Why the Trip Home is Shorter, But Not Faster

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The Return Trip Effect

The subjective experience that the journey home seems to pass more quickly than the initial trip we took when we left home

Described in a wide range of travel contexts
(e.g., bicycle, bus, plane, and ocean voyages)

Vacationers were asked to mentally divide their Club Med holiday into three equal parts (beginning, middle, and end) and rate which of them seemed shorter

51% said that the last third of their holiday seemed the shortest
12% felt that time seemed shortest in the first part
(Avni-Babad & Ritov, 2003)

Participants returning from a bus trip or bicycle trip retrospectively compared their outbound return trips

Return trips were rated 17% to 22% shorter than the initial trip
(van de Ven, Rijswijk, & Roy, 2011)

Research Questions

Why does the Return Trip Effect occur?
Does it occur only when we are on holiday?

Possible explanation #1

Unfamiliar or unpredictable events take more cognitive resources to process, which is associated with an increase in **experienced duration**

Unfamiliar events serve as markers for judging the passage of time, the more events remembered the longer the **remembered duration**

Familiarity would appear to be an important component
of the experience

People who routinely fly on planes rate flights as taking less
time than people who fly less often
(Avni-Babad, 2001)

Even a very busy day, if filled with routine activities,
can pass very quickly

Compared duration ratings for routine jobs (on a kibbutz) to duration
ratings for days containing temporary job assignments. Remembered
durations were significantly shorter for routine days
(Avni-Babad & Ritov, 2003)

Familiarity would appear to be an important component
of the experience

"*Awareness of change is thus the condition on
which our perception of time's flow depends*"
(Wm James, 1890, p. 620)

Increases in difficulty of information processing
lead to increases in experienced duration,
and increases in stimulus complexity lead to
increases in remembered duration
(Block & Zakay, 1997)

When on holiday, the trip home seems shorter
because you are now familiar with the route

Possible explanation #2

Based on people's (incorrect)
expectations of how long a trip will take
(no role of familiarity)

People often underestimate how long a task or trip
will take them to complete
(Kahneman & Tversky, 1979; Roy, Christenfeld, & McKenzie, 2005)

The expectation is typically violated during the initial
leg of the journey (i.e., the trip took longer than expected)

During the return trip the expectancy violation is remembered
and the journey home is now shorter than expected

(van de Ven, Rijswijk, & Roy, 2011)

Expectancy interpretation rules out any
influence of familiarity

Can still obtain shorter estimates of the trip home
when alternate route home is used
(no familiarity)
(van de Ven, Rijswijk, & Roy, 2011)

The longer the estimates of the initial trip,
the shorter the estimates of the return trip
(van de Ven, Rijswijk, & Roy, 2011)

Possible explanation #3

The simplest -- the return trip actually is shorter,
because people drive faster on the way home.
The actual duration of the return trip (as opposed to its perceived
duration) has not been investigated

Research Questions

Why does the Return Trip Effect occur?
Compare novelty/workload, expectation, and speed

Does it occur only when we are on holiday?
What is the role of familiarity?

Method

Re-analyse data from recent experiment

29 participants drove a simulated road
twice a week for approx 12 weeks
13 males, 16 females
Mean age = 30.17 years (ranged 17 to 49 years)

(for details refer to Charlton & Starkey 2013)

Apparatus: TARS - University of Waikato driving simulator

Procedure: 24 km-long section of rural road
divided into northern & southern sections (A & B)

Participants drove 2 sections each day
(in either northbound or southbound direction)
separated by a short rest

For 8 sessions a return trip comparison was possible

Habit Redux Experiment					
Block 1	Session 1	Session 2	**Session 3**	**Session 4**	Session 5
	A-South	B-North	A-North	B-South -- RW	B-North
	B-South	A-North	A-South -- CD	B-North -- RW	A-North
Block 2	Session 6	**Session 7**	Session 8	**Session 9**	Session 10
	A-South	A-North	A-South -- UR	B-South	B-North
	B-South	A-South	B-South -- UR	B-North	A-North
Block 3	Session 11	**Session 12**	Session 13	**Session 14**	Session 15
	A-South	A-North	B-North	B-South	B-North
	B-South	A-South -- CD	A-North	B-North	A-North
Block 4	Session 16	**Session 18**	Session 18	**Session 19**	Session 20
	A-South	B-South -- RW	A-South -- UR	A-North,	B-North
	B-South	B-North -- RW	B-South -- UR	A-South -- CD	A-North

For two of the sessions there were road works in both directions
(that had not been there previously)

Habit Redux Experiment					
	Session 1	Session 2	Session 3	**Session 4**	Session 5
Block 1	A-South	B-North	A-North	**B-South -- RW**	B-North
	B-South	A-North	A-South -- CD	**B-North -- RW**	A-North
	Session 6	Session 7	Session 8	Session 9	Session 10
Block 2	A-South	A-North	A-South -- UR	B-South	B-North
	B-South	A-South	B-South -- UR	B-North	A-North
	Session 11	Session 12	Session 13	Session 14	Session 15
Block 3	A-South	A-North	B-North	B-South	B-North
	B-South	A-South -- CD	A-North	B-North	A-North
	Session 16	**Session 17**	Session 18	Session 19	Session 20
Block 4	A-South	**B-South -- RW**	A-South -- UR	A-North,	B-North
	B-South	**B-North -- RW**	B-South -- UR	A-South -- CD	A-North

Road works scenarios: road warning signs, 30 km/h speed, cones, construction equipment

For three other sessions the return trip had changes to the road environment
(called change detection scenarios)

	Habit Redux Experiment				
	Session 1	Session 2	**Session 3**	Session 4	Session 5
Block 1	A-South	B-North	**A-North**	B-South -- RW	B-North
	B-South	A-North	**A-South -- CD**	B-North -- RW	A-North
	Session 6	Session 7	Session 8	Session 9	Session 10
Block 2	A-South	A-North	A-South -- UR	B-South	B-North
	B-South	A-South	B-South -- UR	B-North	A-North
	Session 11	**Session 12**	Session 13	Session 14	Session 15
Block 3	A-South	**A-North**	B-North	B-South	B-North
	B-South	**A-South -- CD**	A-North	B-North	A-North
	Session 16	Session 17	Session 18	**Session 19**	Session 20
Block 4	A-South	B-South -- RW	A-South -- UR	**A-North**	B-North
	B-South	B-North -- RW	B-South -- UR	**A-South -- CD**	A-North

Change detection scenarios: changes to
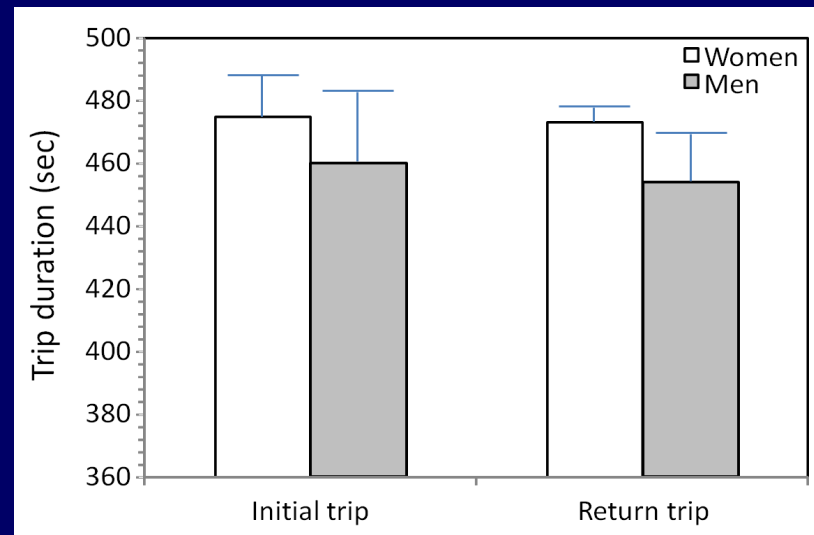or removal of road markings, road signs, buildings, etc

Results:

Return trip was an average of 3.81 sec shorter, but this was in the context of an overall average of 465.85 sec (7 min 45.85 sec) for each leg

not a statistically significant difference
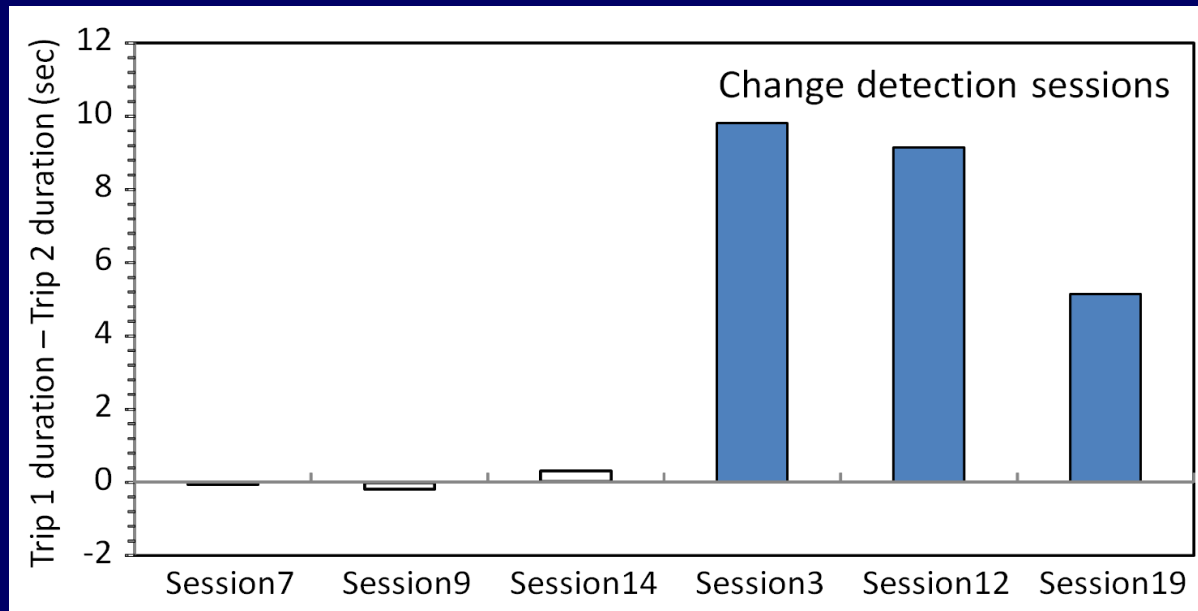$F(1, 24) = 1.17, p = .291, \eta_p^2 = .046$

Mean trip durations for the participants' fourth experimental session (road works)

Error bars indicate 95% confidence intervals

no main effect of gender,
or any gender by trip interaction

Results:

What about the effect of familiarity?

Participants drove faster while reporting changes to roads

Change detection sessions

Trip 1 duration – Trip 2 duration (sec)

Session7   Session9   Session14   Session3   Session12   Session19

Trip time differences for six experimental sessions
Positive values indicate shorter times for the second drive of the
session (i.e., the return trip)

Significant difference between the two types of sessions
$F(1, 26) = 17.16, p < .001, \eta_p^2 = .398$

no effect of session number or any interaction
between session type and session number

Results:

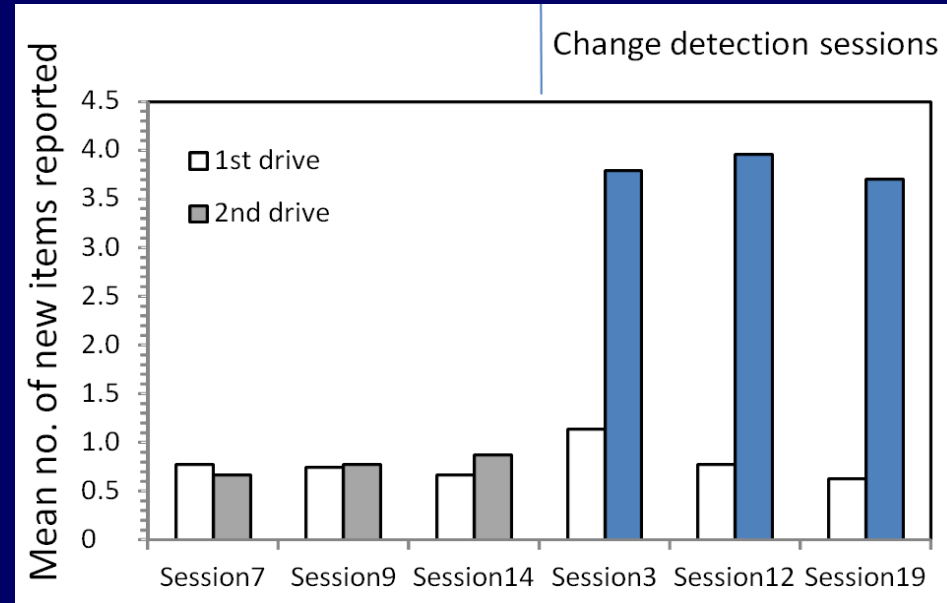## What is different about the change detection sessions?

CD contained unfamiliar elements

Participants reported whenever they noticed an unfamiliar element

Participants reported a significant increase in driving difficulty / mental workload

$F(1, 22) = 4.71, p = .041, \eta_p^2 = .176$
(interaction between trip and session type)

All characteristics associated with longer experienced duration
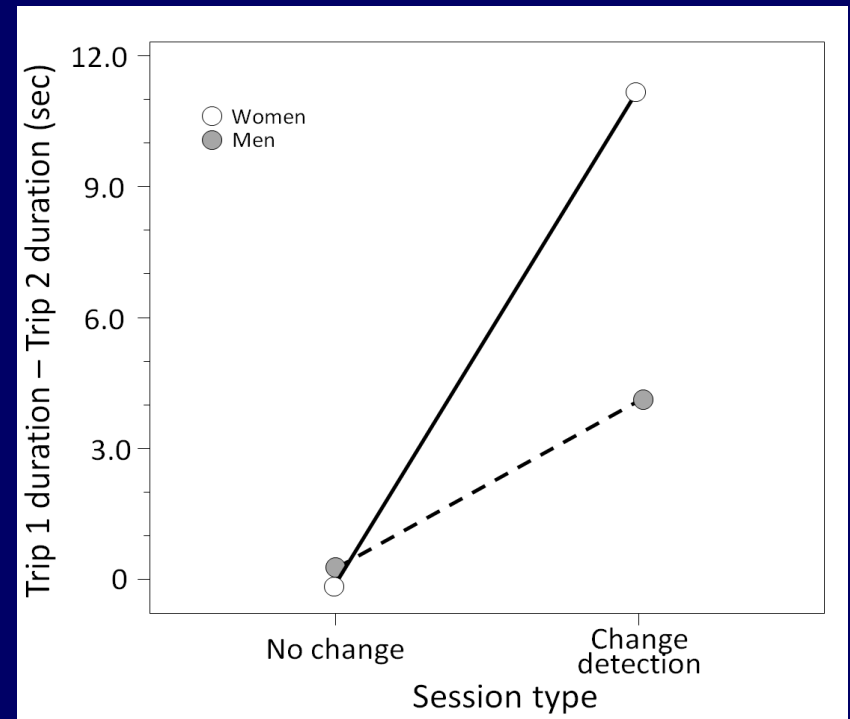

significant interaction between trip and session type
$F(1, 23) = 147.22, p < .001, \eta_p^2 = .755$

Results:

What is different about the change detection sessions?

The women participants increased their speed by the largest amount during the change detection sessions

significant interaction between gender and session type
$$F(1, 25) = 4.19, p = .051, \eta_p^2 = .143$$

Trip time differences across six experimental sessions

Conclusions

Noticing unfamiliar elements produces
increases in ratings in driving difficulty
and decreases in travel times
(increases in experienced duration lead to faster speeds?)
(an inverse Return Trip Effect?)

Increased driving difficulty associated with detecting
unfamiliar elements is consistent with
Explanation #1 – the role of familiarity
(but we didn't collect time estimates!)

No evidence that the Return Trip Effect is the result
of participants driving faster on the way home

TARS
Traffic and Road Safety Research Group
Celebrating 20 years

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