

## How the transport infrastructure of Milton Keynes affects the way people travel

MARUM, Georgina and PATTERSON, Alan <<http://orcid.org/0000-0002-9302-5789>>

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# How the transport infrastructure of Milton Keynes affects the way people travel

**Georgina Marum<sup>1</sup> and Alan Patterson<sup>2</sup>**

Georgina Marum studied BA (Hons) Human Geography at Sheffield Hallam University and graduated in 2017 with First Class Honours. She is now working as an Operational Planner at Network Rail. Alan Patterson is the Principal Lecturer in Human Geography at Sheffield Hallam University and supervised the dissertation.

## **Abstract**

The new town of Milton Keynes (MK) is home to a globally renowned grid system, comprising vertical and horizontal grid roads, uniquely intertwined by a network of pedestrian and cycle paths, known as 'Redways.' This paper explores how this transport infrastructure affects the way the population of MK travels, through the use of a questionnaire survey and semi-structured interviews. A wide range of the relevant literature is reviewed and the data gained from the questionnaire and interviews is examined, using both quantitative and qualitative methods of analysis. The results reveal that the leading travel trend in MK is car use, with the car dominating as the most popular transport mode, to the considerable detriment of other transport modes. Overall, it is clear that MK's transport infrastructure affects the way people choose to travel, in particular promoting car use.

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<sup>1</sup> g.marum@hotmail.co.uk

<sup>2</sup> a.patterson@shu.ac.uk

## Introduction

*'a paradise of parking lots, roundabouts and concrete cows'*

*'a centrally-planned slice of Los Angeles,'*

(Barkham, 2016:1).

Since its birth in the 1960s, Milton Keynes (MK) was 'always destined to be at the cutting edge of transport' (Westcott, 2013:1), adopting the American model of a low-density town built on a grid system, but it is also uniquely interlinked by a network of cycle paths, known as 'redways'. This paper focuses on the effect this infrastructure has on the way MK's residents travel. Hence the research focuses on individual travel patterns, preferred transport modes and the effects transport infrastructure has on these trends. This broad aim is divided into three smaller, more manageable, research objectives:

1. to identify and explain the travel trends of MK's population;
2. to determine any factors that influence the use of travel infrastructure;
3. to examine any relationships between particular travel trends and certain types of travel infrastructure.

The next section of the paper identifies, evaluates and synthesises a wide range of literature, providing a foundation for this study and enabling comparisons and contrasts to be made with the key findings of this research (Blaxter *et al.*, 2010). The methods used for this research are then explained; assessing their strengths and weaknesses. In addition, the methods of data analysis and the ethical considerations are also discussed (Walliman, 2016). The next section then provides a detailed analysis of the findings from the questionnaire responses and the semi-structured interviews, using both quantitative and qualitative methods of analysis in order to understand and explain the results. The final section recaps the main findings, summarises the key points of the literature review, reflects upon the methods used, and makes recommendations for further research.

## How and Why We Travel

This section discusses and evaluates a range of literature and secondary data relevant to the main topics of this study, focussing on the themes of: travel patterns, car dominance, peak car, MK, and its travel trends. This literature is fundamental to this research, providing the rationale for exploring this topic, and informing the selection of the methods used (Steane, 2004).

### Travel Patterns

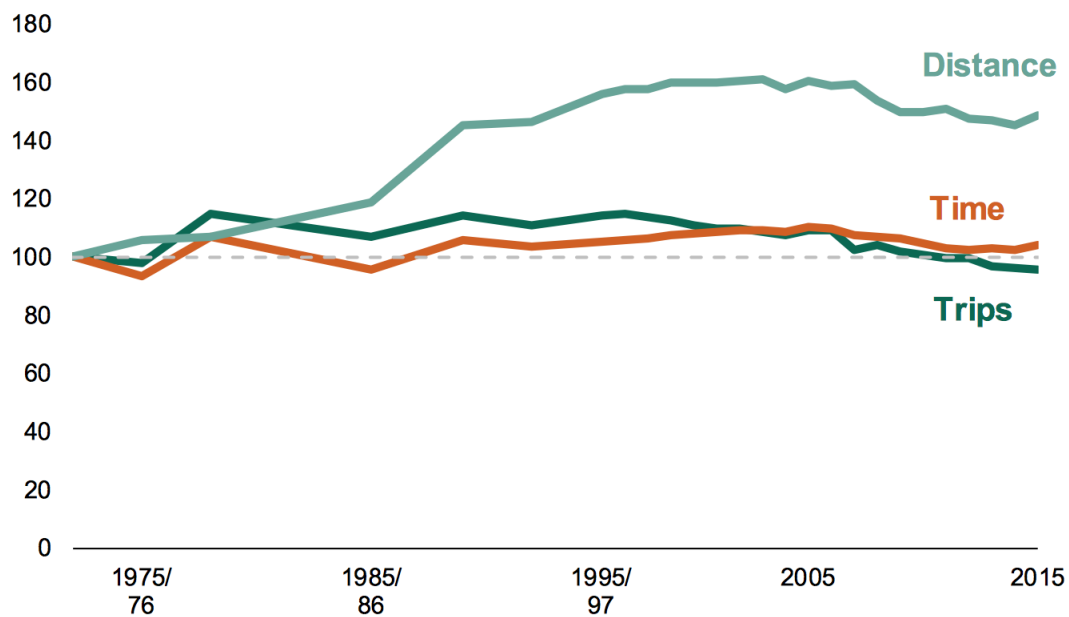
According to Hoyle & Knowles (1998:1) 'Transport is part of the daily rhythm of life' and has grown to become a crucial part of contemporary life (Nijkamp *et al.*, 1998). As Metz (2008) argues, how, when and where we travel has become a continual obsession for many, whether it is the daily commute, or longer journeys to distant destinations.

In England, compared to the 1970s, the average number of trips made and the average total time spent travelling, has remained roughly constant (see Figure 1). In contrast, the average distance travelled soared by 71% between 1965 and 2014 (Department for Transport, 2015). Therefore, it is clear that for a similar number of trips made and the amount of time spent travelling, the English population now travel much further. This is reportedly attributable to the changes in how, not why, people travel, specifically rising car availability (Department for Transport, 2016a).

### Car Dominance

The car has become the 'prime mover' (Metz, 2008:1) and an 'icon of the twentieth century' (Banister, 2005:5). Rapid motorisation has been the dominant travel pattern throughout the developed world since the end of the Second World War (Black, 2003; Giuliano, 1998). The total number of licenced vehicles in the United Kingdom has grown every year (except 1991), and the car is now the leading mode of transport in England, accounting for 64% of all trips made (584 trips per person per year on average) and 78% of the distance travelled in 2015 (5159 miles per person per year on average) (Department for Transport, 2016b).

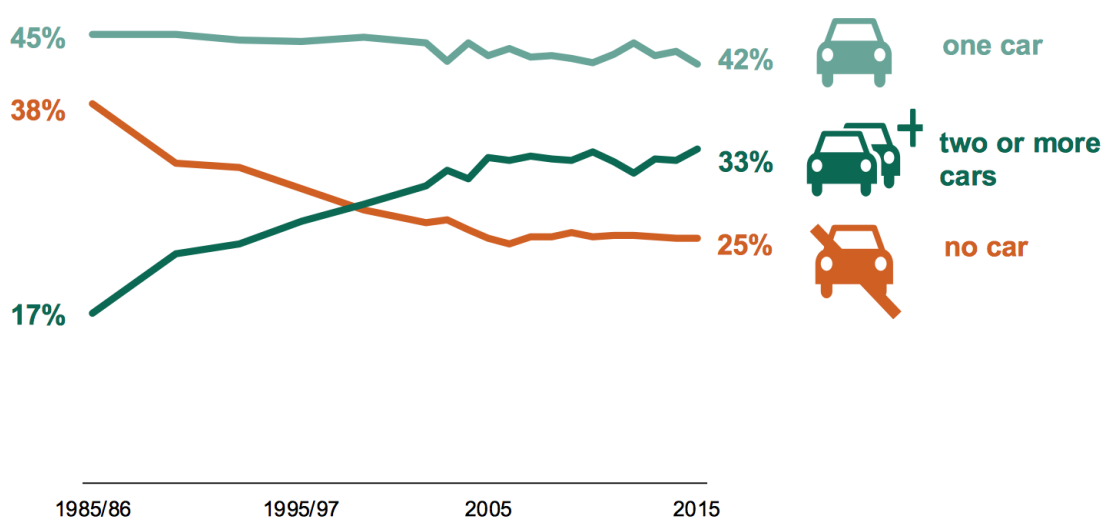
**Figure 1: Travel Patterns in England, 1975/6 to 2015.**



Source: Department for Transport, 2016a:6

Rising incomes, the falling cost of purchasing a motor vehicle, and the perceived advantages of car travel, have contributed to the continued growth of car ownership (Department for Transport, 2016b; Paterson, 2000; Turton, 1992). Now, fewer people do not own a car (Figure 2), with the number of English households without a car dropping 13% between 1986 and 2005 (Department for Transport, 2016a).

**Figure 2: Car Ownership in England, 1985/6 to 2015.**



Source: Department for Transport, 2016b:7

Instead, people now own more cars, approximately 33% of households in England having access to two or more cars (Department for Transport, 2016b), in contrast to an average of just 0.07 cars per household in 1946 (Maltby & White, 1982).

As Metz (2008:10) argued 'When we acquire cars, we travel more'. On average, people in households with cars make 1.4 times more trips, spend more time travelling (22 minutes per car trip), and travel 2.6 times further (Department for Transport, 2016b). In addition, the acquisition of a household's second or third car allows for even more travel (Farthing *et al.*, 1996; Metz, 2008).

### **Peak Car**

There have been slower rates of growth, a levelling off, or a reduction, in car use in the majority of developed countries (Goodwin & Van Dender, 2013). This phenomenon is known as 'peak car' (Le Vine & Jones, 2012; Metz, 2013). In the UK, the concept that an upper limit of car ownership and use would occur, was first developed in the 1950s, with forecasters predicting a saturation level of around 400-450 cars per 1000 by 2010 (Goodwin & Van Dender, 2013). The percentage of journeys made by car in London has declined, from a peak of 50% in 1990, to the current rate of 37% (Metz, 2015). Metz (2013:267) suggests that we have now entered a 'fourth era of travel' in which personal daily travel has fallen and 'travel time, trip rate, and distance travelled hold steady.'

### **Milton Keynes**

The Ministry of Housing and Local Government in 1967 called for the new town of MK to accommodate an inward population of 150,000 Londoners over a 20-year period, eventually resulting in a total population of approximately 250,000 (Chesterton Consulting & MKDC, 1992). The original Designated Area was approximately 9,000 hectares in size and included the existing towns of Bletchley, Stony Stratford, Wolverton and New Bradwell, along with 13 villages (Chesterton Consulting & MKDC, 1992).

The Master Plan for MK was not just a town map or a blueprint, but was a flexible strategic framework, intended to be capable of responding to changing needs (Bendixson & Platt, 1992). The Master Plan defined key structuring principles, which have defined the city, notably: the grid system, a 'grid of dual carriageway roads for through traffic was planned to intersect at approximately 1km intervals (Chesterton Consulting & MKDC, 1992:17), and the redways - dedicated separate pedestrian and cycle routes, 'a length of shared use public highway prescribed for pedestrians and cyclists' (Chesterton Consulting & MKDC, 1992:52).

### **Travel Patterns in Milton Keynes**

The car is dominant in MK. The new town experienced a steady growth of approximately 10% in total traffic on major roads by all motor vehicles between 2000 and 2015, with the car accounting for 75% of this (Department for Transport, 2017). The number of journeys to work (61%) and school (29%) made by car, along with car ownership levels (83%), all exceed national averages (MK Council, 2016). In addition, over 80% of MK households owned at least one car in 2001 (cf. 73% nationally), with an average of 1.26 cars per household (compared to the national average of 1.11). However, car ownership levels are inconsistent across MK, with some wards, such as Emerson Valley and Sherington, having extremely high rates of car ownership (over 90%), whereas other wards have far lower levels, particularly Netherfield (57%), Beanhill (60%) and Coffee Hall (65%) (MK Council, 2008).

Due to the grid system, traffic flow within MK is generally efficient and well distributed spatially. Although, heavy concentrations of traffic have been reported during peak hours (especially between 8am and 9am), particularly on routes connecting MK with the surrounding areas, notably on the M1 around J13 and J14, along the A509/A422 corridor, and on the A5 at the junctions for Old Stratford and Fenny Stratford (MK Council, 2008). At current population growth rates, a 57% rise in car journeys at peak travel times is predicted to occur by 2031, yet MK can only provide an additional 25% capacity (MK Council, 2011). This implies a growth in traffic congestion in the coming years and arguably demands a change in MK's current travel patterns away from car use.

Additionally, MK has 290km of 'off-road cycleways and pedestrian footpaths,' known as redways, that are incorporated within the grid system (MK Council, 2011:8), and which were intended to provide opportunities for cycling and walking away from the grid roads. However, the redway network is generally underutilised and public perceptions are frequently negative, with many regarding the network as unsafe, due to poor lighting, winding paths and overgrown vegetation (Treasure, 2012). Furthermore, the network does not fully stretch into central Milton Keynes and does not reach many of the older towns or the rural areas. Consequently, they are often regarded to provide indirect routes (MK Council, 2012).

Almost half of all journeys to work in MK are less than 5km in length, a distance easily cycled, and 47% of MK households own two or more bicycles. Despite this, the percentage of journeys to work by bicycle was just 3.02% in 2001, in comparison to 72.73% by private motor vehicles, 8.49% by public transport and 6.85% by foot (MK Council, 2012). MK may be home to a unique system providing safe routes away from road traffic, but the share of active modes (both cycling and walking) remains low and the car continues to dominate (MK Council, 2012).

The literature concentrates on both global and national travel trends, with some focus on MK travel patterns. However, it is clear that further study is essential in order to understand how and why MK residents travel and the effect of the new town's infrastructure on this.

## **Research Methods**

Arbno & Bjerke (1997:5) emphasise that 'you can never empirically or logically determine the best approach,' however it is important to evaluate the strengths and weaknesses of the possible methods in order to identify those which are most suitable for this study. The collection of primary data, involving a questionnaire and semi-structured interviews, supported by the analysis of secondary data was chosen for this research. This allowed the incorporation of both quantitative and qualitative



data, known as ‘triangulation,’ in order to counteract the potential weaknesses of both data types and to provide different perspectives on the data (Dawson, 2009; Robson, 2014). The questionnaire collected information from 224 MK residents on their personal travel patterns and their views about MK’s transport infrastructure, and was supplemented by data gained from two semi-structured interviews.

Three types of coding: descriptive, topic and analytical, were used to analyse the qualitative data gained from the questionnaire and interviews, so as to identify new ideas about the data, highlight themes and patterns, and uncover hidden meanings and messages from the responses (Richards, 2015; Walliman, 2016).

## **Analysis**

This section examines the findings from the questionnaire responses and the semi-structured interviews. Data analysis can be regarded as a ‘process of interpretation’, which involves studying the collected data in several ways so that any concealed messages and meanings can be made clear (Robson, 2014:107).

### **Transport Use**

Firstly, questionnaire participants were asked to select their most used transport mode, with the options being: car, bus, bicycle, walking or other (see Table 1). The clear domination of the car is obvious, accounting for 184 of the responses (82.1%), greatly surpassing any other option. The second most common answer, ‘walking,’ accounted for just 14 responses (just 6.3% - 170 fewer responses than ‘car’), and ‘bus’ represented only 5.8% of answers, while ‘bicycle’ represented just 2.2%. Additionally, three quarters (6 of the 8) of those that selected the answer, ‘other,’ revealed that taxis were their most used transport mode. This therefore intensifies car dominance because taxi use and car use are arguably equivalent. These findings emphasise the notion of car dominance and support Metz’s (2008:1) claim that the car has become the ‘prime mover’; and the Department for Transport’s (2016b) report that the car is the leading mode of transport nationally.

**Table 1: Most Used Transport Mode**

Transport Mode	Quantity	Percentage
Car	184	82.1%
Bus	13	5.8%
Walking	14	6.3%
Bicycle	5	2.2%
Other	8	3.6%

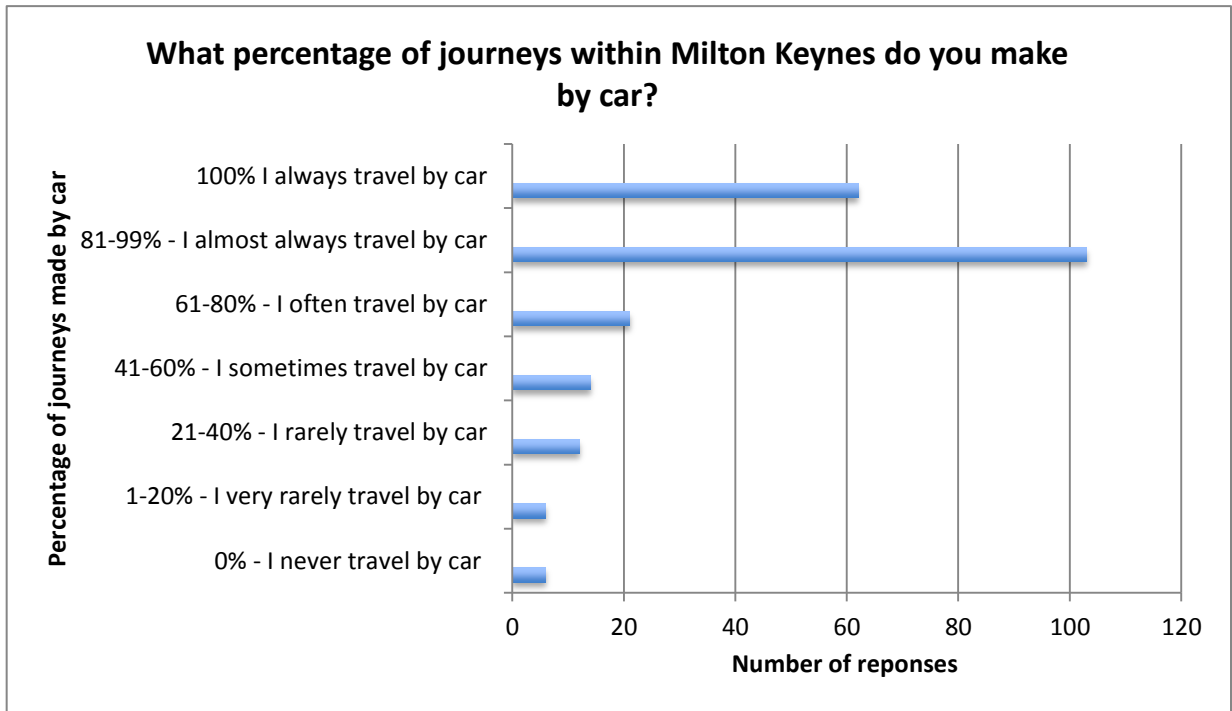
In addition, questionnaire participants were asked to explain their choice of their most used transport mode. Respondents who selected 'car' usually provided more positive justifications, frequently highlighting the advantages of car use. Words, such as 'convenient,' 'quick' and 'easy' were commonly used, being included in 63.5% of the answers. From the use of coding, these words can be linked by the theme of practicality. Likewise, both interviewees stressed the significance of MK's transport infrastructure, especially the grid system, at promoting car use, most notably the 'fast,' 'easy' and 'uncongested' journeys by car that it creates.

However, the questionnaire respondents who chose transport modes other than the car generally provided less positive explanations. Just five individuals emphasised the advantages of these transport modes, highlighting either the low cost or health benefits of walking and cycling. Instead, most respondents who did not select 'car', explained their answer by stating that they 'do not own a car' or 'cannot drive.' This implies that car use is still favoured by the majority of those using other transport modes because they do not have access to a car.

In a following section of the questionnaire, participants were asked to select the percentage of journeys within MK they travel by car, bus, bicycle, and on foot (see Figure 3). Once again, it is clear that the car dominates at the expense of the other transport modes. 73.7% (equivalent to 165 answers) either 'always,' or 'almost always,' travel by car and only 5.4% (equal to just 12 respondents) 'never,' or 'very rarely,' travel by car, with 'I almost always travel by car,' the most common answer,

accounting for almost half of responses (46%). In comparison, 94.2% ‘never,’ or ‘very rarely,’ travel by bicycle, 88.9% ‘never,’ or ‘very rarely,’ travel by bus and 65.6% ‘never,’ or ‘very rarely,’ travel on foot.

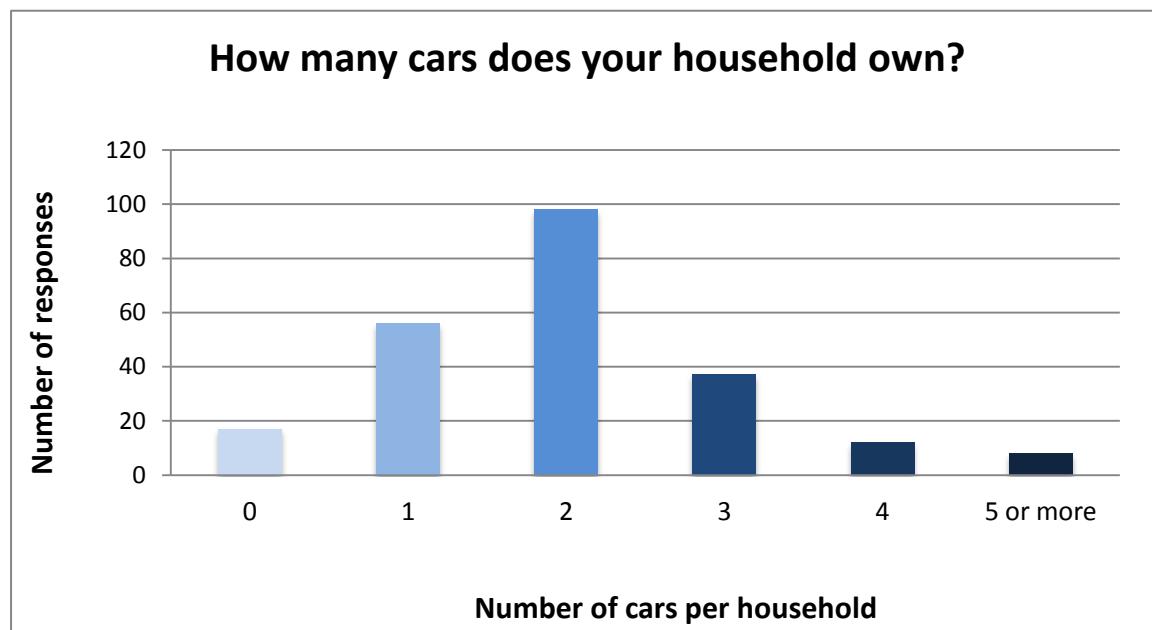
**Figure 3: Percentage of Milton Keynes Journeys by Car**



### Car Ownership

Questionnaire participants were also asked to state the number of cars their household owned, in order to examine the level of car ownership in MK (Figure 4). The responses illustrate an extremely high car ownership level, with 92.4% owning at least one car. This clearly supports Banister’s (2005) claim that car ownership has grown substantially in the recent past and, as just 7.6% of respondents did not own a car, this also confirms the Department for Transport’s (2016a) report that few people do not own a car. These findings clearly illustrate car dominance in MK and strongly suggest car dependence, with the vast majority of respondents owning and using cars.

**Figure 4: Car Ownership in Milton Keynes**



In addition, the questionnaire responses reveal that multiple car ownership is common in MK. 70% of respondents disclosed that their household owned two or more cars, with 'two cars', the most popular answer, accounting for 98 responses (43.8%). This clearly shows car dominance in MK, with almost 70% of respondents owning two or more cars, and even 9% (20 respondents) owning four or more cars.

These findings reinforce the Department for Transport's (2016b) report that English households now own more cars, with recent figures stating that 33% have access to two or more cars. However, this study shows a much higher level of multiple car ownership than this (36.3% higher), thus suggesting a greater than the national average level of car ownership in MK. Moreover, the data gained from the questionnaire responses also reveals a growth in multiple car ownership in MK. MK Council (2008) reported an average of just 1.26 cars per household in 2001, but the average car ownership for the questionnaire sample was 1.97 cars per household. It is clear that these findings do not support the notion of peak car because car ownership appears to be continuing to grow, rather than stabilising or decreasing.

Furthermore, from examining the questionnaire responses, it is obvious that car ownership levels greatly fluctuate across MK. The wards of Shenley Church End and

Two Mile Ash have extremely high levels of car ownership, with an average of 4.6 and 3.8 cars respectively, figures far greater than the questionnaire sample average of 1.97 cars. In contrast, the wards of Wolverton and Fenny Stratford have much lower levels of car ownership, with averages of just 1.5 and 1.0.

From this, it is obvious that large variations in car ownership can exist within MK, with a range of 3.6 cars between the 11 wards examined: Shenley Church End (4.6), Two Mile Ash (3.8), Stony Stratford (2.1), Oxley Park (2.1), Newport Pagnell (2.1), Bletchley (1.8), Loughton (1.8), Monkston (1.8), Great Holm (1.7), Wolverton (1.5) and Fenny Stratford (1.0). Car ownership and affluence are clearly linked as the wards of Shenley Church End and Two Mile Ash are generally fairly affluent and this is reflected in these ward's high car ownership levels. In contrast, the wards of Fenny Stratford and Wolverton are less affluent and have lower levels of car ownership.

### **The Bus System**

In addition, the questionnaire participants were asked to provide their own opinions on MK's bus system and a mix of interesting comments were provided. Answers were mostly negative, with only 6.25% (equal to just 14 respondents) providing entirely positive views. Words such as 'expensive,' 'late,' 'slow' and 'infrequent,' were commonly used to describe the bus system, accounting for 57.4% of negative responses. Moreover, the most common answer, accounting for 41.1% of questionnaire responses (equivalent to 92 answers), was 'I never use the bus and so cannot comment,' or similar, further highlighting the underutilisation of MK's bus system.

Furthermore, when the interviewees were asked about the impacts of MK's grid system on bus routes, both agreed that the grid system negatively affects bus use. From the use of coding, the answers can be connected by the theme of time, particularly the long travel times associated with bus use in comparison to other transport modes, notably car use. Firstly, one interviewee highlighted the long journey times by bus, emphasising the difficulty to plan effective bus routes on a grid

system, as buses are forced to move off the grid roads and into estates to pick up passengers. Moreover, the second interviewee stressed the benefits that the grid system brings to car users, therefore impacting negatively on bus use. The fast, direct and uncongested road routes are appealing, and consequently make bus use unattractive as it is long and indirect in comparison.

### **The redway network**

In a further section of the questionnaire, participants were asked to select how frequently they used MK's redways, in order to aid the examination of walking and cycling levels in the town, choosing from: often, sometimes, rarely or never.

Studying the responses to this question, the answers gained were fairly mixed (see Table 2). 'Sometimes,' was the most common answer, accounting for 32.6% of responses (equivalent to 73 answers), closely followed by 'often,' representing 25.9% and 'rarely,' accounting for 24.6%. These figures reveal that just one quarter of respondents regularly use the redways and therefore are highly likely to either walk or cycle when doing so. Yet, over 41% of respondents, a much higher proportion, 'rarely' or 'never' use the redways, implying that these individuals also walk and cycle infrequently. Thus, this reinforces this study's other findings, that 65.6% of respondents never or very rarely travel on foot and 94.2% of respondents never or very rarely travel by bicycle.

**Table 2: Use of the redways**

<b>Frequency of redway use</b>	<b>Quantity</b>
Often	58
Sometimes	73
Rarely	55
Never	38

In the semi-structured interviews, both of the interviewees were asked whether they considered the redways to be successful at encouraging walking and cycling. Once again, the answers were varied, as one interviewee deemed the redways to be

successful and the other unsuccessful. Firstly, the interviewee who provided the positive answer, argued that the redways provide a 'safe refuge' away from road traffic, thus encouraging more to walk and cycle as many perceive them to be safe transport modes. But the interviewee who deemed the redways unsuccessful at promoting walking and cycling, stated that, due to the lack of underpasses, cyclists and pedestrians are sometimes forced to cross busy roads, which many regard as hazardous. Instead, this interviewee highlighted that the grid road system is so successful that it has a detrimental impact on redway use. The two interviewees provided conflicting views on the redways, however it is clear that the theme of safety is apparent throughout.

### **The Grid System**

In addition, questionnaire and interview participants were asked whether they regarded MK's grid system to be successful or unsuccessful and why. In general, the questionnaire answers were positive, with 91.5% (205) of the respondents deeming the grid system to be a success. Answers, such as 'reduces congestion,' 'easy to navigate around', 'can correct wrong turnings easily' and 'difficult to get lost' were commonly used, accounting for 47.3% (106) of all answers.

It is clear that a prominent theme of ease connects these questionnaire answers, with the majority of positive answers (159), implying that the grid system makes journeys within MK, easy, quick and straightforward, thus supporting MK Council's (2008) report that the traffic flow is efficient and well-distributed spatially in MK as a result of the grid system. In addition, on this topic, both of the interview responses were very similar to the majority of questionnaire responses, deeming the grid system to be successful and emphasising the ease of journeys through the grid system.

Despite this, there were a small number of negative questionnaire responses (19), criticising the grid system. One questionnaire participant, in particular, explained that the grid system simply makes it 'too easy to use the car,' arguing that the grid system completely fails to encourage alternative forms of transport. Adding to this,

an interviewee similarly stated that the grid system was ‘unsuccessful for some,’ most notably individuals without a car. It is clear from this study that car use is dominant in MK, owing to speed, ease and convenience of car journeys, advantages arguably generated by the presence of the grid system. Furthermore, when the two interviewees were asked the additional question of whether they agreed the grid system encourages MK residents to drive more, both interviewees agreed, stressing that the grid system makes the car the most attractive transport choice.

### **Discussion**

Car dominance is highly evident from the results of this research, with the car ‘the most used transport mode’ and nearly three quarters of questionnaire participants revealing that they ‘always,’ or ‘almost always,’ travel by car. Over 92% of questionnaire respondents owned at least one car and 70% owned two or more cars. This is further demonstrated by the failure of the questionnaire participants, who did not choose the car as their most used transport mode, to highlight any benefits of their preferred transport mode. Instead, the majority of these simply stated that they ‘do not own a car.’ The car is clearly a powerful preoccupation for most MK residents and it is arguable that the high level of car use in MK is to the detriment of other available transport modes, with 94.2% of respondents ‘never,’ or ‘very rarely,’ travelling by bicycle; 88.9% ‘never,’ or ‘very rarely,’ travelling by bus; and 65.6% ‘never,’ or ‘very rarely,’ travelling on foot. Additionally, one interview participant highlighted that the grid system makes car use ‘too easy’ and therefore encourages residents to drive regularly.

It is possible to criticise the initial plans for MK for this car dominance, as MK was built for, and around, the car thus making car use highly attractive, in comparison to other transport modes. It can be argued that a large-scale public transport system should have been integrated into the original plans for Milton Keynes, in order to diminish high car use and encourage the use of public transport. It is clear that it would be very difficult to introduce such a system to Milton Keynes now and this raises the question whether the trend of car dominance will change or can ever be tackled.



Furthermore, the issues of population growth and climate change increase the need for a shift in the way MK residents travel. The population of MK is still growing rapidly, suggesting that increases in car ownership and road traffic will continue. It is predicted that there will be a 57% rise in car journeys at peak travel times by 2031, however MK's roads are only able to provide an additional 25% capacity (MK Council, 2011). An improvement in public transport is thus necessary, making public transport viable and attractive as an alternative to the car, and helping to combat this growing problem. Furthermore, the important issue of climate change reinforces the need for improved public transport in Milton Keynes because in the long term the car is an unsustainable transport mode.

From the results of the research, it is clear that the grid system is a success, enabling fast, direct and uncongested journeys and thus promoting car use in MK. It is questionable whether the trend of high car use will change without the introduction of new public transport infrastructure or the improvement of existing public transport systems. MK's population growth and the issue of climate change arguably add increasing pressure for a change in the way MK residents travel.

### **Summary**

The results demonstrate a clear overarching theme of car dominance, therefore supporting Metz's (2008:1) claim that the car has become the 'prime mover'. It is highly evident that the car is currently the leading mode of transport in Milton Keynes: demonstrated by the car dominating as the 'most used transport mode' and nearly three quarters of questionnaire respondents stating that they 'always' or 'almost always' travel by car. Moreover, the results from the questionnaire display extremely high levels of car ownership in Milton Keynes also, thus reinforcing the clear theme of car dominance. Over 92% of questionnaire participants own at least one car and 70% own two or more cars.

In addition, the results suggest that the trend of car dominance in Milton Keynes has a negative effect on the use of other transport modes, namely bus use, cycling and

walking, with just 14.3% of questionnaire respondents choosing either bus, bicycle or walking as their most used transport mode, and 94.2% of respondents 'never,' or 'very rarely,' travelling by bicycle, 88.9% 'never,' or 'very rarely,' travelling by bus and 65.6% 'never,' or 'very rarely,' travelling on foot.

Most importantly, the results strongly suggest that Milton Keynes' transport infrastructure does affect the way people travel. In particular, it is clear that the grid system promotes car use in Milton Keynes. This is evidenced both from the results of the questionnaire survey and from the two interviewees who agreed that the grid system encouraged Milton Keynes' residents to drive more. Both highlighted the benefits the grid system generates for car users: fast, direct and uncongested journeys.

## **Conclusions**

A number of interesting conclusions have been reached from this study. Firstly, the results reveal car use to be the dominant transport trend in MK. This is evidenced by the car dominating as the 'most used transport mode,' nearly three quarters of respondents exposing that they 'always,' or, 'almost always,' travel by car, as well as over 92% of questionnaire participants revealing that they own at least one car.

Secondly, the results suggest that people desire straightforward and convenient transport modes. This is demonstrated by the words 'convenient,' 'quick' and 'easy' commonly being used by both questionnaire and interview participants in order to justify the high levels of car use in MK. Adding to this, the themes of ease and practicality were present throughout the results.

It is also apparent from the results that MK's transport infrastructure does affect the way people travel, most notably the efficiency of the grid system promoting car use, but also the problems with the redways reducing cycling and walking. When asked whether the grid system encourages individuals to drive more, both interviewees agreed, highlighting the advantages the grid system brings car users, notably fast,

direct and uncongested journeys. Hence, it is clear that car use is the main form of travel in MK because car journeys within the town are quick, easy and convenient as a result of the grid system.

The questionnaire's sample size (224 respondents), along with two semi-structured interviews, was suitable, providing sufficient data to be analysed. However, further increasing the sample size, by distributing the questionnaire to more MK residents and completing additional interviews, would be advantageous. In addition, it would be valuable to ensure individuals are surveyed from as many different parts of MK as possible, to further guarantee that the MK population is fully represented. Robson (2014:11) explains that conclusions made from research with a large sample size are generally 'more convincing' than conclusions made from a smaller sample size. It is clear that increasing the sample size would be highly beneficial for future research on this topic.

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