ASSESSING THE DESIGN CHOICES FOR ONLINE RECOMMENDATION AGENTS FOR OLDER ADULTS: OLDER DOES NOT ALWAYS MEAN SIMPLER INFORMATION TECHNOLOGY

Maryam Ghasemaghaei
DeGroote School of Business, McMaster University,
Hamilton, Ontario, CANADA {ghasemm@mcmaster.ca}

Khaled Hassanein
DeGroote School of Business, McMaster University,
Hamilton, Ontario, CANADA {hassank@mcmaster.ca}

Izak Benbasat
Sauder School of Business, University of British Columbia,
Vancouver, British Columbia, CANADA {izak.benbasat@ubc.ca}

Appendix A

Low-Comprehensiveness and High-Comprehensiveness RAs

Figure A1. Screen Shot of the Low-Comprehensiveness RA in the Preferences' Gathering Stage

Figure A2. Screen Shot of the High-Comprehensiveness RA in the Preferences' Gathering Stage

Figure A3. Screen Shot of the Low-Comprehensiveness RA in the Recommendations Stage

My Car Shopping Assistant — user7863

We have identified 8 recommendations that best match your preferences (5 in this page and 3 in next one). Please examine all recommendations carefully before selecting one of them.

Prev | Next

	1	2	3	4	5
Photo	2014 Toyota Corolla 4dr Sdn Man L	2014 Toyota Yaris 5dr HB 5dr Liftback Auto L	2014 Toyota Camry 2014.5 4dr Sdn I4 Auto L	2014 Toyota Prius c 5dr HB One	2014 Toyota 4Runner 4WD 4dr V6 Limited
Body Type	Compact sedan	Small 5-door	Midsize sedan	Small 5-door	Midsize traditional SUV
Base MSRP	$16,800.00	$15,455.00	$22,425.00	$19,080.00	$43,400.00
Horsepower	132 hp @ 6000 RPM	106 hp @ 6000 RPM	178 hp @ 6000 RPM	99 hp	270 hp @ 5600 RPM
Transmission Type	6-speed Manual	4-speed Automatic	6-speed Automatic plus manual op	Continuously Variable Transmissi	5-speed Automatic plus manual op
Towing Capacity	(Not Listed)	(Not Listed)	(Not Listed)	(Not Listed)	4,700 lbs
Fuel Type	Gasoline	Gasoline	Gasoline	Hybrid (not a plug-in)	Gasoline
City Fuel Economy	28 mpg	30 mpg	25 mpg	53 mpg	17 mpg
Highway Fuel Economy	37 mpg	36 mpg	35 mpg	46 mpg	21 mpg
Combined Fuel Economy	31.44 MPG	32.43 MPG	28.69 MPG	49.6 MPG	18.59 MPG
Fuel Tank Capacity	13.2 gallons	11.1 gallons	17 gallons	9.5 gallons	23 gallons
Adaptive Cruise Control	Not Available	Not Available	Not Available	Not Available	Not Available
Collision Warning	Not Available	Not Available	Not Available	Not Available	Not Available
Blind Spot Detection	Not Available	Not Available	Not Available	Not Available	Not Available
Backup Camera	Not Available	Not Available	Standard	Not Available	Standard
Sunroof	Not Available	Not Available	Not Available	Not Available	Standard
Power Windows	Standard	Not Listed	Standard	Standard	Standard
Power Door Locks	Standard	Standard	Standard	Standard	Standard
Power Mirrors	Standard	Not Listed	Standard	Standard	Standard
Power Front Seats	Not Available	Not Available	Not Available	Not Available	Standard
Leather Seats	Optional	Optional	Optional	Optional	Standard
Air Conditioning	Standard	Standard	Standard	Standard	Standard
CD Player	Standard	Standard	Standard	Standard	Standard
Smartphone/MP3 player connection port	Standard	Standard	Standard	Standard	Standard
Bluetooth	Standard	Standard	Standard	Standard	Standard
Number of Seats	5 seats	5 seats	5 seats	5 seats	5 seats
Cargo Capacity	13 cubic feet	15.6 cubic feet	15.4 cubic feet	17.1 cubic feet	(Not Listed)
Basic Warranty	36 / 36,000 miles	36 / 36,000 miles	36 / 36,000 miles	36 / 36,000 miles	36 / 36,000 miles
Availability of Premium Colors	Available	Available	Available	Available	Available
Availability of Premium Interior	Available	Available	Available	Available	Available

My Car Shopping Assistant

We have identified 8 recommendations that best match your preferences (3 in this page and 5 in previous one). Please examine all recommendations carefully before selecting one of them.
Please select the car you prefer and click on the "Done" button on the bottom of the page to see the selected car's specifications.

* indicates that a product exceeds your maximum price, but may be a good match otherwise.

Prev | Next

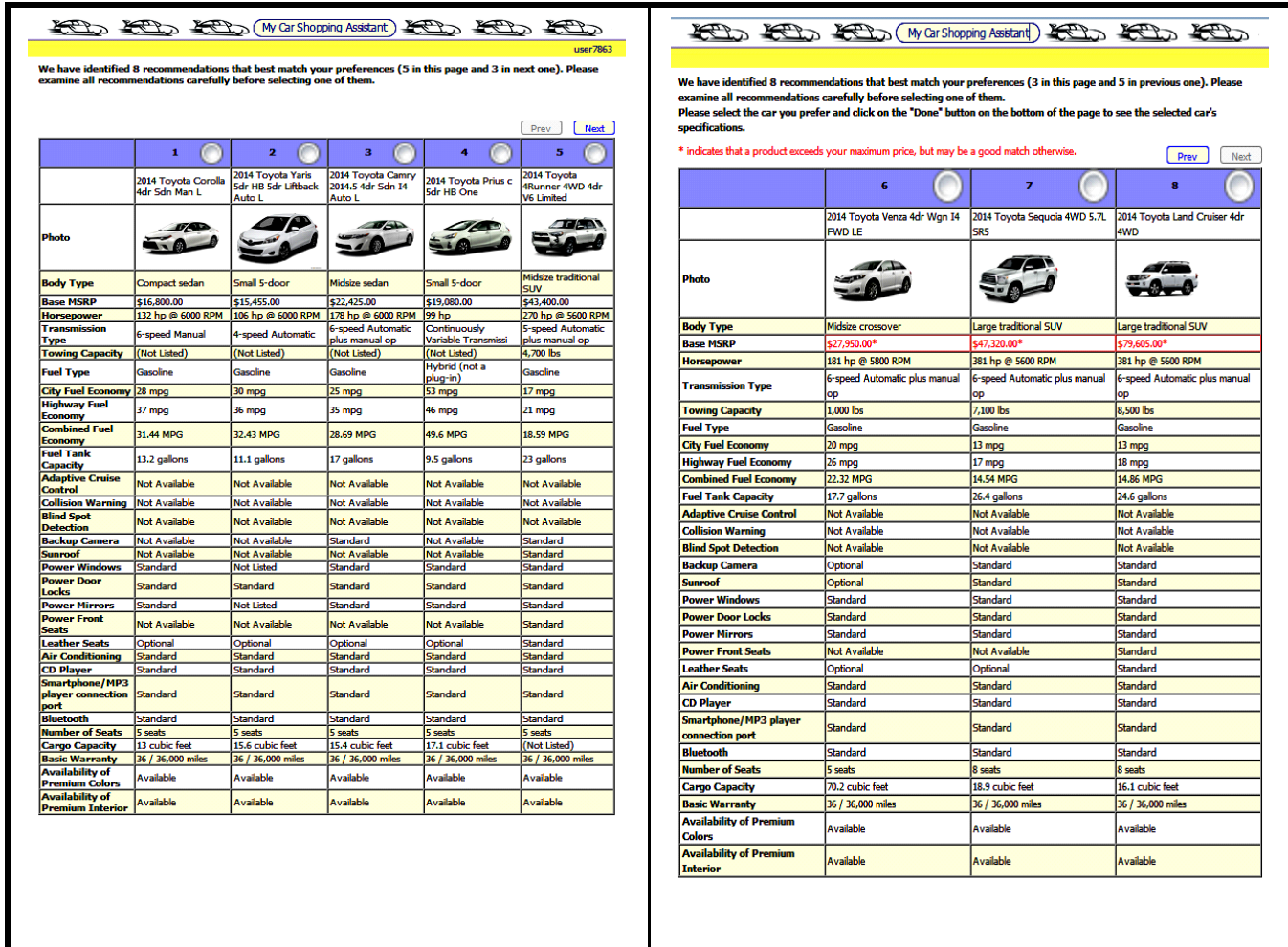|	6	7	8
Photo	2014 Toyota Venza 4dr Wgn I4 FWD LE	2014 Toyota Sequoia 4WD 5.7L SR5	2014 Toyota Land Cruiser 4dr 4WD
Body Type	Midsize crossover	Large traditional SUV	Large traditional SUV
Base MSRP	$27,950.00*	$47,320.00*	$79,605.00*
Horsepower	181 hp @ 5800 RPM	381 hp @ 5600 RPM	381 hp @ 5600 RPM
Transmission Type	6-speed Automatic plus manual op	6-speed Automatic plus manual op	6-speed Automatic plus manual op
Towing Capacity	1,000 lbs	7,100 lbs	8,500 lbs
Fuel Type	Gasoline	Gasoline	Gasoline
City Fuel Economy	20 mpg	13 mpg	13 mpg
Highway Fuel Economy	26 mpg	17 mpg	18 mpg
Combined Fuel Economy	22.32 MPG	14.54 MPG	14.86 MPG
Fuel Tank Capacity	17.7 gallons	26.4 gallons	24.6 gallons
Adaptive Cruise Control	Not Available	Not Available	Not Available
Collision Warning	Not Available	Not Available	Not Available
Blind Spot Detection	Not Available	Not Available	Not Available
Backup Camera	Optional	Standard	Standard
Sunroof	Optional	Standard	Standard
Power Windows	Standard	Standard	Standard
Power Door Locks	Standard	Standard	Standard
Power Mirrors	Standard	Standard	Standard
Power Front Seats	Not Available	Not Available	Standard
Leather Seats	Optional	Optional	Standard
Air Conditioning	Standard	Standard	Standard
CD Player	Standard	Standard	Standard
Smartphone/MP3 player connection port	Standard	Standard	Standard
Bluetooth	Standard	Standard	Standard
Number of Seats	5 seats	8 seats	8 seats
Cargo Capacity	70.2 cubic feet	18.9 cubic feet	16.1 cubic feet
Basic Warranty	36 / 36,000 miles	36 / 36,000 miles	36 / 36,000 miles
Availability of Premium Colors	Available	Available	Available
Availability of Premium Interior	Available	Available	Available

Figure A4. Screen Shot of the High-Comprehensiveness RA in the Recommendations Stage

Appendix B

Measurement Items of the Dependent Variables

Table B1. Measurement Items of the Dependent Variables		
Construct Names	**Measurement Items (7-point scale)**	**Sources**
Perceived Complexity	• Using this recommendation agent would take too much time. • Working with this recommendation agent seems so complicated; it would be difficult to understand what is going on. • Using this recommendation agent involves too much time doing mechanical operations (e.g., data input). • It would take too long to learn how to use this recommendation agent to make it worth the effort.	Thompson et al. (1991)
Perceived Usefulness	• This recommendation agent provides good quality information for my online shopping task. • This recommendation agent improves my performance in my online shopping task. • This recommendation agent increases my effectiveness for shopping online. • Overall, this recommendation agent is useful for online shopping.	Hassanein and Head (2007)
Behavioral Intention to Use an RA	• Assuming I had access to this recommendation agent while shopping online, I intend to use it. • Assuming I had access to this recommendation agent while shopping online, I predict that I would use it. • Assuming I had access to this recommendation agent while shopping online, I plan to use it.	Wang and Benbasat (2009)

Appendix C

Group Comparisons between Cognitive Versus Chronological Age

Figure C1 shows the distribution of participants' cognitive and chronological age. In this study, the average of participants' chronological age and cognitive age was 54.8 (SD: 18) and 43.8 (SD: 15.2) years, respectively.
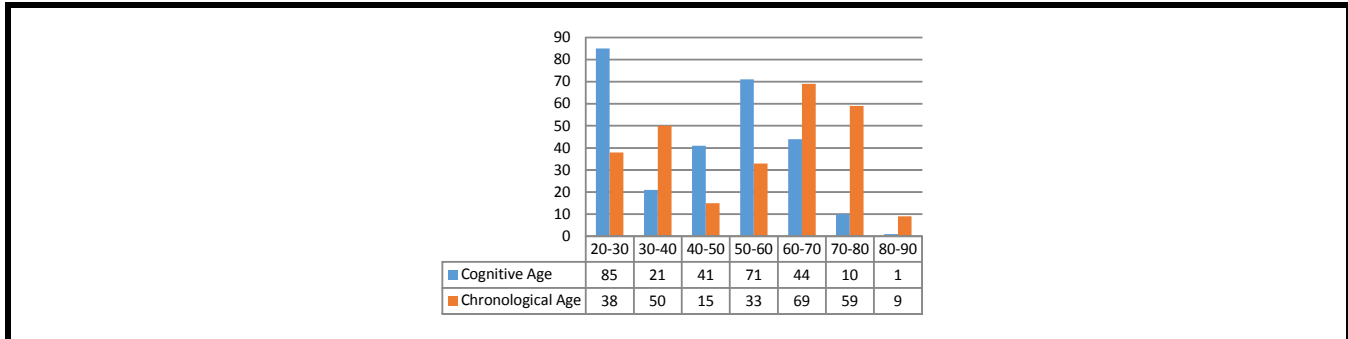

	20-30	30-40	40-50	50-60	60-70	70-80	80-90
Cognitive Age	85	21	41	71	44	10	1
Chronological Age	38	50	15	33	69	59	9

Figure C1. Distribution of Participants' Cognitive and Chronological Age

As can be seen in Table C1, there is a positive association between chronological and cognitive age. Further, and as expected, when individuals become older (> 60 chronological years), they tend to feel younger than their chronological age, with most individuals feeling they are 10 years younger on average than their chronological age.

Table C1. Chronological Age Versus Cognitive Age								
	Cognitive Age							
Chronological Age Group	**20-30**	**30-40**	**40-50**	**50-60**	**60-70**	**70-80**	**80-90**	**Total**
20-30	36	2						**38**
30-40	40	6	3	1				**50**
40-50	5	3	7					**15**
50-60	4	8	8	13				**33**
60-70		2	19	28	19	1		**69**
70-80			3	28	23	5		**59**
80-90			1	1	2	4	1	**9**
Total	**85**	**21**	**41**	**71**	**44**	**10**	**1**	**273**

Appendix D

Loading and Cross Loading of Measures

Table D1. Loading and Cross Loading of Measures			
	BI	**COM**	**PU**
Behavioral Intention (BI1)	**0.9621**	-0.2566	0.8165
Behavioral Intention (BI2)	**0.9785**	-0.3042	0.8171
Behavioral Intention (BI3)	**0.9771**	-0.3074	0.8168
Complexity (COM1)	-0.4084	**0.7721**	-0.3819
Complexity (COM2)	-0.1665	**0.9332**	-0.1609
Complexity (COM3)	-0.232	**0.9212**	-0.2057
Complexity (COM4)	-0.2754	**0.9255**	-0.2766
Usefulness (PU1)	0.7629	-0.2868	**0.9188**
Usefulness (PU2)	0.7989	-0.2765	**0.9456**
Usefulness (PU3)	0.8002	-0.2294	**0.9517**
Usefulness (PU4)	0.8081	-0.2726	**0.9586**

Note: As cognitive age and RA comprehensiveness are single-item measures that results in loadings of 1.000, they were not included in this analysis.

References

Hassanein, K., and Head, M. 2007. "Manipulating Perceived Social Presence through the Web Interface and its Impact on Attitude towards Online Shopping," *International Journal of Human– Computer Studies* (65:8), pp. 689-708.

Thompson, R. L., Higgins, C. A., and Howell, J. M. 1991. "Personal Computing," *MIS Quarterly* (15:1), pp. 125-143.

Wang, W., and Benbasat, I. 2009. "Interactive Decision Aids for Consumer Decision Making in E-Commerce," *MIS Quarterly* (33:2), pp. 293-320.