APPENDIX A

The following table presents the classification of each of the 75 systems in our survey according to the framework we developed.

#	Paper	Additional Information[a]	Interlocutor Composition	Dialog Structure	Discourse Genres	Autonomy	Modalities	Algorithmic Techniques
1	T. Adamson, C. B. Lyng-Olsen, K. Umstattd, and M. Vázquez, "Designing social interactions with a humorous robot photographer," in ACM/IEEE International Conference on Human-Robot Interaction, 2020, pp. 233–241. doi: 10.1145/3319502.3374809.	no	one robot-one human	linear	commanding (h-r), entertaining (r-h)	fully autonomous	voice (h-r, r-h), images or videos (r-h)	speech recognition, speech synthesis
2	P. Alves-Oliveira, P. Sequeira, F. S. Melo, G. Castellano, and A. Paiva, "Empathic Robot for Group Learning: A Field Study," ACM Trans. Human-Robot Interact., vol. 8, no. 1, Mar. 2019, doi: 10.1145/3300188.	yes	one robot-few humans	branching	commanding (r-h), questioning (r-h), informing (r-h)	fully autonomous	voice (h-r, r-h), motions and gestures (r-h)	non-parsed speech analysis, speech synthesis, data-driven synthesis
3	A. Aly and A. Tapus, "A model for synthesizing a combined verbal and nonverbal behavior based on personality traits in human-robot interaction," in ACM/IEEE International Conference on Human-Robot Interaction, 2013, pp. 325–332. doi: 10.1109/HRI.2013.6483606.	no	one robot-one human	linear	questioning (h-r, r-h)	fully autonomous	voice (h-r, r-h), motions and gestures (r-h)	speech recognition, speech synthesis
4	S. Andrist, X. Z. Tan, M. Gleicher, and B. Mutlu, "Conversational gaze aversion for humanlike robots," in ACM/IEEE International Conference on Human-Robot Interaction, 2014, pp. 25–32. doi: 10.1145/2559636.2559666.	no	one robot-one human	linear	questioning (h-r, r-h)	fully autonomous	voice (h-r, r-h), motions and gestures (r-h), buttons (h-r)	speech recognition, pre-recorded voice lines
5	S. Andrist, M. Ziadee, H. Boukaram, B. Mutlu, and M. Sakr, "Effects of Culture on the Credibility of Robot Speech: A Comparison between English and Arabic," in ACM/IEEE International Conference on Human-Robot Interaction, 2015, vol. 2015-March, pp. 157–164. doi: 10.1145/2696454.2696464.	yes	few robots-one human	linear	informing (r-h)	fully autonomous	voice (r-h), text (r-h), images or videos (r-h)	pre-recorded voice lines
6	T. Arimoto, Y. Yoshikawa, and H. Ishiguro, "Multiple-Robot Conversational Patterns for Concealing Incoherent Responses," Int. J. Soc. Robot., vol. 10, no. 5, pp. 583–593, Nov. 2018, doi: 10.1007/s12369-018-0468-5.	no	few robots-one human	linear	questioning (r-h)	wizard-of-oz	voice (h-r, r-h), facial expressions (r-h), motions and gestures (r-h)	speech synthesis
7	P. Briggs, M. Scheutz, and L. Tickle-Degnen, "Are Robots Ready for Administering Health Status Surveys': First Results from an HRI Study with Subjects with Parkinson's Disease," in ACM/IEEE International Conference on Human-Robot Interaction, 2015, vol. 2015-March, pp. 327–334. doi: 10.1145/2696454.2696476.	yes	one robot-one human	linear	questioning (r-h)	wizard-of-oz	voice (h-r, r-h), motions and gestures (r-h)	speech synthesis
8	G. Briggs, T. Williams, and M. Scheutz, "Enabling Robots to Understand Indirect Speech Acts in Task-Based Interactions," J. Human-Robot Interact., vol. 6, no. 1, p. 64, May 2017, doi: 10.5898/jhri.6.1.briggs.[b]	no	one robot-one human	unstructured	commanding (h-r)	wizard-of-oz	voice (h-r, r-h)	speech synthesis

#	Paper	Additional Information[a]	Interlocutor Composition	Dialog Structure	Discourse Genres	Autonomy	Modalities	Algorithmic Techniques
9	M. Cakmak and L. Takayama, “Teaching people how to teach robots: The effect of instructional materials and dialog design,” in ACM/IEEE International Conference on Human-Robot Interaction, 2014, pp. 431–438. doi: 10.1145/2559636.2559675.	yes	one robot-one human	unstructured	commanding (h-r)	fully autonomous	voice (h-r, r-h), motions and gestures (h-r)	speech recognition, speech synthesis
10	M. Cakmak and A. L. Thomaz, “Designing robot learners that ask good questions,” in HRI’12 - Proceedings of the 7th Annual ACM/IEEE International Conference on Human-Robot Interaction, 2012, pp. 17–24. doi: 10.1145/2157689.2157693.	no	one robot-one human	linear	commanding (h-r), questioning (r-h)	mixed implementation	voice (h-r, r-h), facial expressions (r-h), motions and gestures (h-r, r-h)	speech recognition, speech synthesis
11	J. Y. Chai et al., “Collaborative effort towards common ground in situated human-robot dialogue,” in ACM/IEEE International Conference on Human-Robot Interaction, 2014, pp. 33–40. doi: 10.1145/2559636.2559677.	yes	one robot-one human	unstructured	questioning (h-r), informing (h-r)	mixed implementation	voice (h-r, r-h), motions and gestures (r-h)	speech recognition, speech synthesis
12	V. Chidambaram, Y. H. Chiang, and B. Mutlu, “Designing persuasive robots: How robots might persuade people using vocal and nonverbal cues,” in HRI’12 - Proceedings of the 7th Annual ACM/IEEE International Conference on Human-Robot Interaction, 2012, pp. 293–300. doi: 10.1145/2157689.2157798.	no	one robot-one human	linear	commanding (r-h)	fully autonomous	voice (r-h), motions and gestures (r-h)	speech synthesis
13	J. Fasola and M. Mataric, “A Socially Assistive Robot Exercise Coach for the Elderly,” J. Human-Robot Interact., vol. 2, no. 2, pp. 3–32, Jun. 2013, doi: 10.5898/jhri.2.2.fasola.	no	one robot-one human	linear	commanding (h-r, r-h)	fully autonomous	voice (r-h), facial expressions (r-h), motions and gestures (h-r, r-h), buttons (h-r)	gesture recognition, speech synthesis
14	K. Fischer, K. S. Lohan, and K. Foth, “Levels of embodiment: Linguistic analyses of factors influencing HRI,” in HRI’12 - Proceedings of the 7th Annual ACM/IEEE International Conference on Human-Robot Interaction, 2012, pp. 463–470. doi: 10.1145/2157689.2157839.	no	one robot-one human	unstructured	informing (h-r)	fully autonomous	voice (h-r), facial expressions (r-h)	
15	L. Fortunati, F. Cavallo, and M. Sarrica, “Multiple Communication Roles in Human–Robot Interactions in Public Space,” Int. J. Soc. Robot., vol. 12, no. 4, pp. 931–944, Aug. 2020, doi: 10.1007/s12369-018-0509-0.	no	one robot-one human, one robot-human crowd	linear, unstructured	questioning (h-r), entertaining (r-h)	fully autonomous	voice (h-r, r-h), facial expressions (r-h), motions and gestures (r-h), images or videos (r-h)	speech recognition, speech synthesis
16	R. Gehle, K. Pitsch, T. Dankert, and S. Wrede, “How to Open an Interaction between Robot and Museum Visitor?: Strategies to Establish a Focused Encounter in HRI,” in ACM/IEEE International Conference on Human-Robot Interaction, 2017, vol. Part F1271, pp. 187–195. doi: 10.1145/2909824.3020219.	no	one robot-one human	linear	informing (r-h)	mixed implementation	voice (r-h), motions and gestures (r-h)	speech synthesis

#	Paper	Additional Information[a]	Interlocutor Composition	Dialog Structure	Discourse Genres	Autonomy	Modalities	Algorithmic Techniques
17	A. S. Ghazali, J. Ham, E. Barakova, and P. Markopoulos, "Persuasive Robots Acceptance Model (PRAM): Roles of Social Responses Within the Acceptance Model of Persuasive Robots," Int. J. Soc. Robot., vol. 12, no. 5, pp. 1075–1092, Nov. 2020, doi: 10.1007/s12369-019-00611-1.	no	one robot-one human	linear	commanding (r-h)	wizard-of-oz	voice (r-h), facial expressions (r-h)	speech synthesis
18	D. F. Glas, K. Wada, M. Shiomi, T. Kanda, H. Ishiguro, and N. Hagita, "Personal Greetings: Personalizing Robot Utterances Based on Novelty of Observed Behavior," Int. J. Soc. Robot., vol. 9, no. 2, pp. 181–198, Apr. 2017, doi: 10.1007/s12369-016-0385-4.	no	one robot-one human	linear, unstructured	questioning (h-r), entertaining (r-h)	mixed implementation	voice (h-r, r-h)	speech synthesis, data-driven synthesis
19	R. Gockley, J. Forlizzi, and R. Simmons, "Interactions with a moody robot," in HRI 2006: Proceedings of the 2006 ACM Conference on Human-Robot Interaction, 2006, vol. 2006, pp. 186–193. doi: 10.1145/1121241.1121274.	no	one robot-few humans	unstructured, linear	questioning (h-r), entertaining (r-h)	fully autonomous	voice (r-h), text (h-r, r-h), facial expressions (r-h)	speech synthesis
20	S. Guo, J. Lenchner, J. Connell, M. Dholakia, and H. Muta, "Conversational Bootstrapping and Other Tricks of a Concierge Robot," in ACM/IEEE International Conference on Human-Robot Interaction, 2017, vol. Part F1271, pp. 73–81. doi: 10.1145/2909824.3020232.	yes	one robot-one human	branching	questioning (h-r)	fully autonomous	voice (h-r, r-h)	speech recognition, speech synthesis, data-driven synthesis
21	M. Häring, D. Kuchenbrandt, and E. André, "Would you like to play with me? How robots' group membership and task features influence human-robot interaction," in ACM/IEEE International Conference on Human-Robot Interaction, 2014, pp. 9–16. doi: 10.1145/2559636.2559673.	no	few robots-one human	linear	entertaining (h-r, r-h)	fully autonomous	voice (r-h), motions and gestures (r-h), buttons (h-r)	speech synthesis
22	S. Hedaoo, A. Williams, C. Wadgaonkar, and H. Knight, "A Robot Barista Comments on its Clients: Social Attitudes Toward Robot Data Use," in ACM/IEEE International Conference on Human-Robot Interaction, 2019, vol. 2019-March, pp. 66–74. doi: 10.1109/HRI.2019.8673021.	yes	one robot-few humans	linear	commanding (h-r), informing (r-h)	fully autonomous	voice (h-r, r-h)	speech synthesis
23	G. Hoffman, G. E. Birnbaum, K. Vanunu, O. Sass, and H. T. Reis, "Robot responsiveness to human disclosure affects social impression and appeal," in ACM/IEEE International Conference on Human-Robot Interaction, 2014, pp. 1–7. doi: 10.1145/2559636.2559660.	yes	one robot-one human	linear	informing (h-r)	wizard-of-oz	voice (h-r), text (r-h), motions and gestures (r-h)	
24	G. Hoffman, O. Zuckerman, G. Hirschberger, M. Luria, and T. Shani Sherman, "Design and Evaluation of a Peripheral Robotic Conversation Companion," in ACM/IEEE International Conference on Human-Robot Interaction, 2015, vol. 2015-March, pp. 3–10. doi: 10.1145/2696454.2696495.	no	one robot-few humans	unstructured	informing (h-r)	fully autonomous	voice (h-r), motions and gestures (r-h)	non-parsed speech analysis
25	J. F. Hoorn and S. D. Winter, "Here Comes the Bad News: Doctor Robot Taking Over," Int. J. Soc. Robot., vol. 10, no. 4, pp. 519–535, Sep. 2018, doi: 10.1007/s12369-017-0455-2.	no	one robot-one human	linear	informing (r-h)	fully autonomous	voice (r-h), facial expressions (r-h)	speech synthesis

#	Paper	Additional Information[a]	Interlocutor Composition	Dialog Structure	Discourse Genres	Autonomy	Modalities	Algorithmic Techniques
26	C. M. Huang and B. Mutlu, "The Repertoire of Robot Behavior: Designing Social Behaviors to Support Human-Robot Joint Activity," J. Human-Robot Interact., vol. 2, no. 2, pp. 80–102, Jun. 2013, doi: 10.5898/jhri.2.2.huang.	no	one robot-one human	linear	commanding (r-h), questioning (r-h), informing (r-h)	fully autonomous	voice (h-r, r-h), motions and gestures (r-h)	pre-recorded voice lines
27	C. M. Huang and B. Mutlu, "Learning-based modeling of multimodal behaviors for humanlike robots," in ACM/IEEE International Conference on Human-Robot Interaction, 2014, pp. 57–64. doi: 10.1145/2559636.2559668.	no	one robot-one human	linear	informing (r-h)	fully autonomous	voice (r-h), motions and gestures (r-h)	speech synthesis, data-driven synthesis
28	S. Ivaldi, S. Lefort, J. Peters, M. Chetouani, J. Provasi, and E. Zibetti, "Towards Engagement Models that Consider Individual Factors in HRI: On the Relation of Extroversion and Negative Attitude Towards Robots to Gaze and Speech During a Human–Robot Assembly Task: Experiments with the iCub humanoid," Int. J. Soc. Robot., vol. 9, no. 1, pp. 63–86, Jan. 2017, doi: 10.1007/s12369-016-0357-8.	no	one robot-one human	unstructured	commanding (h-r)	wizard-of-oz	voice (h-r, r-h), facial expressions (r-h), motions and gestures (h-r, r-h)	speech synthesis
29	A. Jacq, S. Lemaignan, F. Garcia, P. Dillenbourg, and A. Paiva, "Building successful long child-robot interactions in a learning context," in ACM/IEEE International Conference on Human-Robot Interaction, 2016, vol. 2016-April, pp. 239–246. doi: 10.1109/HRI.2016.7451758.	no	one robot-few humans	unstructured	commanding (h-r)	fully autonomous	voice (r-h), motions and gestures (h-r, r-h), buttons (h-r)	speech synthesis
30	M. F. Jung, N. Martelaro, and P. J. Hinds, "Using Robots to Moderate Team Conflict: The Case of Repairing Violations," in ACM/IEEE International Conference on Human-Robot Interaction, 2015, vol. 2015-March, pp. 229–236. doi: 10.1145/2696454.2696460.	no	one robot-few humans	unstructured	commanding (r-h)	wizard-of-oz	voice (h-r, r-h)	speech synthesis
31	T. Kanda, M. Shimada, and S. Koizumi, "Children learning with a social robot," in HRI'12 - Proceedings of the 7th Annual ACM/IEEE International Conference on Human-Robot Interaction, 2012, pp. 351–358. doi: 10.1145/2157689.2157809.	no	one robot-few humans	linear	questioning (r-h), informing (r-h)	wizard-of-oz	voice (h-r, r-h), images or videos (r-h)	speech synthesis
32	E. S. Kim, D. Leyzberg, K. M. Tsui, and B. Scassellati, "How people talk when teaching a robot," in Proceedings of the 4th ACM/IEEE International Conference on Human-Robot Interaction, HRI'09, 2008, pp. 23–30. doi: 10.1145/1514095.1514102.	no	one robot-one human	unstructured	commanding (h-r)	wizard-of-oz	voice (h-r, r-h)	pre-recorded voice lines
33	S. Kriz, G. Anderson, and J. G. Trafton, "Robot-directed speech: Using language to assess first-time users' conceptualizations of a robot," in Proceedings of the 5th ACM/IEEE International Conference on Human-Robot Interaction, 2010, pp. 267–274. doi: 10.1109/hri.2010.5453187.	no	one robot-one human	unstructured	commanding (h-r)	wizard-of-oz	voice (h-r)	
34	G. J. M. Kruijff, H. Zender, P. Jensfelt, and H. I. Christensen, "Clarification dialogues in human-augmented mapping," in HRI 2006: Proceedings of the 2006 ACM Conference on Human-Robot Interaction, 2006, vol. 2006, pp. 282–289. doi: 10.1145/1121241.1121290.	no	one robot-one human	unstructured	questioning (r-h)	fully autonomous	voice (h-r, r-h)	speech recognition, speech synthesis

#	Paper	Additional Information[a]	Interlocutor Composition	Dialog Structure	Discourse Genres	Autonomy	Modalities	Algorithmic Techniques
35	I. Leite, G. Castellano, A. Pereira, C. Martinho, and A. Paiva, "Modelling empathic behaviour in a robotic game companion for children: An ethnographic study in real-world settings," in HRI'12 - Proceedings of the 7th Annual ACM/IEEE International Conference on Human-Robot Interaction, 2012, pp. 367–374. doi: 10.1145/2157689.2157811.	no	one robot-one human	unstructured	commanding (r-h), informing (r-h), entertaining (r-h)	fully autonomous	voice (r-h), facial expressions (h-r, r-h)	speech synthesis
36	I. Leite et al., "Emotional Storytelling in the Classroom: Individual versus Group Interaction between Children and Robots," in ACM/IEEE International Conference on Human-Robot Interaction, 2015, vol. 2015-March, pp. 75–82. doi: 10.1145/2696454.2696481.	no	few robots-one human, few robots-few humans	branching	entertaining (r-h)	fully autonomous	voice (r-h), motions and gestures (r-h), buttons (h-r)	pre-recorded voice lines
37	D. Leyzberg, A. Ramachandran, and B. Scassellati, "The Effect of Personalization in Longer-Term Robot Tutoring," ACM Trans. Human-Robot Interact., vol. 7, no. 3, Dec. 2018, doi: 10.1145/3283453.	no	one robot-one human	linear	questioning (r-h)	mixed implementation	voice (h-r, r-h), motions and gestures (r-h)	pre-recorded voice lines
38	M. E. U. Ligthart, M. A. Neerincx, and K. V. Hindriks, "Design patterns for an interactive storytelling robot to support children's engagement and agency," in ACM/IEEE International Conference on Human-Robot Interaction, 2020, pp. 409–418. doi: 10.1145/3319502.3374826.	no	one robot-one human	branching	commanding (r-h), questioning (r-h), entertaining (r-h)	fully autonomous	voice (h-r, r-h), non-speech sounds (r-h), motions and gestures (r-h), buttons (h-r)	speech recognition, speech synthesis
39	N. Lubold, E. Walker, and H. Pon-Barry, "Effects of voice-adaptation and social dialogue on perceptions of a robotic learning companion," in ACM/IEEE International Conference on Human-Robot Interaction, 2016, vol. 2016-April, pp. 255–262. doi: 10.1109/HRI.2016.7451760.	yes	one robot-one human	linear	questioning (h-r), informing (h-r)	fully autonomous	voice (h-r, r-h), facial expressions (r-h)	speech recognition, speech synthesis
40	G. M. Lucas et al., "Getting to Know Each Other: The Role of Social Dialogue in Recovery from Errors in Social Robots," in ACM/IEEE International Conference on Human-Robot Interaction, 2018, pp. 344–351. doi: 10.1145/3171221.3171258.	yes	one robot-one human	unstructured	questioning (h-r, r-h)	wizard-of-oz	voice (h-r, r-h)	speech synthesis
41	M. Makatchev, R. Simmons, M. Sakr, and M. Ziadee, "Expressing ethnicity through behaviors of a robot character," in ACM/IEEE International Conference on Human-Robot Interaction, 2013, pp. 357–364. doi: 10.1109/HRI.2013.6483610.	no	one robot-one human	linear	questioning (h-r)	wizard-of-oz	voice (r-h), text (h-r), facial expressions (r-h)	speech synthesis
42	N. Martelaro, V. C. Nneji, W. Ju, and P. Hinds, "Tell me more: Designing HRI to encourage more trust, disclosure, and companionship," in ACM/IEEE International Conference on Human-Robot Interaction, 2016, vol. 2016-April, p. 577. doi: 10.1109/HRI.2016.7451864.	no	one robot-one human	linear	commanding (r-h), questioning (r-h)	wizard-of-oz	voice (h-r, r-h), facial expressions (r-h), motions and gestures (r-h)	pre-recorded voice lines, speech synthesis
43	D. McColl and G. Nejat, "Meal-Time with a Socially Assistive Robot and Older Adults at a Long-term Care Facility," J. Human-Robot Interact., vol. 2, no. 1, pp. 152–171, Feb. 2013, doi: 10.5898/jhri.2.1.mccoll.	no	one robot-one human	unstructured	commanding (r-h)	fully autonomous	voice (r-h), facial expressions (h-r)	gesture recognition, speech synthesis

#	Paper	Additional Information[a]	Interlocutor Composition	Dialog Structure	Discourse Genres	Autonomy	Modalities	Algorithmic Techniques
44	K. Mizumaru, S. Satake, T. Kanda, and T. Ono, "Stop Doing it! Approaching Strategy for a Robot to Admonish Pedestrians," in ACM/IEEE International Conference on Human-Robot Interaction, 2019, vol. 2019-March, pp. 449–457. doi: 10.1109/HRI.2019.8673017.	no	one robot-one human	unstructured	commanding (r-h)	mixed implementation	voice (r-h), motions and gestures (r-h)	speech synthesis
45	D. Morimoto, J. Even, and T. Kanda, "Can a robot handle customers with unreasonable complaints?," in ACM/IEEE International Conference on Human-Robot Interaction, 2020, pp. 579–587. doi: 10.1145/3319502.3374830.	yes	one robot-one human	linear	questioning (r-h), informing (h-r, r-h)	wizard-of-oz	voice (h-r, r-h)	speech synthesis
46	L. Moshkina, S. Trickett, and J. G. Trafton, "Social engagement in public places: A tale of one robot," in ACM/IEEE International Conference on Human-Robot Interaction, 2014, pp. 382–389. doi: 10.1145/2559636.2559678.	no	one robot-human crowd, one robot-few humans	linear	informing (r-h), entertaining (r-h)	mixed implementation	voice (h-r, r-h), facial expressions (r-h), motions and gestures (r-h)	speech synthesis
47	K. Nakagawa, M. Shiomi, K. Shinozawa, R. Matsumura, H. Ishiguro, and N. Hagita, "Effect of Robot's Whispering Behavior on People's Motivation," Int. J. Soc. Robot., vol. 5, no. 1, pp. 5–16, Jan. 2013, doi: 10.1007/s12369-012-0141-3.	no	one robot-one human	linear	commanding (r-h)	wizard-of-oz	voice (h-r, r-h), motions and gestures (r-h)	speech synthesis
48	A. Niculescu, B. van Dijk, A. Nijholt, H. Li, and S. L. See, "Making Social Robots More Attractive: The Effects of Voice Pitch, Humor and Empathy," Int. J. Soc. Robot., vol. 5, no. 2, pp. 171–191, Apr. 2013, doi: 10.1007/s12369-012-0171-x.	no	one robot-one human	linear	commanding (h-r), informing (r-h), entertaining (r-h)	wizard-of-oz	voice (h-r, r-h)	speech synthesis
49	S. Nikolaidis, M. Kwon, J. Forlizzi, and S. Srinivasa, "Planning with Verbal Communication for Human-Robot Collaboration," ACM Trans. Human-Robot Interact., vol. 7, no. 3, Nov. 2018, doi: 10.1145/3203305.	no	one robot-one human	unstructured	commanding (r-h), informing (r-h)	fully autonomous	voice (r-h), buttons (h-r)	speech synthesis
50	T. Nomura and T. Kanda, "Rapport–Expectation with a Robot Scale," Int. J. Soc. Robot., vol. 8, no. 1, pp. 21–30, Jan. 2016, doi: 10.1007/s12369-015-0293-z.	no	one robot-one human	linear	commanding (r-h), questioning (r-h), informing (h-r)	wizard-of-oz	voice (h-r, r-h)	speech synthesis
51	H. W. Park, M. Gelsomini, J. J. Lee, and C. Breazeal, "Telling Stories to Robots: The Effect of Backchanneling on a Child's Storytelling," in ACM/IEEE International Conference on Human-Robot Interaction, 2017, vol. Part F1271, pp. 100–108. doi: 10.1145/2909824.3020245.	no	few robots-one human	linear	informing (h-r)	fully autonomous	voice (h-r), non-speech sounds (r-h), motions and gestures (r-h)	non-parsed speech analysis, pre-recorded voice lines
52	J. Peltason, N. Riether, B. Wrede, and I. Lütkebohle, "Talking with robots about objects: A system-level evaluation in HRI," in HRI'12 - Proceedings of the 7th Annual ACM/IEEE International Conference on Human-Robot Interaction, 2012, pp. 479–486. doi: 10.1145/2157689.2157841.	no	one robot-one human	branching	questioning (h-r, r-h), informing (h-r)	mixed implementation	voice (h-r, r-h), facial expressions (r-h), motions and gestures (h-r), images or videos (r-h)	speech recognition, speech synthesis
53	C. Pou-Prom, S. Raimondo, and F. Rudzicz, "A Conversational robot for older adults with alzheimers disease," ACM Trans. Human-Robot Interact., vol. 9, no. 3, May 2020, doi: 10.1145/3380785.	yes	one robot-one human	linear	questioning (r-h)	mixed implementation	voice (h-r, r-h), images or videos (r-h)	speech recognition, speech synthesis

#	Paper	Additional Information[a]	Interlocutor Composition	Dialog Structure	Discourse Genres	Autonomy	Modalities	Algorithmic Techniques
54	S. Reig et al., "Not some random agent: Multi-person interaction with a personalizing service robot," in ACM/IEEE International Conference on Human-Robot Interaction, 2020, pp. 289–297. doi: 10.1145/3319502.3374795.	yes	one robot-few humans	linear	commanding (r-h), questioning (h-r, r-h)	wizard-of-oz	voice (h-r, r-h), motions and gestures (r-h), images or videos (r-h)	speech synthesis
55	V. Rousseau, F. Ferland, D. Létourneau, and F. Michaud, "Sorry to Interrupt, But May I Have Your Attention? Preliminary Design and Evaluation of Autonomous Engagement in HRI," J. Human-Robot Interact., vol. 2, no. 3, pp. 41–61, Sep. 2013, doi: 10.5898/jhri.2.3.rousseau.	no	one robot-one human	branching	commanding (r-h)	fully autonomous	voice (r-h), facial expressions (r-h), motions and gestures (r-h)	speech synthesis
56	J. Ruiz-del-Solar et al., "Bender – A General-Purpose Social Robot with Human-Robot Interaction Abilities," J. Human-Robot Interact., vol. 1, no. 2, pp. 54–75, Jan. 2013, doi: 10.5898/jhri.1.2.ruiz-del-solar.	no	one robot-human crowd, one robot-few humans	linear	questioning (r-h), informing (r-h)	fully autonomous	voice (h-r, r-h), facial expressions (r-h), motions and gestures (r-h), buttons (h-r), images or videos (r-h)	speech recognition, speech synthesis
57	A. M. Sabelli, T. Kanda, and N. Hagita, "A conversational robot in an elderly care center: An ethnographic study," in HRI 2011 - Proceedings of the 6th ACM/IEEE International Conference on Human-Robot Interaction, 2011, pp. 37–44. doi: 10.1145/1957656.1957669.	no	one robot-one human	unstructured	questioning (h-r, r-h), informing (h-r)	wizard-of-oz	voice (h-r, r-h), motions and gestures (r-h)	speech synthesis
58	M. Salem, G. Lakatos, F. Amirabdollahian, and K. Dautenhahn, "Would You Trust a (Faulty) Robot?: Effects of Error, Task Type and Personality on Human-Robot Cooperation and Trust," in ACM/IEEE International Conference on Human-Robot Interaction, 2015, vol. 2015-March, pp. 141–148. doi: 10.1145/2696454.2696497.	no	one robot-one human	linear	commanding (r-h), questioning (r-h)	mixed implementation	text (r-h), buttons (h-r)	
59	S. H. Seo, K. Griffin, J. E. Young, A. Bunt, S. Prentice, and V. Loureiro-Rodríguez, "Investigating People's Rapport Building and Hindering Behaviors When Working with a Collaborative Robot," Int. J. Soc. Robot., vol. 10, no. 1, pp. 147–161, Jan. 2018, doi: 10.1007/s12369-017-0441-8.	no	one robot-one human	linear	commanding (r-h), questioning (h-r, r-h)	wizard-of-oz	voice (h-r, r-h), motions and gestures (h-r, r-h)	speech synthesis
60	M. Shiomi, T. Kanda, H. Ishiguro, and N. Hagita, "Interactive humanoid robots for a science museum," in HRI 2006: Proceedings of the 2006 ACM Conference on Human-Robot Interaction, 2006, vol. 2006, pp. 305–312. doi: 10.1145/1121241.1121293.	yes	few robots-few humans	linear	commanding (r-h), entertaining (r-h)	fully autonomous	voice (r-h), motions and gestures (h-r, r-h)	speech synthesis
61	M. Shiomi, D. Sakamoto, T. Kanda, C. T. Ishi, H. Ishiguro, and N. Hagita, "A semi-autonomous communication robot - A field trial at a train station," in HRI 2008 - Proceedings of the 3rd ACM/IEEE International Conference on Human-Robot Interaction: Living with Robots, 2008, pp. 303–310. doi: 10.1145/1349822.1349862.	yes	one robot-one human	linear	commanding (r-h), entertaining (r-h)	mixed implementation	voice (h-r, r-h), motions and gestures (r-h)	speech recognition, speech synthesis

#	Paper	Additional Information[a]	Interlocutor Composition	Dialog Structure	Discourse Genres	Autonomy	Modalities	Algorithmic Techniques
62	C. L. Sidner, C. Lee, L. P. Morency, and C. Forlines, "The effect of head-nod recognition in human-robot conversation," in HRI 2006: Proceedings of the 2006 ACM Conference on Human-Robot Interaction, 2006, vol. 2006, pp. 290–296. doi: 10.1145/1121241.1121291.	no	one robot-one human	branching	commanding (r-h), informing (r-h), entertaining (r-h)	fully autonomous	voice (h-r, r-h), motions and gestures (h-r, r-h)	speech recognition, gesture recognition, speech synthesis
63	A. St. Clair and M. Mataric, "How Robot Verbal Feedback Can Improve Team Performance in Human-Robot Task Collaborations," in ACM/IEEE International Conference on Human-Robot Interaction, 2015, vol. 2015-March, pp. 213–220. doi: 10.1145/2696454.2696491.	no	one robot-one human	unstructured	commanding (r-h), informing (r-h)	fully autonomous	voice (r-h)	speech synthesis
64	R. Q. Stafford, B. A. MacDonald, X. Li, and E. Broadbent, "Older People's Prior Robot Attitudes Influence Evaluations of a Conversational Robot," Int. J. Soc. Robot., vol. 6, no. 2, pp. 281–297, Apr. 2014, doi: 10.1007/s12369-013-0224-9.	no	one robot-one human	unstructured	informing (h-r)	fully autonomous	voice (r-h), text (h-r, r-h), facial expressions (r-h)	speech synthesis
65	Y. Tahir, J. Dauwels, D. Thalmann, and N. Magnenat Thalmann, "A User Study of a Humanoid Robot as a Social Mediator for Two-Person Conversations," Int. J. Soc. Robot., vol. 12, no. 5, pp. 1031–1044, Nov. 2020, doi: 10.1007/s12369-018-0478-3.	no	one robot-few humans	linear	commanding (r-h)	fully autonomous	voice (h-r, r-h), motions and gestures (r-h)	non-parsed speech analysis, speech synthesis
66	R. Totsuka, S. Satake, T. Kanda, and M. Imai, "Is a Robot a Better Walking Partner if It Associates Utterances with Visual Scenes?," in ACM/IEEE International Conference on Human-Robot Interaction, 2017, vol. Part F1271, pp. 313–322. doi: 10.1145/2909824.3020212.	yes	one robot-one human	unstructured	questioning (r-h), informing (r-h)	fully autonomous	voice (h-r, r-h)	speech synthesis
67	V. V. Unhelkar, S. Li, and J. A. Shah, "Decision-making for bidirectional communication in sequential human-robot collaborative tasks," in ACM/IEEE International Conference on Human-Robot Interaction, 2020, pp. 329–341. doi: 10.1145/3319502.3374779.	yes	one robot-one human	unstructured	commanding (r-h), questioning (r-h), informing (r-h)	fully autonomous	voice (r-h)	speech synthesis
68	M. Vázquez, E. J. Carter, B. McDorman, J. Forlizzi, A. Steinfeld, and S. E. Hudson, "Towards Robot Autonomy in Group Conversations: Understanding the Effects of Body Orientation and Gaze," in ACM/IEEE International Conference on Human-Robot Interaction, 2017, vol. Part F1271, pp. 42–52. doi: 10.1145/2909824.3020207.	yes	one robot-few humans	linear	questioning (r-h)	mixed implementation	voice (h-r, r-h), facial expressions (r-h)	pre-recorded voice lines
69	E. Velner, P. P. G. Boersma, and M. M. A. De Graaf, "Intonation in robot speech: Does it work the same as with people?," in ACM/IEEE International Conference on Human-Robot Interaction, 2020, pp. 569–578. doi: 10.1145/3319502.3374801.	yes	one robot-one human	linear	questioning (r-h), informing (r-h)	fully autonomous	voice (h-r, r-h)	speech recognition, speech synthesis
70	J. Vilk and N. T. Fitter, "Comedians in cafes getting data: Evaluating timing and adaptivity in real-world robot comedy performance," in ACM/IEEE International Conference on Human-Robot Interaction, 2020, pp. 223–231. doi: 10.1145/3319502.3374780.	yes	one robot-human crowd	linear	entertaining (r-h)	fully autonomous	voice (r-h), non-speech sounds (h-r), motions and gestures (r-h)	non-parsed speech analysis, speech synthesis

#	Paper	Additional Information[a]	Interlocutor Composition	Dialog Structure	Discourse Genres	Autonomy	Modalities	Algorithmic Techniques
71	P. Vogt et al., "Second Language Tutoring Using Social Robots: A Large-Scale Study," in ACM/IEEE International Conference on Human-Robot Interaction, 2019, vol. 2019-March, pp. 497–505. doi: 10.1109/HRI.2019.8673077.	no	one robot-one human	linear	commanding (r-h), questioning (r-h)	mixed implementation	voice (h-r, r-h), motions and gestures (r-h), buttons (h-r), images or videos (r-h)	speech synthesis, pre-recorded voice lines
72	A. Weiss et al., "Robots asking for directions — The willingness of passers-by to support robots," in Proceedings of the 5th ACM/IEEE International Conference on Human-Robot Interaction, 2010, pp. 23–30. doi: 10.1109/hri.2010.5453273.	yes	one robot-one human	branching	questioning (r-h)	fully autonomous	voice (r-h), motions and gestures (h-r), buttons (h-r), images or videos (r-h)	gesture recognition, pre-recorded voice lines
73	F. M. Wijnen, D. P. Davison, D. Reidsma, J. Van Der Meij, V. Charisi, and V. Evers, "Now We're Talking," ACM Trans. Human-Robot Interact., vol. 9, no. 1, pp. 1–29, Jan. 2020, doi: 10.1145/3345508.	no	one robot-one human	linear	commanding (r-h), questioning (r-h)	wizard-of-oz	voice (r-h), text (r-h), facial expressions (r-h), buttons (h-r), images or videos (r-h)	pre-recorded voice lines
74	T. Williams, D. Thames, J. Novakoff, and M. Scheutz, "'Thank You for Sharing that Interesting Fact!': Effects of Capability and Context on Indirect Speech Act Use in Task-Based Human-Robot Dialogue," in ACM/IEEE International Conference on Human-Robot Interaction, 2018, pp. 298–306. doi: 10.1145/3171221.3171246.[c]	no	one robot-one human	linear	commanding (h-r)	wizard-of-oz	voice (h-r, r-h)	speech synthesis
75	M. Żarkowski, "Multi-party Turn-Taking in Repeated Human–Robot Interactions: An Interdisciplinary Evaluation," Int. J. Soc. Robot., vol. 11, no. 5, pp. 693–707, Dec. 2019, doi: 10.1007/s12369-019-00603-1.	no	one robot-few humans	linear	questioning (r-h), informing (r-h)	fully autonomous	voice (h-r, r-h), facial expressions (r-h)	speech recognition, speech synthesis

[a.] Indicates whether additional information about the system was received from the authors

[b.] Includes only the tower-toppling robot, the waiter robot that is discussed in this paper is included in no.74

[c.] Includes only the waiter robot, the tower-toppling robot that is discussed in this paper is included in no.8