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> Post-accident adaptation behavior and dynamic travel information: A comparison between the elderly and non-elderly

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## Introduction

- Serious negative impacts of traffic accidents are represented not only by the large amount of property losses and human injury and fatality tragedies, but also the huge amount of travel time losses, follow-up accident recurring and so on.
- It is expected that effective countermeasures of ITS-based real-time accident information provision play various important roles in solving the above negative impacts.
- Information provision studies about how to provide valuable information and whether or not display reliability information to drivers become more and more important in the current traffic accident information studies.

### Purpose

Focusing on the expressway in Japan, this study examines how individualized dynamic traffic information influences drivers' adaptation behavior under different decision scenes and contexts.

In addition to conventional traffic information, several new types of traffic information related to the occurrence of traffic accidents are also reflected.



### A large-scale web survey

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Pilot Travel information needs 2,500 Survey Residents residing in the five prefectures in the persons Chugoku Region, who used the expressway at (2011.12) least once within the past one year. 1,923 SP Survey Adaptation persons behavior (2012.04)(78%) Fresh 577 persons **Representative sample:** 30,000 SP responses 577 Drop out (No. 1 in the world !?) persons - 2,500 respondents (12 cards/person) new respondents: 577 - 3 scenes: Before departure, On the way to expressway, On expressway (10,000(=2,500 \* 4 SP)/scene)

## Travel information needs

■必要 ■どちらかと言えば必要 ■どちらでもない ■あまり必要ではない ■不要

.)		1	761			4	09	510
.)		16	54			50	;	645
報		157	2			479	14	4222
か		1185			819		17	6418
.)		1351			64	2	17	4569
.)		1241			729		200	578
報		1206			698		235	584
婽		1076		79	1		270	632
椒		1002		790		3	27	707
ene e		934		838		32	3 1	052
Ē難	429	8	12		591	2	42	138
報	434	82	23		588	2	47	150)
腹	403	784		417		410	2	28
報	418	699		7	54	2	36	135
R物	316	726		523		424	25	3
離	315	675		710		342	2	00
報	395	539		685		340	28	3
2)	275	611		773		373	2	10
碰	250	528	446		645		373	

予測時間(例えば、約30分で渋滞が解消します 渋滞の長さ(例えば、渋滞は20kmです) 道路の通行止めの有無に関する情 渋滞時間や渋滞の長さが増加中か減少中 予測時間とその確率(例えば、30分以内で解消する確率は50%です 予測時間と誤差(例えば、15~45分で渋滞は解消します 道路の車線規制の有無に関する情 一般道を利用した代替経路性 高速道路を利用した代替経路作 事故が発生してからの経過影 事故現場周辺のIC・JCTまでの路 事故現場周辺のIC・JCTの作 事故の利 スマートICが設置されているSAの位置作 当事者の衝突対象 事故現場周辺のSA・PAまでの筆 他の交通機関を利用した代替交通手段性 事故現場周辺のSA・PAの情報(設備、店舗な 事故を起こした事

### Before departure

## **Travel** information needs

■必要 ■どちらかと言えば必要 ■どちらでもない ■あまり必要ではない ■不要

予測時間(例えば、約30分で渋滞が解消します。)		155	6		47	7 62
渋滞の長さ(例えば、渋滞は20kmです。)		155	5		47	3 68
渋滞時間や渋滞の長さが増加中か減少中か		1202		-	707	13652
道路の通行止めの有無に関する情報		1407			482	154381
予測時間と誤差(例えば、15~45分で渋滞は解消します。)	,	1285			596	161491
予測時間とその確率(例えば、30分以内で解消する確率は50%です。)		1262			598	167587
道路の車線規制の有無に関する情報	,	1154		623		215 759
一般道を利用した代替経路情報		1023		734		233 6864
事故が発生してからの経過時間	,	980		739	2	52 9655
高速道路を利用した代替経路情報		963		714	- 28	33 8379
事故現場周辺のIC・JCTまでの距離	496	6	56	544	2	29 187
事故現場周辺のIC・JCTの情報	471	66	4	551	24	5 191
事故の程度	388	641		424	382	287
当事者の衝突対象物	365	642		452	386	277
スマートICが設置されているSAの位置情報	401	598		703	22	1 199
事故現場周辺のSA・PAまでの距離	378	584		620	314	226
事故現場周辺のSA・PAの情報(設備、店舗など)	316	552		671	343	240
パーク&ライドを利用した移動に関する情報	356	477	6	59	317	313
事故を起こした車種	262	529	461	51	.2	358

On the way to expressway

## Travel information needs

■必要 ■どちらかと言えば必要 ■どちらでもない ■あまり必要ではない ■不要

-	1591				450	638
-	1592				446	620
-	1452			469	9	14263
1	313			595		43532
1	362			540	- 1	57487
1	335			555	1	57583
1	346			505	1	99 300
122	26			554	237	4959
1122			64	48	217	8266
1055			653		269	7781
1057			642		274	8082
804		672		387	14	2130
746		680		420	14	4 145
697		714		412	16	150
737		651		448	15	5 144
709		644		467	156	159
620	66	0		492	194	169
593	682	2		485	196	179
590	594		5	72	183	196
529 💻	622		57	12	215	197
466	642		417	320	) (	290
435	624		431	347		298
342 53	7	460		454	3	42

渋滞の長さ(例えば、渋滞は20kmです。) 予測時間(例えば、約30分で渋滞が解消します。) 道路の通行止めの有無に関する情報 渋滞時間や渋滞の長さが増加中か減少中か 予測時間と誤差(例えば、15~45分で渋滞は解消します。) 予測時間とその確率(例えば、30分以内で解消する確率は50%です。) 道路の車線規制の有無に関する情報 高速道路出口(ランプ)の渋滞情報 事故が発生してからの経過時間 一般道を利用した代替経路情報 高速道路を利用した代替経路情報 最寄りのIC・JCTまでの距離 最寄りのIC・JCTの情報 最寄りのSA・PAまでの距離 事故現場周辺のIC・JCTまでの距離 事故現場周辺のIC・JCTの情報 事故現場周辺のSA・PAまでの距離 最寄りのSA・PAの情報(設備、店舗など) スマートICが設置されているSAの位置情報 事故現場周辺のSA・PAの情報(設備、店舗など) 当事者の衝突対象物 事故の程度 事故を起こした車種

### On expressway

## SP survey: Attributes

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Based on the pilot survey conducted in 2011, this study selected 12 attributes, each of which has two or three levels, including

- accident condition information (two attributes): (1) location from entrance ramp to the accident site (hereafter, distance to site) (close or far) and (2) accident severity (fatal, no fatal, or no information));
- accident impact information (two attributes): (3) queue length (long, short, or no information) and (4) queue changing trend (increase, decrease, or no information);
- alternative route or travel mode information (three attributes): (5) ordinary road, (6) other expressway route, and (7) other travel modes; all the three attributes have the same three levels, i.e., yes, no, or no information; and
- traffic measure information (five attributes): (8) traffic regulation (with/without regulation, or no information), (9) clearance time (long, short, or no information), (10) clearance time estimation accuracy (high or low), (11) probability of clearing away the traffic congestion at a certain clearance time (high (80%), low (60%)), and (12) time provision method (point information or interval information).

Orthogonal fractional factorial design: 24 SP profiles were obtained

## SP survey: Alternatives

Be Or	fore departure & In the way to expressway		On expressway
1	No change	1	No change
2	Change departure time (Early departure)	2	Wait& see at SA/PA
3	Alternative ordinary road	3	Alternative expressway
4	Other travel mode	4	Ordinary road detour
5	Cancel the trip	5	Ordinary road
		6	Other travel mode
		7	Cancel the trip

## SP profiles

Card no.	Q-length	Q-trend	Clearan- ce time	Accuracy of clearance Time interval	Time interval provision	Accident Severity	Alternative ordinary road	Alternative expressway	Other travel mode	Lane regulation	Distance to accident site	Clearance time accuracy
card_1	Long	No info	Short	No info	No info	No info	No info	No info	No info	No info	Long	60%
card_2	No info	Increasing	Short	No info	No info	No info	Don't have	Don't have	Have	Don't have	Long	60%
card_3	Short	Decreasing	Long	No info	No info	No info	Have	Have	Don't have	Have	Short	60%
card_4	Short	Increasing	Long	High accuracy	Provision	No info	No info	No info	Have	No info	Short	80%
card_5	Long	Decreasing	Long	High accuracy	No info	Have fatal accident	Have	No info	Have	Don't have	Long	60%
card_6	Long	Increasing	Short	Low accuracy	No info	No fatal accident	Don't have	No info	Don't have	Have	Short	80%
card_7	No info	Decreasing	Short	Low accuracy	Provision	Have fatal accident	Don't have	Have	Have	No info	Short	60%
card_8	Long	Decreasing	Short	High accuracy	Provision	No info	Don't have	Don't have	Don't have	Don't have	Long	80%
card_9	Long	No info	Long	No info	No info	Have fatal accident	Don't have	Have	Don't have	No info	Long	80%
card_10	No info	Decreasing	Long	Low accuracy	No info	No fatal accident	Have	Don't have	No info	No info	Long	80%
card_11	No info	Decreasing	Short	Low accuracy	No info	No info	No info	No info	Don't have	No info	Long	60%
card_12	Short	Increasing	Short	High accuracy	No info	Have fatal accident	Don't have	Have	No info	No info	Long	60%
card_13	No info	No info	Short	High accuracy	No info	Have fatal accident	No info	Don't have	Don't have	Have	Short	60%
card_14	Short	No info	Long	Low accuracy	No info	No info	Don't have	Don't have	No info	Don't have	Short	60%
card_15	Long	Increasing	Short	Low accuracy	No info	No info	Have	Have	Have	Have	Long	60%
card_16	Long	Increasing	Long	Low accuracy	Provision	Have fatal accident	No info	Don't have	No info	Have	Long	60%
card_17	No info	No info	Long	High accuracy	No info	No fatal accident	Don't have	No info	Have	Have	Long	60%
card_18	Long	Decreasing	Short	High accuracy	No info	No fatal accident	No info	Have	No info	Don't have	Short	60%
card_19	Short	Increasing	Short	High accuracy	No info	No fatal accident	Have	Don't have	Don't have	No info	Long	60%
card_20	No info	Increasing	Short	No info	No info	Have fatal accident	Have	No info	No info	Don't have	Short	80%
card_21	Short	No info	Short	Low accuracy	Provision	Have fatal accident	Have	No info	Don't have	Don't have	Long	60%
card_22	Short	No info	Short	Low accuracy	No info	No fatal accident	No info	Have	Have	Don't have	Long	80%
card_23	Short	Decreasing	Short	No info	No info	Have fatal accident	No info	Don't have	Have	Have	Long	80%
card_24	No info	No info	Short	High accuracy	Provision	No info	Have	Have	No info	Have	Long	80%

#### **Before Departure**



#### On the Way to Expressway



#### Adapatation behavoir: Before Departure



#### Adapatation behavoir: On the way to expressway



#### Adapatation behavoir: On expressway



#### Exhausted CHAID analysis

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### Heterogeneous adaptation

### **Before Departure**



Before D	)eparture F	Pattern				
D	Distance	Clearance	No fatal	Queue	Fatal	clearing
Pattern#	to Site	Time	accident	decrease	accident	away %
1	<=17.4	<=20				
2	<=17.4	(20,28]	0			
3	<=17.4	(20,28]	1			
4	<=17.4	(28,48]	0			
5	<=17.4	(28,48]	1			
6	<=17.4	(48,68]				
7	<=17.4	(68,72]	0			
8	<=17.4	(68,72]	1			
9	<=17.4	>72		0		
10	<=17.4	>72		1		
11	(17.4,34.8]	<=28		0		
12	(17.4,34.8]	<=28		1		
13	(17.4,34.8]	(28,84]	0			
14	(17.4,34.8]	(28,84]	1			
15	(17.4,34.8]	>84				
16	(17.4,34.8]	<=20				
17	(17.4,34.8]	(20,68]		0		
18	(17.4,34.8]	(20,68]		1		
19	(17.4,34.8]	(68,84]		0		
20	(17.4,34.8]	(68,84]		1		
21	(17.4,34.8]	(84,106]				
22	(17.4,34.8]	>106				
23	(69.3,140]			0	0	
24	(69.3,140]			1	0	
25	(69.3,140]	<=28			1	
26	(69.3,140]	(28,72]			1	
27	(69.3,140]	(72,106]			1	
28	(69.3,140]	(106,142]			1	
29	(69.3,140]	>142			1	
30	>140				0	0.6
31	>140				0	0.8
32	>140			0	1	
33	>140			1	1	

Note: "clearing away %" represents "the probability of clearing away the traffic congestion at a certain clearance time;

#### Exhausted CHAID analysis

### 17 Heterogeneous adaptation On the way to expressway



Note: "clearing away %" represents "the probability of clearing away the traffic congestion at a certain clearance time;

#### Exhausted CHAID analysis

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### Heterogeneous adaptation

### On expressway

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				ν			ГГ	au	LCI	11 (	XI	ΝU	ult		ΠU		D	5110	1 1 1				:vh	ЛС	22	vv a	iy)						1	to Site	l ime	accident	decrease	accident	accuracy	away %
													2	(6105]	<-20 <-20																									
	No change SA*PA rest Sub Expressway Orinary road detour Sub_ordinary road Sub Mode Cancel										el			2	(0,10.5]	<-20 <-20																								
																																	1	(10.3,17.4) (=17.4	(20.68]		1			
100% -									-	-																			7		7	-   -	5	<=17.4	(20,68]		0			
				F	2	$\backslash$	$\boldsymbol{\nu}$						$\mathbf{A}$	-				A	$\searrow$						V	$\langle   \rangle$				$\rightarrow$			6	<=17.4	>68		1			
90% -	┿╋╾		┢		Н	$\rightarrow$									-	F	$\succ$	$\leftarrow$			÷				╋		$\mathbb{V}$	┢				-   -	7	<=17.4	>68		0			
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70% -							4 N	4	4		$\mathbf{V}$		$\downarrow$	4						#	$\downarrow$	4	4	4	V	_	ľ			$\mathbf{\Lambda}$		- 1	11	(17.4,69.3]	(20,42]	1				
, 0,0								$\mathbb{V}$	1				$\mathbf{V}$																				12	(17.4,69.3]	(42,48]	0				
C00/		J						$\mathbb{N}$		//\\	$\setminus$												/					/ `	$\mathbf{V}$				13	(17.4,69.3]	(42,48]	1				
00%		-							$\mathbf{Z}$	7 1	$\mathbf{X}$	77		$\boldsymbol{\Gamma}$			$\mathbf{T}$	7				V					$\mathcal{A}$						14	(17.4,69.3]	(48,72]	0				
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50% -	╞╋╋	t			Н		H	$\vdash$	t		$\uparrow$		$\uparrow /$				H	$\vdash$		HN	t	$\mathbf{V}$	t									-  [	16	(17.4,69.3]	(72,106]		1			
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40% -		$\checkmark$	+	$\rightarrow$	$\rightarrow$		+	$\rightarrow$	╉	+	╋	╉	+/	╋		$\mathbb{N}$	+	+	_	+	+	╉	╋	╋	╋	+	₽	+-		+	⊢⊦	-  [	18	(17.4,69.3]	>106					<=4.8
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30% -								_				4	-					4	4	4	$- \Delta$		4	4	4					1		-  [	20	(17.4,69.3]	>106					(7.7,12]
					Ň						$\mathbf{N}$			/			$  \rangle$					$\backslash$											21	(17.4,69.3]	>106					>12
200/																						V		$\mathbf{A}$									22	(69.3,140]	<=42		1			
20%			Г						Т			Т	$\mathbf{V}$	Г			$\setminus$			Т	Т	Т	Т	X		7 Г					$\mathbf{N}$		23	(69.3,140]	<=42		0			
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10% -			t						T			T				Н				T		T	T	T	T		t					-   _	25	(69.3,140]	(42,106]				0.8	
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	1	72	ñ	4	ה ה	2 2	8	ور	10	11	12	13	14	15	16	7 5	0 0	20	21	22	23	24	25	26	27	28	29	30	31	32	84		28	(69.3,94.5]	>136					
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	att	att	att	att	11 att	att	att	att	te	te	te	te	te	te	te .	e i	י ה	te	te	te	te	te	te	te	te	te	te	te	te	te .	te te		30	>140	<=106			0		
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														L	vecisi	UN P	attel	n															33	>140	(68,136]			1		
																																	34	>140	>136			1		

Note: "clearing away %" represents "the probability of clearing away the traffic congestion at a certain clearance time;

	Before	departure			On the	way to expr	essway		Or	n expressway	/							
MNL	Alternatives	Early	Ordinary	Others	Early	Ordinary	Others	Rest at	Other	Detour	Ordinary	Others						
	Factors	departure	Road		departure	Road		nearby	expressway	from	road							
analysis	(inc. SP attributes)							SA/PA		ordinary	usage							
	Constant	-1.16	2.11	6.35	-0.75	2.45	1.65	2.23	-4.09	4.48	3.45	5.45						
		0.30	1.32	-0.01	0.03	1.05	0.09	0.70	-0.49	0.46	0.33	-0.56						
10	Distance_site	-1.95	-5.53	-3.68	-1.61	-5.41	-3.44	0.00	0.49	-5.12	-2.59	0.00						
19		-1.84	-5.15	-5.21	-1.83	-4.47	-4.15	0.00	-1.13	-4.68	-2.10	0.00						
	Fatal_accident	-0.13	0.07	0.16	0.14	0.05	0.12	-0.05	0.23	-0.03	0.14	-0.05						
		0.26	0.49	0.60	0.23	0.33	0.36	0.03	0.16	0.10	0.07	0.30						
	Clearance time	0.00	-0.05	0.02	-0.06	0.00	0.03	-0.04	-0.13	-0.03	0.00	0.03						
		-0.11	0.38	0.36	0.04	0.11	0.13	-0.12	-0.04	0.03	0.09	0.09						
	Queue length	-3.16	0.27	-1.38	1.23	1.12	1.02	1.74	1.97	0.21	0.31	0.39						
		7.05	-3.04	-3.77	0.52	0.42	-0.31	0.60	1.62	0.47	0.56	0.65						
	Trip purpose	0.05	0.25	0.30	-0.14	0.17	0.21	-0.05	-0.14	0.12	-0.05	-0.41						
		-0.04	0.04	0.19	0.06	0.10	0.15	0.02	-0.09	0.08	-0.02	0.06						
	No_fatal_accident	0.03	-0.13	0.20	-0.11	-0.44	-0.52	0.05	0.36	-0.14	-0.27	-0.22						
		-0.10	-0.27	-0.28	-0.23	-0.36	-0.72	-0.10	-0.46	-0.44	-0.56	-0.51						
	Traffic_regulation	0.21	0.00	0.08	0.02	-0.18	0.06	0.15	-0.22	-0.10	-0.19	0.03						
		0.06	0.08	0.06	-0.03	-0.05	-0.08	0.05	0.09	-0.03	-0.03	-0.10						
	No_traffic_regulation	-0.02	-0.23	-0.50	-0.08	-0.27	-0.34	-0.06	-0.66	-0.19	-0.49	-0.64						
		-0.05	-0.14	-0.20	-0.11	-0.15	-0.17	-0.10	-0.22	-0.28	-0.11	0.00						
	Clearance_time_accuracy	-0.80	-1.47	-1.93	-1.45	-1.30	-1.83	-1.31	-2.07	-1.70	-1.72	-1.55						
		-0.60	-1.09	-0.98	-0.17	-0.55	-0.62	-0.04	0.30	-0.60	-0.40	-0.56						
	Time_interval_value	3.94	5.10	7.45	8.10	3.11	6.06	9.28	17.19	13.71	9.18	14.60						
		2.65	2.51	1.91	9.08	7.60	13.48	13.09	23.06	15.52	7.54	11.60						
	Time_interval_info	0.08	-0.04	0.40	-0.39	-0.25	-0.16	-0.02	-0.52	-0.48	-0.34	-0.05						
		0.02	-0.19	-0.19	-0.49	-0.50	-0.89	-0.62	-1.45	-0.85	-0.50	-0.69						
	Queue_increasing_trend	-0.14	-0.11	-0.14	-0.07	-0.07	-0.36	0.08	0.16	-0.09	-0.05	-0.25						
		0.08	0.05	-0.02	-0.09	0.00	-0.10	0.03	-0.42	-0.10	0.02	-0.02						
	Queue_dcreasing_trend	0.05	-0.17	-0.29	0.24	-0.30	-0.50	0.13	-0.02	-0.11	-0.14	-0.62						
		-0.17	-0.43	-0.43	-0.21	-0.38	-0.56	-0.02	-0.46	-0.37	-0.32	-0.29						
	Alternative_expressway	-0.15	0.10	0.08	-0.39	-0.08	-0.89	-0.32	1.06	0.06	-0.21	-0.23						
	Alternative ne evanceway	0.00	0.19	0.15	-0.05	-0.01	0.06	-0.22	0.62	-0.18	-0.26	-0.04						
	Alternative_no_expressway	-0.21	-0.12	0.00	-0.14	-0.19	-0.23	-0.45	-0.63	-0.35	-0.19	-0.30						
	Alternative ordinary road	-0.04	0.03	0.18	0.04	-0.03	-0.01	-0.09	-0.21	-0.20	0.05	0.01						
	Alternative_ordinary_road	-0.04	0.50	-0.34	-0.03	0.29	-0.21	0.19	0.18	0.1/	0.30	-0.20						
	Alternative no ordinary road	0.13	0.10	0.34	0.01	-0.024	0.21	0.01	0.40	-0.13	0.21	0.10						
Deference		0.05	-0.11	-0.13	0.05	-0.02	-0.12	0.37	0.05	0.13	-0.10	-0.06						
Reference:	Alternative mode	-0.20	-0.04	-0.15	-0.12	-0.02	0.12	-0.11	-0.09	-0.28	0.10	-0.55						
na abanaa	,	-0.08	-0.02	-0.10	-0.07	-0.04	0.06	-0.01	0.05	-0.20	0.11	0.03						
no change	Alternative no mode	-0.06	-0.28	-0.20	-0.40	-0.31	-0.24	-0.17	-0.23	-0.47	-0.33	-0.06						
-		-0.06	-0.06	-0,13	-0,13	-0.17	-0.05	-0.10	-0.23	-0.26	-0,13	-0.01						
Unnor	Age	0.26	0.04	-0.84	0.27	-0.01	-0.04	-0.21	0.64	-0.40	-0.23	-0.66						
opper.	-	0.02	0.10	0.01	0.00	0.07	-0.06	-0.06	-0.05	0.10	0.11	-0.02						
Eldorly	Gender	-0.26	-0.38	-0.84	-0.21	-0.31	-0.78	-0.16	0.22	-0.37	-0.27	-0.94						
LIUCITY		-0.25	-0.13	-0.41	-0.20	-0.19	-0.37	-0.32	-0.36	-0.39	-0.29	-0.53						
lower	Income	0.00	0.00	-0.41	0.07	0.14	-0.22	-0.19	0.70	0.02	0.20	0.10						
LUWEL		-0.37	-0.25	-0.18	-0.24	-0.16	-0.16	-0.25	-0.30	-0.12	-0.14	-0.19						
Non-elderly	Housewife	0.36	0.01	-0.35	0.18	-0.06	-0.38	0.12	0.76	-0.09	0.30	-0.09						
Non clucity		-0.30	-0.16	-0.39	-0.27	-0.30	-0.43	-0.34	-0.45	-0.42	-0.42	-0.60						

#### MNL analysis

### Influential factors (Variance proportion (larger) -> Influence (Larger))

#### Before departure (Elderly)

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#### Before departure (Non-elderly)



#### MNL analysis

### Influential factors (Variance proportion (larger) -> Influence (Larger))



On the way to expressway (Elderly)

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#### On the way to expressway (Non-elderly)



#### MNL analysis

### Influential factors (Variance proportion (larger) -> Influence (Larger))

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#### On expressway (Elderly)



#### On expressway (Non-elderly)



### Conclusions

- Influential information contents are considerably different across the adaptation patterns, confirming the importance of individualized dynamic traffic information.
- Nearly 70% of drivers' behaviors will be influenced by the information provision of traffic accident related information on expressways.

## Conclusions

	Influential information	Elderly	Non-elderly
/	Before departure	<ol> <li>Distance to accident site</li> <li>No alternative ordinary road</li> <li>Time interval value</li> <li>Clearance time accuracy</li> <li>No traffic regulation</li> </ol>	<ol> <li>Clearance time</li> <li>Distance to accident site</li> <li>Fatal accident (info)</li> <li>Queue decreasing trend</li> </ol>
/	On the way to expressway	<ol> <li>Distance to accident site</li> <li>Clearance time</li> <li>Alternative expressway</li> <li>Time interval value</li> </ol>	<ol> <li>Distance to accident site</li> <li>Time interval info</li> <li>Time interval value</li> <li>Clearance time</li> </ol>
	On expressway	<ol> <li>1.Time interval value</li> <li>2. Clearance time</li> <li>3. Distance to accident site</li> <li>4.Alternative routes/modes</li> </ol>	<ol> <li>Time interval info</li> <li>Time interval value</li> <li>Clearance time</li> <li>No fatal accident</li> <li>Distance to accident site</li> </ol>

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