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Conceptualising and measuring children's time use:
A technical review for YL

Pia Vogler (University of Oxford)
Virginia Morrow (University of London, Institute of Education)
Martin Woodhead (The Open University

Young Lives
An International Study of Childhood Poverty

Contents

Summary

This paper reviews interdisciplinary research on children's time use.[1] Following the introduction, Section 2 sketches the broad historical and socio-cultural context for time-use studies, recognising that *how* childhood has been variously understood affects the valuation of children's activities, roles and relationships and the ways they are experienced. It will become clear that differing views about children's 'proper' time use have coincided with powerful assumptions about children's roles throughout history, and the 'value' of children's time. We offer a selective review of studies addressing time use from a range of disciplinary perspectives, in order to highlight how the use of time is not only associated with economic value, but also socio-cultural values. Whether or not certain children's activities are considered permissible, acceptable and appropriate by adult members of society largely depends upon how these activities fit into local value systems. Section 3 briefly explores subjective dimensions of time use, drawing on contrasting paradigms for studying how far children perceive time differently to adults. This question is addressed from a developmental psychological and social constructionist perspective. Finally, Section 4 offers an overview of research methods that have been utilised in studies of children's time use. This review is not exhaustive of methods in time-use research, but is intended as a summary resource for YL and other child researchers.

1. Introduction

In recent decades, children's time has become a global commodity, fought over by a range of international and national policy-makers (Stephens 1995). Ambitious global social policies construct particular views of 'childhood' and in so doing they shape how the world's children spend their time. Most notable among these are the United Nations Convention on the Rights of the Child, the Millennium Development Goals and the Dakar goals comprising Education For All. Major international organisations are vocal in advocating the elimination of particular childhoods and the promotion of others, for example, the International Labour Organisation's progressive efforts to eliminate the worst forms of child labour, and the World Bank's advocacy for early childhood education programmes (Woodhead 2007; Penn 2002). Debates and policies launched by powerful global institutions are having profound effects on children's lives, changing the way they, their families and communities think about childhood and what they imagine to be appropriate time use for children.

These debates about how children spend their time are only one expression of the centrality of time in the study of childhood. The concept of time is structured into the very heart of childhood and youth, with different aspects taken up by different research disciplines. The fact that children inevitably change with time is the starting point for the developmental paradigm in child research, the study of how humans develop through childhood and through the life course, including how they acquire a personal understanding of time. The historical, social and cultural dimensions are also crucial. Childhood and youth are themselves time-bound concepts, and maturational time runs alongside and interacts with the global march of chronological time. The value and use of children's time changes as they make transitions

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through various life phases (Vogler et al. 2008). In many cultures, girls often enter adulthood before boys, at puberty and marriage, with accompanying changes in expectations and roles. It is also important to note that in many, if not all, societies there is far greater control of girls' time use than boys', especially after puberty, due to concerns about controlling their reproductive behaviour and offspring (Reynolds 1991 in relation to Zimbabwe). The content of children's activities is intimately linked to the values and power relationships within households, institutions and communities. The ways these activities and relationships are structured by time is a core issue in the study of childhood. In contexts of poverty and other adversities, economic pressures may constrain and structure children's time use to a considerable degree. For rich or middle-class children, time may be even more constrained through containment in schools and in homes (as opposed to on the streets). On the other hand, for many children who work, this can be a form of liberation from oppressive adult rules and norms (Liebel 2004).

Broadly speaking, research about children's time in Western/developed/minority countries has focused on children's time use as a way of controlling children's time. A broad set of distinctions in conceptualisation of children's time has emerged between rest (sleep), leisure or play, work and education. These distinctions have become objectified in child development textbooks and globalised within institutional understandings of 'play as the work of childhood' (Woodhead 1999a, 2002). But these are normative (and frequently idealised) constructions of childhood that frequently bear little relationship to local beliefs and values, and even less to the realities of children's lives and experiences, especially when applied to children in developing country contexts where children may 'play' whilst at work (Reynolds 1991; Punch 2000, 2001a), and where they learn about work through 'playwork' (see Briggs 1990). They have also tended to homogenise childhood, failing to acknowledge differences, for example that girls' time is often far more controlled than boys' time, and that therefore time is highly gendered.

Concerns about children's time use are often closely linked to specific spaces, locations and institutional settings. Homes, schools, workplaces and playgrounds provide relatively well boundaried contexts for children's lives, but children often colonise less readily regulated spaces - notably 'hanging out' on street corners and shopping malls in modern urban environments. Specifically, such places afford greater agency in use of time and are freer from adult control, which is why adults work so hard to try and control what children do on the streets (Cunningham 1991).

Preoccupations about controlling children's time have always had a strong basis in particular moral values and assumptions. The biggest fears are, firstly, idleness and of children being out of control and becoming criminal; and secondly, time spent by children communicating with and being influenced by people other than parents, who are believed to be the prime (or, together with school, the sole legitimate) moral authority in children's lives. This is the anxiety underlying children's use of the internet. Of course, these are first and foremost Western preoccupations about childhood and about the control of children's time. Research with children in other global contexts, especially in the poorest countries, has tended to focus on children's involvement in a range of economically significant activities that may conflict with their capacity to attend school. The starting point for such research has all too often been that children's work not only undermines their schooling, but is also intrinsically dangerous/hazardous for children's 'healthy development' (Woodhead 1999b, 1999c).

The constructed status of these definitions of a 'healthy childhood' is revealed through historical research. Once again, questions about children's activities, the influences on how they spend their time and how they develop are central. Put simply, prior to

industrialisation/urbanisation in England, it was expected that poor children would work to avoid idleness and delinquency, as well as to contribute economically (Cunningham 1991). Children who were 'trouble makers' were assigned to work. But having a compliant and competent workforce became the central project of industrialisation and this resulted in a shift in values, with a desire to get children into school and keep them out of work. By the end of the nineteenth century, concerns about the welfare of poor children in England had shifted to prioritise schooling over work and accordingly attention was focussed on children's time use outside of school, particularly on activities that conflicted with their capacity to attend school and be effective learners. Very soon, 'leisure-time' would emerge alongside work as a potential threat to a well-schooled childhood.

By the middle of the twentieth century, research concern around children's use and misuse of leisure time had itself shifted to ask, for example, whether too much time was being spent watching television (Pecora et al. 2006) and then later in the century, playing computer games (Vandewater et al. 2006; Cummings and Vandewater 2007) or communicating on the internet (Lee and Chae 2007). Other more recent concerns have been about too little time being spent in physical activities (Mulvihill et al. 2000) or the amount of time spent with fathers after parental separation (Yeung et al. 2001).

This review takes these multiple perspectives as a starting point for reviewing selected research methods. The concept of 'time use' is conventionally understood as a framework for studying the organisation of daily lives. Children's time use can be studied using quantitative as well as qualitative methods, and can yield data about actual time use as well as subjective dimensions of time, exploring what particular activities mean to children and how they feel about their activities. Studies of time use are frequently embedded in wider research projects, for example about changing constructions of childhood; about the ways children's lives are shaped by institutional policies, structures and practices; about the impact of parental beliefs and values; and/or about children's individual and collective agency and expectations for their own childhoods. Cross-sectional studies typically reveal patterns of time use within a specific time interval, for example, hours in a day, or days in a week. But use of time can also be studied from a life-course perspective, especially through longitudinal and developmental research. The focus of longitudinal study is on how patterns of activities and relationships (and associated beliefs, values and capacities) change, what influences these changes and how they are experienced by children themselves. In this respect, time-use studies are closely linked to studies of childhood transitions, in terms of both everyday transitions in roles and activities, and of major life course transitions, including institutional transitions and associated status passages (see Vogler et al. 2008 for a review of transitions research).

2. Constructing childhood: the value and use of children's time

Perceptions of the value of children's time use are linked to generational power relations within a given society. In this section, we draw attention to historical discussions on children's time use, with a specific focus on England. These debates illustrate how the values associated with children's activities are intrinsically linked to social understandings of children's roles. They also point to the emergence of a dominant narrative about children's

time use in England, and more generally within Western societies. This narrative has become increasingly authoritative in fostering current mainstream understandings of the value of children's activities, and importantly, is becoming globalised as a dominant discourse about childhood. The key features of the discourse are that childhood is a distinctive phase of life and that children differ from adults in their needs and capacities and according to the ways they can and should spend their time. Accordingly, children's activities – and their use of time – are increasingly separated from adult activities, especially through formal schooling.

Social historical research on children's time use reveals that concerns about children's 'misuse' of time – as much as about their positive use of time – have shaped emerging discourses, especially a concern about the risks of 'idleness' (Cunningham 1991; Cunningham and Viazzo 1996; Wagner 1982; Zelizer 1985). Throughout this discourse, 'idleness' was not merely related to slothfulness. Instead, it appears that evocations of 'idleness' have served as tools to make moral judgements about the appropriateness of particular forms of time use according to certain age-group and gender distinctions. Therefore, competing evaluations of time use inform conflicting values of differing stakeholders and hence the power relationships pervading historical periods and societies (Bourdieu 2000: 320-1; Cunningham 1991: 95-7; Fabian 2002: 17). For example, Cunningham's studies exploring changing ideas about children and childhood in Britain from the seventeenth to the twentieth century demonstrate how ongoing redefinitions of 'idleness' (as the opposite of 'meaningful occupation') not only problematised poor children's activities, but have also shaped understandings of 'proper childhood'.

During the seventeenth and most of the eighteenth century, childhood was perceived by the poor as 'a time for inurement into habits of labour' (Cunningham 1991: 3). Schooling existed, but it functioned to prepare children for their predestined futures. It was presumed that children had an economic value for their parents. Filial obedience formed a core value in British society and a foundation of political order. Accordingly, unoccupied or 'idle' children were perceived as a threat to society, potentially capable of undermining state authority. It is noteworthy that 'idleness' referred here to children who were neither subject to the structures of a household, nor schooling or other forms of labour. 'Idle' children were those who gained their livelihood either through begging in urban spaces or vagrancy in the countryside. Children living in the urban streets were perceived as unoccupied, idle and on the verge of mischief. 'Idleness' was believed to enhance the propensity to crime. Street children were described as 'savages', 'tribes of lawless freebooters' and even animals. The association with 'savagery' further extended from the particular case of urban street youth to childhood in general (Cunningham 1991: 128). Strategies were devised to reform these children from delinquents into industrious and morally virtuous members of society, through apprenticeships and schooling (Cunningham 1991: 20-1; Wagner 1982: 3).

Simultaneously, 'idleness' among the working classes started to become problematised as a moral vice likely to engender deviant social behaviour:

> In mature capitalist society all time must be consumed, marketed, put to *use;* it is offensive for the labour force merely to 'pass the time'. (Thompson 1993: 395)

Against the backdrop of this wider societal discourse of exhortation to punctuality and regularity, schools started playing a major role in inculcating time management as a moral value amongst the young. Children continued, however, to work before and after school. It was only at the beginning of the twentieth century that it became widely accepted that children of all classes were an emotionally priceless expense rather than an economic asset to their families (Cunningham 1991: 13; Zelizer 1985).

This new perception of the 'proper' role of children within society paved the way for a particular evaluation of children's time use during previous centuries. As Cunningham demonstrates, this stereotypical narrative revolved around three major themes. These include firstly a romanticisation of children's working activities during pre-industrial times when the young were working within their households and families. Families (together with schools) are the primary legitimate sites of child socialisation, which is why family work was (and still is) tolerated while work outside the home is condemned. Children's work activities outside the family became perceived as problematic during industrialisation when children became separated from their families and employed in factories. Finally, this popular narrative suggests that various reforms redeemed children from their miserable condition by providing structures and institutions that would allow them to live 'proper' childhoods (Cunningham 1991: 221). Thus children needed to be trained in school to become effective industrial workers. This reflected the fact that industrial employment focused on men, who were supposed to earn a family wage that was sufficient to keep a wife and children. This effectively led to women and children being rendered economically dependent on the sole breadwinner, and the exclusion of women and children from formal labour markets. This popular view has been challenged since the mid-1960s by historian Ariès (Ariès 1962) who argues that education was initially developed for bourgeois boys, and only gradually extended to girls and finally to working class children. However, its legacy can be traced both in contemporary child policy (EFA) and programmes as well as to a certain extent in social research on children's activities (Boyden 1997: 202; Levison 2000: 129; Nieuwenhuys 1994: 13).

During the 1970s to 1990s, the time use of the children was explored within the context of child labour debates, often by economists using household surveys gathering data from adults rather than directly with children. Based at the International Labour Organisation, economists Rodgers and Standing produced an important cross-cultural typology of children's activities using the following categories: domestic work (cleaning, cooking, childcare and other domestic chores); non-domestic, non-monetary work (work that takes place within the family); tied or bonded labour; wage labour; marginal economic activities (selling newspapers, shoe-shining, running errands); schooling; idleness and unemployment; recreation and leisure; and reproductive activities (personal care, eating and sleeping) (Rodgers and Standing 1981).

Two key ethnographic studies of children's economic activities published in the early 1990s highlighted marked gender differences in children's time use. Reynolds, in her study of children's work in Zimbabwe, underscores the value placed on boys' and girls' work and suggests that children are almost granted equality with adults (Reynolds 1991). At the same time, social order and norms may restrict children's autonomy. Children negotiated personal freedom, for example through work refusal. By refusing to carry out a particular task, these young persons actually reject an activity which is culturally highly valued, i.e., their working participation. Nieuwenhuys (1994), in her study of children's daily activities and routines in a village in Kerala, India, emphasises that

> for the poor, gender and age are crucial in the household's division of labour and are closely linked to the perceived value of a member's contribution… it is their being allotted tasks that are not valued in monetary terms that makes for children's work, and in particular girls', to be held in low esteem. (Nieuwenhuys 1994: 27)

Reynolds' and Nieuwenhuys' studies used a range of methods to explore children's work, including data gathered from children themselves in the form of conversations and diaries. This tradition continued through the 1990s and revealed further evidence about the amount of time children spend on their activities (see, for example, Bass 2003, 2004; Kielland and Tovo 2006; Robson 2003). For example, in a comparative study on working children's

valuation of their activities, Woodhead found that most children's attitudes towards work concur with their perception of their parents´ attitude. Many children indicated that they do not mind working, provided their activities are valued by others and allow for the projection of change in regards to the future:

> Whether young people are affected positively or negatively by their work experiences depends on their personal vulnerability, which is in turn mediated by the economic, social and cultural context of their work, *especially the value placed on their economic activity.* (Woodhead 2001: 93, emphasis added)

According to Ennew (1994), the condition of children not being 'full' wage earners in adult terms engenders a devalorisation of their labour contribution and ultimately their exclusion from valued social roles (Ennew 1994: 142-3). At the same time, in Western societies, there is unease about children and young people 'wasting time'. Ennew further argues that this adult concern (and often ignorance) of children's time use serves as justification for adult control over children's time, in the name of the socialisation process. She draws attention on the linkage between 'time', 'value' and 'activities', and emphasises the need to explore how children themselves experience and use their time. Furthermore, research has long ignored children's work outside school in contemporary industrialised societies (Ennew 1994: 132; Morrow 1995: 207). Moreover, since most of their jobs are informal working arrangements, they are not measured in official statistics (Wintersberger 1994: 241). In national census data, children/people are generally defined as workers only if they are in full, formal wage employment. If they are registered at school, they are defined as school pupils, even if they rarely attend; if they work informally or within the family they are defined as 'inactive'. The implications for (mis)understanding children's time use are very great. Finally, children's work is rendered invisible – especially the work of girls, which tends to focus on the domestic, unpaid sphere or on so-called 'reproductive' rather than 'productive' work – because the working activities of children do not fit into modern understandings of childhood.

Research underscores the fact that the value of children's time is intrinsically linked to the wider socio-cultural context in which children's activities take place. In this view, wage earning is not the only means by which activities are valued, especially in those societies and communities that – despite the global effects of capitalism – engage in household economies which depend on task performances by individual household members. Therefore, scrutinising children's time use can elicit information on the valued activities within a given community, as well as on the power relationships underlying these values. Conversely, a thorough understanding of these sometimes conflicting values is indispensable for evaluations of children's activities.

Punch (2000) explored four aspects of children's everyday lives in rural Bolivia, namely, work, school, home and play. She found that children's time use is largely structured according to the extent to which adults depend on them. However, the study also revealed that, within this set of responsibilities and obligations, children manage to bargain and negotiate their use of time and space through a variety of strategies. For example, they often used errands and other tasks as opportunities to meet up with and play with their friends. Also, everyday movements between home and school provided time and space to indulge in play (Punch 2000, 2001a). Punch emphasises that children's choices have to be understood against the background of their various life arenas. For instance, the decision to stop attending school in favour of entering the labour market may be understood as 'logical' through a grasp of household dynamics. Indeed, more than in Western societies, household relations in developing countries are marked by a high degree of interdependence between children, their caretakers and other household members. Punch (2001a) also makes an

important point about gendered time and how sibling composition and birth order may disrupt gender roles.

The concept 'negotiated interdependence' emphasises interdependence as relative in relation to particular needs arising at particular times and contexts (Punch 2002: 130-1). This may be compared to Western children's rebellion through absenteeism from school, the institution that embodies a major developmental goal – formal education – in industrialised countries. Formal education has been described by Jens Qvortrup as 'children's work', which is precisely what it is, especially given its increasingly compulsory nature (Qvortrup 1994).

In summary, concern about children's use of time has a long history. Recent theoretical shifts in childhood studies have meant that children's time use has been included in research, but it is important to note that contemporary debates are still dominated by anxieties about children's time use and how labour may conflict with education.

3. Children's subjectivity and conceptualisations of time

This section discusses how children conceptualise their time, and more particularly whether or not children conceptualise time differently to adults. Two very different approaches are briefly summarised: firstly, from developmental psychology, and secondly, from social constructionism. Understanding how children understand and represent time, and their capacities for making time-use judgements can inform design and interpretation of research methods in this area.

Developmental psychology

To adults, the concept of time can be complex and obscure, so how do infants and children begin to understand the concept of time? Within developmental psychology, Piaget's attempts to answer this question have been hugely influential (Burman 2007). In his book *The Child's Conception of Time* (1946) Piaget distinguishes 'physical time' from 'psychological time'. However, it is important to note that developmental psychology has focused on children in very time-conscious industrialised settings (Gell 1992), where physical time has a very precise meaning and great importance (Postill 2002).

Piaget studied children's understanding of physical time by asking them to judge the motions of external objects, such as the time taken for a moving object to cover a certain distance. According to Piaget, young children (at the preoperational stage of development, around 2 to 7 years) do not have the logical capability to understand the effects of speed on duration and so they make judgements about duration solely based on how far a moving object has travelled, equating greater distances with longer durations.[2] Piaget was gender-neutral in his analysis, which is one of the factors that has resulted in gender-blind thinking around

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2 Piaget distinguishes four stages in children's ontogenetic development: the sensorimotor stage (birth – 2 years), the preoperational stage (3-6 years), the concrete operational stage (7-11 years) and the formal operations stage (11 years and up). Learning starts at the sensorimotor stage. An important milestone occurs when infants realise that objects or persons exist even when they cannot see them. During the preoperational stage, egocentrism characterises children's reasoning. Children have the tendency to perceive and relate to the world only from their point of view. Single experiences may cause children to draw generalised conclusions about their environment. (Mooney 2000: 68-78)

children's time use and childhood roles more generally. Psychological time on the other hand is how the child subjectively views time. For instance a child will often hear her parent say 'we will go out to the swings in a minute', or some such similar expression, and the child's subjective view of that 'minute' will vary depending on the length of time that elapses until she eventually gets out to the park. To Piaget the concept of psychological or subjective time involves an understanding of physical time and is linked to the child's understanding of space but is also influenced by children's experiences of how time is managed and talked about at home.

Children's understanding of time begins as they start to recognise temporal order. Piaget gives the example of a young child who is looking for a lost toy. According to Piaget's model of stages, a young child in the sensorimotor stage (under about two years old) may look randomly into each room of the house, but as they get more cognitively sophisticated, they plan the hunt to cover rooms only in the reverse order of visits, thus showing that the child is using knowledge of the temporal order of a series of events.

More recent research has challenged many of Piaget's conclusions, especially where different methods have been used to assess their capacities. For example, in one of Piaget's original tasks, children were shown a sequence of picture cards as they heard a story. Subsequently the cards were shuffled and the children were asked to put the cards in order and re-tell the story. Children below the ages of 7 or 8 years old were unable to carry out this task as they muddled up the details of the story and placed the cards in the wrong order. However, other researchers have argued that basing the task around unfamiliar stories may not be the best method to test children's understanding of sequential events. O'Connell and Gerard (1985) used short sequences of familiar everyday events, such as bath-time where a teddy got into a bath, washed himself and then got out and dried himself. While discussing the sequences children were asked to imitate the actions of the teddy. O'Connell and Gerard found that children as young as 24 months old could imitate the sequences fairly successfully. This study demonstrates even quite young children are able to understand and represent temporal order, but only if the context and methods are familiar and salient to them.

Developing this idea of saliency within the computer age, Panagiotakopoulos and Ioannidis (2002) used multimedia to assess young children's understanding of basic time concepts such as simultaneity, temporal order, concept of development etc. The performance of two groups of children, one pre-school (4 to 5 years old) and one school age (5 to 6 years old) was compared using conventional methods such as picture cards (as used by Piaget) versus multimedia presentations of the same tests. To test temporal order or sequencing of events, children were shown pictures of a wall at various stages of construction. To test the concept of development, children were shown four pictures of swallows at various stages from eggs in a nest to the fledglings leaving the nest. Children in the multimedia group produced more accurate responses than the conventional methods group, and this difference was enhanced when the stimulus involved movement and when sound information was also provided. The reason given for this improvement was that the children had understood the task better and thus were better able to make a judgement about the various facets of time. These findings reinforce the critique of Piaget's methods. It may not have been that the children were incapable of understanding abstract time concepts. Instead, the task, the way it was presented and the materials used may have caused difficulties. This has particular importance for research with children on aspects of their time use, as children are more likely to be able to make judgements about familiar experiences presented in a grounded way.

The same principle of saliency applies to children's understanding of the relationship between time, distance and speed (homogeneity of time), as in Piaget's studies of physical

time, mentioned above. For example, Piaget presented a 'race' between two mechanical toy snails moving at different speeds across the same distance. Children were subsequently asked whether the snails had raced for the same amount of time or not. The young children in Piaget's study (under 7 or 8 years old) judged time only by the distance that the snail had travelled, whereas the children older than 8 years old took the speed of the snails into account when making their decisions. When Panagiotakopoulos and Ioannidis (2002) presented a similar 'race' between two snails but via animation, younger children (between 4 and 6 years old) were able to respond accurately. The results from these studies do not support Piaget's somewhat rigid stage theories of cognitive development. Even so, young children are necessarily limited in their capacities to construct a sense of time – both their own use of time and the chronology of their lives – but this changes during middle childhood and adolescence.

Two other aspects of children's understanding of time are relevant to this discussion, being prospective and retrospective time (Zakay and Block 1996). 'Prospective time' (sometimes called experienced time) is about the subjective awareness of time passing and is linked to attention. When a person is aroused (for example being involved in an exciting football match), more attention is given to the task at hand, so that the event is viewed as being longer. This perception is reversed in an opposite set of situations. In order to assess prospective time judgements, researchers ask participants to complete a range of tasks of varying interest and challenge, who are then asked to estimate how long the tasks lasted. Distraction has been found to be a further influence on time estimations. Zakay (1992) found 7- to 9-year-old children increased their estimate of the length of time that a light bulb was switched on when they were also asked to attend to another simple task. 'Retrospective time' (sometimes called remembered time) is more dependent on memory. Block and Reed (1978) argued that the number of different events that occur within a remembered period will influence its estimation, with a high number of events making the remembered period seem longer.

Applied to children, this would mean that they are likely to underestimate the time spent on a relatively uneventful activity compared with more dynamic and varied parts of their day. Levels of personal interest and motivation no doubt also play into these subjective dimensions of time. For example, if children attend an under-resourced, single teacher school where they are expected to sit passively for much of the day, they may then underestimate the time they have spent at school in comparison to that taken to complete the multitude of household tasks they have undertaken, such as feeding the chickens, getting the water, etc. Time spent meeting with friends or playing football may be overestimated because of its personal salience.

As a general rule, young children soon learn the regular sequences in a day or week, such as the routines at home and in pre-school and school. They also order the days of the week and months of the year. However, for the younger age group this may be merely a chain of named events rather than an understanding of these events within a linear scale of time, measured in hours, days, weeks, etc. Friedman (1991: 102) describes young children as being able to conceptualise 'brief slices of time' which grow in adolescence to a more sophisticated understanding of prospective and retrospective time. However, the significance attached to time and the ways it is understood are also strongly influenced by cultural factors, especially the ways children's daily lives are structured, the values placed on time, and the extent to which time dominates interpersonal, household, school and community relationships. For example, you are waiting for a friend to come to a meeting at 12 noon but they do not appear, how long will you wait? This question was asked by Triandis (1994) to show the cultural differences towards the importance put on time. Classic work by Doob

(1971) drew attention to how time is more structured in industrialised societies, as the activities of individuals within these societies are more dependent on other people to accomplish their own goals, with people in Japan most concerned with time followed by Europeans and Americans, but with time appearing less salient in less industrialised societies (Levine and Bartlett 1984). In answer to the question asked by Triandis (1994), people living in industrialised societies will not wait as long as those in less time-structured societies, with people living in small towns waiting longer than those in cities, and people living in societies without telephone access returning to the same place the day after in case their friend muddled the meeting date up.

However, there is a risk of oversimplifying, and indeed stereotyping, the cultural and psychological significance of time as it affects children's lives and their temporal understanding. Gell (1992), in his classic study of the anthropology of time, is more critical: he suggests that a cross-cultural analysis reveals the culturally-bounded nature of Piaget's theorising and suggests that 'it is not possible to extract from Piaget's work a working theory of cognitive universals of time' (1992: 116).

With the increased global access to modern technologies, television, internet and especially mobile phones, even in isolated communities, temporal structures may take on greater importance (Brislin and Kim 2003). But, interestingly, the internet and other global media are also a way of moving out of conventional time and structured time zones, allowing communication across different time zones. For children, growth of global access to education is especially salient since schools are strongly time structured both in terms of daily activity – arrivals and departures, timetables and break times – and annual progression through classes or grades, based on children's chronological age. Interestingly, Piaget speculated that children's understanding of time concepts is accelerated after entering school (at around six years in most of Europe), where they are expected to arrive 'on time' and their day is divided into 'periods' of time where they are learning, playing or eating, often marked off by a school bell or some other audible signal. Time thus becomes a more concrete construct. However, in recent decades patterns of care for young children in industrialised societies have changed, with increasing numbers going to nursery or child care outside the home from an early age, in some cases before they are one year old, and the vast majority having some pre-school education experience before school entry. In light of these earlier transitions to more time structured settings, it would be interesting to revisit Piaget's work to ascertain whether children gain a construct of time much earlier in the twenty-first century.

Social constructionism

Social constructionism emerged during the 1970s when a wave of critical, deconstructing phenomenology started to compete with structural sociologies. To describe a phenomenon as socially constructed, 'is to suspend a belief in or a willing reception of its taken-for-granted meanings' (James, Jenks and Prout 1998: 27). So, as James, Jenks and Prout point out,

> While we all know what children are and what childhood is like, for social constructionists this is not a knowledge that can reliably be drawn on. Such knowledge of the child and its lifeworld depends on the predispositions of a consciousness constituted in relation to our social, political, historical and moral context. In their explorations, then, social constructionists have to suspend assumptions about the existence and causal powers of a social structure that makes things, like childhood, as they are. Their purpose is to go back to the phenomenon in consciousness and show how it is built up. So within a socially constructed, idealist world there are no essential forms or constraints. Childhood does not exist in a finite and identifiable form. (James, Jenks and Prout 1998: 27)

In other words, childhood is socially constructed, in that childhood has different meanings and children have different roles and undertake different activities in different historical periods and in different cultures. This is further differentiated according to class, gender, ethnicity, religious and cultural background. From a social-constructionist perspective, Prout and James (1997) and James, Jenks and Prout (1998) pose the critique that social research on children has focused too much on childhood as a period of *becoming*. This teleological perception of children in relation to their future adult status has hindered considering them as social agents who make sense of their own worlds. Consequently, these scholars argue for the importance of capturing children's own experiences of childhood by asking what *being* a child actually means (James, Jenks and Prout 1998: 6).

Other authors working with the social-constructionism frame highlight the need to examine the dynamics of childhood more closely – in other words, the temporal dimensions of growth, flux and change (Kovařĭc 1994; Neale and Flowerdew 2003: 195). In particular, these authors call for more in-depth explorations of the texture of childhood as perceived by children themselves on an everyday basis, as well as more studies on temporal aspects of children's agency, since the 'condition of childhood is best understood when it is captured out of the immediacy of children's subjective experiences' (Neale and Flowerdew 2003: 196). Looking at the dynamics of childhoods here means an exploration of the way children are 'navigating their way though their childhoods'; how children define their own development, age and generational grading. Furthermore, such studies would ask what kind of meaning children attach to changes in their lives, thus exploring whether the moral risks identified by adult society (such as parental divorce in industrialised countries or poverty in developing countries) are also perceived as hazards by children themselves (Neale and Flowerdew 2003: 196).

Social constructionist perspectives also emphasise gender and social class differences. Blanchet's study of children and domestic work in Bangladesh suggests that working-children/low caste children leave childhood at the commencement of work (around 6), while middle class school children remain children for far longer (until puberty) (Blanchet 1996, see also Bissell 2003).

Within the UK, this new perspective has engendered and continues to stimulate research upon children's lifeworlds (for example, Christensen and James 2000; Christensen, James and Jenks 2000; James and Prout 1997; James 2005; Mayall 2002; Punch 2001a, b). In a recent study on the time use of 10-year-old working class children in northern England, Allison James and Pia Christensen explored how children subjectively perceive their ageing selves (James 2005: 253). They asked children to locate important events in their lives on time lines. They found that while most children experience difficulties in envisaging the far-away future, when they did imagine it, they did so by virtue of depictions of rites of passage, such as weddings. For example, children would describe changes in birthday parties or routines relating to school and their feelings in relation to these shifts of family practices (James 2005: 261-2). This shows that children attribute meaning and value to events in their lives, reflecting upon and forming narratives about their own lives.

In summary, developmental psychological research based on Piaget's work about children's conceptualisation of time emphasises the ways in which children's grasp of time changes as they pass through various stages. Social constructionist research with children emphasises children's agency and the importance of understanding context in research with children about time.

4. Studying children's time: methods and frameworks of analysis

In a key paper, Ben-Arieh and Ofir (2002) provide a useful review of time-use studies in relation to children and identify a number of methods that have been used, which we draw upon below. They suggest that

> an examination of children's activities and patterns of time use will highlight their participation in society, as individuals and as a group. Such information will reveal the pattern of childhood in particular societies, thus allowing international comparisons, and expose the differences between groups of children within the same society … Secondly, it raises the visibility of children as contributors to, as well as recipients of, social resources (Ben-Arieh and Ofir 2002: 225-6).

Ben-Arieh and Ofir (2002) identify the following methods that have been used in the study of children's time use: time budget studies, observations, on-time self-reporting (including self-report diary methods and experience sampling methods) and recall self-reporting. They do not, however, discuss creative methods or participatory approaches to the study of children's time.

Most studies on time use have been conducted with adults and have taken place in industrialised countries, within the field of economics or economic sociology. Due to these geographic limitations, a particular method seems to prevail: time budget studies. These have their origins in the 1920s Soviet era and consist of measuring everyday activities in a detailed and consistent manner. Belgian time-use researchers Glorieux and Elchardus note that, 'A minimal time budget consist of three series of data: the kind of activities that are undertaken, when these activities take place, and for how long' (Glorieux and Elchardus (1999: 1). They call attention to the need to explore the meaning that an activity has to the person performing it in order to understand motivation and evaluation. Conversely, few developing countries have produced quantitative data on the time use of their population in a way demographic surveys have done in the US or the UK.

The time diary method asks participants to record detailed information on the temporal sequence of their activities in a diary they carry with them throughout the day. Recently, there have been attempts to utilise statistical data about children's time use in research about the relationship between children's educational attainment and children's work roles. Hsin has explored Indonesian children's time use, labour division and schooling (Hsin 2006, 2008) using data derived from a longitudinal study of 4,662 households in Central Java that began in 2002. The study asked children over the age of 8 (to age 18) to complete time diaries of how they spent the previous 24 hours, (an adult member of the household completed diaries for 8 and 11 year olds). Nearly 3,000 children produced data. The time diary data was combined with detailed demographic information about the characteristics of the children and their households (Hsin 2008:1297). Hsin analysed the time diary data according to four mutually exclusive categories: market labour, non-market labour, schooling and leisure.

Other studies have been less successful in using time diaries with children in developing countries. Comaraswamy (1998) describes a Women Headed Households income-generating project in Eachchantivu, Trincomalee District, part of a child-focused development programme in Sri Lanka. She reports:

> The older children… have actively assisted their mothers in setting up and helping in various tasks related to their small enterprises. An older children's group has been formed, with one child from each of the WHH families. As a possible method of monitoring the progress of the family activities, these children, with the exception of one 8-year-old, began maintaining diaries. This ended when children lost interest and the process became cumbersome. (Coomeraswamy 1998: 163)

A report from the Regional Working Group on Child Labour (RWGCL) (2000) on methods of surveying child labour found that a

> survey experiment based on a time use module [sic] was not successful for the purposes of investigating children's activities and the intensity of their work. Even when presented with a long list of economic and non-economic activities, many children could not recall the activities in which they had been engaged during the 24 hours preceding the day of the survey. And even when they were able to identify the activities, they had little recollection of time spent on each. Most children seem to remember only those activities which they most like, especially those in which they made good earnings. In most instances, it was difficult to consult the children themselves, and approaching proxies for this purpose was found to be futile since they could not account for the children's daily activities or their time allocation on each. (RWGCL 2000: 109)

The authors suggest that 'better quality data may be obtained if the investigators or interviewers spend time in the area where children can be found and interact with them and/or observe them throughout the day' (RWGCL 200: 109).

Eva Poluha (2004), in her ethnographic study of children's daily lives in Addis Ababa, used diaries in conjunction with interviews to explore children's time use. She asked 20 children 'of different ages' (39) to write a diary for one to three weeks with varying results, and was able to use what they had written as a basis for more in-depth interviewing. She also notes that

> in their diaries, the children made very little mention of the work they carried out outside the school during the day. The many daily responsibilities they had been given and also taken upon themselves were only revealed to me when I started cross-questioning them in relation to the diaries. During the interviews I learnt that they had tasks and responsibilities not only at home but also that some worked to earn money for their subsistence. The fact that none of this was mentioned in our talks or the diaries may be a sign of their taking these tasks for granted. Since so many were surrounded by poverty and work and money were a perpetual topic in their homes, it seems possible that the children took it for granted that they contribute with whatever they were capable of. (Poluha 2004: 45)

Problems associated with the on-time diary are the need for literacy, prior instruction of participants, and the tendency of participants to exclude activities perceived as embarrassing. They also take up time and the onus is on research participants to complete their diaries. Very often, too, people 'multi-task', perform two or more activities simultaneously, and it can be difficult to capture this. Clearly, time diaries as a method on their own are not adequate to capture the complexities of children's time use.

Ben-Arieh and Ofir (2002) suggest that the experience sampling method is considered by some as a technical improvement of the diary method. Here, children are equipped with pagers or watches usually for the duration of one week. When receiving a signal at randomly selected moments, the children ideally note down the activity they are engaged with at the moment (Larson 1989: 522). This method seems unduly intrusive and disruptive. Ben-Arieh and Ofir (2002) suggest that recall self-reporting methods are also useful. There are two major types of recall self-reporting: first, those studies that ask children to recall their

activities for a chosen period of time by answering a long open-ended questionnaire (or indeed by filling out a retrospective diary). This method is usually referred to as 'recall time budget'. The second method, so-called 'stylised estimates' asks how much time children spent (during the last day/week) on particular activities (Ben-Arieh and Ofir 2002: 236). The advantage of both methods is that children are asked to report on their own activities. They also show how children perceive the patterns of their weeks and the activities on which they lay personal emphasis and value (Reynolds 1991: 87).

Most recall self-reporting studies have used questionnaires, diaries or interviews. In their classic study of children's lives outside school in the USA, Medrich et al. (1982) found that personal interviews were more useful than self-administered questionnaires when researching children's time use. They identified several advantages in regards to interviews. For example, when working with different age groups, the interview allows questions to be formulated in a way that allows children of all ages to understand the questions. Also, children's attention may be held in interviews better than when working by themselves (Meldrich et al. 1982: 30-1). Although generally perceived as valid and reliable, a weakness of interview methods is the possibility of conforming to social desirability by the interviewed child (Ben-Arieh and Ofir 2002: 237).

Retrospective diaries filled out by children proved to be very useful in estimating children's time use. Despite the rather qualitative and subjective connotations of the word 'diary', most of these diaries are quantitative (for example, Bianchi and Robinson 1997). An example of a recent study that asked children to write up their diaries in their own style and language was with 24 'looked after' children aged between 7 and 18 years in Scotland. Aldgate and McIntosh (2006) asked children to write diaries about what they did over a period of 48 hours, including a weekday and a weekend day. Two days after the filling out of the diary, the children also participated in semi-structured interviews. Aldgate and McIntosh found that the time diary data was particularly useful in showing the pattern, duration, frequency and context of children's daily activities (Aldgate and McIntosh 2006: 11).

Questionnaires are usually conducted through stylised estimates by asking the children how much time they spent during the previous day or throughout the previous week on specific activities. Here also lies the disadvantage of the method, as it presents the interviewee with a set of possible answers rather than generating the categories from the answers of the children. However, since the method is relatively inexpensive and only requires one contact per child (in contrast to on-time self-reporting and observations) it is widely used in larger surveys.

Ethnographic methods

In the past 20 years, as noted, there has been a marked shift, particularly within social anthropology and social geography, to develop ethnographies of childhood. These include a combination of observations and descriptions of children's time use, using interviews and other forms of data gathered directly from children themselves. Schildkrout (1978/2002) was one of the first social anthropologists to observe and record children's activities in relation to household tasks in Nigeria. Olga Nieuwenhuys (1994) in her study of children's work in Kerala, describes how she used systematic observations of children

> to map a wide range of activities carried out by children without having to decide a priori whether they deserved to be called 'work' or not. Once we had understood how children's time was organised and, at the same time, had gained a fair knowledge of how the adult world was organised around it, then only did we feel we were ready for the next step, in-depth interviews of selected children. (Nieuwenhuys 1994: 33-4)

Observation methods have been a major tool for studying children's time use within social anthropology. Indeed, during fieldwork with working children in Zimbabwe, Pamela Reynolds suggested that observation is 'the most reliable and comprehensive record of children's work. It was the only way to capture context' (Reynolds 1991:76). Ben-Arieh and Ofir (2002) make a distinction between direct observation with (semi-) participation, and 'spot observation' with minor participation.

Various authors have found that direct observation combined with participation is a valuable technique when combined with other methods (for example, Christensen and James 2000; Punch 2001b; Reynolds 1991). The major advantage of observations is that they free children from recording their own time use. Structured observation can be especially effective for time-use studies. However, full *participant* observation as practiced by anthropologists poses ethical and practical problems when researching children's time use. In particular, the method may distort the behaviour of those observed. More often than not, it signifies a potential imposition on other people's private lives. The success of participant observation also relies largely on building up trust relationships. The method is not only time-consuming, but also very limited to the scope of research participants with whom one can establish and maintain relationships that allow for observation *and* participation (Reynolds 1991: 77-80; Punch 2001b: 176).

Semi-participant observation has been recommended as a feasible technique for researching children's time use and as a realistic alternative to full participation (Punch 2001b: 165). In her research on children's activities in rural Bolivia, Punch stayed for a period of six months in the field, complemented by short-term visits. In terms of methods, she predominantly relied on informal and semi-structured interviews as well as semi-participant observation with members of 18 households. Furthermore, three months were spent engaged in classroom observation and task-based methods in the style of participatory rural appraisal techniques, including drawings and photography by the children, to discover, for example, the range of activities and work done by children.

Punch found that semi-participation allowed her to increase her understanding of children's lifeworlds through observing as well as through practice. By accompanying children on their errands, she could experience how heavy water jars carried by children are, how children find their way in the dark, identify individual animals, and so on (Punch 2001b: 175). Semi-participant observations elucidated children's strategies in negotiating their time use through combinations of chores and leisure activities (Punch 2000). It was also a useful method for discerning the relationships between those who give and receive orders. Finally, the method allows for the recording of multiple-task performances that are often not captured when research participants describe their time use retrospectively (Reynolds 1991: 46).

Despite these advantages, both Punch and Reynolds point at the major disadvantages of constant (semi-) participant observations. These include the limited number of research participants, time taken undertaking the research, the difficulty of comparing individual cases, and the fact that it relies on flexibility and opportune moments during fieldwork.

Robson, in her study of children's work in northern Nigeria, also notes that the studies of children's work tend not to provide 'detailed time measurements of reproductive burdens' (Robson 2004: 6). She spent time in the area before conducting interviews familiarising herself with children's daily lives and activities. She then gathered data from 30 girls and 54 boys aged 6 to 15 years, asking them to recall the activities undertaken the previous day.

The young people were interviewed, usually at home, in their own language of Hausa by the author and a research assistant of same gender, or research assistant alone. The

young people were asked to recount their activities of the previous day in as much detail as possible paying attention to timing and duration of activities. The information given was recorded on a specially designed sheet and later coded for analysis. Each child was interviewed only once. The aim was to identify patterns by comparisons among children, rather than trying to build up pictures for individual children. Thus, it was unnecessary to subject the young people to the demands of repeated interviews. (Robson 2004: 6)

She notes:

recall methods of recording time use are not perfect. Compared with recording time use by direct observation (very costly in research time), recall methods tend to underestimate, or fail to record, certain activities like childcare which are often carried out as secondary and/or passive activities. Thus, children tend not to report 'keeping an eye' on their younger siblings while doing something else, or may fail to mention carrying infants on their backs while engaged in other activities. Children may also forget or neglect to report activities they consider unimportant, taken-for-granted, embarrassing or illicit. (Robson 2004: 6)

Robson also make a valuable point, not often noted in research on children's time use, that, 'By its nature the time use data is a snapshot survey which does not encompass the annual seasonal variations in children's work' (Robson 2004: 6).

Spot observations are a further observation technique. Observations are carried out frequently at unannounced hours. The advantage of spot observations from an ethnographer's point of view lies in the fact that it combines the tradition of participant observation with a more systematic approach to one's observations by choosing beforehand the domains to be observed. Important points in regards to this method include definitions of observational interval, length of fieldwork, sample frequency (in other words, the number of times per week observations are made), sample density (how much context and meaning can be provided), the writing of a code book prior to the observation (and based on preliminary observations, interviews, etc.). The method has usually been applied during daytime hours among people who allow casual visitors. Evenings and early morning hours are therefore easily ignored (Gross 1984: 537-43).

An early example is Munroe et al.'s (1984) comparative study of children's work in Kenya, Belize, Samoa and Nepal. They employed spot-observation of each child participating in their study 30 times over a period of six weeks (Munroe et al. 1984). They found that, 'Even at three years, [children] are performing various chores about 10% of the time. This figure rises steadily until, by the age of nine, they are working during more than one third of their non-school time in the early mornings, in the afternoons, on weekends and during vacations' (Munroe et al. 1984: 369). Similarly, Gross underscores the usefulness of spot observation for studying domestic groups, female reproductive work as well as the economic contributions of children (Gross 1984: 538).

During fieldwork in Bolivia, Punch included spot observation. Her visits to the 18 households allowed her to gradually build up trust and then to conduct cumulative interviewing with different household members. Visits to sample households allowed her to observe the activities of different household members at different times. Repeated interviews allowed her to capture the views of all household members, some of whom had been absent during initial visits. The major disadvantage of this method was its time-consuming character. While some visits took only half an hour, others extended over a waking day. Furthermore, unannounced household visits are likely to be perceived as imposed on participants' time and privacy (Punch 2001b: 176).

Compared with constant observation, this method has the clear advantage of being less intrusive and more useful for larger samples. However, it is problematic in terms of its applicability in settings that do not permit random access. Furthermore, due to respect for privacy, spot observation fails to record children's activities during the very early and late hours of the day (Ben-Arieh and Ofir 2002: 235). Finally, spot observations cannot capture the subjective implications of differing activities from children's points of view. In response to this critique, Gross suggests combining spot observations ideally with other methods such as life histories, content analysis, and so on (Gross 1984: 540).

Creative methods and participatory approaches

James and Christensen (2000) discuss in detail the method of drawing charts. As mentioned above, they carried out research with 10 year olds in urban and rural areas in the north of England, and the focus of their study was on various aspects of children's time use in their everyday lives at home and at school. They asked children to inscribe circles, boxes or lines into simple paper charts. This allowed children freedom to answer researchers' questions about time use, decision making and biographical time. However, they don't explain exactly how the methods were used, which instructions, how many facilitators, etc. Apparently, the method allowed children to express abstract and implicit ideas about how they spend their time. James and her colleagues also found similarities when they invited children to draw their week into a blank circle. Interestingly, most children linked the circle to the familiar mathematical concept of a 'pie chart'. The charts did not impose this structure but nonetheless the children interpreted them according to a utilitarian notion of time (Christensen and James 2000: 166).

In the 'My week' exercise, children were asked to consider a usual kind of week during school term and to tell researchers what they did during such a day and for how long. After initial explanations by the researchers, children expressed themselves through a blank circle on a piece of paper. Children's research participation was also recorded during the process of drawing. The researchers were thus able to reflect upon the content of the final drawings as well as the way these had been produced by children (Christensen and James 2000: 163-4)

Researchers have also found participatory approaches useful when examining children's time use. These have been developed in studies with rural communities where people possess limited literacy. These techniques usually require few resources – just drawing paper or sticks, for example – and ideally allow research participants to express their individual views through shared means – for example, individual drawings on a plain circle. Johnston piloted five participatory activities to obtain data about children's time use in Peru (Johnston 2006: 11-19). These included 'drawings of yesterday's activities', which was found to be especially useful as warm-up activity for 8 to 9 years old children. Worksheets were used with literate children in urban sites to explore activities, how they are valued and the power relationships that cause children to undertake them. The 'what do you do when you are not in school?' activity using cards and buckets involved the children providing answers to that question on index cards either by writing or drawing. This seems to be a very good way of instigating discussion, and most children seemed to enjoy this exercise. Following the discussion, they are asked to order the index cards into buckets that represent domains such as 'working activity', 'leisure activity', and so on. According to Johnston, it is important to involve children in deciding the categorisation of the buckets, since their understanding of 'work' or 'inside/outside' home may differ from facilitators' perspectives. An attempt was then made to ask children to indicate the amount of hours they spend on each activity. 15 counters were distributed, each child receiving counters in a unique colour. Children then had to distribute the counters between the buckets. Johnston highlights the importance of including a discussion about weekends and

holidays after the bucket activity (representing a school day). The activity seems to be less useful for the younger cohort who may have less experience with division and numeracy. Also, it may be better to let children allocate their counters without others watching them. Johnston also recommends establishing a way to validate the method since it was not clear whether children's distribution indeed stood for time spent on activities or other factors, such as importance ascribed to this activity. Johnston also piloted ranking exercises but found them less useful for the study. Instead she suggested a modification by using a given pair of buckets and by making children indicate which of these general activities (e.g. 'school' and 'domestic chores') they prefer. Since children were asked to get up and move towards the bucket representing their preferred activity, the exercise was enjoyed by many children.

Within participatory approaches, involvement of research participants does not halt with data collection but extends to the process of data analysis and dissemination. For example, Beazeley and Ennew (2005: 191) note that the main principle of participatory approaches is that 'the people whose lives are being studied should be involved in defining the research questions and taking an active part in both collecting and analysing the data'.

In summary, utilising a combination of methods, particularly observations combined with direct data gathered with children, seem to have proved useful in researching children's time use. It is now widely accepted that children themselves have valuable insights into their everyday activities, and that their accounts and descriptions should be a key source of data about their daily lives. The onus is on researchers to derive the most suitable and effective methods of doing so.

Analysing children's time

Having gathered information about children's time use, how have researchers analysed their data? Chin and Phillips (2003) have suggested a framework for the analysis of children's time use. Their approach is Western, and is mainly about 'play' and leisure activities, concerned with (for example) the detrimental effects of too much TV watching on children's development. They based their study on ethnographic data on 10 and 11 year olds' free time use. They suggest that instead of simply

> categorizing children's activities according to type (e.g. watching TV, reading, skateboarding) research on time use can more accurately capture the variation in children's activities by measuring the intensity of activity, the extent of peer involvement, the extent of adult involvement, and whether the activity takes place in a typical or atypical setting for the child. (Chin and Phillips 2003: 149)

In other words, they suggest exploring not just what children do and how long they spend doing it, but the relationships involved in children's activities – asking who else is doing it with them, and so on. For example, recent research about children's work and child labour (Bass 2003; Kielland and Tovo 2006) also explores in some depth how children experience and feel about their work activities and the amount of time they spend on their work. Children may be undertaking economically important work, but doing so alone. They may not like this kind of work, of which cattle- or goat-herding is a typical example.

> Children often end up doing work that adults don't like. Herding is a typical example… it is a lonely and tedious job… In rural areas of Botswana, one of Africa's main exporters of beef, boys between 10 and 14 years spend an average of almost seven hours a day, and even younger boys put some five hours a day into herding. (Kielland and Tovo 2006: 71)

A framework for analysis that identifies the categories of intensity, the relational element of children's time (who the children are spending time with), and whether the time spent is typical or atypical, could be useful in exploring the meaning and value of children's time use.

5. Conclusions

This paper has examined interdisciplinary research on children's time use. The current literature has been grouped in three major themes: children's time use and the value of children's activities; children's subjectivity and conceptualisations of time from differing theoretical perspectives; and thirdly, methods and frameworks for researching children's time use. Conventional studies of children's time use have corroborated the imagery of labouring – and thus exploited – children in non-industrialised countries and non-working children in the industrialised world, and have been conducted using quantitative methods. On the one hand, there are studies in which researchers evaluated existing statistical data. On the other, there are time budget studies in which adults are consulted about children's time use. These studies have mostly been conducted in industrialised societies where national statistics are available and the practice of quantitative surveys is an accepted way of undertaking research. By contrast, research on the time use of parents and children in non-industrialised countries has been comparatively scarce. However, since the 1960s, children's time use in non-industrialised communities has received increasing attention within child labour debates. Operating mostly with a quantitative methodology, these studies give little information about children's (working) activities without monetary value though, as we have noted, this is changing (Bass 2003, 2004; Kielland and Tovo 2006, for example).

Whether in industrial or agricultural societies, it can be said that conventional quantitative time-use studies have rarely paid attention to children's views about the value and meaning of their activities. Instead, it seems that these studies have largely been driven by moral judgements about the harmful effects of child labour (in non-industrialised countries) or particular leisure forms, like watching TV (in industrialised countries) on child development. The Young Lives project is an exception in the inclusion of child interviews with samples of 2,000 children across four countries, including children as young as eight (www.younglives.org.uk).

Inclusion of children as key participants and social actors is the continuation of a trend begun in the 1980s, as research in anthropology and sociology started to pay increasing attention to children's subjectivity and agency. Once recognised as social actors, children have also become potential research participants. Thus, social research has increasingly made efforts to explore children's lifeworlds and time use. The suitability of qualitative research methods has been explored with children, and researchers are increasingly willing to design methods for child research participants. This shift in methods and the perception of children as valuable interlocutors has generated time-use studies that offer insights into children's everyday lives. Research thus goes beyond the stereotypes of non-working children in the industrial world and labouring children in developing countries. In Europe, social science has shown that children in fact are engaging in labouring activities before, during and after school. Anthropological research has revealed that 'poor children' are not necessarily exploited victims, but that most children in rural parts of the world do have (some) agency in negotiating their time use. Yet very little research exists about the daily time use of children in non-industrialised countries. Furthermore, studies about the time use of very young children, and the methodology best used to explore this, are needed. Research has so far tended to engage mostly with children around 10 years of age and above, and much less is known about children's daily activities in early and middle childhood.

Studying children's daily time use will provide important background information to assess aspects of children's well-being, as well as their experiences of life-course transitions. By looking at how social characteristics affect children's time use we can see how children's activities are shaped by structural constraints as well as by their own decision-making. This, in turn, sheds light on how adults, children and others negotiate their roles in a given society. Examining the values attributed to children's activities may elicit information on divergent views among children and their caregivers. On the one hand, we may examine the economic value of children's activities by focusing principally on their contributions to household and/or community economies through paid and unpaid work. On the other hand, exploring the socio-cultural value of children's activities will highlight the expectations of children's caregivers and other community members of children and childhood. This will lead to a clearer understanding of children's daily lifeworlds, and the socio-cultural values and power relations that affect children's transition experiences, as well as their general well-being.

As Ben-Arieh and Ofir (2002) also note in their review, the research literature on children's time use suggests that using a combination of methods yields very rich findings. While quantitative data may provide a good overview of general patterns of activities, the experiences of children's daily lifeworlds can be better understood through qualitative methods and participatory approaches which put into practice ethical commitments to children as active agents. Differing methods may highlight various aspects of children's time use. While observation methods allow parallel activities to be discerned, interviews and participatory approaches enable children to express their own views about the value and meaning of how they spend their time. Finally, the ethical commitment of treating children as equal partners obliges researchers to incorporate children's views into all stages of the research process (such as data gathering, analysis and dissemination). As Ben-Arieh and Ofir suggest 'Children should play a major role in any effort to study their time use' (240). However, data gathered about children's time use also needs to be understood in the context of broader socio-political processes, ideologies and constraints, that children themselves cannot be expected to express/articulate/be aware of. There is a danger that studying children's time use, whether from their viewpoints of the point of view of adults around them, allows adults to 'reproduce the power relations that enable them to take hold of children's time, organise it, curricularise it and simultaneously control the next generation on behalf of an economic system that depends for its very existence on the subdivision of human energy into units of labour time' (Ennew 1994: 143).

References

Aldgate, Jane and Miranda Mcintosh (2006) *Time Well Spent: A Study of Well-Being and Children's Daily Activities*, Edinburgh: Social Work Inspection Agency

Ariès, P. (1962) *Centuries of Childhood*, London: J. Cape

Bass, L. (2003) *Child Labor in Sub-Saharan Africa*, Boulder, CO: Lynne Reinner

Bass, L. (2004) 'Child Labor and Household Survival Strategies in Sub-Saharan Africa', *Sociological Studies of Children and Youth* 9: 127-48

Beazley, Harriot and Judith Ennew (2006) 'Participatory Methods and Approaches: Tackling the Two Tyrannies' in V. Desai and R. Potter (eds.) *Doing Development Research*, London: Sage Publications

Bianchi, Suzanne M. and John Robinson (1997) 'What Did You Do Today? Children's Use of Time, Family Composition, and the Acquisition of Social Capital', *Journal of Marriage and the Family* 59.2: 332-44

Ben-Arieh, Asher and Anat Ofir (2002) Time for (More) Time Use Studies: Studying the Daily Activities of Children, *Childhood* 9.2: 225-48

Bissell, S. (2003) 'The Social Construction of Childhood: A Perspective from Bangladesh' in N. Kabeer, G.B. Nambissan and R. Subrahmanian (eds.) *Child Labour and the Right to Education in South Asia: Needs Versus Rights*, New Delhi: Sage Publications

Blanchet, T. (1996) *Lost Innocence, Stolen Childhoods*, Dhaka: The University Press Limited

Block, R.A. and M.A. Reed (1978) 'Remembered Duration: Evidence for a Contextual Change Hypothesis', *Journal of Experimental Psychology: Human Learning and Memory* 4: 656-65

Bourdieu, Pierre (2000) *Pascalian Meditations*, Cambridge: Polity Press

Boyden, Jo (1997) 'Childhood and Policy Makers: A Comparative Perspective on the Globalization of Childhood' in Allison James and Alan Prout (eds.) *Constructing and Reconstructing Childhood: Contemporary Issues in the Sociological Study of Childhood*, London and Washington DC: Falmer Press

Briggs, Jean (1990) 'Playwork as a Tool in the Socialization of an Inuit Child', *Arctic Medical Research* 49.1: 34-8

Brislin, R.W. and E.S. Kim (2003) 'Cultural Diversity in People's Understanding and Uses of Time', *Applied Psychology: An International Review* 52.3: 363-82

Burman, E. (2007) *Deconstructing Developmental Psychology* (2nd ed.), London: Routledge

Chin, T. and M. Phillips (2003) 'Just Play? A Framework for Analysing Children's Time Use', *Sociological Studies of Children and Youth* 9: 127-48

Christensen, Pia and Allison James (2000) 'Childhood Diversity and Commonality: Some Methodological Insights' in P. Christensen and A. James (eds.) *Research with Children: Perspectives and Practices*, London and New York: Falmer

Christensen, Pia, Allison James and Chris Jenks (2000) 'Home and Movement: Children Constructing "Family Time"' in Sarah L. Holloway and Gill Valentine (eds.) *Geographies: Playing, Living, Learning*, London and New York: Routledge

Coomaraswamy, P. (1998) 'Exploring Children's Participation: the Sri Lankan Experience' in V. Johnson, et al. (eds.) *Stepping Forward: Children and Young People's Participation in the Development Process*, London: Intermediate Technology Publications

Cummings, H. and E. Vandewater (2007) 'Relation of adolescent video game play to time spent in other activities', *Archives of Pediatrics and Adolescent Medicine* 161.7: 684-9

Cunningham, H. (1991) *The Children of the Poor: Representations of Childhood since the Seventeenth Century*, Oxford: Blackwell

Cunningham, H. and P.P. Viazzo (eds.) (1996) *Child Labour in Historical Perspective 1880-1985: Case Studies from Europe, Japan and Colombia,* Florence, Italy: UNICEF/ICDC

Doob, L.W. (1971) *Patterning of Time*, New Haven, CT: Yale University Press

Ennew, Judith (1994)   'Time for Children or Time for Adults' in Jens Qvortrup et al. (eds.) *Childhood Matters: Social Theory, Practice and Politics*, Aldershot: Avebury

Fabian, J. (2002) *Time and the Other: How Anthropology Makes its Object*, New York: Columbia University Press

Friedman, W.J. (1991) 'The Development of Children's Memory for the Time of Past Events', *Child Development* 62.1: 139-55

Gell, A. (1992) *The Anthropology of Time: Cultural Constructions of Temporal Maps and Images*, Oxford: Berg

Glorieux, I. and M. Elchardus (1999) 'What Does Your Time Mean? Some Arguments for Including Indicators on the Meaning of Time Use in Time Budget Research' paper to 1999 IATUR Conference, University of Essex, October 1999

Gross, Daniel R. (1984) 'Time Allocation: A Tool for the Study of Cultural Behavior', *Annual Review of Anthropology* 13: 519-58

Hsin, Amy (2006) *Quantity versus Quality of Care: Maternal Employment, Children's Time Use and Child Wellbeing*, Los Angeles, CA: California Center for Population Research, University of California

Hsin, Amy (2008) 'Children's Time Use, Labor Divisions and Schooling in Indonesia', *Journal of Marriage and Family* 69: 1297-306

James, Allison (2005) 'Life Times: Children's Perspectives on Age, Agency and Memory across the Life Course' in Jens Qvortrup (ed.) *Studies in Modern Childhood: Society, Agency, Culture*, London: Palgrave Macmillan

James, Allison and Alan Prout (1997) 'Re-presenting Childhood: Time and Transition in the Study of Childhood' in Allison James and Alan Prout (eds.) *Constructing and Reconstructing Childhood. Contemporary Issues in the Sociological Study of Childhood,* London and Washington DC: Falmer Press

James, Allison, Chris Jenks and Alan Prout (1998) *Theorizing Childhood,* Cambridge: Polity Press

Johnson, J. (2006) 'Children's Perspectives on Their Young Lives: Report on Methods for Sub-Studies', Young Lives internal document, Peru Pilot, April 2006

Kielland, Anne and Maurizia Tovo (2006) *Children at Work: Child Labor Practices in Africa,* Boulder, CO: Lynne Reinner

Kovaříc, Jiří (1994) 'The Space and Time of Children at the Interface of Psychology and Sociology' in Qvortrup et al. (eds.) *Childhood Matters: Social Theory, Practice and Politics*, Aldershot: Avebury

Larson, Reed (1989) 'Beeping Children and Adolescents: A Method for Studying Time Use and Daily Experience', *Journal of Youth and Adolescence* 18.6: 511-30

Lee, S. and Y.G. Chae (2007) 'Children's Internet Use in a Family Context: Influence on Family Relationships and Parental Mediation', *CyberPsychology and Behavior* 10.5: 640-4

Levine, R. V. R. and K.K. Bartlett (1984) 'Pace of Life, Punctuality, and Coronary Heart Disease in Six Countries', *Journal of Cross-Cultural Psychology* 15.2: 233

Levison, Deborah (2000) 'Children as Economic Agents', *Feminist Economics* 6.1: 125-34

Liebel, M. (2004) *A Will of Their Own: Cross-Cultural Perspectives on Working Children,* London: Zed Press

Mayall, B. (2002) *Towards a Sociology for Childhood: Thinking from Children's Lives,* Buckingham: Open University Press

Meldrich, Elliott A. et al. (1982) *The Serious Business of Growing Up: A Study of Children's Lives Outside School*, Berkeley, CA: University of California Press

Mooney, C.G. (2000) *Theories of Childhood: An Introduction to Dewey, Montessori, Erikson, Piaget and Vygotsky.* St Paul, MN: Redleaf Press

Morrow, Virginia (1995) 'Invisible Children? Toward a Reconceptualization of Childhood Dependency and Responsibility', *Sociological Studies of Children* 7: 207-30

Mulvihill, C., K. Rivers and P. Aggelton (2000) *Physical Activity 'At Our Time': Qualitative Research among Young People Aged 5 to 15 and Parents*, London: Health Education Authority

Munroe, Ruth H., Robert L. Munroe and Harold S. Shimmin (1984) 'Children's Work in Four Cultures: Determinants and Consequences', *American Anthropologist* 86.2: 369-79

Neale, Bren and Jennifer Flowerdew (2003) 'Time, Texture and Childhood: The Contours of Longitudinal Qualitative Research', *International Journal of Social Research Methodology* 6.3: 189-99

Nieuwenhuys, Olga (1994) *Children's Lifeworlds. Gender, Welfare and Labour in the Developing World*, London and New York: Routledge

O'Connell, B.G. and A.B. Gerard (1985) 'Scripts and Scraps: The Development of Sequential Understanding', *Child Development* 56.3: 671-81

Panagiotakopoulos, C.T. and G.S. Ioannidis (2002) 'Assessing Children's Understanding of Basic Time Concepts Through Multimedia Software', *Computers and Education* 38.4: 331-49

Pecora, N., J.P. Murray and E. Wartella (eds.) (2006) *Children and Television: Fifty Years of Research*, London: Routledge

Penn, H. (2002) 'The World Bank's View of Early Childhood', *Childhood: A Global Journal of Child Research* 9.1: 118-32

Piaget, Jean (1946) *Les Notions de Mouvement et de Vitesse Chez L'enfant,* Paris, France: Presses Universitaires de France

Poluha, E. (2004) *The Power of Continuity: Ethiopia Through The Eyes of its Children*, Stockholm: Nordiska Africainstitutet

Postill, J. (2002) 'Clock and Calendar Time: A Missing Anthropological Problem', *Time and Society* 11: 251-270

Prout, Alan and Allison James (1997) 'A New Paradigm for the Sociology of Childhood? Provenance, Promise and Problems' in Allison James and Alan Prout (eds.) *Constructing and Reconstructing Childhood: Contemporary Issues in the Sociological Study of Childhood*, London and Washington DC: Falmer Press

Punch, Samantha (2000) 'Children's Strategies for Creating Playspaces: Negotiating Independence in Rural Bolivia' in Sarah L. Holloway and Gill Valentine (eds.) *Geographies: Playing, Living, Learning,* London and New York: Routledge

Punch, Samantha (2001a) 'Negotiating Autonomy: Childhoods in Rural Bolivia' in Leena Alanen and Berry Mayall (eds.) *Conceptualizing Child-Adult Relations*, London and New York: Routledge

Punch, Samantha (2001b) 'Multiple Methods and Research Relations with Children in Rural Bolivia' in M. Limb and C. Dwyer (eds.) *Qualitative Methodologies for Geographers*, London: Arnold

Punch, Samantha (2002) 'Youth Transitions and Interdependent Adult-Child Relations in Rural Bolivia', *Journal of Rural Studies* 18: 123-33

Qvortrup, J. (1994) 'Childhood Matters: An Introduction' in Jens Qvortrup et al. (eds.) *Childhood Matters: Social Theory, Practice and Politics*, Aldershot: Avebury

Regional Working Group on Child Labour (2000) 'Improving Action-Oriented Research on the Worst Forms of Child Labour', proceedings of Asian Regional Workshop, Bangkok, Thailand, 8-10 December 1999

Reynolds, Pamela (1991) *Dance Civet Cat : Child Labour in the Zambezi Valley,* Athens: University of Ohio Press

Robson, E. (2004) 'Children at Work in Rural Northern Nigeria: Patterns of Age, Space and Gender', *Journal of Rural Studies* 20.2: 193-210

Rodgers, G. and G. Standing (1981) *Child Work, Poverty, and Underdevelopment,* Geneva: ILO

Schildkrout, E. (1978) 'Age and Gender in Hausa Society: Socio-Economic Roles of Children in Urban Kano' in J. LaFontaine (ed.) *Sex and Age as Principles of Social Differentiation.* London: Academic Press

Stephens, S. (1995) 'Introduction: children and the politics of culture in "Late Capitalism"' in S. Stephens (ed.) *Children and the Politics of Culture*, Princeton, NJ: Princeton University Press

Thompson, E.P. (1993) *Customs in Common: Studies in Traditional Popular Culture,* New York: New Press

Triandis, H.C. (1994) *Culture and Social Behavior,* New York: McGraw-Hill Inc.

Vandewater, E., D. Bickham and J. Lee (2006) 'Time Well Spent? Relating Television Use to Children's Free-Time Activities', *Pediatrics,* 117.2: 181-91

Vogler, P., G. Crivello and M. Woodhead (2008) *Early Childhood Transitions Research: A Review of Concepts, Theory and Practice*, Working Paper 48, The Hague: Bernard van Leer Foundation/Young Lives

Wagner, Gillian (1982) *Children of the Empire*, London: Weidenfeld and Nicolson

Wintersberger, Helmut (1994) 'Costs and Benefits: The Econonmics of Childhood' in Qvortrup et al. (eds.) *Childhood Matters: Social Theory, Practice and Politics*, Aldershot: Avebury

Woodhead, M. (1999a) 'Reconstructing Development Psychology: Some First Steps'*, Children and Society* 13: 3-19

Woodhead, M. (1999b) *Is There a Place for Work in Child Development? A Conceptual Paper*, Stockholm: Radda Barnen

Woodhead, M. (1999c) 'Combating Child Labour: Listen to what the Children Say', *Childhood* 6.1: 27–49

Woodhead, M. (2001) 'The Value of Work and School: A Study of Working Children's Perspectives' in K. Lieten and B. White (eds.) *Child Labour: Policy Options*, Amsterdam: Aksant Acadmic Publishers

Woodhead, M. (2002) 'Work, Play and Learning in the Lives of Young Children' in R. Drury, L. Miller and R. Campbell (eds.) *Exploring Early Years Education and Care*, London: David Fulton

Woodhead, M. (2007) 'Developing Policies on Child Labour: Has Research Made a Difference?' in Kristina Engwall and Ingrid Söderlind (eds.) *Children's Work in Everyday Life*, Stockholm: Institute for Futures Studies

Yeung, W.J., J.F. Sandberg, P.E. Davis-Kean and S.L. Hofferth (2001) 'Children's Time with Fathers in Intact Families', *Journal of Marriage and Family* 63: 136-54

Zakay, D. (1992) 'The Role of Attention in Children's Time Perception', *Journal of Experimental Child Psychology* 54.3: 355-71

Zakay, D. and R.A. Block (1996) 'The Role of Attention in Time Estimation Processes' in M.A. Pastor and J. Arteida (eds.) *Time, Internal Clocks and Movement*, Amersterdam: Elsevier Science

Zelizer, Viviana A. (1985) *Pricing the Priceless Child: The Changing Social Value of Children*, New York: Basic Books

THE AUTHOR

Pia Vogler is a research assistant for Young Lives and a DPhil candidate in the Department of International Development (QEH), University of Oxford. She is currently carrying out doctoral research on life course transitions of Karen children in Thailand.

Virginia Morrow is Child Research Associate for Young Lives. She advises the project's qualitative team on conceptual and theoretical frameworks, qualitative research methods with children, and social research ethics.

Professor Martin Woodhead is International Child Research Director for Young Lives, and is based at the Child and Youth Studies Group, The Open University.

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Department of International Development
University of Oxford
3 Mansfield Road, Oxford OX1 3TB, UK
Tel: +44 (0)1865 289966
Email: younglives@younglives.org.uk