)). As can be seen, only in the last example the plural of תורה is rendered by the plural of νόμος. In more than half of the examples someone has changed either the plural to the singular or the other way around, either in the *Vorlage* or in the process of translation or transmission. As has been argued above the change from plural to singular is far more likely. However, there is one example of a plural of תורה in Jer. 32:23, ובתרותך, but this is found only in the consonantal text while the vowels added by the Masoretes has the singular, and thus the singular was apparently preferred by the Masoretes. The Septuagint has καὶ ἐν τοῖς προστάγμασίν σου (in your commands) here. In the texts of the Septuagint, for which there is a Hebrew *Vorlage* extant, there are only two examples of νόμος in the plural, which refer to the Torah: 2 Kings 14:6 (MT תרות (law)); Neh. 9:13 (MT תורות (laws)). In one example, Esth. 3:8, Haman refers to the νόμοι (laws) of the Jews, but this is a rendering of דתי (decree).

The example in Jer. 38:37 (MT 31:36), οἱ νόμοι (the laws), is a rendering of הַחֻקִּים (statutes) and clearly does not refer to the Torah. The singular form of תורה, on the other hand, occurs more than 200 times in MT, 11 of which are found in Jeremiah (2:8; 6:19; 8:8; 9:12; 16:11; 18:18; 26:4 (LXX τοῖς νομίμοις (the statutes)); 31:33 (LXX 38:33 νόμους (laws)); 32:23 (LXX 39:23 τοῖς προστάγμασιν (commands)), cf. above); 44:10 (not in LXX); 44:23 (LXX 51:23). The examples in Jeremiah appear to refer to the Torah and are mostly rendered by νόμον in the singular, the exceptions being 26:4, 31:33, and 32:23. Apparently, Schenker is right that there are extremely few examples both of תורה and of νόμος in the plural, and that it is far more likely that someone changed the plural into singular than that someone changed the singular to plural (Schenker, 2006). As regards the variation in the manuscripts, there are no variant readings in any Hebrew manuscripts, but in the Greek manuscripts there is quite a bit of variation between singular and plural. It should also be noticed that Aquila, Symmachus and Theodotian all have the singular.

The difference in meaning can be seen in the renderings in the previous example. Apparently, the plural νόμους can hardly refer to the written Torah, the five books of Moses. Consequently, according to the MT, the same Torah, which was given among the people at Mount Sinai, will be written on the hearts of the people. According to the Septuagint version, on the other hand, the Torah is not in focus, but only a number of laws (including the Torah or parts of the Torah?) will be written on the hearts of the people.

v. 34

וְלֹא יִלְמְדוּ עוֹד אִישׁ אֶת־רֵעֵהוּ וְאִישׁ אֶת־אָחִיו לְאֹמֵר דְּעוּ אֶת־יְהוָה כִּי־כֹלֵם יִדְעוּ
 אוֹתִי לְמִקְטָנָם וְעַד־גְּדוֹלָם גְּאֹמֵר יְהוָה כִּי אֶסְלַח לְעֹנְוֵם וּלְחַטְאֵתֵם לֹא אֶזְכְּרֶנּוּ:
 No longer shall they teach one another, or say to each other, “Know the LORD,”
 for they shall all know me, from the least of them to the greatest, says the
 LORD; for I will forgive their iniquity, and remember their sin no more. (NRSV)

καὶ οὐ μὴ διδάξωσιν ἕκαστος τὸν πολίτην αὐτοῦ καὶ ἕκαστος τὸν ἀδελφὸν αὐτοῦ
 λέγων γινῶθι τὸν κύριον ὅτι πάντες εἰδήσουσίν με ἀπὸ μικροῦ αὐτῶν καὶ ἕως μεγάλου
 αὐτῶν ὅτι ἴλεως ἔσομαι ταῖς ἀδικίαις αὐτῶν καὶ τῶν ἁμαρτιῶν αὐτῶν οὐ μὴ μνησθῶ
 ἔτι

‘And they shall not everyone teach his citizen and everyone his brother, saying, “Know the LORD”, for all will know me, from their small [and] until their great, for I will be merciful to their iniquities, and their sins I will remember no more.’

In verse 34 there is very little variation between the Hebrew and the Greek versions, and the Greek version appears to be a literal rendering of a text very close to the Masoretic Hebrew text. However, there are a number of smaller variants in the Greek manuscripts (no variants are noted in the *apparatus criticus* of BHS) that should be mentioned. *Vaticanus* has οὐ διδάξουσιν (teach; future indicative) instead of οὐ μὴ διδάξωσιν (teach; aorist subjunctive), which are both possible without any change of meaning. Several manuscripts have added ἔτι (longer), which appears to be a revision according to a Hebrew text with טוּע (longer). Some manuscripts have πλησίον (neighbour) instead of πολίτην (citizen). πλησίον is a standard rendering of עַר (neighbour) (Hatch, Redpath, 1998), hence this could be another indication of a revision according to a Hebrew text. The same variant reading πλησίον is also found in some manuscripts of Heb. 8:11. Some manuscripts (including Aquila) have φῆσιν κύριος (speaks Lord), which apparently is a rendering of הַיְהוָה אֵלֵינוּ (says the Lord). φῆσιν κύριος is not found in the quotation in Hebrews. Finally, there are variant readings of ἀδικίας, ἁμαρτιῶν, and μνησθῶ, which seem to have some kind of relation to the text of Heb. 8:12 and 10:17.

vv. 35–37

Here it will only be noticed that the order of the verses is not the same in the MT as in LXX. MT v. 35 = LXX v. 36, MT v. 36 = LXX v. 37, and MT v. 37 = LXX v. 35. The significance of the different orders of the verses is not clear, but it cannot be excluded that there is some kind of connection between the differences in the earlier verses and the difference in order of the verses 35–37.

Summary and Conclusion

A number of major differences have been identified. Some of these appear to be significant and there is good reason to believe that the differences should not be attributed to the translator of the Septuagint, but it seems as if the differences have already occurred in the *Vorlage* of the Septuagint. The first difference is v. 32 οὐκ ἐνέμειναν ἐν τῇ διαθήκῃ μου (they did not abide by my covenant) for הִפְרוּ אֶת־בְּרִיתִי

(they broke my covenant). Here, according to Schenker, the difference in meaning between the two versions is that in the MT the covenant is broken by Israel since the exodus from Egypt, while in LXX Israel is described in a more passive sense, as not having the endurance to stay in the covenant. The second difference is v. 32 καὶ ἐγὼ ἠμέλησα αὐτῶν (and I neglected them) for בַּיָּמַי אֲנִי כִּינִי (though I was their husband). Here Schenker is right that the meaning of the Masoretic text differs substantially from the meaning of the Septuagint, but he has pushed the evidence too far by assuming a *Vorlage* of ὠλέεμᾱ with a meaning quite different from ἀμελέω itself. Thus the conclusions drawn by Schenker about how the two versions differ substantially from each other from a theological perspective is doubtful. According to Schenker the Masoretic perspective presupposes that the covenant still exists between God and Israel due to the faithfulness of God, even though the covenant is broken by Israel. From the Septuagint perspective the covenant no longer exists, since it is broken both by Israel and by God. Leaving the interpretation of ἀμελέω by Schenker aside, the meaning of the text, according to the Masoretic version is approximately that the covenant is broken by the Israelites, but it is not broken by God, who still is the master or husband of Israel. According to the Septuagint, on the other hand, the covenant was not kept by the Israelites, and God did not care for the Israelites. The third difference is v. 33 διδοὺς δῶσω for יְהַנֶּנּוּ (I have put). The main difference between the two versions is based on the assumption that Schenker is right that the perfect form יְהַנֶּנּוּ (I have put) should be taken in its common sense, denoting a past action. If this is right the two versions could have the following meanings: MT: in the past, at mount Sinai, God gave the Torah to be in the midst of (or among) the people, but he will write the (same) Torah on their hearts in the future; LXX: giving I will give my laws into their mind, and on their heart I will write them. The fourth and last difference is v. 33 νόμους μου (my laws) for אֶת־בְּרִיתִי (my law). The difference in meaning can be seen in the renderings in the previous example, where the plural νόμους hardly refers to the Torah. Consequently, according to MT, the same Torah, which was given among the people at mount Sinai, will be written on the hearts of the people. According to the Septuagint version, on the other hand, a number of laws (including the Torah or parts of the Torah?) will be written on the hearts of the people.

There are also a few differences which seem to be due to the interpretations of the translator and/or subsequent revisors of the Septuagint, and should not be attributed to

different Hebrew originals, e.g., v. 32 ὅτι (for) for ἣν (which), and v. 33 εἰς τὴν διάνοιαν αὐτῶν (in their mind) for ἐν τῷ μέσῳ (in their midst/within them).

Thus Schenker appears to be right that there are substantial differences between the two versions, and that some of these differences can hardly be explained as scribal errors. Consequently, there seem to have existed at least two Hebrew versions of Jeremiah, one of which was translated into Greek, viz., the Septuagint version, while the other version survived as the Masoretic Hebrew text. Schenker also appears to be right that there are theological differences between the two versions, and that it is more likely that the Septuagint version is more original than the Masoretic version.

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Heart rate and Heart Rate Variability Responses to Competition Under Ego or Task-Orientation

Peter Robert Austin Burgess

ABSTRACT

The aim of this study was to investigate the psycho-physiological responses of competitors while performing a task individually or as a team member under the conditions of task-oriented or ego-oriented competition. Thirty-two participants completed the task and ego-orientation in sport questionnaire and then took part in four matches of table football during which heart rate and heart rate variability were recorded. The results indicated heart rate was significantly higher ($p < 0.001$) whilst heart rate variability was significantly lower ($p < 0.001$). These responses indicate that stress levels were higher in the ego condition compared to the task condition. The heart rate variability results revealed that there were two significant interactions between the participants' orientation (task vs. ego), the condition (individual vs. team) ($p = 0.01$) which indicated the individual ego condition was the most stressful condition. Additionally, when the between-subjects factor of high/low task orientation ($p = 0.04$) was introduced results indicated that competing individually with an ego-oriented focus was the most stressful condition especially for those participants high in task-orientation. These results demonstrate that competing as a member of team and with task-orientation causes less stress and anxiety than competing individually with ego orientation.

KEYWORDS

Competition, ego-orientation, task-orientation, heart rate variability.

Introduction

Competing in sport has the potential to induce high levels of anxiety and stress (Ring et al, 2005). However, it has been suggested that when an athlete is competing as a member of a team, the anxiety experienced is less than that experienced when competing individually

(Flowers and Brown, 2002). Bray and Martin (2003) explain this phenomenon as diffusion of responsibility. Terry et al (1996), in a study of one-hundred tennis players, supported these claims by demonstrating that players exhibited higher levels of anxiety prior to performance in singles than in doubles matches. It appears that when athletes compete in a team situation, the responsibility for losing is shared among all members of the team (Martin and Hall, 1997). However, when competing as an individual, the blame for losing is normally borne by the individual competitor, and therefore the athlete may experience much more pressure and anxiety (Craft et al, 2003).

Although there is extensive research investigating the effects of competition on individual performers and their psycho-physiological responses (Harrison et al, 2001), very limited research has compared these responses during individual and team competition. Additionally, few attempts have been made to conduct studies in ecologically valid sport settings. However, in a study by McKay et al (1997) athletes performing individually experienced significant increases in heart rate and both systolic and diastolic blood pressure. These findings were reproduced in laboratory settings; however, no changes in diastolic blood pressure were found in laboratory-based tests (Veldhuijzen Van Zanten et al, 2002). Additionally, it has been highlighted that the more competitive the situation, the greater the psycho-physiological response (Harrison et al, 2001). Further research has suggested that competition influences the cardiovascular system in the following ways; increases blood pressure, increases heart rate and also leads to shortening of the pre-ejection period (Sherwood et al, 1989). McKay et al (1997) explain that this line of research has been criticised for typically only employing measures of heart rate and blood pressure as an indication of psycho-physiological responses to competition. However, one study by Veldhuijzen Van Zanten et al (2002) showed that heart rate variability (fluctuation in the mean heart rate) decreased when competition was experienced. Watkins et al (1999) claim this decrease in heart rate variability reflects an increase in anxiety. Patterson et al (1998) also state that blood composition alters during high stress situations because psychological stress leads to increases in the number of red blood cells and decreases plasma. Furthermore, Thyer et al (1984) report that when individuals experienced stressful situations, skin temperature decreased.

Papaioannou and Kouli (1998) suggest that another aspect may be responsible for reducing anxiety during competition is being task-oriented. This requires placing the focus on improving skills and taking part for sheer enjoyment as opposed to taking part to win rewards or to beat an opponent which would be ego-oriented competition (Cox, 1994). Despite these claims, little is known about how competing as a member of a team and under task-oriented competitive conditions affects the physiological indicators of anxiety. Generally, questionnaires have been the preferred measure of assessing anxiety and stress in these situations, but these measures of state anxiety fail to account for the observed variance that occurs in performance (Terry et al, 1996). Therefore, this study seeks to investigate how competing individually or as a team member in both task and ego-oriented competition affects physiological indicators of stress. It is predicted that while performing as a team member, stress will be lower than when performing as an individual; equally, performing with a task-oriented focus will be less stressful than competing with an ego-oriented focus.

Methods

Participants

Thirty-two university students (27 males and 5 females) volunteered to participate in this study. Their mean age, height and weight were 22.13 yrs \pm 3.55, 175.9 cm \pm 10.5 and 76.5 kg \pm 13.6 respectively. All participants were novices at the task.

Measures and Procedures

Each participant provided written informed consent prior to any data collection being conducted. All procedures were reviewed and approved by the institutional research ethics committee in advance of the first testing session. Prior to testing, participants attended a briefing session in order to select a teammate. This was done in order to create the atmosphere of a team, which may not have been achieved if the participants were randomly paired together. Prior to the start of testing, the participants were fitted with heart rate monitors (Polar S610i Polar, Kempele, Finland) to assess heart rate and heart rate variability and all participants completed the task and ego-orientation in sport questionnaire (Duda and Nicholls, 1992). Duda and Nicholls (1992) explain that the task and ego-orientation in sport questionnaire has shown construct validity (0.91) and internal consistency reliability (task 0.87 and ego 0.89). This questionnaire was used to measure the participants' task

and ego-orientation, in order for them to be placed into high/low task and ego-orientation groups to be used as a between-subjects factor. The participants were placed into groups based on the medians for task and ego-orientation. Any individual scoring over 4.10 on the task subscale was diagnosed as high in task-orientation, while individuals scoring over 2.80 on the ego subscale were diagnosed as high in ego-orientation. Following this, the participants undertook a three minute familiarisation trial of table football.

Following familiarisation, the participants were given five minutes to read instructions. Following a five second countdown, all heart rate monitors were started simultaneously with a countdown timer. Participants then took part in a table football match over a five minute period, with heart rate being recorded every five seconds. At the end of this period a buzzer sounded on the timer and each participant stopped playing. Heart rate and heart rate variability were recorded throughout the five minute period. Once the buzzer sounded at the end of the five minutes, all heart rate monitors were stopped. All participants took part in the following four conditions in a randomised order:

Task-oriented competition: Participants were asked to focus on developing their skills. All participants were informed that their performance would not be monitored or recorded and it was emphasised that the score was not important. This condition was performed twice by each participant, individually and as a team member.

Ego-oriented competition: Participants were informed that the score from the match they were about to undertake would be recorded and entered into a league table which would be displayed to all participants. Different league tables were produced for the individual and team conditions. Additionally, participants were informed the winners of the individual and team competitions would receive gift vouchers and a trophy. To ensure the same levels of pressure and motivation were experienced by all participants, scores was placed in a league table prior to the first round of competition.

Data analysis

Heart rate variability data was calculated via spectral analysis and by root mean square of the differences between heart beats (rMSSD). Between-subject factors were also analysed with the participants being labelled high or low in task and ego-orientation, which was determined by calculating the median. Both heart rate and heart rate variability data was analysed using a separate 2-way repeated-measures ANOVA, with orientation and condition as the within-subject factors for each.

Results

Heart rate

The results of the ANOVA showed that average heart rate was significantly different between the task and ego-conditions ($F_{1,24} = 30.93, p < 0.0001, \text{partial } \eta^2 = 0.56$) (refer to table I for descriptive heart rate data). However, there was no significant difference between those participants performing as a team member and those performing individually ($F_{1,24} = 2.36, p = 0.14, \text{partial } \eta^2 = 0.09$). Also, the between-subject factors of high task-orientation vs. low task-orientation and high ego-orientation vs. low ego-orientation revealed no differences ($p > 0.05$).

Table 1

Table I Mean (\pm SD) Heart Rates for Each Condition (BPM).

	Individual	Team
Task	95.26 \pm 16.95	93.18 \pm 14.30
Ego	103.33 \pm 17.26	98.96 \pm 18.16

BPM= Beats per minute

Heart rate variability

There were no significant differences ($p > 0.05$) between the two main effects (individual vs. team; task vs. ego) and their interactions for the spectral analysis data. Yet, there were two significant differences within the rMSSD data. The ANOVA showed that there was a significant difference between rMSSD of those participants performing with a task-oriented focus and those with an ego-oriented focus ($F_{1,20} = 16.96, p < 0.0001, \text{partial } \eta^2 = 0.43$). The means were 41.19 ms, 30.71 ms, 40.90 ms and 37.96 ms for the task/individual, ego/individual, task/team and ego/team conditions respectively. Additionally, there was an interaction between task vs. ego and individual vs. team conditions ($F_{1,20} = 4.99, p = 0.01, \text{partial } \eta^2 = 0.23$) (Figure 1). This Interaction means rMSSD was lowest when performing

individually during the ego-oriented competition. There was also an interaction between task vs. ego and individual vs. team conditions when the between-subjects factor of high task-orientation vs. low task-orientation was introduced ($F_{1,19} = 4.99, p = 0.04, \text{partial } \eta^2 = 0.21$) (Figure 2). This interaction means that competing individually with an ego-oriented focus led to the largest decreases in rMSSD, especially for those participants high in task-orientation. However, no significant difference was evident between the individual and team conditions even when participants were split into high ego-orientation and low ego-orientation ($p > 0.05$).

Figure 1: The interaction between orientation (task vs. ego) and condition (individual vs. team) on rMSSD

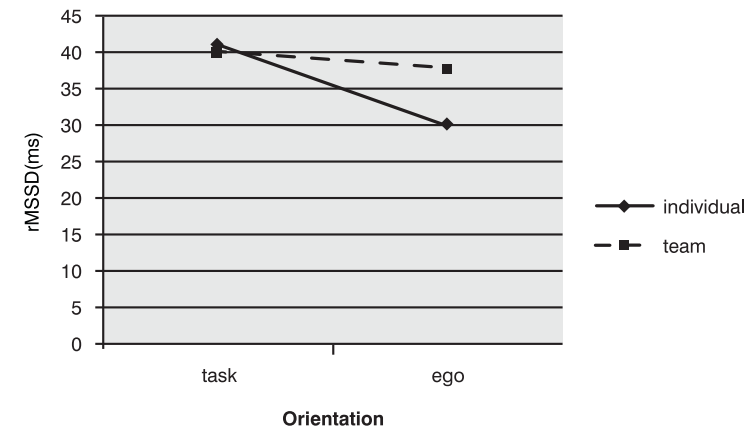
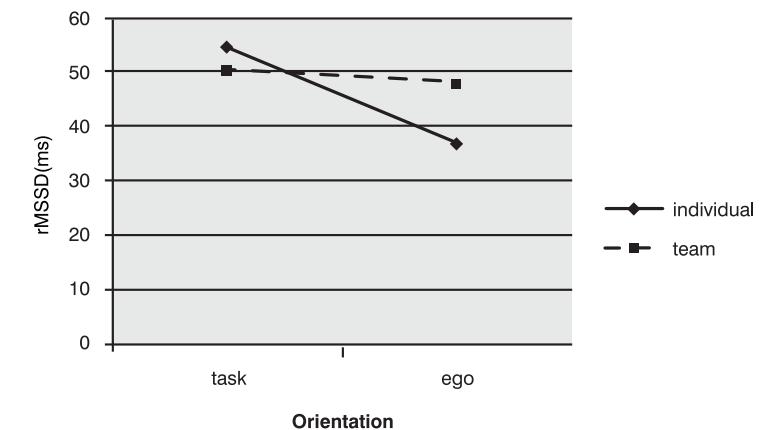


Figure 2: The interaction between orientation (task vs. ego) condition (individual vs. team) and high task orientation on rMSSD



Discussion

Previous research has suggested that being part of a team is less stressful than performing as an individual because there is less focus on each single performer (Craft et al, 2003). Furthermore, if a mistake occurs, the performer has someone who can potentially amend this error or alternatively there is someone else to shift the blame to so that the responsibility of the outcome is diffused amongst members of the team (Terry et al, 1996). However, at first glance the data suggests that competing with a task or ego-oriented focus influences heart rate far greater than competing individually or as a member of a team. This is because significant differences were found between the task and ego-oriented conditions in heart rate, but not between the individual and team conditions. This significant difference was found across the variables of heart rate and heart rate variability. Results showed that heart rate was lowest during the task-oriented conditions. The reduced heart rate during the task-oriented conditions may reflect a reduction in anxiety in relation to the ego-oriented conditions. This is supported by the fact that increased levels of anxiety are associated with an elevated heart rate (Harrison et al, 2001). Furthermore, it has been reported that when taking part in task-oriented activities, participants tend to report lower levels of somatic anxiety (Papaioannou and Kouli, 1998). Additionally, partial eta squared shows that fifty-six percent of the variation in heart rate can be explained by the task and ego-oriented competition. The results of this study offer some support for previous findings that indicate that taking part in task-oriented competition is less stressful than taking part in ego-oriented competition.

The Spectral analysis data of heart rate variability showed no significant difference in regards to competing individually, as a member of a team or due to the orientation of the competition. Despite this the rMSSD data revealed a significant difference between the athletes who competed with a task-oriented focus and those who competed with an ego-oriented focus. The means indicate that heart rate variability was lowest during the ego-oriented conditions. These results seem to concur with those previously reported which showed heart rate variability, as calculated via rMSSD, was lowest when competitive stress was highest (Veldhuijzen Van Zanten et al, 2002). The heart rate and the heart rate variability data indicate that less stress is experienced when a participant competes with a task-oriented focus. Partial eta squared shows that forty-three percent of the change that occurred in rMSSD was due to the task and ego-oriented competition. Furthermore, the

ANOVA showed there was an interaction between the task versus ego-oriented conditions and individual versus team conditions. This interaction (figure 1) suggests that heart rate variability decreased while competing with an ego-oriented focus and declined even further (implying even greater levels of stress) when competing individually. This indicates that competitors were most stressed in the individual and ego-oriented competition condition. Hall et al (1998) explain that due to enhanced self regard, competing with task-oriented goals is less likely to cause increases in anxiety. Eisenbarth (2007) claims competing with ego-oriented goals leads to increased self focus and social comparison, resulting in heightened levels of anxiety. This accounts for how ego-oriented competition decreases heart rate variability, as well as indicating potentially how ego-oriented competition interacted with individual competition to create the highest levels of stress. However, when competing as a team member, the feeling of being individually recognised is lost and as a result the competitor's anxiety is reduced as they are less concerned about social comparison (Hall et al, 1998).

The true nature of this interaction can only be seen when the between-subject variable of high/low task-orientation is introduced. The results revealed that those participants with low levels of task-orientation experienced little change in rMSSD when competing individually in ego-oriented competition. Yet, the participants who reported high levels of task-orientation experienced a steep decline in rMSSD. Achten and Jeukendrup (2003) claim this decrease in heart rate variability may represent a decrease in the influence of the parasympathetic nervous system (the part of the nervous system responsible for slowing heart rate), which is also linked with an increase in anxiety. These results appear to suggest that only individuals who are highly task-oriented will experience a significant decrease in heart rate variability, whereas those competitors who report low levels of task-orientation appear relatively unaffected. This finding is interesting and warrants further exploration as previous research had reported no difference in anxiety in those participants with high/low levels of self reported task-orientation (Panda, 2006). However, more recent research has claimed that despite limited studies, a competitor's orientation will influence the stress and anxiety they experience (Eisenbarth, 2007). Therefore, it is possible that competitors with high task-orientation experience higher levels of stress when asked to compete with an ego-orientation compared to those with low task-orientation. These results suggest that athletes who are high in task-orientation may require interventions to reduce stress when competing individually in an ego-oriented environment.

The results of this study demonstrate that competing as a team member tends to cause less stress and anxiety compared to competing individually. These results support the notion that competing as a team member allows greater latitude for diffusion of responsibility compared to when competing individually. Additionally, task-oriented competition appears to be less stressful than ego-oriented competition. These findings provide further evidence on the impact of the nature of competition on the performer and the complexity of interactions between the psycho-physiological aspects relating to sports competition. Further research is required to explore how competition interacts with the nature of the task, the environmental conditions and the individual characteristics of the competitor. Furthermore, investigation of additional physiological measures of stress is needed in future research. Specific attention should be applied to neuroendocrine responses such as cortisol. Cortisol can be collected unobtrusively and is a specific indicator of physiological and psychological stress. Yet, current research on cortisol responses to competition without controlling for the influence of physical activity, which can influence cortisol concentration, is limited.

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The Influence of the Built Environment on Children's Physical Activity

Peter Collins

ABSTRACT

The purpose of this study was to determine whether the physical (built) environment influences children's physical activity (PA) levels, focusing in particular on how access to recreational amenities, means of commuting to school and perceived neighbourhood safety may influence children's PA. Thirty children (15 girls and 15 boys) from two urban secondary schools located in Dudley (mean age: 12.43 years) and Birmingham (mean age: 14.81 years) took part in this study. Children's actual physical activity levels were measured over a four day period using pedometers, whilst their perceived PA was also measured using a self-report daily activity log. Data on how children's access to local amenities, transport to school and perceptions of their neighbourhood was gathered from the physical activity questionnaire. The results revealed that access to recreational amenities and perceived neighbourhood safety had no influence on children's physical activity levels. However, children who actively commute to school are generally more physically active and healthy. These findings provide an insight into the influences of the built environment on children's PA and highlight the importance of active commuting to school and regular park use by children. The implications of these findings are discussed.

KEYWORDS

Physical activity, built environment, perceived safety, active commuting, recreational amenities.

Introduction

Research findings suggest that an increase in a sedentary lifestyle and a reduction of physical activity (PA) amongst children has almost certainly contributed to the current

child obesity epidemic (Boreham and Riddoch, 2001; Biddle et al, 2004). Subsequently, research focusing on what factors of children's lives influence their PA levels is monumental in gaining a greater understanding of what hinders children's PA levels and what can be done to help increase children's PA as a preventative strategy against childhood obesity. Recent information has strongly suggested that certain attributes of the physical environment have a significant influence on children's PA (Ferreira et al, 2006; Sallis et al, 2000; Krahnstoever-Davison and Lawson, 2006). Consequently, research into the influence of the built environment on children's PA levels, is extremely valuable in terms of understanding and creating prevention strategies for the current childhood obesity epidemic.

The childhood obesity epidemic and the role of physical activity

Over the past thirty years the obesity prevalence has dramatically increased to epidemic proportions (Wilmore, 2003). Obesity itself does not kill, but it is strongly associated with other diseases that have high mortality rates such as hypertension, coronary artery disease and cancer (Wilmore et al, 2008). Research ominously highlights an escalating obesity trend in children (Seidell, 2000; Crespo and Smit, 2003; Ogden et al, 2006) with British childhood obesity increasing from 14% to 24% for boys and from 15% to 26% for girls, between 1995 and 2004 (Department of Health, 2006). Obese children are not only increasing their risk in developing many diseases in later life (e.g. stroke, cancer and asthma) but they are now also being diagnosed with many conditions previously only thought to occur in adulthood, such as high blood pressure and type 2 diabetes (Active Living Research, 2007).

Whilst there are multiple factors which can influence an individual's weight status (Salbe and Ravussin, 2000; Faith et al, 2003; Heyward, 2006), the physical, psychological and social benefits of PA cannot be over estimated (Pate et al, 1995; Biddle et al, 2004; Cavill et al, 2001; HEA, 1998). Research suggests that generally children in Britain do not partake in enough PA to gain the substantial benefits and meet the recommended PA amounts (Duncan et al, 2007a; Riddoch et al, 2007). Guidelines on what is an acceptable level of PA for children can vary, with certain researchers supporting a

12,000 and 15,000 steps/day guideline for girls and boys respectively (Tudor-Locke et al, 2004; Rowlands and Eston, 2005), whilst others support the more traditional 10,000 steps per day guideline (Bastos et al, 2008). In terms of time scale, a cut-off point of one hour per day of moderate to vigorous PA is recommended (Cavill, Biddle, and Sallis, 2001; Health Education Authority, 1998; Jago et al, 2006a; Strong et al, 2005; Department of Health, 2004).

The influence of the built environment on children's physical activity

Research suggests that children today spend far less time playing in the local neighbourhood, compared to previous generations (Tranter and Doyle, 1996; Karsten, 2005; Hillman, 2006). Considering the strong association that playing outdoors has with increased PA levels (Sallis et al, 2000; Klesges et al, 1990; Sallis et al, 1993), this is a concerning trend emerging, which is more than likely contributing to the overall decrease in childhood PA levels over the past forty years. Given research claims that increased popular indoor activities such as watching the television and playing on the computer is strongly associated with an increased risk of obesity (Dennison et al, 2002; Gortmaker et al, 1996; Obarzanek et al, 1994; Robinson, 1999), the cultural movement of children from active outdoor to sedentary indoor environments has strongly contributed to the current childhood obesity epidemic and decreasing PA levels. In light of this concerning trend, there has been a sudden recent influx of research over the past few years focusing on how the built environment in which children live impacts on their PA levels (Krahnstoever-Davison and Lawson, 2006). Such research has revealed that the surrounding physical environment in which people live has a great impact on all of the dimensions of PA (Krahnstoever-Davison et al, 2006; Ferreira et al, 2006).

Children's physical activity and the availability of local recreational amenities

The availability of places to engage in exercise and PA is an important characteristic of the environment which potentially has a major impact on PA levels (Babey et al,

2008; Jago et al, 2006b; Brownson et al, 2001; Huston et al, 2003). Parks and other local recreation amenities are especially important as they are an essential community resource for nurturing increased PA, health and active living (Kaczynski and Henderson, 2008; Bedimo-Rung et al, 2005; Godbey et al, 2005). Previous literature has revealed contrasting findings between studies which found an association (Sallis et al, 2000; Paxton et al, 2005; Estabrooks et al, 2003; Booth et al, 2000; Brownson et al, 2001; Boehmer et al, 2006) and studies which found no association between children's PA and proximity to recreational facilities (Ferreira et al, 2006; Zakarian et al, 1994; Romero, 2005).

As children from socio-economically disadvantaged neighbourhoods are at a greater risk of obesity and other related diseases (Wang, 2001; Lin et al, 2004; Storey et al, 2003), it is highly plausible that the provision and quality of neighbourhood facilities impacts on children's PA. Research supports a positive association between access to PA facilities and PA levels (Kahn et al, 2002; Sallis et al, 1998; Humpel et al, 2004; Sallis et al, 1990; Humpel et al, 2002; Babey et al, 2008).

The availability that children have to local public recreational facilities such as parks and playgrounds does not necessarily mean that children use these facilities, and any use of such facilities does not necessarily have to be active, but can also be sedentary (McKenzie et al, 2006). Thus, this emphasises the importance of measuring PA as the strong association between PA and proximity to recreational facilities (Sallis et al, 2000; Norman et al, 2006; Garcia et al, 1995) alone is not enough to assume that people living near parks actively use them. Despite this however, parks, trails and other public recreational facilities do have some of the most consistent relationships found with PA (Kaczynski and Henderson, 2007 and 2008).

Commuting to school and levels of children's physical activity

Active transport to school is widely identified as an opportunity for children to participate in regular habitual PA (Tudor-Locke et al, 2001). Previous research highlights that walking or cycling to school has a positive affect on children's health (McDonald, 2008;

Schofield et al, 2005; Blair et al, 2001; Tudor-Locke et al, 2003). Considering these health benefits, it is of great concern that research highlights a decreasing trend of active school commuting over recent decades within the developed world (Carver et al, 2008; Hillman, 1993). For example, the number of British children who walk to school decreased by approximately 20% between 1970 and 1991 (Hillman, 1993). Additionally, research by the Department of the Environment, Transport and the Regions (2000) also revealed that the proportion of children travelling to school by car increased from 16% to 30% between 1985 and 1998. It is widely perceived that 'being driven to school compromises PA' (Metcalf et al, 2004: 832). Despite this, children travelling to school by car is now largely perceived as the norm (Salmon et al, 2005; Hillman et al, 1990). The decline in active school commuting unsurprisingly mirrors the increased obesity prevalence and decreased child PA trends (Dollman et al, 2005; Koplan et al, 2005).

While walking or cycling in itself is a more healthy way to travel to and from school (compared to travelling via motorized transport), literature also suggests that children who actively commute to school have higher overall PA levels, and are both healthier and more likely to participate in more PA in their free-time (Alexander et al, 2005; Cooper et al, 2005; Cooper et al, 2003; Tudor-Locke et al, 2002). With this in mind, there are a number of government schemes focused on trying to encourage children to walk to school, such as the 'California Safe Routes to School', 'Kids Walk-to-School' and 'Safe-Routes-To-School' schemes (Davison et al, 2008; Boarnet et al, 2005). Despite such projects, a study by Metcalf et al (2004) concluded that the mode of travel to school has no impact on the children's weekly PA levels and even suggested that while walking to school may have many benefits, 'PA does not appear to be one of them' (Metcalf et al, 2004: 833).

There are a wide variety of factors which influence the way in which children commute to school, such as individual, family, school, community and environmental characteristics (Davison et al, 2008). The distance that children live from school understandably has a major bearing on the way they travel to and from school, with usually children who live closer to the school the most likely to actively commute (Davison et al, 2008; Heelan et al, 2005; McMillan, 2007; Merom et al, 2006; Sjolie and Thuen, 2002).

Children's perceived neighbourhood safety and its influences on children's physical activity

It has been highlighted in an array of literature focusing on children's PA that perceived crime and neighbourhood safety is a major determinant in children's PA levels (Farley et al; 2007; Molnar et al, 2004; Valentine and McKendrick, 1997; Gomez et al, 2004). Furthermore, a significant proportion of walking, cycling and exercising takes place in public spaces such as local neighbourhoods, and if people perceive these public places to be crime-ridden or unsafe, they will not want to exercise there (Center for Disease Control and Prevention, 1999; Loukaitou-Sideris, 2006). Children's perceived safety of their local neighbourhood (Gomez et al, 2004; Adkins et al, 2004) and the parents' perceived safety for their children (Weir et al, 2006; Sallis et al, 1997; Lumeng et al, 2006; Kerr et al, 2006) can both have a monumental impact on the children's PA level. In fact, it has been reported that parents rate safety as the most important factor in deciding upon children's PA locations (Sallis et al, 1997). This not only impacts the children's free-living PA, but also impacts the manner in which they commute to school (Evenson et al, 2006).

The Youth Risk Behaviour Surveillance System reported that 4.4% of school pupils missed at least one day (from the last 30 days of school) because they felt unsafe travelling to their school (Kann et al, 1995). This emphasizes the importance of ensuring school walking/cycling routes are safe to encourage children to actively commute. Research highlighting the effect that perceived safety has on children's PA levels is essential in producing potential strategies to encourage children to be physically active in outdoor environments. For example, an intervention strategy study conducted by Farley et al (2007) found that children were 84% more active in the safe play area (with safety attendants) compared to when in the comparison playground which had no safety attendants. Whilst such intervention strategies would be impractical and expensive to run on a larger (i.e. national scale) basis, this highlights the positive impact that providing a safe environment can have on children's PA.

Justification for the Present Study

From previous literature the need to further explore the influence of the built environment on children's PA is clear, to establish which factors majorly influence children's PA and subsequently aid the development of effective intervention strategies to promote PA and tackle obesity in children. With this in mind, the current study aims to explore how accessible local amenities such as parks and playgrounds are to children and attempt to uncover what factors affect the children's use of such available facilities. In recognition of the wide range of factors affecting children's PA, the current study will also look at how children commute to school and how perceived safety influences their PA both in free leisure time and when commuting to school.

Research hypotheses

From previous literature the following hypotheses have been established for the current study.

- Children who have greater access to parks and other local amenities will be more physically active.
- Children who actively commute to school will have higher PA levels than children who travel by car or bus.
- Children's PA levels will be inversely affected by their perceptions of an unsafe physical environment.

Method and Research Design

Participants

Following the approval of the research proposal by the University College's Research Ethics Committee the necessary consent was gained (school, parent and child) and an opportunity sample of 30 participants (15 girls and 15 boys) was taken from two urban secondary schools located in Dudley and Birmingham, England. Research access was limited due to a number of restrictions (such as time and participant numbers) from the

school's head teachers and parents. From the school based in Dudley there were 14 participants, nine of which were girls and five boys from Year 8 (mean age: 12.43 ± 0.51 years). The school based in Birmingham provided 16 participants, six of which were girls and ten boys from Year 10 (mean age: 14.81 ± 0.34). Both schools were similar in size (average school population of 850 pupils).

Measurements and Procedures

Pedometers

The pedometer used in this study was the New Lifestyles NL2000 Activity Monitor (US). This is a popular device which records data at daily intervals and its automatic memory has the capacity to store data from the previous seven days. This pedometer has a similar accuracy and better precision than the commonly used Yamax Digiwalker series (Duncan et al, 2007b). Unlike many pedometers, the NL2000 can record multiple days of data, provide estimate gross and net energy expenditure and is not affected by height or BMI variance (Crouter et al, 2003; Crouter et al, 2005). The high level of construct validity makes the NL2000 pedometers suitable for applied physical activity research (Schneider et al, 2004; Crouter et al, 2003; Schneider et al, 2003; Crouter et al, 2005).

Physical Activity log

The PA Log being used in this current study is an adapted version of the 'PA Log' produced by Heyward (2006). This self-report measure of PA records qualitative data in a non-invasive manner. The activity log simply requires participants to fill out details about what they have done throughout the day. More specifically the current activity log requires participants to self-report four sections; type of activity, intensity of activity, time spent on activity, and length of time wearing the pedometer. This data provides the researcher with each participant's type, time and intensity of PA and can be used to cross compare with the pedometer scores of each participant to ensure internal consistency and concurrent validity between the subjective and objective measures of PA.

Questionnaire

A PA questionnaire was used to establish the children's current PA level and potential environmental factors which influence their current levels of exercise. The questionnaire is a modified version of previous PA questionnaires (Sallis et al, 2000; Heyward, 2006) and takes no longer than five minutes to complete. The questionnaire consists of five sections; personal profile, school related, after school, environment, and neighbourhood safety. For analysis purposes and to ensure ease of use and understanding, the majority of questions were multiple choice. In total, the questionnaire has 19 multiple choice (quantitative) questions and 6 open-ended questions (qualitative). Previous research found that similar non-occupational PA questionnaires have good reliability (Kimsey et al, 2003).

Height, weight and Body Mass Index (BMI)

Each participant's height and weight were recorded (without shoes) to calculate the BMI. Weight was measured using digital floor scales (SECA 770, Germany) while height was recorded using the SECA Leicester Portable Height Measure. BMI was calculated as kg/m^2 (ACSM, 2005) and used to identify the weight status of each child, to establish the proportion of children who were classified as obese, overweight, healthy or underweight (Heyward, 2006; Cole et al, 2000).

Waist Circumference (WC)

The waist circumference of each participant was assessed. Measuring WC is recognised as an indicator of abdominal obesity (ACSM, 2005) and provides further information of the weight classification of participants and the potential health risks they may face. The validity and objectivity of measuring circumferences (such as the waist) as a measure of assessing body fat is stronger than measuring BMI (ACSM, 2005; Janssen et al, 2004). There is also research which states that combining WC with BMI predicts health risks far better than when using just BMI on its own (Arden et al, 2003; Zhu et al, 2004).

Quantitative Data Collection

The pedometers were distributed on the Thursday afternoon and collected on the preceding Tuesday morning. This enabled four full days of PA data to be recorded, two weekdays (Friday and Monday) and the weekend. Before being distributed, a quick step-count test was conducted to check the functionality of each pedometer, which

confirmed the reliability of the pedometer. Key data such as the participant's height, age, weight and gender was inputted by the research administrator into the pedometers, so that each pedometer was personalised to accurately measure each individual. All children received a demonstration and instructions on how to wear the pedometer (i.e. near right hip) and when they should and should not wear the pedometer.

The Physical Activity Questionnaire was also completed by participants. All participants answered the questionnaire on their own in silence and were supervised to ensure that the data received was a valid and fair reflection of the individuals' own opinions. The researcher was present at all times to answer any questions and it was also stated to all pupils that their answers were confidential and that they could withdraw from participating in the study at any time. The completion of the questionnaire took no longer than approximately 5 minutes.

Both height and weight data was recorded, on an individual basis. To measure the children's height, shoes were removed and the children were instructed to stand up straight, look straight ahead, and hold their breath (ACSM, 2005). The WC measurement was also discretely recorded by measuring the narrowest part of the children's waists, usually approximately one-to-two inches above the navel (ACSM, 2004).

Qualitative Data Collection

Pupils were given the PA log sheet for the proceeding four days on the Thursday afternoon. Each log sheet was clearly labelled with the correct day to ensure that the participants knew which days to record their PA and instructions were given to every participant on how to complete the activity log sheet. Within the quantitative PA questionnaire there are six qualitative questions. Thus, these were also completed at the same time as the rest of the questionnaire, under the same conditions.

Analysis

All inferential statistical analysis carried out in this study was performed using the Statistical Package for Social Sciences (SPSS, version 16). This was used to conduct both Pearson's correlations and paired t-tests to establish what factors of the built environment impact on children's PA. The following further data analyses were used; descriptive statistics, Cohen's *d*, and *r* squared, to establish the effect size and magnitude of any differences (or percentage shared variance of any relationships) respectively.

Results

Due to the wide spectrum of data collection methods used in the current study, the analysis of results contains both qualitative and quantitative aspects. The current study ascertains the current condition of the children who took part in the study, highlighting how the children compare to the recommended health guidelines. These findings revealed that the children's general physical health and condition is very positive, as highlighted by the mean scores for the overall group suggesting that on average children achieved the recommended 10,000 steps per day (Bastos et al, 2008), and one hour per day of moderate to high intensity physical activity guidelines (Cavill, Biddle, and Sallis, 2001; Health Education Authority, 1998; Jago et al, 2006b; Department of Health, 2004) (see table I).

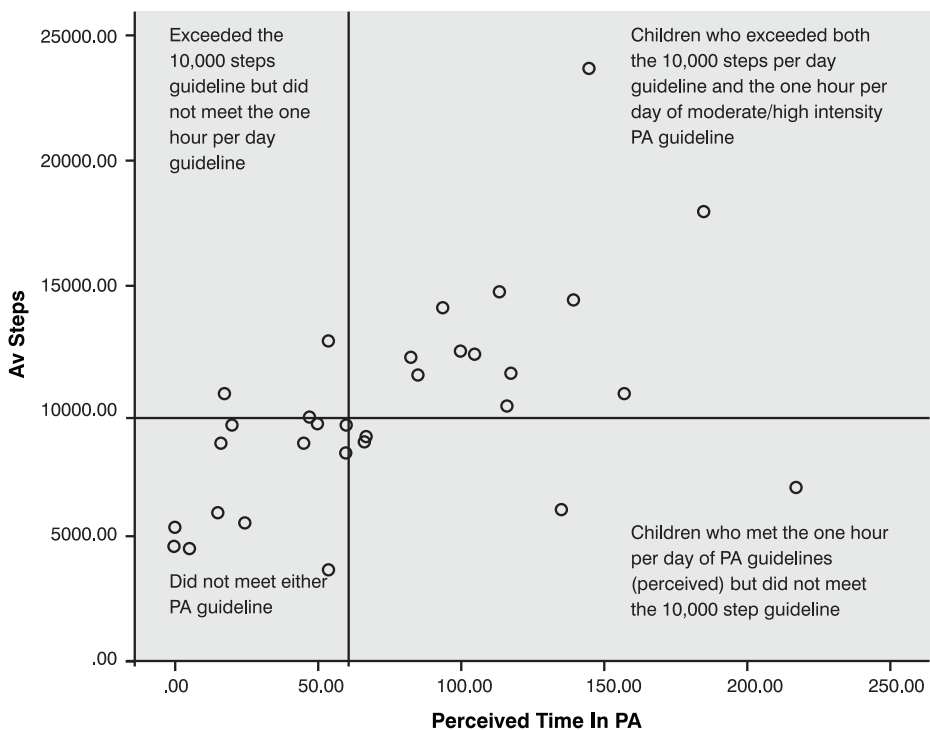
Table I – Descriptive Statistics and percentage of children meeting health guidelines.

Participant Group	Statistic	Pedometers (Daily Steps)	Activity Log (mins) (Perceived time of moderate/ high intensity PA)	BMI (kg/m ²)
Overall group	Mean	10092	75	20.79
	SD	4246.77	55.88	3.20
	% meet normal/ acceptable guidelines	43.33%	56.67%	60%
Males	Mean	10563	86	21.24
	SD	5005.68	63.49	3.14
	% meet normal/ acceptable guidelines	42.86%	60%	80%
Females	Mean	9622	64.17	20.34
	SD	3439.00	46.67	3.30
	% meet normal/ acceptable guidelines	50%	40%	40%

Despite the mean values suggesting healthy and active children, in fact only 50% of the children are achieving the recommended levels of daily physical activity. The large deviance shown in the mean PA scores supports these findings further.

The result of a Pearson's correlation coefficient supported the concurrent validity of the pedometers (daily steps) and PA log (perceived PA) as the results revealed a moderate positive relationship between the two methods ($r=0.585$, $p<0.0001$, $r^2=0.34$, percentage shared variance= 34.22). This significant positive correlation is supported by the *r squared* and percentage shared variance which revealed that 34.22% of shared variance of the perceived PA scores from the activity log can be explained by the pedometers PA scores. Further support for the concurrent validity of the two PA measurement methods is provided by the scattergraph (figure 1).

Figure 1 - The relationship between children's daily average steps and perceived duration of moderate to high PA.



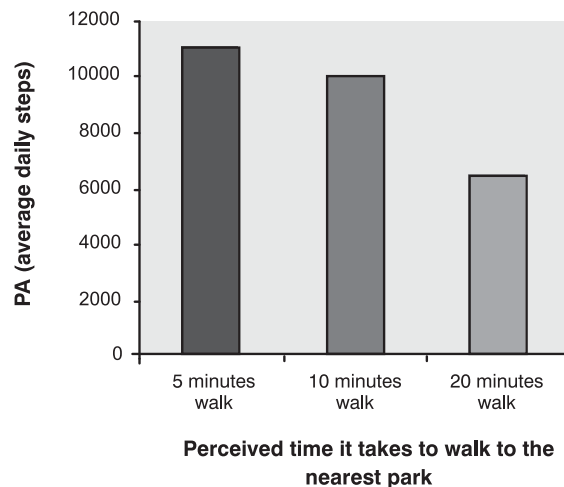
This positive correlation shows that generally if children failed to meet the steps guideline, they also failed to meet the PA duration guideline, and vice-versa. Results also revealed that there was a strong positive relationship between BMI and WC ($r=0.820$, $p<0.0001$, $r^2=0.67$, percentage shared variance= 67.24). A large percentage shared variance of 67.24% underlines the strong relationship between these two body composition methods.

In tackling the main focus of the study, the results of how children's PA is influenced by the physical environment are presented in three sections; Children's physical activity and the availability of local recreational amenities, commuting to school and levels of children's physical activity, and children's perceived neighbourhood safety and levels of physical activity.

The effect of the proximity of local parks on children's PA.

From conducting a Pearson's correlation, the current study revealed that there was no significant relationship between the distance that children live from the local park and their physical activity levels ($r=-0.241$, $p=0.216$). This lack of a significant correlation was underlined by the small effect size ($r^2=0.06$) and only 5.90% of shared variance of the children's PA levels being explained by their proximity of the park. The mean physical activity values show that 83% of children live within a ten minute walk from a local park and even more importantly, show that children who live closer to the parks are more physically active. This is illustrated in the bar chart below (figure 2).

Figure 2 – The mean PA of children depending on their proximity to a local park.



The effects of local parks proximity on PA and their use by children. The current study revealed that the proximity of the local park had no significant influence on how regularly children use the park. This was underlined by the result of the Pearson's correlation ($r=0.251$, $p=0.181$) while the effect size ($r^2= 0.06$) also highlighted a lack of association between how close children live to the park and how often they use the facilities. Furthermore, only 6.30% of shared variance of the regularity of children's park use can be explained by the distance children live from the park. This suggested that park accessibility did not influence children's physical activity or use of recreational facilities such as parks.

The effects of regular use of parks on children's PA

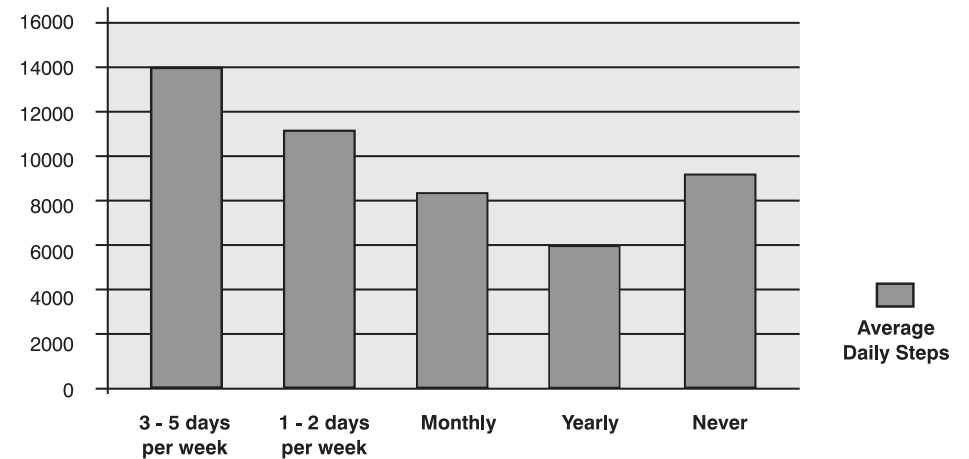
The results of the current study reveal that children who use the park more often are more likely to be physical active. This was indicated by a significant moderate positive relationship between regularity of park use and children's PA levels ($r=0.439$, $p=0.015$, $r^2= 0.19$, percentage shared variance= 19.27%).

Table II – Mean PA scores of children in relation to how often they visit the park.

Regularity of Park use	Number of Children	Percentage of total group (%)	Mean PA (Steps taken)
Never	3	10	9,773
Yearly	4	13	6,312
Monthly	11	37	8,866
1-2 days per week	8	27	11,789
3-5 days per week	4	13	14,092
6-7 days per week	0	-	-

The mean PA values shown in table II demonstrate that the more the children go to the park, the more physically active they are (with the exception of 3 children who 'never' go to the park). This positive correlation was further illustrated by the bar graph (shown in Figure 3). Even with the anomalous 'never' category included, the mean PA values still highlight that on average only children who visit the park at least once per week achieve the 10,000 steps per day health guidelines (Bastos et al, 2008).

Figure 3 - The relationship between mean PA and children's regularity of park use.



Commuting to school and levels of children's physical activity

The results revealed that only 47% of the children (14 children) actively commuted to school (all of whom walked), with the majority of children (53%) using more sedentary modes of transport (e.g. bus or car). When comparing the children who actively commute to school with the children who travel by more sedentary modes, the results clearly reveal substantial differences in both body composition and PA (see table III).

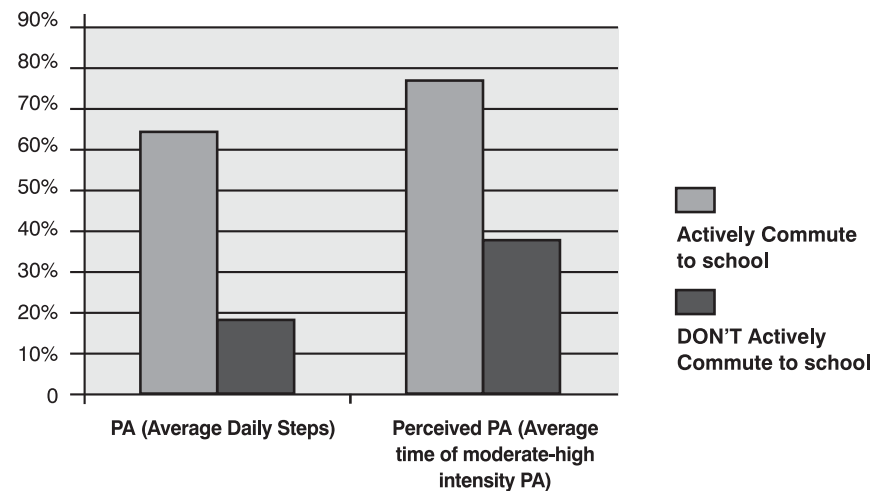
Table III - Differences between children who actively commute to school and children who do not actively commute to school.

Measure	Actively Commute Mean (SD)	Don't Actively Commute Mean (SD)	t value	p value	Cohen's d	Effect size	Percent change
BMI (kg/m ²)	19.44 (2.20) kg/m ²	21.53 (3.59) kg/m ²	-2.247	0.043	0.72	medium	-10 (small decrease)
Waist Circumference (cm)	56.16 (17.46) cm	67.01 (21.79) cm	-5.799	<0.001	0.56	medium	-16 (medium decrease)
Pedometers (mean daily steps)	11,721 (4286.93)	8,434 (2860.80)	2.703	0.015	0.95	large	39 (large increase)
Log manuals (perceived time of PA) (mins)	98 (46.06) mins	54 (55.63) mins	2.480	0.028	0.89	large	81 (huge increase)

The results of the paired t-tests strongly suggest that active commuting to school has strong health benefits as it is associated with significantly lower BMI and WC and positively impacts children’s levels of PA (see table III). This is highlighted by medium effect sizes and a decrease in the percentage change, indicating that those who actively commute to school have decreased BMI and smaller waist girths. Additionally, by reverting to the mean values (in table III) there is a substantial difference in the pedometer and activity log scores between children who walk (actively commute) to school and those who travel by bus or car. The large effect sizes shown by the Cohen’s

d equations ($d=0.95$ in pedometers and $d=0.89$ in log manuals) strongly indicates that active commuting to school can play a major role in children achieving the daily PA health guidelines (see table III). This is emphasized by the graph below (figure 4).

Figure 4 - A graph revealing the percentage of children who meet the PA national guidelines based on if they have active or sedentary means of travel to school.



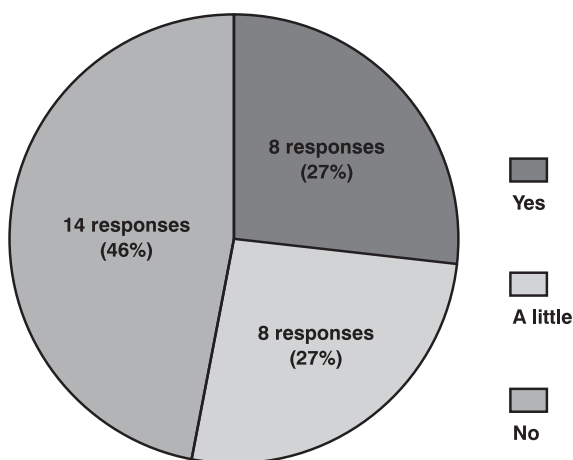
When assessing how long it takes the children to travel to school the majority (72%) of children who travel by car have a journey time of over ten minutes, and this may explain why travelling by car is necessary. A major reason why a large percentage of children who walk to school meet the daily PA health guidelines may be due to the fact that 57% of these active commuters walk for a minimum of 10 minutes to get from home to school.

Children’s perceived neighbourhood safety and levels of physical activity

The results of the current study revealed that the vast majority of children feel safe in their neighbourhood within the day. In fact, only one participant claimed to feel unsafe in their local neighbourhood during daytimes. When comparing children who felt safe to those who felt ‘a little unsafe’, the independent t-test revealed that there was no

significant difference ($t=0.560$, $p=0.580$). This is emphasised by the small effect size (Cohen's $d=0.22$) and minimal percentage change (9% small increase). Despite this, the mean scores show that children who feel safe are slightly more active (10,609 mean daily steps) than those who feel a little unsafe (9,699 mean daily steps). Furthermore, over 50% of all children claimed that neighbourhood crime affects the amount of exercise they participate in at least 'a little'. This is illustrated in the pie chart (figure 5).

Figure 5 - The different child responses to the question; "Does neighbourhood crime affect amount of exercise you participate in?"



Discussion

Children's current health and physical activity levels

The current study does not reflect the current obesity epidemic (Seidell, 2000; Wilmore, 2003), with no obese children and only 13% of children being classified as overweight (according to BMI classifications). This contradicts statistics stating that over 23% of children were obese (Department of Health, 2006). Thus, it can be stated that in terms of weight classification, the participants in the current study were better than the national average.

According to the 10,000 daily average steps health guideline (Bastos et al, 2008)

43.3% of children met the PA health guidelines. This finding is expected as most British children do not partake in enough PA to meet the recommended guidelines (Duncan et al, 2007a; Riddoch et al, 2007). Whilst there is conflicting declarations from previous literature regarding the most appropriate PA daily steps guidelines for children, the current study adopted the 10,000 steps per day guideline. The reason for this is that although it has been strongly recommended (Tudor-Locke et al, 2004; Tudor-Locke and Bassett, 2004) that children's daily steps guideline should be higher than adults, with Tudor-Locke and Bassett (2004) proposing guidelines of 12,000 steps/day for girls and 15,000 steps/day for boys, these guidelines were aimed at children aged '6-12 years old' (Tudor-Locke et al, 2004: 857). Thus, studies focusing on older adolescent aged children, such as that by Bastos et al (2008) and the current study, have pursued with the 10,000 steps per day guidelines.

The concurrent validity of the two PA measures used in the current study was moderately high, ensuring that children's PA data was consistent between both methods (the pedometers and PA log) and supporting previous literature (Crouter et al, 2005; Schneider et al, 2003; Crouter et al, 2003). However, a possible explanation for only a moderate positive relationship between the two methods of measuring PA is that children may perceive physical activity differently and also some children may forget or exaggerate certain physical activities when recalling what they have done (Harro and Riddoch, 2000). This again supports the current study's use of two PA data collection methods to eradicate discrepancies found from children's self reported PA. The concurrent validity between the BMI and WC scores is highly supported by the current study's findings, and supports previous similar research findings (Elobeid et al, 2007).

Children's physical activity and the availability of local recreational amenities

The current study's results rejected the study hypothesis, which stated that 'children who have greater access to parks and other local amenities will be more physically active'. The study established no significant relationship between children's PA and either their access to or frequency of using the local park or recreational facilities in general. This therefore contradicts the findings of several previous research studies (Kahn et al, 2002; Sallis et al, 1998; Humpel et al, 2004; Sallis et al, 1990; Humpel et al,

2002; Babey et al, 2008). A potential explanation for this could be that unlike several previous studies, the current study had a limited sample size of thirty children from two secondary schools. Although there are no statistically significant relationships, the mean values indicate a negative trend between children's PA and distance to the local park. This offers partial evidence of children who live closer to the recreational facilities being more physically active. The current findings also highlight the importance of public parks in encouraging children to be physically active, as a clear positive relationship is found between children's regularity of park use and PA. This supports similar findings from previous literature (Kaczynski and Henderson, 2008; Bedimo-Rung et al, 2005; Godbey et al, 2005) and indicates that being outdoors positively influences children's PA levels (Sallis et al, 2000; Klesges et al, 1990; Sallis et al, 1993).

A reason for the lack of association between access to parks and recreational facilities and children's PA is stated by McKenzie et al (2006) who claimed that just because people have access to a park, this does not necessarily mean they will use the park or that park use will be active. However, despite the findings of McKenzie et al (2006) the current study does show that park use is associated with increased PA levels, and therefore children who do go to the park are generally more physically active.

The current study supports the findings from previous research that found no association between the children's PA and their access to parks or other recreational amenities (Zakarian et al, 1994; Romero, 2005; Ferreira et al, 2006). Therefore, despite the research hypothesis, the mixed findings of previous literature make the current study's results unsurprising. Overall, while the access to park and recreational amenities has no impact on children's PA levels, the current study still highlights the importance of local recreational facilities such as parks, in encouraging PA in children.

Commuting to school and levels of children's physical activity

The study hypothesized that 'children who actively commute to school will have higher PA levels than children who travel by car or bus.' The results strongly support this hypothesis by revealing that children who actively commute are significantly more physically active, than children who travel by more sedentary means to school. Subsequently, these findings strongly support the vast majority of literature, which came to similar conclusions (Schofield et al, 2005; Blair et al, 2001; Tudor-Locke et al, 2003).

The current study findings also support literature that states walking to school has a positive influence on children's health (McDonald, 2008; Schofield et al, 2005; Blair et al, 2001). The current study's results revealed that children who walked to school are healthier (in terms of lower BMI and WC results) than children who were driven to school by either a bus or car. This is highlighted by the fact that all of the overweight children did not actively commute to school and 71% of children who walked to school fell within the 'normal' BMI classification compared to only 50% of children who travelled by car or bus. Tudor-Locke et al (2003) claimed that children expend between 33 to 44kcal per day more than car travellers. The current study's lower actual and perceived PA values of car travellers (compared to walkers) supports these findings and more than likely explains the BMI and WC score differences. In light of such findings the current study fully supports government schemes promoting active commuting (Davison et al, 2004).

Despite the majority of research findings, Metcalf et al (2004) previously concluded that the way children travel to school has no impact on their overall PA levels. A possible explanation for the contrast in findings could be because Metcalf et al (2004) focused their study on five year olds, where as the current study focused on older children and adolescents. Meanwhile, previous literature has highlighted that children who live close to the school are more likely to actively commute (McMillan, 2007). This was supported with the majority of children who walked to school (64%) living relatively close, with less than a 20 minute travel time (by foot). Overall, the current study supported the vast majority of previous literature by revealing that children who actively commute to school are generally more physically active and healthy.

Children's perceived neighbourhood safety and levels of physical activity

The current study's results do not support the hypothesis, which based on previous literature stated that 'children's PA levels will be inversely affected by their perceptions of an unsafe physical environment'. One major reason for this is that only one child claimed to feel unsafe in their local neighbourhood and while she claimed that crime affects her PA levels, which were well below the daily health guidelines (6040 steps per day), this sub-sample of just one participant does not provide strong enough grounds to support the claims of several researchers who state that perceived crime is a major determinant in children's PA levels (Farley et al; 2007; Molnar et al, 2004; Valentine

et al, 1997; Gomez et al, 2004). Furthermore, the current study provides support for similar literature which also found that perceived safety does not impact children's PA (Krahnstoever-Davison and Lawson, 2006; Zakarian et al, 1994; Sallis et al, 2002).

The current findings are surprising, given that the majority of research identified that perceived safety does impact PA levels in children (Ferreira et al, 2006). A reason for this could be due to the current study only recording data from two urban schools, which while being approximately 12 miles apart, do share striking resemblances in neighbourhood characteristics. Thus, the reason for low rates of children citing the neighbourhood as unsafe may be because both urban areas are similarly widely perceived as safe communities.

There is however limited support provided by the current study for a relationship between perceived safety and PA which is provided by the mean PA scores revealing that children who feel safe in their neighbourhood meet the 10,000 step daily health guideline, while children who feel 'a little unsafe' fall just below this guideline (9,669 daily steps). This may hint that with a larger sample size, an association may be found which supports previous literature (Adkins et al, 2004; Gomez et al, 2004; Cordon-Larsen et al, 2000). With over 50% of all of the children claiming that neighbourhood crime influences the amount of exercise they participate in at least 'a little', this also provides a glimmer of support for literature revealing a positive relationship between children's PA and perceived safety. Overall, the current study contradicted previous literature by revealing no relationship between children's perceived neighbourhood safety and children's PA levels.

Conclusion

The current study indicated that certain elements of the built environment appeared to have no effect on children's PA (e.g., access to recreational amenities and perceived safety). However, it should be acknowledged that the study did not measure all elements of the built environment, and as such cannot conclude that the built environment has no impact on children's PA levels. Furthermore, the analysis of three environmental factors (access to local amenities, perceived neighbourhood safety and transport to

school) has highlighted the importance of active commuting to school and regular park use as issues which can significantly influence children's PA.

Limitations

The present study is however not without its limitations. For example, as only 13% of children in the current study were classified as overweight (and none obese), it could be argued that the current sample of children used in the study does not fairly reflect the general population (at this age group) or the current obesity epidemic. The reason for the lack obese and overweight children could either be coincidental or potentially reflect the reluctance of overweight children to participate in the study. Furthermore, the current study due to time and accessibility restrictions, used an opportunity sample of thirty children from two schools, limiting the studies ability to reflect the general population on a national scale, which would require a larger, random, national sample. Some children were inaccurate when completing the activity log. For example, one child claimed being 'asleep in bed' is a physical activity, and furthermore claimed that the intensity was 'very tiring'. Children misinterpreting the physical activity log is a study limitation, although this only occurred on a few occasions.

Whilst highly practical for epidemiological studies, the validity of BMI to assess body composition has been questioned by previous literature (Heyward and Wagner, 2004) and therefore more accurate weight classification methods could be used, such as skinfold measures or bioelectric impedance analysis. Another potential limitation of this study may have been reactivity from the participants when wearing the pedometers. Previous research has highlighted that pedometers were deemed as a motivational tool and encouraged participants to perform more exercise than normal (Bassett et al., 1996; Tudor-Locke, et al, 2002; Tudor-Locke, 2002; Jago et al, 2006a). Thus, while encouraging greater PA can be seen as a positive, it does hinder the ability to record participant's normal amount of PA. Despite this limitation, the current study limited participant reactivity by sealing the pedometers and by the children wearing the pedometers for a practice day (Clemes et al, 2008). Despite its limitations, the current study has provided intriguing information on the potential impact that factors of the built environment have on children's PA.

Recommendations for future studies

As active commuting rates are reportedly significantly higher in boys, compared to girls (Rosenberg et al, 2006; Evenson et al, 2003; Harten and Olds, 2004), future research should consider gender differences. Further research should include a larger, random sample of participants. Furthermore, research should also use participants from more schools nationally so the results can be fairly reflected on a national scale. In light of previous research by Babey et al (2008), who found a stronger association in urban areas compared to rural areas, future research should compare children's PA from urban and rural neighbourhoods. When measuring how perceived safety affects the children's PA, the current study only measured perceived safety and did not include various other factors such as condition of paths, poor pedestrian facilities, number of road crossings and volume of traffic, all factors which have been highlighted in previous literature as having a major effect on children's perceived safety and level of PA (Zhu and Lee, 2008). Such factors should be addressed in future research.

Both perceived and objectively measured crime can influence children's PA (McGinn et al, 2008) and therefore should both be assessed in future research. Despite this however, the current perceived data collected is still valuable, as perceptions are important predictors of PA (Giles-Corti and Donovan, 2002). It may be beneficial for future research to also consider the children's parents' perceptions of the local environment as this can have a major impact on children's PA levels (Trost et al, 2003; Sallis et al, 2000; Miles, 2008; Molnar et al, 2004). With this in mind, recording parents' opinions may be worthwhile in future similar minded studies. Also, the current study when assessing how factors of the built environment affect children's PA, does not take into account age (Halvari and Thomassen, 1997) and socioeconomic differences (Moore et al 2008). Both of these factors have been highlighted in previous literature as issues which can influence such epidemiological research results. In conclusion, the research results provide a foundation for future studies to build upon in increasing knowledge and understanding of the affects of the built environment on children's PA.

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Negotiating the 'Natural' World: Postcolonial Representations of the Wild Landscapes of India in Global Literature

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ABSTRACT

This article attempts to draw together a diverse range of secondary material from a number of disciplines including literary studies, environmental history, environmental science and cultural studies in order to provide a conceptual and contextual framework through which it may be possible to attempt an assessment of the multiplicity of factors that influence literary representations of the wild landscapes of post-Independence India. The theoretical basis of this article will be negotiated through a dialogue between contemporary ecocritical and postcolonial theory and practice, and some of the intersections and divisions between these schools are sketched out in the first section which examines the problems and possibilities of ecocriticism. The second section of the article follows on from this general introduction and applies some of the major theoretical points already outlined to a discussion of literary and cultural representations of 'wilderness', and the management of national parks and forest reserves in the Subcontinent. This article is not intended as a definitive document but represents a preliminary investigation, and it is hoped that this discussion may act as a catalyst for further critical inquiry.

KEYWORDS

India, postcolonialism, ecocriticism, literature, landscape.

Introduction

The concept of the *natural* world is highly problematic. Where does nature begin and end? Is nature in some way separate to the human realm? Does nature exist in its own right, or is it culturally constructed?

These kinds of questions seem particularly pertinent when applied to a consideration of the development of representations of the landscapes of postcolonial India. Since Independence, an increasing barrage of social, economic and environmental pressures (precipitated in part by colonial legacies of exploitation, and exacerbated by the march to globalisation) have placed huge pressures on the Subcontinent's *wild* spaces. In his essay 'Wild Fictions', Amitav Ghosh (2005b: 1) describes India as 'one of the most important battlegrounds in the current conflict over the meaning and definition of Nature', and in the introduction to *Environmental Issues in India* Mahesh Rangarajan (2007: xx) asserts that the country is,

[...] a landscape in turmoil. Contests over water and fisheries, grazing lands and commons, city spaces and mountains are a feature of 21st century India... there is disagreement on what constitutes a resource and for whom. There are clashes and conflicts over whose interests should get priority and how.

It is against this background that literary constructions of the landscapes of the Subcontinent are negotiated between a complex and diverse set of cultural and epistemological standpoints. In order to make sense of this matrix of representation it will be necessary to utilise insights from other academic fields, including environmental science and environmental history, and to adopt a theoretical approach that combines and modifies aspects of ecocritical and postcolonial theory.

The first section of this article will map some of the problems and possibilities associated with a combined ecocritical and postcolonial approach through a review of relevant theoretical literature, before moving in the second section to a discussion of the management of national parks and forest reserves in India and an exploration of the construction of literary and cultural representations of Indian wilderness.

The Problems and Possibilities of Ecocriticism

Ecocriticism is defined in the *Ecocriticism Reader* as 'the study of the relationship between literature and the environment [offering] an earth-centred approach to literary studies' (Glottfelty, 1996: xviii). At this simple level, ecocriticism seems to offer a natural theoretical framework for any study that takes any landscape as its primary

focus, but until the mid-1990s (the *Ecocriticism Reader* was published in 1996) the discipline still largely concentrated much of its analytical efforts on a very limited canon of mainstream American literature and confined its considerations to writing which took nature overtly as its primary focus (bio-centric and eco-centric texts). Cheryll Glotfelty acknowledges in her introduction to this seminal collection that the potential scope and usefulness of the discipline has at times been somewhat restricted by this *rootedness* in the intellectual traditions of the Western academy. Indeed, Glotfelty (1996: xxv) goes on to concede that as a result of this institutional myopia, 'Ecocriticism has been predominantly a white movement'.

Clearly something had to change and although the *Reader* is still a rather canonical work, concentrating largely on American issues, Glotfelty's introduction and a number of essays in the collection carefully conspire to open a discursive space for texts from *other* literary and cultural traditions and epistemological backgrounds, providing an important platform to bring to the fore a second wave of environmental criticism capable of negotiating the manifold challenges of a globalised and multicultural world and of addressing the issues that arise out of the field's initial isolation from alternate conceptions of the relationship between nature and culture.

An important part of this process was the inclusion in the *Reader* of 'The Sacred Hoop' by Paula Gunn Allen (1975) and Leslie Marmon Silko's 'Landscape, History and the Pueblo Imagination' (1986) which both focus on the relationship between Native American groups, cultures and the[ir] landscape. Allen (1986: 241) begins her contribution by making a very obvious and pertinent point,

Literature is one facet of culture. The significance of a literature can be best understood in terms of the culture from which it springs, and the purpose of literature is clear only when the reader understands and accepts the assumptions on which the literature is based.

This apparently simple statement raises an important challenge to the previously mono-cultural vision of mainstream ecocriticism which valorised and claimed as universal a conception of the natural landscape as an un-peopled 'virgin wilderness' (Nixon, 2005: 234) without critically addressing the imperialist violence that accompanied westward expansion in the United States and the original *purpose* of this concept of wilderness.

The contemporary figuration of wilderness is in many ways linked to the colonial concept of *terra nullius*, which as Nixon (2005: 235) states had the effect of '...erasing the history of colonised peoples through the myth of the empty lands'. In an American context, early ecocriticism can therefore be seen to be complicit in promoting a hegemonic view of the natural world that effectively wrote Native Americans out of the physical, cultural and literary landscape and propagated a topography impregnated with Euro-centric symbolism that justified ownership of the natural world. In its modern form this idea of wilderness has had far reaching implications for the implementation of global conservation policies and the problems associated with this concept in relation to India will be examined in further detail later in this discussion (see subsection '*Wilderness and the National Park: An Indian Perspective*').

By [re]placing Native Americans in the physical landscape and within the theoretical context of the *Reader*, Allen (1975) reveals a *natural* world that was already populated with a matrix of alternative [hi]stories and meaning long before the arrival of Europeans through the complex relationship between Native American cultures and the[ir] landscapes; a stance that challenges ecocritical orthodoxy and invites and engages a postcolonial and subaltern-orientated response. Silko's (1986) contribution to the *Ecocriticism Reader* develops this symbiosis between land, history and imagination and demonstrates just how dramatically different world views can be as she explains the complex relationship between humans, stories and places that defines Pueblo imagination. In Pueblo culture, history as it is understood in the West does not exist; it is instead written into the text of the landscape and retold through the ancient continuity of the oral tradition. This early exploration of *other* (non-Western) views of the natural world within the ecocritical movement provides an important theoretical parallel with some of the central concerns of postcolonial studies such as orality, alternate histories and cultural hegemony.

Reflecting on the future of ecocriticism in the introduction to the *Reader*, Glotfelty (1996: xxv) encourages scholars to expand their conception of place and space, and widen their focus from the local to the global, envisioning an 'interdisciplinary, multi-cultural and international' field that may be capable of opening up a multitude of critical possibilities within the discipline;

[Ecocriticism] will become a multi-ethnic movement when stronger connections are made between the environment and issues of social justice, and when a diversity of voices are encouraged to contribute to the discussion... environmental problems are now global in scale and their solutions will require worldwide collaboration (Glotfelty, 1996: xxv).

This dual commitment to the environment and social justice is one of several focal points outlined in the content of the *Reader* where ecocriticism increasingly converges with aspects of postcolonial theory, and this developing relationship between the disciplines is examined in detail in the chapter 'Greening Postcolonialism: Ecocritical Perspectives' from Graham Huggan's (2008) book *Interdisciplinary Measures*, and in an earlier article, 'Green Postcolonialism', co-authored by Huggan and Helen Tiffin (2007).

In his chapter 'Greening Postcolonialism: Ecocritical Perspectives', Huggan (2008) draws specifically on the example of the Indian Subcontinent to suggest ways in which these theories may converge to offer a critical framework through which to understand the massive environmental changes wrought by colonialism and, more importantly, the current pressures of globalization on the natural world of the Subcontinent. Indeed Huggan (2008: 65) goes as far as to insist that 'current crises of ecological mismanagement [cannot be separated from] historical legacies of imperialist exploitation and authoritarian abuse'. In India many of the government's policies towards the environment, and the departments that enforce them, appear to have changed little in their outlook from the former colonial authorities, and according to Huggan (2008: 67) for many Indian theorists '[the] primary concern is less with the West and Western imperialism *per se* than with the neo-colonialist imperatives of the post-Independence Indian state'. The Indian environmental critic Vandana Shiva (1991: 12), suggests that the government and its nationalist project are guilty of pursuing 'a policy of planned destruction of diversity in [both] nature and culture' and Ramachandra Guha (1989: 195-6) contends that successive regimes have 'actively sought to impose a homogenising late-capitalist vision of economic progress most obviously beneficial to the nation's ruling elite'.

Huggan (2008) notes that the history of the Indian nation-state is strewn with examples (such as the Chipko resistance movement in the 1970s or the devastating effects of the

Green Revolution on rural Punjab in the 1990s) of the havoc that this neo-colonialist imperative has wrought on marginalised peoples and the environment, and suggests that these 'serve as twin reminders that ecological disruption is coextensive with damage to the social fabric; and that environmental issues cannot be separated from questions of social justice and human rights' (Huggan, 2008: 66). This statement resonates with Cheryll Glotfelty's (1996: xxv) view that, '[ecocriticism] will become a multi-ethnic movement when stronger connections are made between the environment and issues of social justice, and when a diversity of voices are encouraged to contribute to the discussion'.

In 'Green Postcolonialism', co-authored by Huggan and Helen Tiffin (2007), twenty-first century environmental conservation is examined through the postcolonial lens. Tiffin and Huggan (2007) trace the development of environmental awareness in recent years and note that the accompanying change in the assumptions that underpin Western views of the relationship between human and environment have done little to change the neo-colonialist status quo. They observe that,

Ironically [...] this shift in emphasis from anthropocentric to environment-based (ecocentric) philosophies and practices generally failed to benefit those very peoples whose pre-colonised apprehension of being-in-the-world had not only been systematically denigrated by Europeans, but had consistently provided justification for Western conquest, the 'primitive' being distinguished from the 'civilised' precisely by its proximity to the natural world (Huggan and Tiffin, 2007: 3).

The problem is that environmental conservation has become so fixed on the importance of nature that there is no space for human beings, so local and indigenous people are essentially ignored or removed from the equation altogether. This has certainly been the case with many of the national park projects throughout the globe. Inevitably many of the examples of this *pristine* nature that environmentalists seek to conserve and control are, 'areas which have been relatively unaffected by development...those parts of the globe where indigenous peoples are struggling to preserve their livelihoods and cultures against external encroachment' (Huggan and Tiffin, 2007: 3-4). Echoing the concerns expressed about the neo-colonial interventions of the Indian government in 'Greening Postcolonialism: Ecocritical Perspectives', Tiffin and Huggan (2007: 4) note

that there is a further source of neo-colonial influence at play in global environmental politics,

[...] the continuing vulnerability of marginalised peoples is no longer simply a question of the colonised throwing off the shackles of colonialism, so particular groups can find themselves targeted by their *own* governments- on behalf of multinational companies, but also or alternatively on behalf of international environmental and animal conservation NGOs.

It is clear that environmentalism must reappraise the way in which it views all humans as antagonistic to nature, and extend its philosophical remit to include an acknowledgement of the need to maintain and protect human cultural diversity along with bio diversity. Out of this imperative comes Huggan and Tiffin's (2007: 9) call for the development of green postcolonialism, a field that they tentatively suggest,

[...] might be defined in terms of those forms of environmentally orientated postcolonial criticism which insist on the factoring of cultural difference into both historical and contemporary ecological and bioethical debate'.

In attempting to understand the neo-colonial forces that lurk behind much contemporary environmental thought, it is perhaps necessary to return to the origins of ecological debate. One of the earliest and most influential pieces in the *Ecocriticism Reader* is Lynn White Jr.'s (1967) 'The Historical Roots of Our Ecological Crisis'. White (1967: 5) is pragmatic in his assessment of the grave state of the global environment and its potentially catastrophic future,

Our present consumption of fossil fuels threatens to change the chemistry of the globe's atmosphere as a whole [...] with the population explosion, the carcinoma of planless urbanism, the now geological deposits of sewage and garbage, surely no creature other than man has ever fouled its nest in such short order.

In order to understand how 'we' (the viewpoint is distinctly Western) arrived at this disastrous situation, White goes on to set the current ecological crisis into historical context through an explication of the development (and subsequent hegemony) of Western Judaeo-Christian perceptions of man's relationship with the natural world, and the history of the relationship between science and technology. White (1967: 9) acknowledges the difficulty of generalising about all branches of Christianity but notes

that the Bible clearly establishes a hierarchy between man and the natural world,

Man named the animals, thus establishing his dominance over them. God planned all of this explicitly for man's benefit and rule: no item in physical creation had any purpose save to serve man's purpose. And, although man's body is made of clay, he is not simply part of nature: he is made in God's image.

According to White (1967: 4) this intransigently anthropocentric view that creates nature as Other did not realise its fully destructive potential until the 1850s when a *marriage* between science and technology conspired to create 'a union of the theoretical and empirical approaches to our natural environment (that lead to) the emergence in widespread practice of the Baconian creed that scientific knowledge means technological power over nature'. This extension of the power relationship reinforces the divide between human and nature, and further places science and technology in opposition to the natural world.

From a postcolonial point of view, a major omission from White's article is any overt reference to the project of Empire. He locates the start of the crisis in the 1850s, a time when European colonialists were involved in wholesale environmental plunder; imperialist expansion simultaneously supported the ecological degradation of both the colony (through the stripping of resources) and the metropole (through the pollution and waste generated by rapid industrialisation). It has been well documented in postcolonial criticism that by convenient extension of dualist logic, the West was able to extend its definition of nature to include the populations of the former colonies, thereby seamlessly justifying imperial dominance over global resources. In their essay 'Environmental Orientalisms', Suzana Sawyer and Arun Agrawal (2000: 92) include a quotation from Albert Sarraut, governor-general of French Indo-china at the end of the nineteenth century, that concisely presents the imperialist perspective,

While in a narrow corner of the world, Nature has concentrated in white Europe the powers of invention, the means of progress, and the dynamics of scientific advancement, the greatest accumulation of natural wealth is locked up in territories occupied by backwards races, who not knowing how to profit by it themselves, are even less capable of releasing it to the greater circular current that nourishes the ever-growing needs of humanity.

It can be seen that 'not knowing how to profit by it' is almost an analogue of 'not being able to name' (and therefore establish dominion over) in the Adamic, biblical sense. Taxonomy, and therefore knowledge and power, are *naturally* the exclusive tools of a Western hegemonic model that conflates science/ technology/ human to assert colonial dominance, thus condemning the colonised subject to a peripheral non-human existence as a mute part of nature. Interestingly this kind of imperialist rhetoric still informs Western attitudes to environmental stewardship. White (1967: 5) illustrates these inherently racist and imperialist undertones with a good degree of irony, but also without acknowledging the implication of his pronouncement that until we achieve ecological enlightenment,

There (will be) many calls to action, but specific proposals, however worthy as individual items, (will) seem too partial, palliative, negative: ban the bomb, tear down the billboards, give the Hindus contraceptives and tell them to eat their sacred cows.

The neo-colonial implications of this final statement about India are immediately apparent. It establishes a stark divide between the West (the givers and arbiters of science and technology) and the grateful recipients of this patronage in the East who are figured as superstitious, and incapable of solving their own problems. Western science and technology is represented as a panacea for global problems; the contraceptive is the restorative against India's perceived population excesses and rationalism naturally dictates that their sacred cows are the solution to food shortage. The idea that a cow can be sacred is clearly anathema to Western logic and therefore becomes part of another divisive dyad that places Hindu views of the relationship between human and nature clearly at odds with Western constructions, and subsumes such extra-cultural considerations to the realm of folklore and fiction.

The disturbing parallels between colonial and contemporary Western attitudes to nature and the environment are demonstrated convincingly by Sawyer and Agrawal (2000). It is no great leap of the imagination to place the fin de siècle imperialist logic of Sarraut in the same category as the following statement, which they present alongside it, made by James Scheuer (former chairman of the Subcommittee on the Environment in the US House of Representatives) almost exactly a century later,

The time has come to act before the decline of species becomes crisis situations. We need to strengthen endangered species law worldwide, but we also need to supplement them with equally strong biodiversity legislation. We need to inventory biological resources and their status, and to identify species and ecological communities of outstanding value. With this knowledge we can begin to plan for the sustainable management of *our* resources, we can take measures to protect 'hot-spots' containing sensitive species of critical eco-systems (My emphasis, Sawyer and Agrawal, 2000: 92-3).

Sawyer and Agrawal (2000: 88) accuse conservation science of 'deploy[ing] the coloniser's tools of naming, appropriating, and ordering, and seek[ing] to generalise, predict, and ultimately control', and this point is difficult to counter; there is clearly a sinister and familiar neo-colonial resonance in Scheuer's use of the possessive 'our.' The authors further contend that this attitude of 'environmental orientalism' is backed up by the 'rhetoric of global patrimony- of Nature being everyone's birthright' (Sawyer and Agrawal, 2000: 93). This imperialist trope legitimates an environmental discourse that, 'allows First World elites to dismiss as geographical accident the fact that Nature's wealth resides in the tropics [and] legitimises conservationist discourses that lay claims to control tropical nature and displaces blame on Third World overpopulation' (Sawyer and Agrawal, 2000: 93). Contemporary Western attitudes either employ directly, or modify previous imperialist representational models to assert neo-colonial dominance over wild spaces.

Over-population is one of the first threats to global ecology mentioned by White (1967: 5), and Sawyer and Agrawal (2000: 88) argue that such attitudes towards population growth are as ever governed by environmental orientalisms,

While still representing the labyrinth dis-covered by Europe's explorers, Nature no longer exudes danger. It is, rather, itself endangered. Still embodying the feminine, Nature is raced differently. Today she represents the threatened and vulnerable white woman who needs protection. Third World populations incarnate her Black Peril.

The West's simultaneous horror and revulsion at the ever-expanding 'black peril' is implicit in Paul Ehrlich's seminal text *The Population Bomb* (1968). On a hot night in

Delhi in the 1960s, he takes a taxi ride through the city,

As we crawled through the city, we entered a crowded slum area. The temperature was well over 100°F; the air was a haze of dust and smoke. The streets seemed alive with people. People eating, people washing, people sleeping. People visiting, arguing, screaming. People thrusting their hands through the taxi windows begging. People defecating and urinating. People clinging to buses. People herding animals. People, people, people, people. As we moved slowly through the mob, hand horn squawking, the dust, the noise, heat and cooking fires gave the scene a hellish aspect. Would we ever get to our hotel? All three of us were, frankly, frightened. It seemed that anything could happen- but, of course, nothing did. Old India hands will laugh at our reaction. We were just some over-privileged tourists, unaccustomed to the sights and sounds of India. Perhaps, but since that night I've known the feel of over-population (Ehrlich, 1968: 15-16).

Ehrlich (1968) is utterly terrified by this mass of 'people' going about their daily lives; humans are transformed through his Western lens into a 'mob' creating a 'hellish' aspect. There is, however, a seemingly compelling argument behind the over-population theory. The West represents the view that with a finite amount of resources, we will inevitably run out if the population keeps growing, but this simple logic deliberately ignores many factors such as, 'an analysis of the distribution of consumption and waste production, and the socioeconomic causes of population growth and decline' (Sawyer and Agrawal, 2000: 91). The West is the biggest consumer of resources and until this is addressed, the global environment will continue to become degraded and depleted.

Ultimately the main thrust of both White's (1967) and Sawyer and Agrawal's (2000) arguments are very similar and based on an understanding that unless a new philosophical conception of the relationship between human and nature can be established, there is unlikely to be a resolution to the world's environmental problems, 'more science and technology are not going to get us out of the present ecologic crisis until we find a new religion or rethink our old one' (White, 1967: 12). In many ways these articles are calling for the same sea-change in environmental philosophy that Huggan and Tiffin (2007: 6-7) are seeking in their article 'Green Postcolonialism',

A re-imagining and reconfiguration of both the nature of the human and the place of the human in nature – that is, a postcolonial environmental ethic' [that] necessitates an investigation of the category of the 'human' itself, and of the multiple ways in which the anthropocentric construction has been, and is, complicit in racism, imperialism and colonialism, from the moment of conquest to the present day.

The necessity for the establishment of a 'postcolonial environmental ethic' that is able to 're-imagin[e] and reconfigure[e] the nature of the human and the place of the human in nature' is particularly poignant when one comes to consider the conflict over wilderness and nature in the Indian Subcontinent.

'Wilderness' and the National Park: An Indian Perspective

In Umberto Eco's (1986) *Travels in Hypereality*, the author makes some rather intriguing observations about the *nature* of nature that are particularly pertinent to the wilderness debate in India. Whilst on a visit to the San Diego zoo, Eco (1986: 49) marvels at the achievements of this beacon of conservation and education, '...each enclosure is the reconstruction, on a vast scale, of an *original* environment [...] of all existing zoos, this is unquestionably the one where the animal is most respected' (My emphasis). It can be seen that there is very little difference between the ways in which both the zoo and the wilderness are culturally constructed, as they attempt to recreate a vision of the natural world that is purely conceptual. In his essay, 'Wild Fictions', Amitav Ghosh (2005b: 8) shares Eco's concerns about the 'performance' of the natural world and relates them specifically to Indian environmental issues,

When urban middle class people visit India's forests they have little conception that their experience of the wilderness is not unlike that of spectators at a play: rarely if ever are they provided a glimpse of the stage machinery that produces the conditions of their viewership. They are in this sense, partners in the production of a wild fiction: it is their willing suspension of disbelief that makes the administrative exclusivity of forests possible.

In the case of the Indian national reserve, nature is not so much trained (although it does become accustomed to the constant demands of tourist vehicles and cameras) as contained and surveyed, and of course isolated from the wrong kind of people. Either way the privileged observer of wilderness ultimately experiences a hypereal version of nature where, 'the oscillation between the promise of uncontaminated nature and a guarantee of negotiated tranquillity is constant' (Eco, 1986: 51).

An argument often forgotten by deep ecologists who argue for the preservation of *untouched* wildernesses and the need to protect these areas from human activity is demonstrated by Simon Sharma (1995: 9) in *Landscape and Memory* who notes that 'the landscapes that we suppose to be most free of our culture may turn out, on closer inspection, to be its product', and this point is developed by Andrea Parra (1999: 1100) in the introductory letters to the *PMLA Forum on Literatures of the Environment* who contends that,

The prevailing conception of nature is informed by racial and class bias, often resulting in the preservationist stance that has "no place for people, even when they are a historical component of the rural landscape and habitat.

As has been previously noted, this 'no place for people' conception of wilderness developed in the West out of imperialist ideology to justify expansion and dominion. The colonial origins of this ethos are clearly enunciated in literary terms in E.M. Forster's (2005 [1936]: 63) *Abinger Harvest* when the narrator becomes disorientated and fears he will become lost on the vast expanse of the central Indian plains,

"Take care; we shall all lose one another", I shouted. But disintegration had begun, and my expedition was fraying out, like the track, like the fields.

Uncharioted, unattended, I reached the trees, and found under them, as everywhere, a few men. The plains lack the romance of solitude. Desolate at first glance, it conceals numberless groups of a few men. The grasses and the high crops sway, the distant path undulates, and is barred with brown bodies or heightened with saffron and crimson. In the evening the villages stand out and call to one another across emptiness with drums and fires. This clump of trees was apparently a village, for near the few men was a sort of enclosure surrounding a kind of street, and gods

multiplied. The ground was littered with huts and rubbish for a few yards, and then the plain resumed; to continue in its gentle confusion as far as the eye could see.

The narrator finds himself situated in an imperfect wilderness scene where 'the plains lack the romance of solitude' because of the disrupting presence of concealed 'brown bodies'. The inhabitants are represented as a sinister force and as an aberration in an idealised and *naturally* empty landscape. The shock of the *presence* of these 'numberless groups of a few men' disturbs the narrator's vision of the perfection of the natural vista. Their 'brown bodies' bar the paths that should offer the imperialist observer unhindered access to the text of the landscape and their village is concealed as a 'clump of trees', emphasising that these 'numberless men' are in but are not part of this transplanted Western picturesque. For the narrator, the village represents an unintelligible tangle of signs at odds with his cultural construction of the natural world. It is 'a sort of', 'kind of', 'littered' ground where 'gods multiplied' in defiance of the monotheist, imperialist framework through which the narrator attempts to define the scene.

In an Indian context the postcolonial resonances of British Imperialist conceptions of wilderness are joined in a contemporary context by much earlier cultural and literary influences that also assert an *un-peopled* wilderness dating back to the *Ramayana* and *Mahabharata*. These texts form a pre-European colonialist discourse which helped to write the dominance of Hindu religious and caste hierarchy onto the Indian landscape. DN (1990: 795-6) notes in the article 'Women and Forests' that,

Various streams have contributed to India civilisation, but that which dominates it, or its mainstream, is clearly the culture that came with settled agriculture in the Ganga-Jamuna doab. This is the seat of the caste system and the Hindu religious order [...] This mainstream Indian civilisation was set up by subjugating the forest dwellers and clearing the forests for settled cultivation.

The *Ramayana* and *Mahabharata* and the discourse of imperialist cultural power they invoke still inform and influence contemporary representations of the wild landscape and form the symbolic framework in many contemporary narratives of resistance. This ancient conflict between coloniser and colonised is as ever resource-driven, and one of the cultural functions of these revered Hindu caste texts is to justify imperialist

expansion into the wilds through a supporting cultural discourse that generates a dyadic relationship of power between the cultivated and the wild, and the civilised and primitive; a recognisable *othering* process that is very familiar to postcolonial scholars.

A notable example of pre-European attitudes to wilderness is the story of the destruction of the Khandava forest in Mahabharata. Arjuna, one of the five pandavas, and his ally Krishna meet a Brahman ascetic in the forest who asks them for food, before revealing himself as the fire god, Agni. The deity strikes a deal whereby Arjuna and Krishna burn the forest for his food in return for weapons and chariots. With the forest ablaze the text describes how they then,

[...] guarded all sides so tightly that the creatures fleeing from the blaze found not a single chink to escape through...the creatures driven back into the forest were burned alive. Those who ran out fell under their weapons [...] Finally having consumed the flesh and fat of every last creature in the forest, Agni went away satisfied (Karve, 1969: 138).

What is immediately noticeable about the language is the comprehensive brutality of the massacre as Arjuna and Krishna (symbols of the authority of caste) kill any 'creature' that tries to escape. What is perhaps not so noticeable initially is that 'creature' is here deployed as a collective noun that includes the tribal inhabitants of the forest. Jennifer Wenzel (1998: 138) discusses this narrative in the article 'Epic Struggles over India's Forests' and notes the continuities evident amongst representations of tribal groups throughout the Indian epics, 'forest dwellers [...] - the Nagas or rakshasas - are often dehumanised and described either as supernatural demons or as animals'. The extreme nature of this *othering* process is demonstrated by the transformation of the tribal inhabitants of Khandava into bestial 'flesh and fat' to be consumed or discarded at the whim of caste authority. Wenzel (1998: 138) concludes that 'from a brahmanical perspective, episodes such as the Khandava forest burning are pest control rather than genocide' and the net effect, as in Western Imperialist discourse, is the creation of an *un-peopled* landscape.

These epics often form a referential framework for contemporary resistance writing in India and Wenzel observes that the burning of the Khandava forest forms the subtext of the short story 'Paddy Seeds' by tribal activist and writer Mahasweta Devi (1990).

Devi's text invokes Khandava in a contemporary context to demonstrate the continuity of the ancient tenets of caste hegemony and violence. In 'Paddy Seeds' a low caste village is destroyed by fire and its inhabitants are massacred in a dispute between two Rajput (high-caste) landlords. As the village burns, Devi's (1990: 169) protagonist Dulan muses on the timeless nature of the scene of destruction,

It was not the first time and would not be the last. From time to time, with the flames and the screams of the massacred leaping into the sky, the lowly untouchable must be made to realise that it meant nothing at all that the government had passed laws and appointed officers to enforce them [...] they must not forget that the Rajputs remain rajputs, the brahmins remain brahmins and the [adivassi and untouchables] remain under their feet.

That this extreme act of indiscriminate genocide (eradicating an entire tribal village) meant 'nothing at all' to the appointed officers of an Independent India indicates a lineage of violent cultural hegemony towards tribal groups that traces an historical arc back to the progenitors of Hindu imperialist brutality in early mythological and religious texts. The effect of this caste violence in Devi's story, as in the tale from the Mahabharata, is that indigenous groups are purged from the natural landscape, creating an *unpeopled* space which becomes a resource under the absolute authority of the dominant castes.

This situation is replicated in the management of India's national parks, where unpeopled spaces are created at the expense of tribal groups. The flagship organisation for the maintenance of wilderness in India is Project Tiger and according to their website,

[The] tiger is [a] symbol of wilderness and [is indicative of the] well-being of the ecosystem. By conserving and saving tigers the entire wilderness ecosystem is conserved. In nature, barring human beings and their domesticate[d] [animals], [the] rest of the ecosystem is wild. Hence conserving wilderness is important and crucial to maintain the life support system... saving tiger amounts to saving the ecosystem which is crucial for man's own survival (Project Tiger website, 2009).

There is an obvious double-meaning inherent in the phrase 'barring human beings'; on the one hand the local population is physically 'barr[ed]' from the reserve and on

the other it sets up a theoretical division that bars humans from being part of nature. It is clear from this statement that contemporary Indian environmental philosophy entirely reproduces a conception of wilderness as devoid of humans (tribal peoples) and seamlessly demonstrates a continuity of representation of un-peopled spaces that began in ancient Hindu texts and was perpetuated by Western imperialist discourse. Curiously despite this segregation, saving the tiger 'amounts to saving the ecosystem which is crucial for man's own survival'. It is clear that wilderness as it is constructed in neo-colonial environmental philosophy has a devastating effect on the local tribal populations who are denied access to land they have occupied for generations. This story of displacement and conflict is repeated across the Subcontinent, leaving marginalised groups homeless, resource-less and criminalised. Ghosh (2005b: 8) notes the scale of the problem,

Today the institutional successor to the colonial Forest Department controls some twenty per cent of India's land surface- a realm that would be the envy of many an Emperor... it continues to wield a near-imperial authority over its vast dominions. The doctrine of Nature's exclusivity has allowed it to pull a curtain of secrecy around India's forests, behind which corruption and exploitation flourish.

This 'near-imperial authority' is the subject of Shalini Randeria's (2007) article 'Global Designs and Local Lifeworlds'. Her study (2007) concentrates on the Gir forest reserve in Gujarat and explores the vast national and international bureaucratic machinery (from state government to global NGOs) that is ranged against the displaced and disadvantaged local population. Randeria's (2007: 17) article repeats the now familiar mantra that the biocentric views of national and international organisations are complicit in imposing and maintaining a hegemonic and neo-colonialist representation of nature as a '...self-regulating pristine wilderness that is threatened by unsustainable resource use and (the) ecologically harmful lifestyle of the local population'. Randeria (2007) offers a rare space in environmental discourse for the subaltern to speak in this overwhelmingly one-sided debate; Chandrasinh Mahida is a local Gir activist and her words eloquently express the ever-present inequity of current ecological thought,

It is better to be reborn as a lion than a human being in the Gir forest. Lions have more rights, better international funding and support. Even the World Bank is

concerned about the decline in the population of lions. The availability of prey and water for lions, their ability to move freely within the forest, everything is closely monitored in order to improve their survival. But the movements of pastoralists and their buffaloes are policed so as to curtail their rights. The people are under pressure from forest officers to reduce the size of their families and their herds (Randeria, 2007: 20).

In his novel *The Hungry Tide*, Ghosh (2005a) dramatises the cultural and physical violence of modern environmental hegemony through his fictional recreation of the mass eviction of settlers from the island of Morichjhapi in an area of Sundarbans under the control of Project Tiger. The island had been colonised by Bangla refugees and because of the international prestige attached to Project Tiger the national government has no qualms about acting forcefully to remove this human aberration from the wilderness. As police and hired thugs rampage outside her hut, Kusum muses on modern conceptions of social and environmental justice, and her words resonate very strongly with those above from Chandrasinh Mahida,

Who are these people, I wondered, who love animals so much that they are willing to kill us for them? Do they know what is being done in their names? Where do they live, these people? Do they have children, do they have mothers, fathers? As I thought of these things, it seemed to me that this whole world has become a place of animals, and our fault, our crime, was that we were just human beings, trying to live as human beings always have, from the water and the soil. No one could think this a crime unless they have forgotten that this is how humans have always lived – by fishing, by clearing land and by planting the soil' (Author's emphasis, Ghosh, 2005a: 261-2).

There are clearly echoes in Ghosh's text of the brutality of Khandava as the forces of civilised society enthusiastically attack the island's inhabitants and destroy their homes. Ghosh reverses the traditional representation of the inhabitants of wild spaces as animals, and accuses *civilised* India instead of being the true 'place of animals', a point that is re-enforced by Kusum's statement that 'we were just human beings' and her subsequent repetition of 'human'.

The erasure of Kusum's village in the name of modern environmentalism completes

a metaphorical and historical journey through the *natural* wildernesses of India, from the ancient Khandava forest to the Project Tiger-owned island of Morichjhapi, that demonstrates the continuous lineage of violent colonial and neo-colonial domination over wild spaces and their inhabitants, and that highlights the need for both environmental and literary discourses to address the inherent inequities within contemporary conceptions and representations of the *natural* world as an *un-peopled* landscape. In an Indian context there is clearly an urgent need to explore and develop a symbiotic relationship between ecocritical and postcolonial thought that forges firm links between environmentalism and social justice, re-evaluates the concept of wilderness and the practice of wildlife preservation, and that ultimately seeks to fulfil Huggan and Tiffin's (2007: 6-7) proposition that it is time for,

A re-imagining and reconfiguration of both the nature of the human and the place of the human in nature – that is, a postcolonial environmental ethic [that] necessitates an investigation of the category of the 'human' itself, and of the multiple ways in which the anthropocentric construction has been, and is, complicit in racism, imperialism and colonialism, from the moment of conquest to the present day.

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