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How do rail travellers use their time?

A comparison of National (Rail) Passenger Survey findings between 2004 and 2010

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Introduction

In the context of the national debate over the value of investing in the proposed HS2 high-speed rail network, it is timely to consider recent evidence on just how rail travellers use their time and their own assessment of its usefulness. This short paper provides a summary¹ of the findings from a comparison of responses to a series of questions on travel time use inserted into the National (Rail) Passengers Survey (NPS) in the autumns of 2004 and 2010. The paper first describes the nature of NPS and the large sample sizes achieved, goes on to outline the results from the travel time use questions and finally provides some commentary on the meaning and importance of these findings.

The NPS Survey

This large scale survey, now managed by Passenger Focus (PF), is mainly designed to ensure that train operating companies are delivering acceptable (and contractual) standards of service delivery in terms of information, comfort, cleanliness and quality of service on trains and at stations. In spring and autumn each year some 25,000 travellers are asked to complete a questionnaire about the service experienced on their current journey. The results are analysed and weighted to provide a representative sample for rail services across Great Britain and are published online by PF in a detailed report each half year. The survey has been operating in this format since 1999 and hence provides effective long-term monitoring of passenger rail quality delivery standards.

For the autumn survey waves in 2004 and 2010 the questionnaire included a series of questions on how travellers use their journey time on the train, what items they have with them, to what extent they advance plan their time use and how they rate the usefulness of the journey time. The 2004 findings from these questions are reported in detail in a published paper by Glenn Lyons, Juliet Jain and David Holley².

Results from the travel time use question modules

The principal results concerning how people used their journey time in 2004 and 2010 can be seen in Table 1.

Table 1 shows that reading for leisure and window gazing/people watching are the most common activities in terms of being undertaken *at some point* in the journey. When considering the activities on which travellers spent *most* of their time, working and studying also becomes

¹ A more detailed account can be found in a full paper entitled "Comparing rail passengers' travel time use in Great Britain between 2004 and 2010" by Glenn Lyons, Juliet Jain, Yusak Susilo and Steve Atkins, University of the West of England, Bristol (UWE), July 2011.

² Lyons, G., Jain, J. and Holley, D. (2007). The use of travel time by rail passengers in Great Britain. *Transportation Research*, 41(A), 107-120.

important, especially for business travel. The table reveals notable consistency between 2004 and 2010 in terms of the relative overall proportions of people reading for leisure, window gazing, working/studying, talking to other passengers, sleeping/snoozing, being bored and eating/drinking. This suggests that the survey instrument has operated in a consistent manner between surveys offering legitimacy to direct comparison of results between years. However the technology dependent activities - text messages/phone calls and listening to music/radio/podcast - have increased in their extent of occurrence over the six year period across all journey types. Passengers in 2010 are 63% more likely to be texting or phoning for personal reasons and 83% more likely to be doing so for work. It is clear that technology is allowing greater opportunities for external communication, as well as facilitating a wider range of activities, both work-related and social. 1 in 5 commuters and 1 in 3 business travellers in 2010 were checking emails. 1 in 20 passengers were accessing social networking sites. Although not revealed directly by the survey, it also seems likely that use of mobile technologies has become more socially acceptable and travellers are increasingly able to personalise both their aural and physical environments.

Table 1. Comparison for 2010, by journey purpose and direction of travel, of the percent of travellers undertaking activities for some time during the train journey and (shown in brackets) for most of the time; shaded rows show 2004 results - only activities undertaken by at least 10% of respondents are shown

activity	journey purpose			
	all	commute	business	leisure
Reading for leisure	54 (38)	63 (45)	43 (25)	48 (34)
	54 (38)	62 (46)	47 (27)	48 (32)
Window gazing/people watching	53 (20)	47 (12)	46 (13)	64 (32)
	57 (20)	49 (13)	54 (14)	68 (31)
Text messages/phone calls - personal	30 (2)	34 (2)	26 (1)	27 (2)
	19 (1)	20 (1)	15 (1)	19 (1)
Working/studying	27 (13)	31 (13)	54 (34)	11 (5)
	26 (14)	27 (14)	52 (35)	13 (6)
Listening to music/radio/podcast *	20 (8)	28 (10)	14 (5)	13 (6)
	9 (4)	12 (5)	5 (1)	7 (3)
Checking emails #	17 (2)	20 (2)	31 (5)	7 (1)
Eating/drinking	17 (1)	13 (0)	23 (1)	20 (1)
	15 (0)	9 (0)	22 (1)	20 (0)
Text messages/phone calls - work	15 (1)	17 (1)	32 (3)	5 (0)
	8 (1)	8 (1)	21 (2)	3 (0)
Talking to other passengers	14 (5)	10 (3)	10 (5)	19 (9)
	15 (7)	11 (4)	13 (5)	22 (10)
Being bored	11 (2)	14 (2)	8 (1)	9 (2)
	12 (2)	14 (3)	9 (1)	11 (2)
Internet browsing #	10 (1)	13 (1)	11 (1)	6 (1)
Sleeping/snoozing	14 (3)	18 (4)	13 (3)	10 (3)
	15 (4)	18 (5)	13 (3)	11 (2)

*podcast new to 2010 survey

new to 2010 question

Table 2 shows how passengers themselves judge the degree to which their travel time is worthwhile to them. Overall the proportion of people considering their time wasted has gone down by nearly a third in six years from 19% to 13% of all passengers. Correspondingly the proportion of people making very worthwhile use of their time has gone up by a quarter - from 24% to 30%. There is a strong overall message here that positive utility of rail travel has increased over the six year period - very good news for the marketing departments of the train operating companies. This may in part reflect how rail service provision is perceived to have changed over this time. The proportion of travellers who were very/fairly satisfied with the punctuality/reliability of their train has gone up by 15% (from 71% to 82%) and the proportion of travellers who rated the train very good or good in terms of there being sufficient room for all the passengers to sit/stand has also gone up by 15% (from 59% to 68%). Improvement in service quality has been accompanied by an improvement in the positive utility of travel time.

Table 2. "Thinking about the time you spent on the train from XXX station, which one of the following statements do you most agree with?" (% of respondents selecting each statement in 2010; equivalent figure for 2004 shown in brackets)

statement most agreed with	all	commute	business	leisure
I made very worthwhile use of my time on this train today	30 (24)	27 (23)	34 (28)	32 (23)
I made some use of my time on this train today	55 (55)	55 (53)	57 (58)	53 (55)
my time spent on this train today is 'wasted time'	13 (19)	16 (23)	8 (13)	12 (17)
not answered	2 (3)	2 (2)	1 (2)	3 (5)

In terms of the thing people spend *most* time doing, three activities account for 71% of all journeys - reading for leisure, window gazing and working/studying. For all three of these there are substantial increases in the proportion of travellers who consider their time spent to have been very worthwhile. Few passengers who spend most time reading for leisure or working/studying consider their time to have been wasted.

Table 3. Assessment of time worth according to extent of advance planning - 2010 results

	Planning in Advance			
	A lot	A little	Very little as I always use my journey time the same way	Not at all
I made very worthwhile use of my time on this train today	64	29	31	21
I made some use of my time on this train today	32	63	56	53
My time spent on this train is wasted time	3	7	12	22
Not stated	1	1	1	4

Table 3 shows, for different extents of advance planning for how time is used on the train, how worthwhile that time was then considered to be. Individuals who have planned a lot in advance are three times more likely to consider their time use very worthwhile compared to those who have not planned at all and seven times less likely to consider their time has been wasted. Those who always use their journey time in the same way and do very little advance planning (commuters in particular) are half as likely to consider their time use worthwhile as those who plan a lot. This may reflect habitual behaviours that have formed which are not geared towards getting the most out of a journey. It may also reflect the greater appeal, for those using the train less frequently, of having the travel time and wishing to make the most of it. Such findings

offer a prompt for marketing departments of train operating companies to consider how they might better encourage their customers to get more out of train travel.

Table 4 compares the extent to which items were both to hand and used between 2004 and 2010. The following items show little difference between 2004 and 2010: reading book; text book; magazine; and paperwork. However there have been notable increases in both availability and use of mobile technologies.

Table 4. Items individuals had to hand and items individuals used (2004 figures shown in brackets)

Carried Items	to hand (%)	used (%)	used/ to hand
Newspaper	45 (79)	32 (29)	0.71 (0.37)
Reading book	36 (36)	21 (20)	0.59 (0.56)
Text book	7 (7)	3 (3)	0.43 (0.44)
Magazine	12 (15)	7 (8)	0.53 (0.52)
Paperwork	21 (24)	11 (12)	0.51 (0.51)
Games/puzzles	6 (3)	2 (1)	0.36 (0.41)
Food/drink	26 (30)	16 (19)	0.62 (0.6)
Laptop computer	11 (7)	4 (2)	0.32 (0.30)
Netbook *	2	1	0.40
Mobile phone	69 (66)	37 (24)	0.54 (0.36)
Portable DVD player *	1	0	0.43
MP3 player/personal stereo	22 (12)	13 (6.4)	0.58 (0.56)
Games console	1 (0)	1 (0)	0.45 (0.50)
eBook/iPad *	2	1	0.57

* 2010 categories only

Combining netbooks and laptops then the proportion of people with such a device has increased by 77% in six years from 7% in 2004 to 13% in 2010 - the proportion of travellers who have and use a laptop computer has increased by 60%. The proportion of people with a mobile phone has only increased modestly over the six years but more of those travellers who have a phone with them are now using it during the journey - 54% compared to 36% for 2004 - perhaps indicating less inhibition about use. The proportion of people who have a music player and the proportion who have one and use it has doubled in six years. The extent of being equipped for sound may be even greater given the capacity of modern mobile phones to store and play music.

The survey question struggles to keep pace with or to capture an ability to compare truly what technological capabilities an individual is equipped with and how this is changing over time. It is increasingly difficult to know what functionality a device has. Thus 'mobile phone' in its earliest guise made phone calls and then handled text messages. Now the latest (smart) phones have touch screens and can be used to browse the internet, take and view photos, check and send emails, store and play music and listen to podcasts and play games.

There appear to be changing fortunes for the newspaper - in 2004 the majority (79%) had a newspaper to hand - by 2010 this had reduced to a minority (45%). Those who still have a newspaper to hand are twice as likely to use it compared to the position in 2004. Despite the increase in availability of free newspapers targeted at public transport use, travellers are perhaps less reliant on the printed word for news information while travelling. Or it may be that mobile technologies are replacing the newspaper as a means to create psychological distance from other surrounding passengers.

Concluding discussion

It is clear that the assumption in UK economic appraisal of transport schemes that travel time by rail is unproductive and has no economic value cannot be justified. Significant proportions of travellers, particularly but not exclusively business travellers, work or study during their journey and assess this time as being very worthwhile. Indeed it is one of the clear advantages of rail travel that journey times can have positive use value, especially when compared to the car driving task. However, recognition of this fact leads to the paradoxical conclusion that reducing rail journey times, for example by construction of a high-speed rail line, would have less economic benefit than under the present appraisal assumptions. The matter becomes further complicated once the 'time productivity' consequences of switching from road to rail and of more or less crowding on trains are contemplated. With the march of the information age bringing changes to both times uses and their perceived worth for rail passengers, a substantive revision of this basic appraisal assumption is long overdue - especially at a time when such major rail investment decisions are being examined.

The increase in travellers' positive assessment of their rail travel time uses will be welcomed by train operators. It seems to be associated with both an increase in the availability and use of mobile technologies as well as improved perceptions of journey qualities such as punctuality and likelihood of getting a seat. The upward trends shown here in the use of mobile technologies are surely far from being exhausted and further expansion seems highly likely, with more widespread viewing of television and movies a potential next stage of development. Train operating companies will be keen to understand how such a market opportunity might lead to commercial advantage. Travellers will be interested in taking advantage of these opportunities, whilst still protecting their own environment from incursion by others engagement in these activities.