How real is a reported desire to travel for its own sake? Exploring the 'teleportation' concept in travel behaviour research

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Abstract The 'teleportation test' has been used in travel behaviour research for more than a decade, as a means of assessing whether an individual views travel purely as a disutility. The teleportation concept has been used successfully in qualitative research to elicit responses and clarify attitudes to travel time. However, survey-based studies have revealed an apparent inconsistency, in that many people who report an ideal travel time greater than zero, and/or do not consider their travel time as wasted, also report wanting to teleport. This note reviews a range of studies involving the teleportation concept, highlights the inconsistency, suggests reasons for it, and proposes a research approach for testing the validity of those reasons.

Keywords Positive utility of travel · Travel multitasking · Commuting · Travel time · Ideal travel time

Introduction

The concept of instant transportation from one time or place to another is a staple of science fiction and fantasy—from H.G. Wells' *The Time Machine* (Wells [1895] 2000), to *Star Trek* (television programme), and J.K. Rowling's Harry Potter, who can 'apparate'—instantly appear in a new place (Rowling 2005). To a driver stuck in a traffic jam, or a public transport commuter experiencing delays, there might be strong appeal in the idea of dispensing with the journey altogether and arriving instantly at the destination.

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In travel behaviour research, the 'teleportation question' or 'teleportation test' has been used for over a decade as a means of exploring experiences of and attitudes toward travel time. Among other reasons, travel time is important because of the key place of the 'valuation of travel time savings' in transport economics, which assigns a monetary value to time savings as a benefit, on the assumption that spending time travelling is undesirable (e.g. Abrantes and Wardman 2011; Small 2012).

This research note first outlines the origins of the teleportation test in the travel behaviour field and then describes some cases where the teleportation concept has been used in research. Two recent New Zealand studies are examined and the apparently unstable effect of the teleportation question in survey results is explored (information on one of these was included in an earlier presentation; (Russell 2013)). The article concludes with recommendations about the use of the teleportation concept in travel behaviour surveys.

The 'teleportation test' was originally suggested by Mokhtarian and Salomon (2001). The authors discussed understanding and measuring people's 'affinity for travel', which they proposed could be seen as having three elements. People may have affinity for travel because of:

- 1. 'The activities conducted at the destination;
- 2. Activities that can be conducted while travelling;
- 3. The activity of travelling itself' (Mokhtarian and Salomon 2001, p. 701).

A person's affinity for travel was hard to measure, the authors claimed, because it was 'likely to be a composite of positive utilities' for these three elements. The teleportation concept was introduced as a 'whimsical but potentially useful way to help make the distinction' between the three elements. The idea was simply to ask this question:

If you could snap your fingers or blink your eyes and instantaneously teleport yourself to the desired destination, would you do so?' (Mokhtarian and Salomon 2001, p. 711).

If people only travelled for 'activities conducted at the destination' they would answer 'yes' to the teleportation question; if they liked 'activities that can be conducted while travelling' their answer may be 'yes' or may be 'no', depending on 'the perceived ability to accomplish the same tasks without the travel'. If they liked 'the activity of travelling itself' they would answer 'no' to teleporting (Mokhtarian and Salomon 2001, p. 711).

USA and UK studies using the teleportation concept

The teleportation question or test has been used, with variations, by several travel behaviour researchers. This section and the next give a brief overview of the studies and their findings (see summary, Table 1). Diana (2008) also used the concept in a measurement model fit on a sample of 164 employees of the French National Institute for Transport and Safety Research (INRETS, now re-named with the acronym IFSTTAR), but no descriptive statistics from the sample were provided for the 'willingness to being teleported' variable.

Handy, Weston and Mokhtarian (2005) used a variant wording in research about 'excess travel' involving 43 one-to-one interviews with car drivers in Texas, USA. Their lead question on the 'value of driving itself' was:



Table 1 Summary: the teleportation question in travel behaviour research

Author/date			
Mokhtarian and Salomon (2001)	Suggested the teleportation question affinity for travel	Suggested the teleportation question as a 'whimsical but potentially useful' approach in studying people's affinity for travel	proach in studying people's
	Method	Focus of study	Country
Handy, Weston and Mokhtarian (2005)	Qualitative: interviews	43 car drivers	Texas, USA
Jain and Lyons (2008) Also reported by Watts and Urry (2008) Qualitative: focus groups	Qualitative: focus groups	Six focus groups	England
O'Fallon and Wallis (2012)	Quantitative: online survey	512 commuters by any mode	New Zealand
Russell (2012)	Qualitative: phone interviews	48 PT passengers	New Zealand
	Quantitative: paper survey	1039 PT passengers	



'Remember Star Trek, how Captain Kirk could beam himself instantly from place to place? If you could beam yourself up for all your trips, would you do it? (Handy et al. 2005, p. 190).

This study found that 33 out of 43 participants 'would "beam up" rather than drive', and some were enthusiastic about it, but the authors quoted 10 participants who would not like to 'beam up' for all their trips, to show that 'for some people, there really is something about driving itself that they value' (Handy et al. 2005, p. 192).

Jain and Lyons (2008) used the idea of teleporting in research with car and public transport users in England. They conducted six focus groups in three areas including large cities and a rural area. Among other topics, participants discussed:

'the pros and cons of a "teleportation" scenario... where the prospect of being able to reduce travel time to zero was put....' (Jain and Lyons 2008, p. 84).

The study commented on the ability of the teleportation concept to illuminate the constraints on desired activity engagement that are imposed by long travel times, noting that one rural participant wanted to use 'the teleporter' for a very practical reason: 'because the bus service doesn't run after 6 o'clock' (Jain and Lyons 2008, p. 84).

Results from these same focus groups were also discussed by Watts and Urry (2008), who seemed to suggest that Mokhtarian and Salomon (2001) had actually asked the teleportation question in their survey—reporting that 'the majority did not want to teleport instantly' (Watts and Urry 2008, p. 864). In fact, the California team asked about 'ideal commute time' in both survey and focus group research, including the possible 'ideal time' of zero minutes i.e. no travel time at all (Redmond and Mokhtarian 2001).

Watts and Urry provided quotations from the six English focus groups illustrating the 'general reaction to teleportation' (Watts and Urry 2008, p. 865). They wrote:

'The immediate reaction to teleportation was often positive.... However, as discussions developed, the notion of teleportation as a travel ideal was generally challenged and a different response developed; occasionally... a person completely reversed their initial reaction as they reflected on the implications of losing their travel time.... Overall, the initial eulogising of teleportation changed into distinguishing between particular moments and parts of journeys that were a waste of time, or boring, or particularly arduous, and those parts of journeys where the experience of travelling was important or desirable' (Watts and Urry 2008, p. 865).

A similar report of participants changing their initial response arose from the two focus groups on a related topic, ideal commute times, conducted by Redmond and Mokhtarian as part of their San Francisco research (2001, p. 186).

New Zealand studies using the teleportation concept

A qualitative study

Russell used the teleportation question in 2009–10 in both personal telephone interviews and survey research about travel time use (Russell 2012). For the semi-structured interviews (of 48 adult bus and train passengers), the teleportation question was placed near the end of the interview schedule, and preceded by an introduction:



'Now I have a science fiction question. If you could snap your fingers or blink your eyes and instantaneously teleport yourself to the desired destination, would you do so?'

Russell's experience with the teleportation question was similar to the English and San Francisco focus group results. In the New Zealand interviews, many participants' first response to the question was amusement and laughter. Participants appeared intrigued by the fantasy of teleporting. In proportions similar to those in the Texas interviews, ten participants said at once they would not like to teleport and one person did not respond to this question. Over three-quarters of the participants (37) said at first that they would like to teleport; some responding with enthusiasm to the idea, valuing the money saved and avoidance of inclement weather.

'The child in me says yes [to teleporting]' (Bus-user; male).

Some participants who would like to teleport envisaged how they could spend the time saved; examples included teleporting into a café before going to work, and spending time reading, working or gardening.

One participant was very clear that she would like to teleport; for her, travel was:

'a means to an end, it's not an enjoyable thing in itself' (Bus-user, female).

Another disliked travelling at all, by any mode:

thought it had a downside too:

I just don't like travelling places. I feel like I'm missing out, like I'm wasting time.... I just want to be where I want to go' (Train-user; female).

One woman who had a very steep walk taking her child in a pushchair to their bus stop would have liked to teleport only part of the way, to avoid that difficult leg of her journey. Some interview participants who initially responded warmly to the idea of teleporting

'yes it would be good, but then you've got the lack of talking to other people and so on' (Train-user; female).

'it would be an amazing way to get to work. But on the other hand it would take some of the sort of pleasure out of travelling, because, you know, a chance to relax, to just look at things, a chance that people don't get very often during the day, and I might find I missed that time as I travelled in and out' (Bus-user; male).

'going back to your question would I go instantly? I would miss out on my walk every morning' (Train-user; male).

A participant who travelled for over three hours a day said 'just to be able to do it would be fun'. But he then added:

'that one-and-a-half hours in between [work and home] gives me time to wind down and it's a good way to shut off work and get home with a different mindset, fresh... and likewise in the morning... that time in the train sort of wakes me up and when I get to work I'm fresh' (Train-user; male).

The ten participants who said from the outset that they would *not* like to teleport to their destination gave various reasons (several of them echoed in the interviews of 12 female commuting drivers in the midwestern United States of America presented by Basmajian 2010, although he did not directly invoke the teleportation concept): one found taking the bus 'a lot more fun than just appearing' (Bus-user; female) and others valued the time between one place and another as healthy 'down time':



'it is quite nice to have a distinction between work and home' (Train-user; female). '[teleporting would mean] losing that kind of quiet, stress-free place to be in the morning where you can kind of in a way wake up and get into the school mode.... I do like having that time, when I can't really do anything' (Bus-user, female).

'I'm racing at home doing lots of things and then racing at work, and so it is a kind of down time' (Bus-user; male).

'if you live next to your workplace that doesn't help your health because then there is no change of environment and you can't really switch off' (Bus-user; male).

A woman whose only time to herself was on her train commute—which she called 'my time'; see also Basmajian (2010), Jain and Lyons (2008), Watts and Urry (2008)—said:

'if I could just beam myself to where I want to be, the 'my time' would [only] happen after everything else was done' (Train-user; female).

Some actively liked public transport travel's social aspects:

'I enjoy going along in a vehicle with people' (Bus-user; female).

'sometimes going on a bus is a way of communicating with people and sometimes you make friends from that. You get the regulars. And yeah, it's like another social event.... The people who're on the bus experience the same kind of action or trouble and then maybe that leads on to some relationship developing' (Bus-user; female).

Asked about their 'ideal travel time', participants' responses ranged from five or ten minutes to their current commutes of up to one and a half hours each way. Over a third of participants (18) suggested an ideal travel time of 20 min or less each way, and just under a quarter (11) gave an ideal length of 30 min each way. Nine were happy with their current journey time; and although four wanted no travel time at all, five had an ideal travel time of an hour or more each way. One train passenger disliked having a 14-minute train trip; he found his journey was too short:

'by the time you settle down, have the ticket clipped, and most mornings I would text my wife... it goes very quickly. It's almost like I would get more done or a lot more out of it if it was half an hour' (Train-user; male). (See also Calvert and Avineri 2009).

These results are not dissimilar to those from studies in other countries. Mokhtarian's team found in the USA that 15–19 min was the category into which the reported ideal commute length most often fell (Redmond and Mokhtarian 2001). The English focus groups showed participants' ideal travel time to work on average was '20–30 min, with the range being between 10 and 60 min' (Watts and Urry 2008, p. 866).

From these qualitative research reports, it appears the teleportation concept has been used effectively in the United States of America, England and New Zealand. Interviewers were able to deploy the idea (with various wordings, although not all the published reports give the precise question asked, nor the context leading up to or following the question) to elicit views and comments that gave insights into the nuances of car and public transport users' views on travel time.

Two quantitative studies using the teleportation concept

Two independent studies, coincidentally both conducted in New Zealand, collected survey data using the teleportation concept, enabling a quantitative analysis of the responses.



	O'Fallon and Wallis (2012) (all modes) ('usual' commute journey) (N = 512)	Russell (2012) (bus & train) ('today's journey') (N = 1039)
Would like to teleport	79 %	66 %
Travel time is wasted	19 %	18 %
Length of travel time	Median <i>existing</i> commute 20 min; 75 % of all commuters' <i>ideal</i> commute: ≤20 min; 3 % stated an ideal commute of 0 min	Median 'today's journey' 25 min; Travel time 'too long': 18 %; Travel time 'about right': 81 %

Table 2 Attitudes toward travel time in two New Zealand surveys

There were also questions about 'ideal' travel time. Examining these studies, a more complex view emerges. Relevant results are given in Table 2.

In a study commissioned by the New Zealand Transport Agency, which plans, funds and manages land transport in New Zealand, O'Fallon and Wallis (2012) conducted an online survey of 512 people who commuted to work or study by any mode (response rate: 40 % full completion). Question 22 of the survey asked:

'If you could use a Star Trek-like teleporter to instantly travel from home to work/ study (and back again), what would you want to do?' (O'Fallon and Wallis 2012, p. 83).

Response choices were: 'I'd teleport' (which led to a question asking 'how would you use the time you saved by not having to commute?'), or 'I'd want to spend some time travelling between home and work/study' (which led to questions about minimum desired travel time for the commute and reasons why participants wanted to spend time travelling) (O'Fallon and Wallis 2012). In response, 79 % of the sample indicated that:

'if provided with the opportunity, they would teleport to work/study, thus altogether avoiding the time spent commuting' (O'Fallon and Wallis 2012, p. 8).

The length of their existing commute may have impacted respondents' views on teleporting: those who wanted to teleport had a longer median existing commute of 20 min, whereas people who preferred *not* to teleport had a median commute of 15 min. Those who walked were somewhat less keen on teleporting than other commuters: of walkers, 67 % would teleport, compared to 81 % of drivers and 83 % of public transport users (O'Fallon and Wallis 2012, p. 53).

In contrast, of the 512 respondents, 'very few (3 %) specified a "zero" ideal commute time' (question 12 of the survey); the median 'ideal commute' time was 10 min. Only 19 % indicated that their travel time was 'wasted' (O'Fallon 2012, p. 9). Respondents who would like to teleport had shorter ideal commute times (median 10 min) than those who would not like to teleport (median 15 min). But a good match between a respondent's existing commute length and ideal commute length was no guarantee of their views on teleporting: just over a fifth of those who wanted to teleport reported ideal commute times greater than or equal to their existing time (O'Fallon and Wallis 2012, p. 53).

This survey had another relevant question (q.17), which asked:

'Assuming that any costs were the same in both situations, which would you prefer—your usual commute trip time or one that takes half the amount of time?' (O'Fallon and Wallis 2012, p. 82).



Respondents' existing commute time also appeared to have an effect on whether or not they would like to shorten their travel time by half. Those who wanted to halve their travel time (72 % of the sample) had a median existing commute of 25 min. The 28 % who didn't want to halve their travel time (O'Fallon and Wallis 2012, p. 51) had a median existing commute of 15 min.

Thus, at first glance there is a contradiction with answers to this question for at least 7 % of the sample: even if all of the 72 % who wanted to halve their commute time also wanted to teleport, at least one-fourth of the remaining 28 % wanted to have 0 commute time (since they must have wanted to teleport in order for teleport aficionados to comprise 79 % of the sample) but preferred their current commute time over one that was half as long. At least two resolutions suggest themselves. One is that preference may be a nonlinear function of commute time: it is quite possible that people would prefer commute times that are either very short (or zero) or moderately long (if not too long) over those in between, which are too long to be negligible but not long enough to get anything done. Thus, the group in question could consist of respondents who most prefer zero travel time, but prefer their current commute time over one that is only half as long. An alternative resolution is that for the people in question, the novelty appeal of teleportation may have overridden their preference for their current commute time. We return to both these points in the discussion section.

Further responses from participants who would like to reduce their commute by half, or do away with it altogether by teleporting, indicated that instead of travelling they would like to spend time on activities like:

'sleeping, more time getting ready for work, eating breakfast, family time, household chores and reading' (O'Fallon and Wallis 2012, p. 9).

Undertaking work or study in the saved travel time rated less frequently than the non-work/study activities. Note that some of the listed activities might be done while travelling on some kinds of public transport, e.g. sleeping, reading, and eating breakfast; the latter may also be done while walking or driving, and 'family time' can potentially be had while travelling on several modes.

Russell's pen-and-paper postal-return survey of bus and train passengers about travel time use and wellbeing in Auckland and Wellington (N = 1039; response rate 52 %) included three questions specifically relating to passengers' views on travel time. Two questions used the same wording as the British rail passenger surveys of 2004 and 2010 (Lyons et al. 2012, Susilo et al. 2012). One asked regarding the participants' waiting time 'today' whether they had made 'very worthwhile' use of their time; 'some use' of their time, or if their time spent waiting for the bus or train was 'wasted time'. The same question was asked in relation to the time spent travelling *inside* the bus or train. Finally, participants were asked the teleportation question.

The wording used to ask about teleportation differed slightly from that used for interviews. The survey asked retrospectively about 'today's journey',

'If you could have snapped your fingers or blinked your eyes and instantaneously teleported yourself to your destination today, would you have done so?'

Response options were: 'Yes', 'No' and 'Don't know/unsure' (Russell 2012).

Regarding waiting time 'today', 38 % of participants thought this was wasted time. Of in-vehicle travel time, only 18 % thought their travel time 'today' was wasted time. Yet in response to the teleportation question, 66 % of these same respondents indicated they would have liked to teleport. There were no significant differences by mode (bus/train),



gender or location (city). But a statistically significant difference relating to age was found: 81 % of respondents under the age of 25 years would like to teleport, compared to only 37 % of people over 65 years old (Russell 2012, p. 248).

At first glance, these survey results from New Zealand appear to have internal contradictions. Why did so many participants say they would like to teleport, when much smaller proportions wanted zero travel time, said their journey was too long, or considered their travel time wasted?

Discussion

To summarise, results from *qualitative* research showed an initial enthusiasm for teleporting followed by a retraction or softening of that view in some cases, enough to be remarked on by researchers. *Quantitative* results from two surveys showed a large positive response to a teleportation question, relating in one case to the 'usual' commute journey (in O'Fallon and Wallis 2012) and in the other, to 'today's journey' (in Russell 2012). In both of these surveys, this positive response to teleporting seems to conflict with results elsewhere within the same survey. Specifically, each of the surveys had more than one question related to whether commute time was viewed positively, asking about travel time as 'wasted time' and about 'ideal' journey time. Answers to *these* questions showed that people's journey time was 'about right', that zero travel time was not widely preferred and that travel time was by no means widely seen as 'wasted time'. Data from these questions seem to be at odds with the teleportation responses.

One factor to consider relates to the context of journeys. A respondent who expresses a love for travelling may be 'confounding the positive appeal of the destination with the travel required to reach it' (Mokhtarian and Salomon 2001, p. 701). The desirability of the destination did indeed seem to affect some responses in O'Fallon and Wallis' study, where there was a difference in workers' enjoyment of their commute based on enjoyment of their work, but in numbers too small to detect a significant relationship (O'Fallon and Wallis 2012, p. 40). Responses about travel time may vary with the journey being discussed. Studies reported here discussed 'today's journey' (Russell 2012) and 'usual commute' (O'Fallon and Wallis 2012), but a special outing may elicit more positive responses than workaday travel. Another aspect to consider is whether the journey is an 'outward' or a 'homeward' journey, as, for example, different levels of fatigue may shape travellers' responses. The conditions of the journey (for example, traffic congestion; crowding; weather) or the extent of choice about taking the trip may also affect travellers' responses.

However, although these considerations may help explain why different studies may yield different results, or even why different individuals within the same study may feel differently, they do not explain why the *same* individual in the *same* study would answer differently to the various questions, as is evidently the case in both New Zealand studies. Additional reasoning is required. The apparent discrepancy may be partly explained by realising that (1) 'ideal travel time' is a continuous-valued variable, whereas 'teleportation: yes or no?' invites an all-or-nothing comparison, and (2) as mentioned earlier, preference may well be a nonlinear function of travel time. Consider a respondent whose current commute travel time is 45 min and whose ideal travel time is 10 min. In response to a teleportation question, zero minutes may be the more attractive choice for the respondent, as being closer to 10 than to 45 min, even if the respondent actually prefers 10 min over both the other times. The same explanation may even apply to the respondents who reported wanting to teleport even though their ideal commute time was *greater* than their



current time: if their current time is 'too long to be negligible but not long enough to get anything done', they may consider '0' preferable to 'current', even if 'ideal' is preferable to both. However, this explanation is more likely to be true for the Russell 2012 study, where an explicit alternative to teleportation was not specified, than for the O'Fallon and Wallis 2012 study, in which such respondents would presumably have chosen 'want[ing] to spend some time travelling' over teleportation.

In general, but especially in the presence of nonlinear preference functions, respondents' reported preferences for teleportation can depend very much on what comparisons they are making (to *any* non-zero travel time? to their *current* commute time? to their *ideal* time? to an otherwise unspecified alternative of 'not teleporting'?), and question wording and order can considerably influence those comparisons.

In addition, however, for such cases in *both* studies, the evidence provided through the qualitative results presented earlier is relevant to interpreting the apparently contradictory survey results. The qualitative reports from England, USA and New Zealand showed that participants' *initial* response to the idea of teleporting was often an amused agreement, or enthusiasm for teleporting. It was only after further discussion that some focus group members and individual interviewees volunteered a change of heart, against teleporting. Yet the nature of quantitative survey research is such that generally only that *initial* response is captured, in this case a strong, and likely an amused, 'Yes' to teleporting. It can be difficult with this method to obtain considered, nuanced or subtle answers.

One possible reason for the initial enthusiasm for teleporting is the pure novelty of the idea, which may be confounded with its practical utility. It is likely that many respondents who would otherwise prefer non-zero travel time would nevertheless want to teleport at least at first, just for the experience (although conversely, a number who would otherwise want it for its practicality may be apprehensive of an unproven technology, and report *not* wanting to teleport). Again, the qualitative studies (especially the one from New Zealand) shed light on this issue, with some of the quotes ('the child in me says yes'; 'an amazing way to get to work') corroborating the sense that novelty is one basis for the strong appeal of teleportation.

The foregoing discussion presents possible explanations for why an ideal travel time might be greater than zero even though the respondent reports wanting to teleport. With respect to why respondents might not view their travel time as being wasted, even though they report wishing to teleport, those same explanations may apply, but a somewhat different explanation is also possible. Rather than representing a before-the-fact attitude toward travelling, the 'non-wasted' view of travel time may represent a post hoc adjustment to the reality of one's commute. That is, some travellers may effectively say, 'I prefer to teleport, but as long as I do have to travel, I am certainly not going to waste the time – I am going to use my time as well as I can'. It remains an open question how much travellers' positive use and perception of travel time is an adaptation to conditions they would otherwise see as negative, as opposed to being positive in its own right. A passenger reading on the train might see it as reading while travelling, or in a subtly different way as travelling while reading. From the point of view of policy or service-quality such nuances may not signify much; rail passengers will likely want a fast, reliable, and comfortable train service no matter how they spend their time while travelling. O'Fallon and Wallis' review of relevant literature concluded that:

'doing an activity while travelling did not necessarily give the travel time a positive utility, as the traveller may simply have been making the best of a 'bad' situation; similarly, pure 'monochronic' travelling did not mean the travel time was wasted, nor that it had a disutility to the traveller' (O'Fallon and Wallis 2012, p. 7).



In other words, it depends – on a range of circumstances, but experienced travellers do start their journeys equipped and ready to make use of travel time; see Lyons et al. (2011).

Conclusion and recommendations

We conclude that the teleportation idea can provide a thought-provoking discussion-starter and probe in focus groups and interviews. The specific wording of the question in studies has varied and this seems appropriate because different cultural settings may require the use of different words or phrases. Future qualitative studies of commuting could usefully attempt to explore ideal commute time and travellers' desire to teleport, to probe the nature of the ideal commute time versus no travel time.

In quantitative survey research, the teleportation concept needs to be used with caution as there is less scope for the nuances of travel time to appear. Acceptance of teleporting is not necessarily a proxy for an ideal travel time of zero, nor for seeing travel time as wasted.

We suspect that with careful question design, however, the teleportation question could still be usefully employed in quantitative surveys. The value of the teleportation concept in such a context could be tested with an experimental design in which half the sample is randomly selected to receive the straightforward teleportation question with yes/no/don't know options, and the other half presented with a longer question which incorporates some of the nuances of travel time. Our suggested example, applied to a regular commute, follows:

'In responding to this next question, we'd like you to think carefully about *the things* you might like about travelling, such as:

- the opportunity for transition between roles, e.g. between work or study and home,
- time for yourself,
- time to do certain things,
- enjoyment of the environment,
- exercise,

as well as the things you might not like, such as:

- the time it takes away from other things,
- congestion,
- stress,
- exposure to weather,
- being crowded by strangers.

With these pros and cons in mind, suppose you could snap your fingers or blink your eyes and be instantly "teleported" to your desired destination. Would you do so, or would you prefer to spend some time traveling?'

Follow-up questions could try to tease out whether a 'yes' to teleporting revolves mainly around its fun and novelty, or the desirability of avoiding travel (and conversely whether a 'no' is based on apprehension regarding an unknown technology, as opposed to an active desire to travel).

It would be additionally interesting to vary the wording of the teleportation question, with half of the sample simply being asked if they wanted to teleport or not, and the other half explicitly requested to choose between teleporting and 'spending some time travelling', as presented above and discussed earlier.



Similarly, careful question design is needed to help understand individuals' views of their travel time as wasted or not. Respondents who report that their travel time is not wasted could be asked which of the following statements most closely expresses their perspective:

- 1. 'As long as I have to make this trip, I'll try to see that the time it takes is not completely wasted' (activities while travelling make a negative less negative).
- 2. 'I don't mind making this trip if I can use the time productively' (activities while travelling essentially redeem the disutility of the trip).
- 3. 'The trip in itself has value to me, so that even without doing anything special, I don't consider the travel time is wasted time' (the trip has positive utility independently of activities conducted while travelling).

If the third response is chosen, additional questions might pursue reasons why the trip might have intrinsic value, such as 'because I enjoy the movement and the change of scenery', 'because I like having the time to myself', and so on. It is also possible to articulate an additional response, capturing the case in which activities while travelling *more than* compensate for the disutility of the trip (the "ultra" productive' time postulated by Lyons and Urry (2005):

- 4. 'The things I can do while travelling *more than make up for the time* spent travelling'. A further, even stronger, extension could be:
- 5. 'The things I can do while travelling in fact constitute a major reason why I chose to make this trip, or to make it in this particular way.'

We readily acknowledge the potential existence of such travel time, and find such cases especially interesting. However, we suspect they are relatively rare and specialised, and thus that statements 4 and 5 may be little-chosen in most contexts (while statement 3, even if more popular than 4 and 5, will also pertain only to a minority of cases). We suggest that they may well account for a number of instances in which a slower mode is chosen over a faster one. For example, driving cross-country in a recreational vehicle may be chosen over flying precisely for the variety of activities such a trip can afford (but note how this example shades into the category of the trip itself having positive utility). Along the same lines, business travellers may prefer, for example, the 14-hour overnight ferry trip between Stockholm and Helsinki over the 1.5-hour flight, because of the entertainment activities on board the ship.

As with all surveys, question order matters (de Vaus 2002). Asking about teleportation earlier rather than later in a series of questions might elicit different responses. A further refinement could vary the placement of teleportation questions in surveys and compare responses placed *before* questions about other attitudes toward travel time in half of the sample, and in the other half, at the conclusion of travel time questions.

Given that context and trip purpose may affect travellers' attitudes, separate questions relating to the outward or return journey could be put. Responses could then be analysed with respect to the impact of the type of teleportation question (simple or extended lead-in) and answers ('yes'/'no' or 'yes'/'spend some time travelling'), the motivation for seeing travel time as not wasted (utilitarian or intrinsic), and question order, on the rates of teleportation acceptance and the degree of apparent inconsistency among responses relating to teleportation, ideal travel time, and view of travel time as wasted. Controlling for other variables such as socio-demographic factors, personality or attitudes may shed additional light on these relationships.



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