TOPIC

Emerging Fields and Translational Research from Anime to
Human-Agent Interaction (HAI)

Dr. Katie Seaborn

Overview

Translating anime knowledge to interaction design

Agent voice 💬   Kawaii voice studies

Agent appearance 🎨   Mukokuseki design

Agent identity 🎭   Social identity in translation
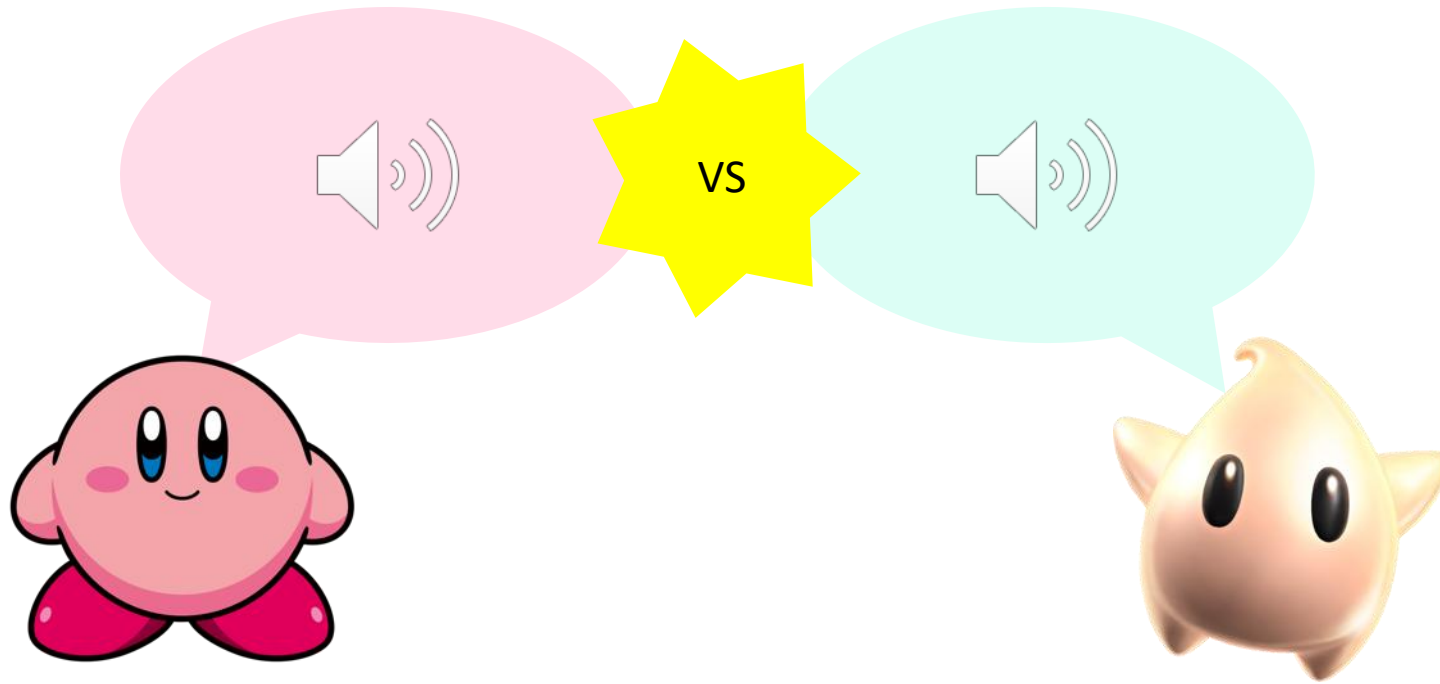
Future work 🌐   Internationalization

Voice UX + Intersection(AI)

Which game character voice is
more kawaii?

VS

© Nintendo

© Nintendo

Voice UX + Intersection(AI)

Which game character voice is
<mark>more kawaii?</mark>

VS
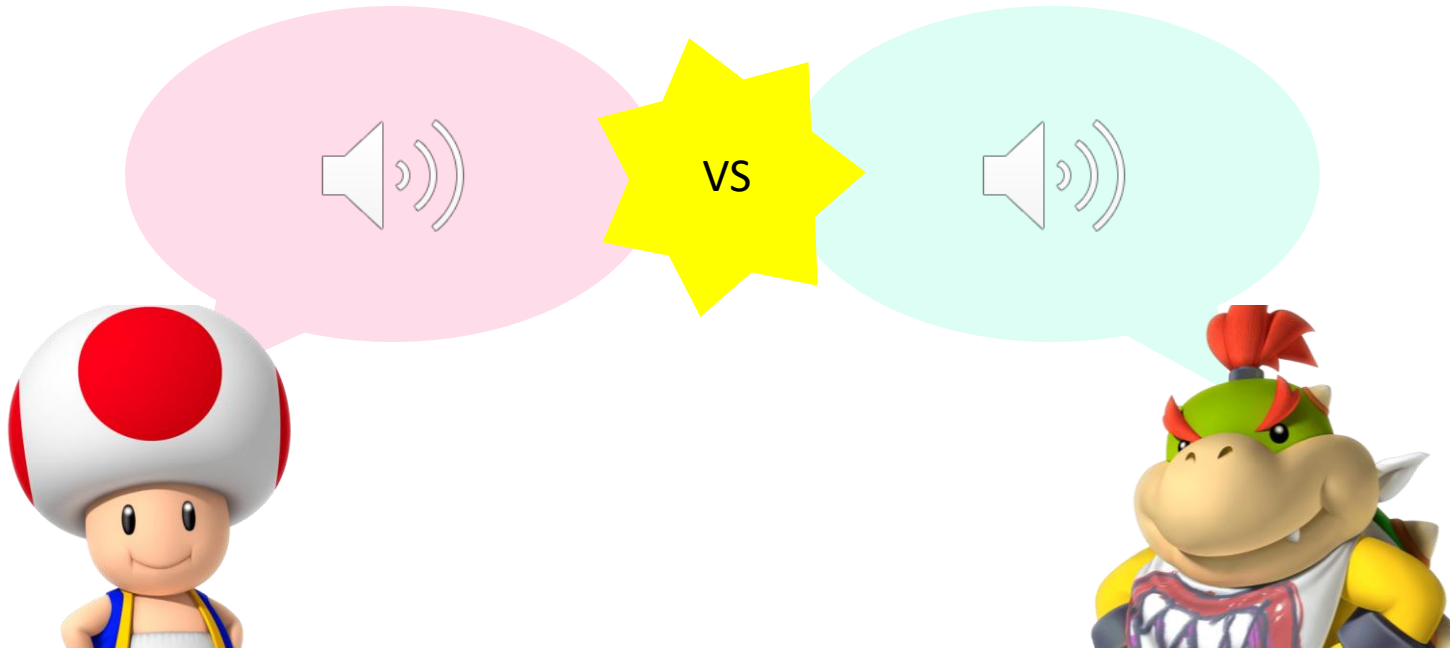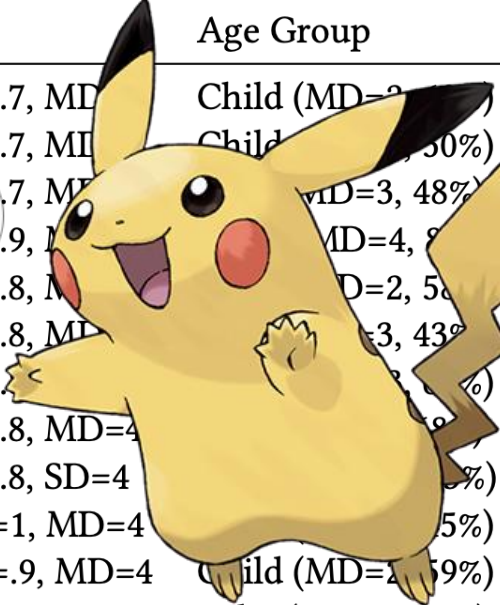
© Nintendo

© Nintendo

Character	Game or Series	Kawaiiness	Age Group	Gender
		Y: M=4.2, SD=.7, MD	Child (MD= , 50%)	Fem. (MD
		Y: M=4.2, SD=.7, MD	Child (MD= , 50%)	. (MD
		Y: M=3. , SD=.7, M	(MD=3, 48%)	(MD
		Y: M=3. , SD=.9, M	MD=4, 8	em. (M
		Y: M=3.9, SD=.8, M	D=2, 58	Fem. (MD
		Y: M=3.7, SD=.8, M	3, 43%	Fem (MD
		Y: M=3.7, SD=.		
		Y: M=3.7, SD=.8, MD=4		
		Y: M=3.6, SD=.8, SD=4	%)	
		M: M=3.4, SD=1, MD=4	5%)	
		M: M=3.4, SD=.9, MD=4	Child (MD=2, 59%)	
		M: M=3.3, SD=1, MD=4	Baby (MD=2, 57%)	Amb
		N: M=3.2, SD=.9, MD=3	Child (MD=2, 62%)	Masc. (M
		N: M=2.9, SD=1, MD=3	Child (MD=2, 35%)	Amb. (M
		N: M=2.9, SD=.9, MD=3	Child (MD=2, 55%)	Masc. (MD= ,
		N: M=2.7, SD=1, MD=3	Child (MD=2, 41%)	Amb. (MD=3, 41%
		N: M=2.7, SD=1, MD=3	Ageless (MD=7, 76%)	Neu. (MD=4, 69%)
		N: M=2.6, SD=1, MD=3	Ageless (MD=7, 70%)	Neu. (MD=4, 57%)
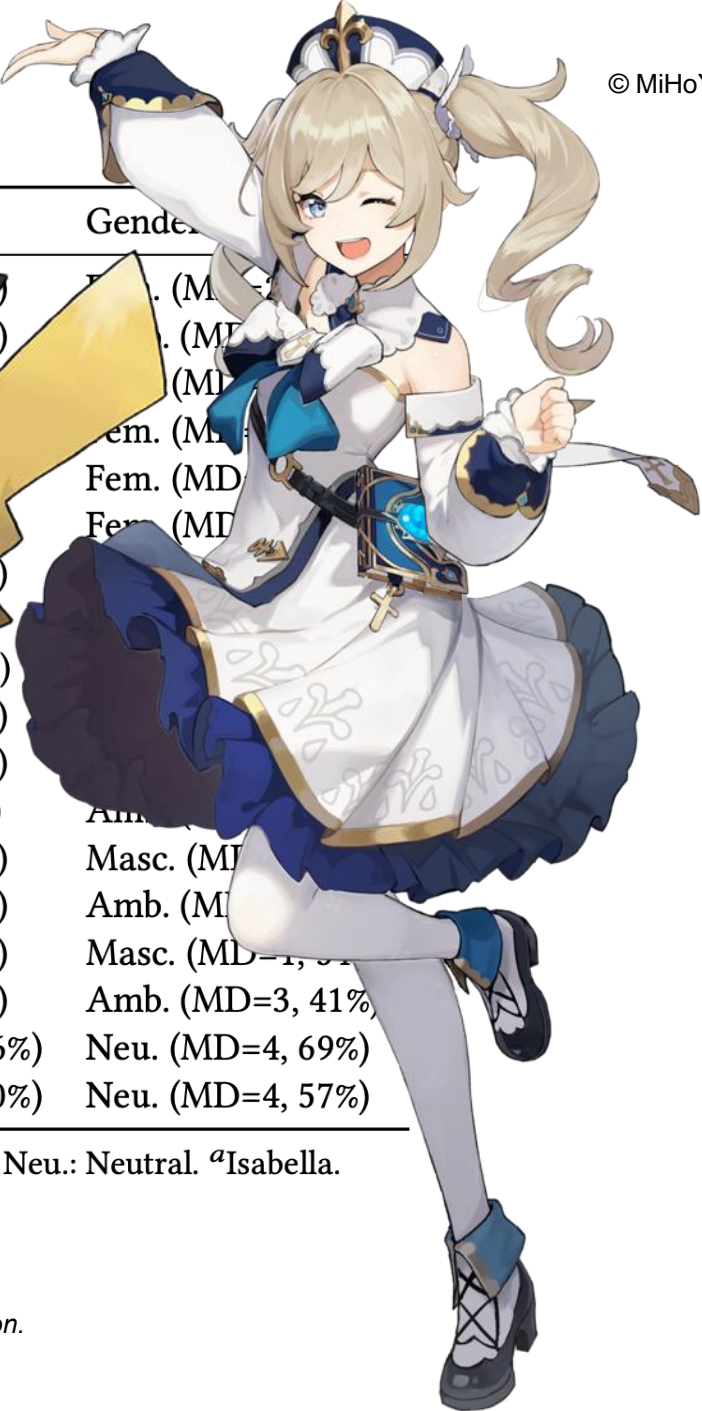
Y: Yes. M: Marginal. N: No. TLoZ: The Legend of Zelda. Fem.: Feminine. Masc.: Masculine. Amb.: Ambiguous. Neu.: Neutral. [a]Isabella.

Seaborn, K., Rogers, K., Nam, S., & Kojima, M. (2023). Kawaii game vocalics: A preliminary model. *ACM CHI PLAY '23 Companion*.

Voice UX

Super Kawaii Vocalics 🍄

*Make me **kawaii**!!!*

Semitone-0 (original)

Semitone-1

Semitone-2

Semitone-3

© Nintendo
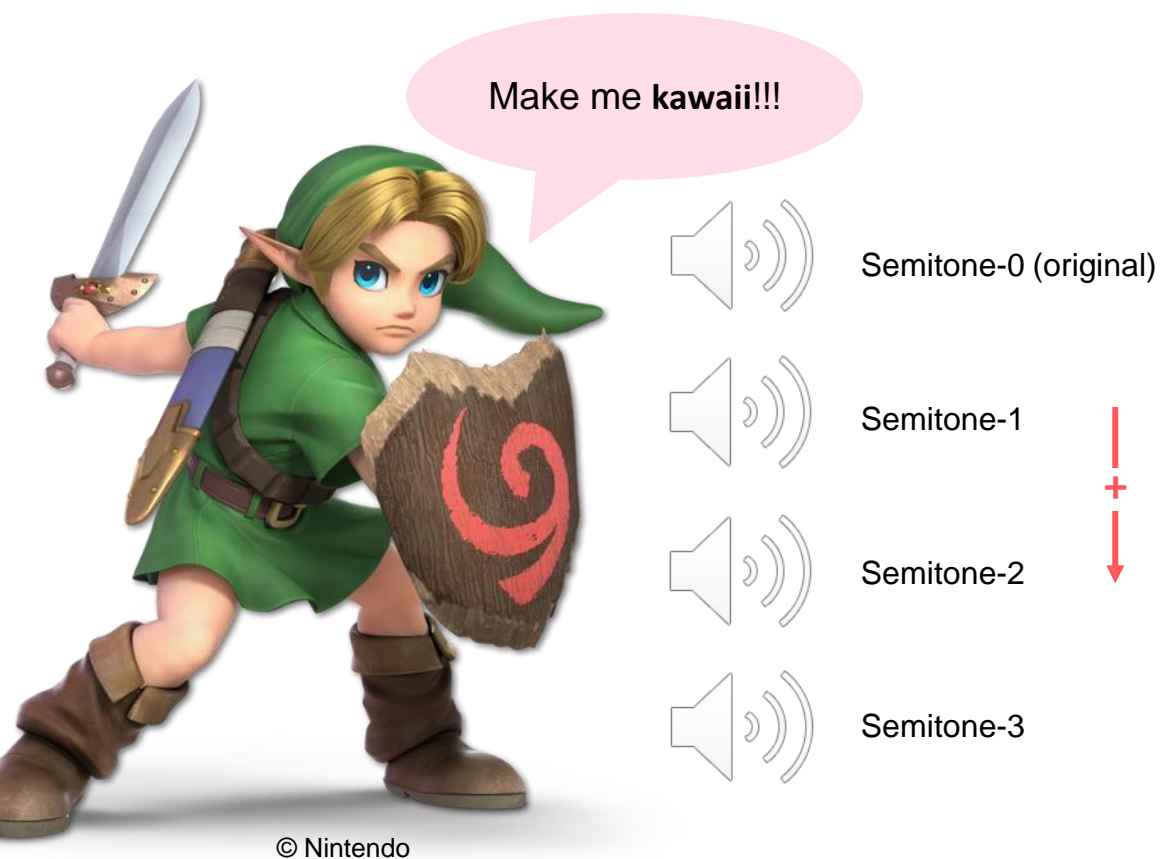
Semitones	Character	Direction	W	p-value	r	Significance
semi-0 vs. semi-1	All	++	21500.00	.037	23.42	*
	Toad	++	27.00	.008	0.53	**
semi-0 vs. semi-2	All	++	29493.00	.000	32.13	**
	Toad	++	27.00	.026	0.53	*
	Ayaka	++	78.00	.002	1.53	**
	Peach	++	84.00	.011	1.65	*
semi-0 vs. semi-3	All	++	41558.50	.040	45.27	*
	Toad	++	28.50	.001	0.56	**
	Ayaka	++	181.50	.020	3.56	*
	Peach	++	112.50	.025	2.21	*
semi-1 vs. semi-2	All	++	16496.50	.050	17.97	*
	Young Link	++	14.00	.008	0.27	**
	Ayaka	++	45.00	.016	0.88	*
semi-1 vs. semi-3	All	==	23961.50	.840	26.10	
	Edea	−−	50.00	.004	0.98	**
	Young Link	++	32.00	.022	0.63	*
	Ayaka	++	96.00	.048	1.88	*
semi-2 vs. semi-3	All	−−	16750.50	.101	18.25	
	Edea	−−	26.50	.003	0.52	**
	Pikachu	−−	24.00	.007	0.47	**

Table 9 from Mandai et al. (2025):

Statistically significant Wilcoxon signed-rank tests as post hoc pairwise comparisons for semitone manipulation by game character (Phase 3).

*p < .05, **p < .01. CI: Confidence Interval.

Direction:
++ Perceived kawaiiness increased.
 - - Perceived kawaiiness reduced.
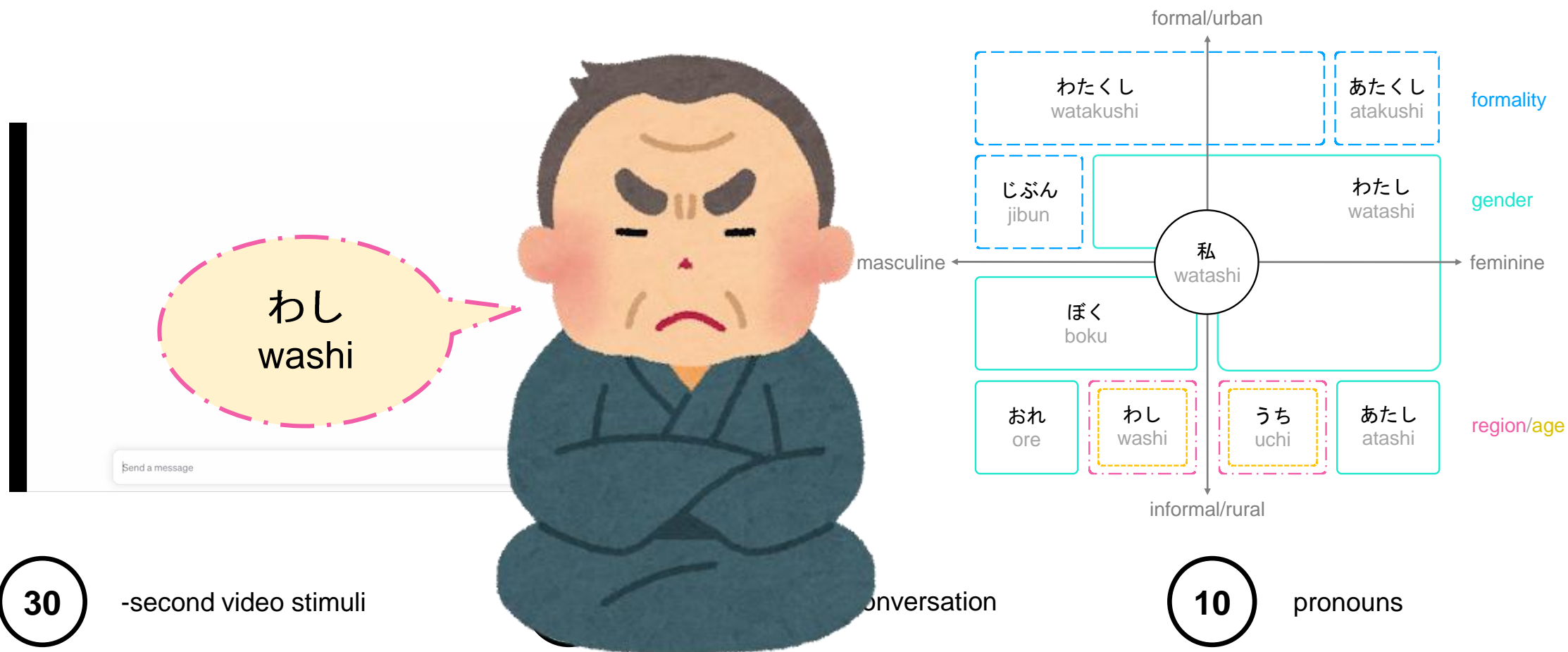 == No change in perceived kawaiiness.

Mandai, Y., **Seaborn, K.,** Nakano, T., Xin, S., Wang, Y., & Kato, J. (2025). Super kawaii vocalics: Amplifying the "cute" factor in computer voice. *ACM CHI '25 (A*-ranked).*

Intersectional Pronouns & Text Agents

formal/urban

わたくし
watakushi

あたくし
atakushi

formality

じぶん
jibun

わたし
watashi

gender

私
watashi

masculine ← → feminine

ぼく
boku

おれ
ore

わし
washi

うち
uchi

あたし
atashi

region/age

informal/rural

30 -second video stimuli

onversation

10 pronouns

わし
washi

Fujii, T., **Seaborn, K.**, & Steeds, M. (2024). Silver-tongued and sundry: Exploring intersectional Japanese first-person pronouns with interactive AI. *ACM CHI (A*-rank).*

Self-Referents & Voice Agents

Figure 12: The gender categorization of each voices using each self-referents or pronouns as a percentage ($N = 204$).
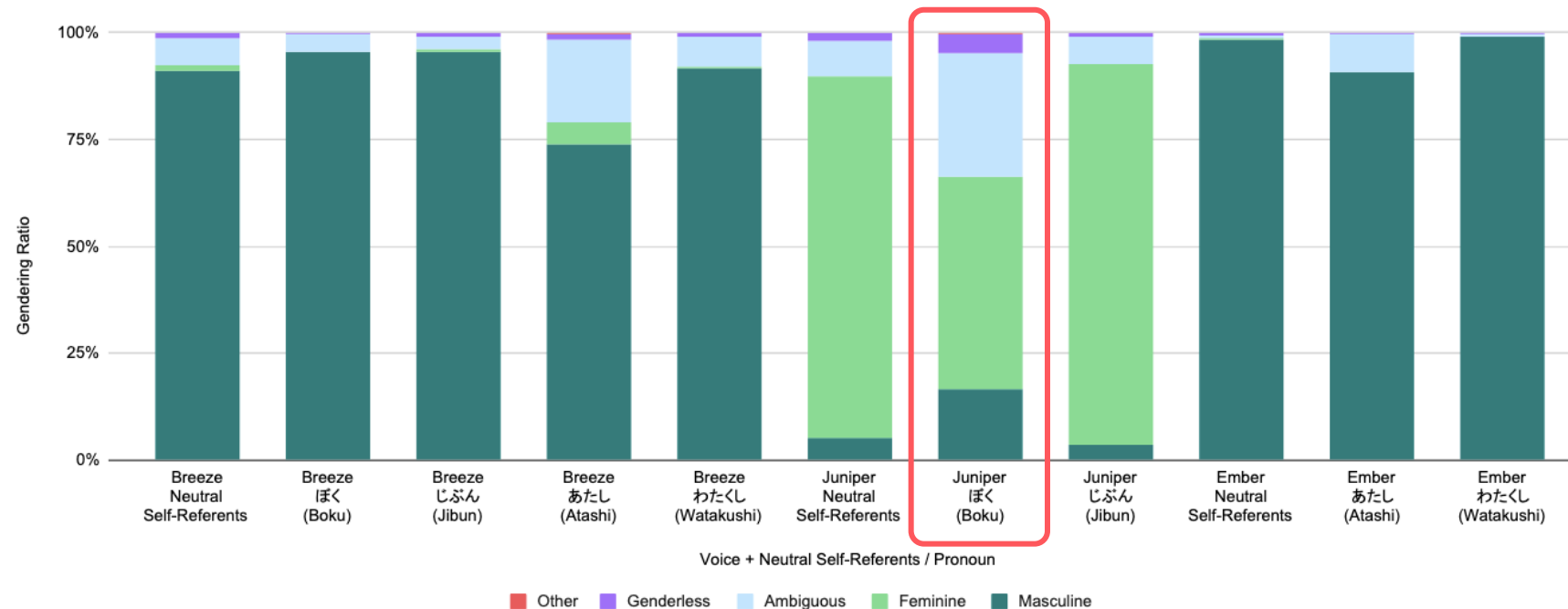
Feminine Juniper
+ masculine "boku"

= **bokukko** effect

Popular "boyish girl" or "tomboy" archetype, like Sapphire from the *Princess Knight* manga (1953)

Fujii, T., **Seaborn, K.**, Steeds, M., & Kato, J. (2025). Inter(sectional) alia(s): Ambiguity in voice agent identity via intersectional Japanese self-referents. *ACM CHI (A*-rank).*

From "Made-In" to Mukokuseki
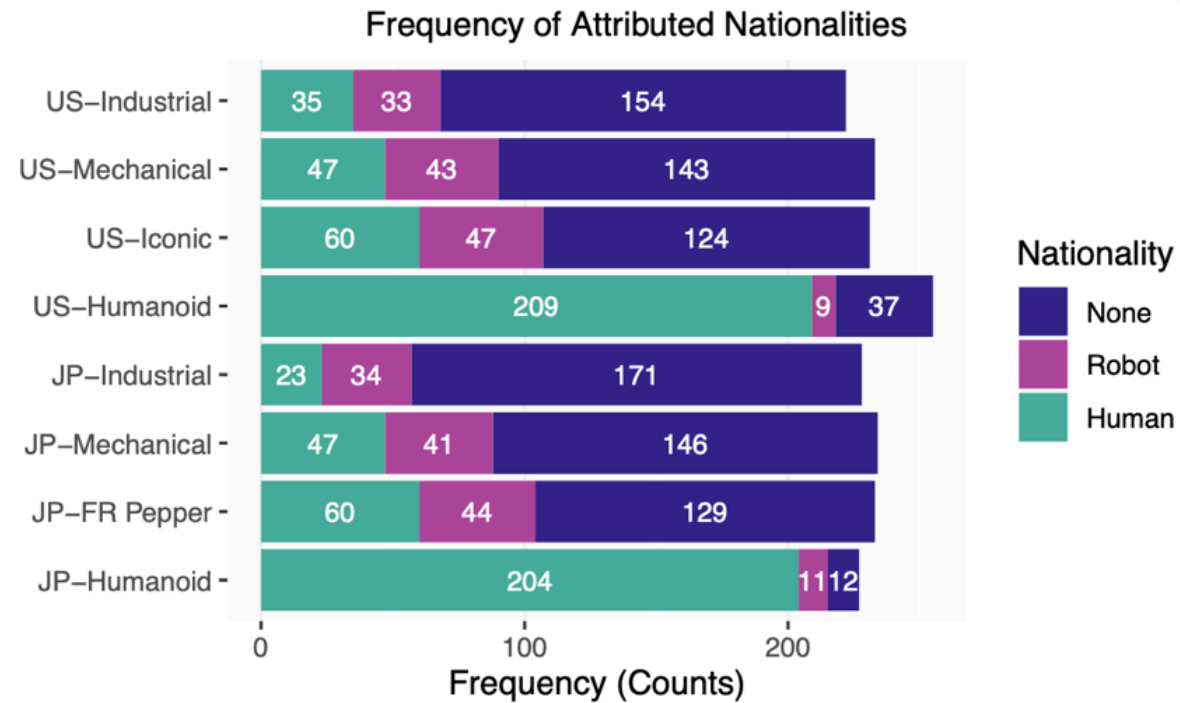
Figure 3. Frequency of attributed nationalities.

Seaborn, K., Kotani, H., & Pennefather, P. (2024). From "Made In" to Mukokuseki: Exploring the Visual Perception of National Identity in Robots. *ACM Transactions on Human-Robot Interaction, 14*(1), 1-21.

From "Made-In" to Mukokuseki

Table 4: Nationalities assigned to the robots by origin and mukokuseki, takokuseki, or made-in designation.

Rob. Ori.	Duffy Category	North Amer.	Latin Amer.	Europ.	Middle East.	Afric.	East Asian	Sum of Hu. Nat.	"Robot"	None	Desig.
US	Industrial	16 (8%)	5 (2%)	7 (3%)	2 (1%)	1	7 (3%)	35	33	154	Made-in
US	Mech. Hu.	23 (11%)	2 (1%)	17 (8%)	2 (1%)	0	8 (4%)	47	43	143	Made-in
US	Iconic Hu.	18 (9%)	7 (3%)	8 (4%)	10 (5%)	8 (4%)	16 (8%)	60	47	124	Tako.
US	Human.	75 (37%)	64 (32%)	31 (15%)	22 (11%)	7 (3%)	32 (16%)	209	9	37	Tako.
JP	Industrial	9 (4%)	2 (1%)	4 (2%)	3 (1%)	2 (1%)	5 (2%)	23	34	171	Muko.
JP	Mech. Hu.	19 (9%)	1	11 (5%)	2 (1%)	1	11 (5%)	47	40	146	Tako.
JP-FR	Iconic Hu.	15 (7%)	1	9 (4%)	1	0	34 (17%)	60	44	129	Made-in
JP	Human.	4 (2%)	1	4 (2%)	4 (2%)	0	184 (91%)	204	11	12	Made-in

Note that respondents could select multiple options. Rob. Ori.: Robot Origin. Mech.: Mechanical. Hu.: Humanoid. Human.: Humanoid. Amer.: American. Europ.: European. East.: Eastern. Afric.: African. Hu.: Human. Nat.: Nationalities. Desig. Designation. Tako.: Takokuseki. Muko.: Mukokuseki.

Participants (n=212; American, n=110; Japanese, n=92) generally "read in" national origin, however incorrect. Only the JP industrial robot was mukokuseki … and the JP humanoid strongly "made-in."

Perspectives on internationalization for HAI and HCI

> Anime is inspiring the design of AI-based agents like Replika

> Mukokuseki design and de-Japanization (Lu, 2008): Is this necessary? Does it work?

> Challenges in translation of Japanese characters to agents: language, voice, bias …

> Beyond agents, how can anime inspire HCI research?