Abstract

This paper considers that a fuller understanding of the public’s attitudes towards and perceptions of transport is essential in the development of successful campaigns and policies aiming to encourage more sustainable transport behaviour. The paper seeks to clarify: the importance of understanding the attitudes and perceptions of young people (the future users and decision makers in regard to transport); what is currently understood in this area through a review of the current literature; where new research can make a contribution to knowledge; and subsequently a conceptual framework is developed to guide proposed new research. Specifically this research will seek to: identify which sources of knowledge impact on the attitudes of young people towards transport; examine how these sources of knowledge impact on their attitudes; investigate what and how subjective factors impact on young people’s transport related attitudes; and determine to what extent perceived control over behaviour affects their attitudes and behaviours. Each of these factors is considered in the context of the changes in life stage that young people experience as they age. In addition, the paper justifies and outlines a methodology for successfully capturing the perceptions and attitudes of young people in their own words. The research will be using participatory methods, in particular a combination of photography and discussion groups, which has the potential to act as a highly successful way of involving young research participants (aged between 11 and 18 in terms of this research) and revealing depth insights.

1. Introduction

This paper begins by defining and discussing the importance of sustainable transport to society and of the role played by young people in achieving such a future transport system in the UK. Secondly it justifies the proposal that transport behaviours may be significantly modified by influencing attitudes and perceptions towards sustainable transport. The paper then attempts to establish current understanding of the transport-related attitudes, perceptions and behaviours of young people and examine where new research might be orientated and focused. In support of planned new research, the paper then gives attention to attitude and behaviour theory and the development of a conceptual framework to guide such research. Finally, a proposed methodology is outlined and justified.

2. Sustainable development and sustainable transport

Sustainable development was introduced into policy circles after the publication of the Brundtland Commission’s report on the global environment and development in 1987. It is most commonly defined as ‘…development that meets the needs of the present without compromising the ability of future generations to meet their own needs’ (Brundtland Commission, 1987). However the more explicit definition promoted by many environmental and wildlife groups may be more appropriate,

Sustainable development is about maintaining and enhancing the quality of human life – social, economic and environmental – while living within the carrying capacity of supporting ecosystems and the resource base (Barton, 2000).
With this in mind it can be said that the current state of transport in the UK, which is dominated by use of the car, is in conflict with the concept of sustainable development for a number of reasons. Mobility is an essential part of society, and the car is seen as a quick, comfortable, direct, relatively cheap, and flexible form of transport. It is this positive image of the car along with increasing incomes and purchase of vehicles, and land-use planning that caters (or has catered) for increased car use, that has led to a public dependent upon the car (ironically resulting from the pursuit of independence that the car promises to offer (Goodwin, 1995)). In turn, this unrestrained and dominant use of the car has various drawbacks for the UK's natural, social and economic environments.

Car use impacts on our local and global climate through the emission of various pollutants, including: carbon dioxide (CO₂), which according to both scientists and governments alike (Blair, 2004) is a significant contributor to 'climate change'; nitrogen oxides which contribute to photochemical smog and acid deposition (Stead, 2000); and particulates of carbon and partially burnt organic compounds are linked to health problems such as asthma (Royal Commission on Environmental Pollution, 1994). Car use also impairs biodiversity via road building (Henninger, 1994) and wildlife lost to 'roadkill' (Ulturich, 1997). Car use has a dramatic impact on human health and mortality and correspondingly on the resources of the National Health Service (Jain and Guiver, 2001). It also puts pressure on the availability of fuel, being almost completely dependent on oil, a non-renewable energy source (Gudmundsson and Hojer, 1996). According to the DTI (2002), although overall energy consumption in the UK rose by 13% from 1970 to 2001, the energy consumption of transport rose by 95%. In terms of our social environment, the dominance of the car has led to, among other phenomena, non-drivers finding their ability to participate in society reduced (due to the closure of various bus services and rail lines (Cahill, 2001)), and a fear of road traffic accidents that has shaped people's travel decisions away from cycling and walking to become car drivers (Potter, 1997). Finally, in terms of the economic environment, increasing car use has led to congestion and unreliability which have adverse consequences for businesses.

However, despite these significant adverse consequences for society, the individual driver may consider them outweighed by the personal advantages and so continue to use the car for nearly all journeys. Goodwin (1995) believes 'less necessary' or 'excess' driving should be targeted and reduced first before considering all driving. ‘Excess’ car use is taken to mean that which could be easily substituted for one or more form of public transport, walking or cycling, or does not necessarily need to take place at all (e.g. simply ‘going for a drive’). But how should such driving be targeted? To date the UK Government has taken some action: improving public transport; taxation of vehicles and fuel, road pricing, parking controls, and improved facilities for cycling and walking (Wright and Egan, 2000). At the same time advances in car technology such as catalytic converters has gone some way in reducing the impacts of car use on society. However, they are not solving the problem on their own. Lyons (2004) considers that in order to move forward in this area, a deeper understanding of society is needed.

Through considering phenomena such as social norms and habitual behaviour, it (can be) argued that the travel choices and behaviour of individuals are not simply a matter of economic optimisation. What needs greater attention is not only the social context for the introduction of such (transport) policies, but also the understanding of public reaction and behavioural response to such measures and ultimately their effectiveness. The latter issues are particularly crucial for politicians (Lyons 2004)."

Thus, if we can develop a fuller picture of people's attitudes towards and perceptions of transport in general, we can establish how this relates to sustainable transport behaviour1 and develop policies and interventions to retain or create positive attitudes and behaviours towards sustainable transport (including reducing excess car use) based on this understanding. Positive attitudes towards sustainable transport are needed to encourage people to make positive choices for themselves (for example, choosing to cycle and walk short journeys rather than take the car), as well as to ensure support of public policies that may mean regulation of their behaviour such as a ban on cars in city centres, or paying higher local taxes for better cycle facilities etc.

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1 Travel behaviour that can be considered ‘sustainable’ is taken to include reducing unnecessary car use via car sharing, use of buses and trains, walking, cycling, or not travelling at all.
All members of society should have a share of decision-making power in developing a sustainable transport system (a system that enables and encourages reduced excess car use and increased use of other modes) including children and young people. This is encouraged by the government through their Action Plan Involving Children and Young People 2003-2004 (2003). Future transport choices and behaviours and transport policy decisions will be made by the young people of today, and so to anticipate and influence future developments, it is important to understand the attitudes of this societal group, identify problems and positively influence them in order to reduce the risk of persisting or increasing excess car use as they become older. Beyond licence acquisition, the advantages of car use can encourage it to become ‘habitual’ (Steg and Tertoolen, 1999) (or at least contain ‘automatic elements’ (see Bamberg et al., 2003)), and once car dependency and patterns of excess car use are established (Goodwin, 1995; Steg, 1996), they are very difficult to alter. However, it may be possible to prevent the habit of excess car use from forming in the first place by influencing young people before they start driving. This is also suggested by Goodwin (1995) who considers “research on the formation and longevity of behaviour patterns by new entrants into the population of interest (e.g. older children as they approach the age of licence acquisition…) may be of far more importance than changes in the behaviour of those people already in the population (i.e. those that can already drive)”.

As such, several studies contribute to current understanding of the attitudes and behaviours of young people towards sustainable transport, with the following being typical.

DHC (2003) found that awareness of the environmental impacts of transport is greater the younger the person is, but older children (11-16) do appreciate the environmental (and health) benefits of choosing more sustainable transport modes such as walking, cycling and using the bus (DHC, 2003). There is an increase in the popularity of trains, and walking with age (although the popularity of walking was found to decline between the ages of 14 and 16, then recover again), but a decrease in the popularity, and use of, buses (DHC, 2003; DFT, 1999), particularly when young people gain the ability to drive (17+) (Mackay, 1997). There also appears to be a ‘conflict’ between the ages of 12 to 16, where young people have been found to understand the environmental impacts of car use, but also see the personal benefits (including the attraction of the looks, comfort, speed, and the level of independence brought by the car (DHC, 2003) and the majority intend to drive when they are older (DHC, 2003, Storey and Brannen, 2000). Mackay (1997) found that 16-18 year olds with unrestricted availability of the car for transport (either to drive themselves or be driven by someone else) use it for almost all journeys.

From this it appears that as young people age, there is a collective tendency for them to move away from more sustainable transport, towards a much greater use of the car for nearly all journeys. These findings prove insightful but they do not tell us why young people think and behave in the way they do. For example, why do 12-16 year-olds still intend to use cars when they are older, despite understanding the environmental impacts of such behaviour? Why do young people have a greater awareness of the environmental impacts of transport the younger they are? It could be assumed that positive attitudes and knowledge about the environment has gradually less influence on behaviour while positive attitudes and knowledge about the car gradually has more influence as young people age. Why does this occur? Is it in response to changes in the level and sources of information about the environment and the car that young people receive? Or is it a result of the influence of peers, the level and type of media they are exposed to, that they copy the behaviour of their parents, or is the car simply the quickest and cheapest option? Or is it a mixture of all of these factors? Current theoretical understanding of attitude and behaviour and the application of this to pro-environmental behaviours (of which sustainable transport behaviour is one) may shed light on these questions.

3. Attitude and Behaviour Theory

There has been a shift since the 1990s towards using well-established social-psychological theories in explaining ‘environmental behaviours’ (Bamberg and Schmidt, 2003). These theories can be useful in that they provide relevant concepts, and in turn conceptual frameworks, for understanding how attitudes and behaviours interlink. Such theories include the norm activation model (Schwartz, 1977), the theory of interpersonal behaviour, and the theory of planned behaviour (TPB) (Ajzen, 1991). These three theories are particularly relevant because
they cover issues that are currently discussed in environmental research in a controversial manner: Are proenvironmental behaviours mainly normative, moral behaviours (due to the norm activation model) or mainly guided by the calculation of personal utility and costs (theory of planned behaviour)? Is the enactment of everyday environmentally relevant behaviour mainly under conscious control (theory of planned behaviour), or is it activated in a more automatic, habitualized fashion (theory of interpersonal behaviour) (Bamberg and Schmidt, 2003)?

However, the norm activation model, which is based on the assumption that proenvironmental behaviours come from people’s general value orientation toward the welfare of others (their personal/moral norm), has been weakened by findings that suggest personal norm does not exert any direct influence on behaviour (e.g. Bamberg and Schmidt, 2003). This may be partially explained by considering the concept of ‘behavioural intention’, as put forward by the theory of planned behaviour (TPB) (Ajzen, 1991). The TPB can be summarised as follows,

...the TPB stipulates that when confronted with the need to decide on a course of action, people consider the likely consequences of available alternatives (behavioural beliefs), they weight the normative expectations of important reference individuals or groups (normative beliefs), and they consider required resources and potential impediments or obstacles (control beliefs). These considerations or beliefs result, respectively, in the formation of attitudes toward the behaviour of interest, subjective norms with respect to the behaviour, and perceived behavioural control. ...Furthermore, the TPB assumes that people form behavioural intentions based on their attitudes, subjective norms, and perceptions of behavioural control and that these intentions are the immediate determinants of behaviour (Bamberg and Schmidt, 2003).

The theory of interpersonal behaviour (TIB) (Triandis, 1977, 1980) is considered similar to the TPB². Both include expectancy-value and normative belief constructs, and both attempt to explain the intention to perform a specific behaviour, as well as the actual performance of that behaviour. However, whereas the TPB proposes that social behaviour is under the individual’s conscious control, the TIB states that as the level of habit³ increases, the control of the individual over the social behaviour decreases. Thus, habit is seen as an additional predictive factor of behaviour and, when comparing the TPB and the TIB in the context of transport, Bamberg and Schmidt (2003) found that transport behaviour is indeed influenced by such an automatic, habitualised process (as well as a controlled conscious process as suggested by the TPB). However Bamberg et al. (2003), who used the TPB to examine the effects of past behaviour (which may be habitual) and ‘an intervention to increase’ bus use, found that

Complex human behaviour is cognitively regulated and, even after numerous enactments, appears to be subject to at least some degree of monitoring. As a result, new information, if relevant and persuasive, can change behaviour, normative, and control beliefs, can affect intentions and perceptions of behavioural control; and can influence later behaviour. We thus conclude that human social behaviour, although it may well contain automatic elements, is based on reason⁴.

² However, according to Bamberg and Schmidt (2003) “The TIB also considers a broader range of social factors influencing the intention building process that may be used in combination with those of the TPB under a broader ‘social factor’. These include a cognitive (‘expectancy-value’) measure of attitude – an evaluation of the long-term consequences of the behaviour (which differs from the TPB); a purely affective measure of attitude towards behaviour – an evaluation of the direct consequences of the behaviour; a social factor including the normative belief construct of the TPB; personal norms; role beliefs about the appropriateness of the behaviour for one’s perceived social role, interpersonal agreements, and self-definitions.”
³ Triandis (1980, cited Bamberg and Schmidt, 2003) defined habit as “situation-behaviour sequences that are or have become automatic, so that they occur without self-instruction. The individual is usually not ‘conscious’ of these sequences.”
⁴ Thus, in reference to young people’s relationship with transport, it is assumed that although they may have already developed behaviours containing ‘automatic elements’ (for example, ‘always
The integration of the TIB and TPB provides a useful way to view the links between attitudes and behaviours. From this, it appears that behaviour is influenced by behaviour intention, which in turn is influenced by attitudes, a variety of social factors (such as perceptions and norms); and control factors (perceived and actual). Individuals therefore have to weigh up both the economic costs and personal utility of performing a given behaviour (as in the TPB), but their behaviour intention may be impacted by factors out of their control. Also, the resultant behaviour (which may or may not correspond with the behaviour intention) can become habitual or contain automatic elements (as in the TIB), but it may be ‘broken’ by the introduction of new information. When applied specifically to the attitudes and behaviours of young people towards sustainable transport, and to the development of a new research framework in this context, the theories may be utilised and additional concepts added. A consideration of current findings on why young people express the transport-related attitudes and behaviours they do (as discussed below) will be used to establish such additional concepts.

‘Knowledge’ is not the only factor in attitudes and behaviour formation (FUTERRA, 2005; Nilsson and Kuller, 2000; Kaiser et al., 1999) but it can be a significant moderating variable when predicting young people’s pro-environmental behaviours (Meinhold and Malkus, 2005). Therefore it is important to identify what and how sources of information impact on the knowledge and, in turn, transport-related attitudes and behaviours of young people. Information may be delivered through a mixture of conflicting sources that could lead to confusion and an incomplete or inaccurate picture of the issues surrounding transport. For example in the school environment DHC (2003) found that the main conflict young people have to face in relation to sustainable transport is between “general messages from that termed “car culture” and what they are learning in school in relation to sustainability and sustainable transport (DHC, 2003).” Outside of school, young people also gain information from their friends and family, where they tend to display the same transport behaviour and attitudes as their parents (Nilsson and Kuller, 2000). A large amount of information also reaches young people through the media, where they are exposed to “an immense range of influential figures through television and radio, popular cultures, print media and the internet (Giles and Maltby, 2004)”. Car manufacturers establish and retain a positive image of cars, taking it our of the highway context, using spotless cars and empty roads to present it as a possession rather than as a mode of transport (Pristo, 2000/01).

‘Social factors’ such as the perception of peers (a norm belief) also impact on the attitudes and behaviours of young people towards transport. Being seen as “cool” by others has been found to be important from age 11 onwards (DHC, 2003) and according to Dusek (1991) “During the earlier years of adolescence, there is an increase in conformity to peer group norms and standards, perhaps as a result of increasing egocentrism and the need to develop an identity. During the later high school years conformity declines as ego-centrism abates and identity develops.” When considering this together with positive image of the car promoted by the media, car-marketing and consumerism, it is not surprising that young people want to own a car and learn to drive.

Social factors also include ‘power’, defined as “the ability to do or act” (Concise Oxford Dictionary, 1998) and therefore a key factor in the performance (or lack of performance) of sustainable transport behaviour. Mackay (1997) found that in relation to transport, some 16-18 years olds agreed that there is a need to change the way that ‘we’ as a country travel, but alone felt powerless to effect any change. Similarly in a study of 4,000 11-16 year olds, MORI (1998) found that “81% of the students believed that it is important to learn about global issues at school...(but) 54% said they felt powerless to do anything to change the world (DHC, 2003).” It may be the case that

getting a lift to school with Mum, instead of taking the bus’) it may be possible to change these behaviours by the introduction of new information.

5 ‘Perception’ is defined by the Concise Oxford Dictionary (1998) as “an interpretation or impression based on one’s understanding of something”. For example, one person’s perception of the bus may be different from another person’s due to their level of understanding of the bus system.

6 ‘Norm’ is defined by the Concise Oxford Dictionary (1998) as “customary behaviour”. Norms may differ between countries, between regions within countries and even within these regions. They may differ for a variety of reasons. For example, one region may be served well by their train service and therefore it may be ‘customary’ to travel to work by train, whereas another may have a poor train service, but good road network, and therefore it is customary to travel to work by car.
adults don’t allow or encourage young people to feel powerful in this context. For example, Barker (2003) found that in the context of ‘Safer Routes to Schools’, children “are constructed as the passive recipients of policy rather than as political actors and are rarely involved as stakeholders in decision-making processes”. Similarly, in his study of the voting behaviour of British young people between the ages of 18 and 25, Richard Kimberlee (2002) found that beliefs and concerns about young people today “echo much of the post-war discourse on youth, in that they seem to perceive young people’s culture as problematic, inferior and even detrimental to the general good of society.” It could prove illuminating to investigate whether young people are aware of any such attitudes towards them from older people when it comes to their transport choices and whether this affects their attitudes and behaviours.

‘Control’ comes from power and there are two types that may affect transport-related attitudes and behaviours: ‘perceived’ control and ‘actual’ control. Reflective of the TPB, young people will be affected by the perceived behavioural control they have over their ability to perform sustainable transport behaviours. This is underpinned by “perceptions of obstacles, impediments, skills, resources and opportunities that may inhibit or facilitate performance of the behaviour (Evans and Norman, 2004).” For example, young people may have the perception that ‘they do not have time or ability to cycle or walk to school (especially in the rain) and even if they do cycle their bike might get stolen’ even if none of these factors are true. At the same time, young people’s transport related attitudes and behaviours will be influenced by ‘actual control’ over factors which may or may not be within their ability to affect. For example, moving house or moving school may leave a young person further away from their school. As a result they may have the intention to cycle to school, but the distance makes it impossible. Or they may move to a more traffic-congested area that causes their parents to prevent them from cycling through fear of them having an accident.

Another example is the cost of public transport, which Storey and Brannen (2000) and DFT (1999) found to be a significant barrier to young people making use of public transport.

‘Socio-demographic’ factors are also significant. Nilsson and Kuller (2000) found that “suburban adolescents express more car-affection than inner-city adolescents (and) inner-city adolescents have a tendency to take the environmental problems more seriously than the suburban adolescents (Nilsson and Kuller, 2000).” However when it comes to affluence, mobility and choice, Barker (2003) found that “there is no simple relationship...Whilst many children in affluent and mobile families have the luxury of deciding which car to travel in, their other travel choices may be much more limited, since their lifestyles many only be sustainable by car.” Gender has also been found to be an important determining factor in young people transport-related attitudes and behaviours. For example, Nilsson and Kuller (2000) found that “girls take the environmental problems of cars more seriously than boys”, but that gender has no impact on the “car affection” held by young people. Why this difference occurs between the two sexes is not clear.

Age and ‘life-stage’ may also be significant, but it is important to recognise that “individuals progress through various stages of development at different rates” (Dusek, 1991) and therefore two individuals may be at the same chronological age but at different stages developmentally (this is fundamentally important when considering differences in attitudes and behaviours between and within age-groups). With this in mind however, there still appear to be ‘general trends’ that occur during adolescence including changes in peer relations, peer pressure, moral thinking (Dusek, 1991) and societal pressures such as ‘fashion’ and ‘coolness’ (DHC, 2003). There are also changes in the level of independence. DHC (2003) found that social constructs relating to independence appeared at age 8 (such as ‘independent-v-need someone else to take you’ and ‘can go with friends-v-loner’), although actual travel without an adult isn’t likely to take place until around age 11, when young people tend to walk or take the bus with friends. The type of independence also changes. Whereas young people around 11-12 want freedom from parental or adult supervision to spend time alone with friends, Mackay (1997) found that 16-18 year olds see driving as “allowing freedom and independence at a level not afforded by other modes of transport”, which may be related to the isolation of the car where an individual is separated from the ‘strangers’ that can be found on the bus, train or path, and can travel under their own time and chosen route with friends or alone. For example, DFT (1999) found that “a third of young people aged between 10 and 12 years usually travel on public transport with a parent or other adult and another third usually travel with friends. Older young people are much more likely to travel with friends and nearly a quarter of those aged 15 years and older travel alone.” Again, these factors can all impact individuals at different ages, but the present study is interested in investigating
whether there are any ‘life stages’, such as changing schools (e.g. primary to secondary) or leaving school, that may affect the young people’s transport related attitudes and behaviours.

4. **The research framework**

From the discussion outline above, a ‘conceptual framework’ (as shown in Fig. 1) has been developed specific to this new research. It is to be used as a sensitising tool, guiding but not restricting the research. It differs from the TIB and TPB in that it specifies potential sources of information that may impact on young people’s attitudes towards transport and it includes a ‘socio-demographic factor (including gender and age, but more particularly ‘life stage’). However, similar to the TIB and TPB it includes a ‘social factor’ (which in turn includes perceptions and norms), a ‘control factor’, ‘attitudes’ and ‘behaviour intention’. Reflecting the conclusions of Bamberg et al. (2003), it is also assumed that the ‘transport-related behaviour’ may contain ‘automatic elements’.

In summary it is posited that attitudes towards transport are formed through contributions from knowledge about transport, social factors and control factors. The link between attitudes and behaviours is then mediated by behaviour intention. Socio-demographics impact each of the other factors in the framework. The resultant behaviour is either positive or negative in relation to sustainable transport and may or may not correspond with the attitude. In addition there is an important feedback loop between behaviour and attitude via knowledge and social factors. Once a behaviour has been performed, the experience will provide new knowledge and may impact the social and control factors affecting the individual. In turn, this may influence their original attitude towards the behaviour, either reinforcing it, or modifying it. For example, a young person may have a positive attitude and behaviour intention towards the opportunity to cycle to school, but never actually performed the behaviour. This positive attitude may be the result of: information from schools and their parents; social factors such as the perception that their peers will consider them ‘cool’ on their bike; the fact they live in a car-congested area with separate cycle paths; and the perception that cycling allows them to get to school in a shorter amount of time than travelling by car. Actual control factors such as bad weather or parents denying their child the opportunity to cycle to school will affect the link between this behaviour intention and the actual behaviour. If such factors prevent the young person cycling to school, this may impact their original positive attitude, either reinforcing it modifying it, which in turn may affect their behaviour intention. There may also be no change in attitude or behaviour intention.
If actual control factors do not prevent the young person from cycling to school, they may still not move beyond the behaviour intention. However if they do, performing the behaviour will impact on their original attitude through: new information from personal experience (they did or did not enjoy the journey); social factors such as the fact (or perception) that their friends did or did not think they looked ‘cool’ on their bike; and the fact (or perception) that they did or did not travel to school faster than if they had gone by car. Again, this feedback loop may modify their attitude (and in turn behaviour intention) towards cycling to school, or have no impact. The circular nature of the framework reflects the idea of stages in attitude and behaviour change in that it is possible to go backwards and forwards from one attitude and corresponding behaviour to a new attitude and corresponding behaviour and back again, and for different reasons. For example a young person cycling to school may experience one journey that reinforces their positive attitude (and in turn their behaviour intention and actual behaviour), and/or they may experience a journey that negatively impacts their attitude towards cycling. This may be due to them having an accident, or near-accident; or being told by their peers that they look ‘silly’ on their bike. This new information and change in attitude may, in turn, modify their behaviour intention (either positively or negatively) and therefore their actual behaviour (either they continue cycling or stop). At the same time, changes in actual control may also affect their behaviour intention and their attitude. For example, a young person may stop cycling to school due to an increase in traffic on their route, but restart if cycle lanes are put in place.

With the current findings drawn from the literature and this conceptual framework in mind, new research into the attitudes of young people towards sustainable transport is proposed specifically to: identify which sources of knowledge impact on the attitudes of young people towards transport; examine how these sources of knowledge impact on their attitudes; investigate what and how subjective factors impact on young people’s transport related attitudes; and determine to what extent perceived control over behaviour affects their attitudes and behaviours. Each of these factors should be considered in the context of the changes young people experience as they age.

It has been found that “it is more profitable to encourage children to use their own language, and their own ways of communicating, and to ask them to clarify where necessary, rather than attempt

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7 Or a new attitude and the same behaviour, or the same attitude, but a different behaviour etc.
5. Methodology

There are several ‘general’ factors that should be taken into account when researching young people that are vital to the development of a successful methodology. These include: allowing young people to choose to be involved and leave the project if they want or need to (JRF, 2000); making sure the participants are capable of completing the task (Kirby, 2004); that the task is explained as clearly as possible (Mauthner, 1997); and that the research is enjoyable. In appreciation of this, Kirby (1999) considers participatory research methods, such as drawing and photography, appropriate ways of researching children and young people in that they “attempt to replace the more formal forms of adult communication and enquiry – such as traditional interviews – with those that are more appropriate for younger people. This helps young respondents to talk about and explain their experience and views, utilising their own capacities and interests, and makes the process more enjoyable.” Such methods “contradict the myth that researchers and practitioners need to simplify their approaches with young children. …(Instead) there is a need to think differently and be flexible but not to oversimplify (Clark, 2004).”

Participatory methods often involve expressing thoughts artistically. For example, picture prompts (which involve young people drawing in relation to a topic or question) have been found to be an effective tool to aid discussion (Parry-Williams, 1998; Morrow, 2001), as has photography used in a similar way. According to Vygotsky (1971), art and thinking are closely connected and Arnhem (1969) argues that visual arts are a source of visual thinking, because thinking calls for images, and images contain thoughts. In support of this, Clark (2004) considers photography, as a form of art, can harness both the verbal and non-verbal ways in which young children communicate their feelings about a subject. In the context of this paper, that subject is the role of transport in the social world of young people, which is in part a seen world (Ball and Smith, 1992). Thus, the research proposed in this paper is based on the assumption that photography is an affective technique for young people to ‘capture’ this social world, where each photo is capable of reflecting “complex dimensions of social structure, cultural identity, interpersonal relationships, and psychological expression (Collier and Collier, 1986).”

Several case-studies illustrate that photography can be used effectively by young people, even by those as young as three (Kirby, 1999). Sharples et al. (2003) carried out a study of 180 ‘children as photographers’ at three age levels (7, 11 and 15) across five European countries and found that children took photos in support of the notion that as children develop, they become aware of their identity in relation to their surroundings and other people, and their ability to control aspects of their environment. Sharples et al. (2003) used a quantitative coding mechanism to analyse the photos, which contrasts with the more qualitative use of photography by Morrow (2001), who combined it with discussion groups to investigate ‘well-being and health’ with children aged between 12 and 15. In reference to the merits of each approach, Ball and Smith (1992) illustrate that,

visual material…constitute(s) part of a larger class of data known as documentary sources…The major systematic and empirical method that has been developed for analysing documentary data is content analysis…(which) claims to offer an “objective,” “systematic,” and “quantitative” (Berelson, 1952, pp. 16-17, cited Ball and Smith) analysis of documentary content. The objectivity of content analysis resides in the devising of precisely and clearly defined categories to apply to the material analysed in accordance with explicitly formulated rules of procedure.

However Ball and Smith also state that “a major problem with content analysis is that repetition becomes the mark of significance…repetition or frequency is a poor guide to the communicative significance or meaning of a particular item.” In response, it can be said that Morrow’s more qualitative approach overcame this problem by allowing the significance and/or meaning of the photos taken by the young volunteers to be communicated via discussion groups. It is this type of
approach that will be utilised in carrying out the proposed research in this paper, reflecting its abductive strategy.

When selecting a sample for this research, two issues need to be considered, the age on which to focus, and recruitment. It is necessary to select a sample that can be easily managed but without reducing the depth of investigation or the ability to establish if attitudes evolve from the later stages of childhood to young adulthood. It is therefore important to identify particular ages to focus on, which is done by considering the ‘life stages’ that occur during adolescence that may prove significant to this study. As young people age, they are subject to changes in not only transport choices, but in the social and control factors that may affect them, and it is assumed that these do not just occur at the point of licence acquisition. This study has attempted to identify three significant and relatively universal life stages in young people’s lives. 11 is an important age, as most young people move to secondary/senior school. 15 is also an important age as young people are facing the possibility of leaving formal education and entering the work force or moving to college or a sixth form at a new school. Storey and Brannen (2000) found ‘over 40 per cent of those aged 15-16 say that transport issues influence their decisions about post-16 education. 18 is considered important as people have the opportunity to drive, may already have experience of driving and may have to cope with leaving education and/or home. It is noted that the impact of these three life stages will vary within the ages investigated.

Schools and/or colleges may be used to recruit young people, and provide an easily accessible and structured environment to carry out the research, as long as a positive rapport is established with the volunteers and staff. It is, however, important to recognise various issues when utilising schools. Firstly attention should be paid to power relations, in that adults (as teachers) control the environment of the students (Robinson and Kellet, 2004). Control may be given back to the students by allowing them to choose to participate in the research, allowing them the freedom to talk as freely as they wish within discussion groups, and to be involved in decisions such as the location of such discussions groups. Thus, it is important to communicate with the schools in the initial stages to discuss such issues before making any final selections, while at the same time finding a way to carry out the research that causes minimal disruption to the teachers and class life (as suggested by Rassol, 2004).

A pilot study was undertaken by the researcher, whereby three volunteers, one aged 11, one 15 and one 18, were given two disposable cameras (one labelled ‘transport’ and one ‘environment’) and asked to take as many photos as they like in relation to the two topics. These were then developed and used in one-to-one discussion with the 15 and 18 year olds volunteers\(^8\) (each volunteer discussed only the photos taken by themselves). The main outcome of this study was that the technique was successful in gaining depth insights from the discussion, but the photographic ‘subjects’ (‘transport’ and ‘environment’) was too broad and the number of photos required too many (the volunteers considered a number of ideas, but none in depth). It was therefore felt that ‘the car’ and ‘the bus’ would allow both the photographic work and the discussion groups to be more ‘focused’ (but at the same time the discussion groups will not be restricted to the topics of the bus and car. Instead these will be used as introductory subjects to a wider discussion of the issues surrounding transport). In addition the volunteers wanted to take photos of other forms of transport such as trains and sports cars, but found this difficult or impossible. This problem should be reduced, if not eliminated, by the volunteers drawing or collecting already-printed images of subjects for which they cannot take photos.

Thus, the new research project proposed in this paper aims to recruit 12 volunteers of each age group (11, 15 and 18) from two schools. The volunteers will be given two disposable cameras\(^9\) and asked to label one ‘bus’ and the other ‘car’. The participants will be asked to gather half a dozen images through the use of photography, as well as their own drawings or already-printed images representing their opinions of, perceptions of, and attitudes towards cars and the same in response to buses. This may be done while engaging with the transport (for example taking a photo through a bus or car window) or reflecting on it (for example collecting a car-related advertisement). Although the research is not dismissing other forms of transport such as walking and cycling, it is

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\(^8\) The discussion with the 11 year old volunteer has been delayed.

\(^9\) Clark (2004) found that single use cameras can reduce any anxiety about using expensive equipment.
felt that the bus is a particularly interesting mode. Buses "provide for those 25 per cent or so of households without regular access to a car (Preston, 2003)" and most young people have had experience of bus use inside and outside of school. Although the images will provide insights into this specific mode of transport they will also be used in group discussions to stimulate ideas about the wider subject of sustainable transport. The research will take place in stages reflecting its abductive strategy in "alternating periods of immersion in the relevant social world, and periods of withdrawal for reflection and analysis (Blaikie, 2000).

7. Conclusion

It has been established that the attitudes, perceptions and behaviours of young people towards sustainable transport are key to the development of a future 'sustainable transport system' in the UK. Various studies provide an understanding of the current attitudes and behaviours of young people, but it is concluded that further research is needed to gain a deeper understanding of why they hold these attitudes and perform these behaviours. A consideration of attitude and behaviour theory in the context of the attitudes of young people towards sustainable transport has provided an important conceptual understanding of this area, and from this a conceptual research framework (to be used as a guide) has been drawn specifically for the proposed research. This research in particular aims to: identify which sources of knowledge impact on the attitudes of young people towards transport; examine how these sources of knowledge impact on their attitudes; investigate what and how subjective factors impact on young people’s transport related attitudes; and determine to what extent perceived control over behaviour affects their attitudes and behaviours. Each of these factors is considered in the context of the changes in life stage that young people experience as they age.

It can be said that the proposed research, conceptual framework and methodology outlined and justified in this paper is both challenging and exciting in that it attempts to gain a deeper understanding of the attitudes, perceptions and behaviours of young people towards transport (and how this relates to a sustainable transport system in the UK) in the words of the young participants themselves. The participatory methods of photography and discussion groups should prove enjoyable and engaging, not only for the participants, but also for the researcher, as they provide a relatively new and interesting mechanism for successfully expressing thoughts and ideas. It is hoped that the findings of this research may aid the development of effective and engaging policies and interventions to educate young people about sustainable transport and reduce excess car use before it begins. This research may ensure that such initiatives are based on a thorough understanding of what, why and how young people think and behave in relation to transport.

8. References


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