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Politeness in Korean Sign Language from a cross-linguistic perspective*

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Lee, Jungah, Hyunah Kim, and Youngju Choi. 2024. Politeness in Korean Sign Language from a cross-linguistic perspective. Linguistic Research 41(2): 253-281. Previous research has shown that sign languages share socio-cultural norms, such as 'politeness,' with spoken/written languages. For example, in Japanese Sign Language (JSL), a head nod and bending the upper body are exclusively observed in polite signing contexts, demonstrating that JSL shares politeness norms with Japanese (Yoon and Kim 2022). Similar to Japanese, Korean has a well-defined honorification to convey politeness (e.g., Brown et al. 2014), and we therefore assume that Korean Sign Language (KSL) may also have systematic strategies to mark politeness. We recruited a native KSL signer and sign language interpreter to compare nonmanual features between two different hierarchical orders (a superior versus a peer/subordinate), and across different contexts (apology vs. compliment). Our findings reveal that, similar to JSL, KSL shows nonmanual characteristics, such as squinted eyes, head nods, narrowed shoulders, and upper body bending, in polite settings. We interpret upper body bending as a feature that likely reflects language contact with spoken/written Korean, embodying Korean politeness culture. Moreover, our results suggest that a smaller signing space may not always indicate more politeness. Unlike previous findings, our study shows that a larger signing space is employed to mark more politeness in emphasizing lexical signs. Our study primarily attempts to investigate systematic relationships between nonmanual features, contexts, hierarchical orders, and politeness. (Chosun University)

Keywords Korean, linguistic politeness, Korean Sign Language, cross-linguistic comparison

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1. Introduction

Contrary to the misconception that sign languages are mere gestural systems, previous literature has proven that sign languages have their own systematic grammatical structures, syntax, morphology, and semantics (Stokoe 1960, 1980; Brentari 1998, 2019; Sandler and Lillo-Martin 2006; Baker et al. 2016). Sign languages not only play a primary role as communication tools for deaf communities but also provide all the fundamental linguistic properties, including rules for word formation, sentence structure, and discourse organization (Stokoe 1960). Moreover, sign language linguistics have contributed to the investigation of the cognitive processes underpinning language acquisition, processing, and evolution, shedding light on language with auditory modality (Johnston and Schembri 2007). Recognizing the linguistic importance of sign languages not only affirms the cultural and cognitive value of deaf communities but also enriches and deepens our broader understanding of various fields in linguistics.

Previous literature has presented complex dynamics of linguistic contact and evolution in sign languages. As spoken languages engage in language contact situations, sign languages also interact with, borrow from, and influence one another in diverse sociolinguistic settings (Kuster and Lucas 2022). Sign languages actively evolve through interaction with contexts of spoken/written languages in geographically shared communities. Sign languages often borrow lexical terms and adopt neologisms from these spoken/written languages (e.g., finger spelling and formation of neologisms in Australian sign language; see Schembri and Johnston 2007 for more information). More importantly, sign languages share cultural norms like 'politeness' with spoken/written languages, especially when signers of a sign language and speakers of a spoken language live in the same territory. Thus, sign languages that have their own systematic ways to mark politeness show similar politeness-marking strategies to those of spoken/written languages (George 2011; Mapson 2014).

In spoken languages, politeness is often conveyed through both an honorific system (e.g., honorific markers) and suprasegmental cues such as prosody and intonation (Brown and Levinson 1999). In terms of suprasegmental cues, acoustic features such as low intensity (of loudness – thus, quieter), breathy voice quality, and slow speech rate are universally considered to be more polite (Ohala 1984; Campbell 2004; Winter and Grawnder 2012; Idemaru et al. 2020).

Similar to the role of acoustic cues in marking politeness, in sign languages,

nonmanual features (e.g., facial expressions, movement of head and upper body) play a key role in expressing and conveying politeness. These cues are similar to the roles of prosody and intonational cues in spoken languages (Dachkovsky and Sandler 2009; George 2011; Mapson 2014). Just like phonetic cues in spoken languages, nonmanual features are systematically controlled in order to convey different degrees of politeness, depending on contexts (e.g., polite vs. casual) and interlocutors (e.g., a person above vs. equal or below).

In British Sign Language (BSL), Mapson (2014) investigated nonmanual features in two contexts (request vs. apology). The nonmanual features such as raised eyebrows, slow signing rate, and smaller signing space were used in more polite settings such as requesting a favor from a supervisor (Mapson 2014). He also demonstrated the extent to which the nonmanual features appeared differently depending on the context. In the context of asking a favor from a person above (e.g., boss and/or supervisor), nonmanual features such as side tilts, polite duck, and polite grimace were more preferred. In contrast, in the context of making an apology, the frequency of polite duck and side tilts decreased while the frequency of raising eyebrows increased. He concluded that nonmanual features might be systematically controlled and have strategies to mark politeness depending on the context.

In Japanese Sign Language (JSL), slow signing rate (speech rate, thus less assimilation), smaller signing space (centralized signing space), and forward head position (c.f., head nod) were considered to be more polite (George 2011). More importantly, it is notable that slow speech rate was observed more often in polite contexts in both Japanese and JSL. Thus, Japanese and JSL may share similar cues to mark more politeness. Moreover, similar to BSL, smaller signing space was considered a marker of more politeness. More specifically, smaller signing was often compared to whispering, but larger signing space was compared to shouting in speech (Crasborn 2001; Mapson 2014). Thus, smaller signing space indicates more politeness in JSL and BSL (George 2011; Mapson 2014).

More critically, it is noteworthy that the nonmanual feature of 'bowing down (bending the upper body)' was exclusively observed in JSL. According to Yun and Kim (2022), bending the upper body in JSL may be a feature derived from language contact with spoken Japanese. Unlike Western speech contexts, in Japanese, 'humble speech form', which is spoken with the gestures of bending the upper body, is used in polite contexts (Okamoto 1999). Specifically, humble speech is a linguistic form that

emphasizes politeness and respect toward superiors (Okamoto 1999; Hough 2014). By humbling and lowering themselves, Japanese speakers emphasize the hierarchies between inferiors and superiors in order to mark more politeness (see Okamoto 1999). These humble speech forms are often accompanied by a bowing gesture (Ohashi 2010). Thus, in JSL, the same humble form in Japanese might be reflected in the nonmanual feature of bending the upper body (see also Park 1990; Sohn 2005).

Based on the notion that Japanese and JSL share a similar concept of humble speech by bending the upper body to mark more politeness (George 2011; Yoon and Kim 2022), it is predicted that KSL also has its own systematic strategies to mark politeness, similar to Korean. It is well-known that Korean language has a well-defined honorification to convey politeness (panmal vs. contaymal, see Brown et al. 2014; Idemaru et al. 2020). In Korean, politeness is not only marked morphologically but also conveyed with phonetic cues. These phonetic cues include both suprasegmental and segmental cues. First, in terms of suprasegmental cues, Korean speakers tend to speak more slowly and quietly in polite speech. Moreover, Korean speakers tend to make less pitch (F0) fluctuation (thus, more monotone) in polite speech, resulting in smaller intonational changes (Brown et al. 2014; Idemaru et al. 2020). Notably, in Korean, F0 is significantly lower in polite speech (Idemaru et al. 2020). When it comes to segmental cues, Korean speakers tend to speak more clearly. For example, Korean speakers in formal settings distinguish voice onset time (VOT) between lenis and aspirated stop categories and try to separate phonemic space of cardinal vowels (ala acoustic cues of hyperarticulation, see Kang and Guion 2008).

Parallel to the cases of Japanese and JSL, we assume that nonmanual features in KSL might be similar to the acoustic cues in polite speech of Korean. More specifically, Korea also has a culture of bowing and bending the upper body when inferiors greet their superiors and when drinking alcohol or proposing a toast (Brown and Winter 2019). The 'bending the upper body' gesture represents the inferior's lower status by suppressing and minimizing his or her body as well as increasing their submissiveness to the superior, resulting in more politeness (Brown and Winter 2019). In addition, inferiors often use two hands when they give or receive something from their superiors, which is considered a clear signal of marking politeness (deference, see Brown and Winter 2014).

In KSL, Yoon and Kim (2022) showed that politeness was also marked with nonmanual features like facial expressions, eye contact, and the position of head and shoulders. Specifically, KSL signers often move their head and upper body forward to

mark politeness. In addition, they use a slow signing rate and show less assimilation in signing (Yoon and Kim 2022). However, it is unclear how these nonmanual features in KSL systematically convey politeness depending on context and interlocutors. However, it has been little studied how nonmanual features are used to mark politeness in KSL by far. To fill this gap, we focus on nonmanual features used as politeness strategies in KSL, comparing nonmanual features between two different hierarchical orders (a person above vs. a person below/equal), and across different contexts (apology vs. compliment).

Based on the Japanese-JSL relationship, we predict that KSL also has its own systematic strategies to mark politeness reflecting politeness strategies in Korean. We aim to determine the extent to which a native KSL signer uses nonmanual features to convey politeness differently depending on the hierarchical order. We also investigate whether the nonmanual features in KSL are comparable to the features of JSL. Moreover, our study aims to understand the nonmanual features in relation to spoken Korean.

As noted in the previous studies (George 2011; Mapson 2014), we hypothesize that a KSL signer may use nonmanual features similar to JSL to convey politeness, such as raised eyebrow and forward head position. Given that Korean and Japanese share similar 'humble' features in their languages (Kim and Sells 2007), 'bending the upper body' may also be observed in polite contexts in KSL. In addition, similar to BSL (Mapson 2014), different strategies might be used to indicate politeness depending on the context (apology vs. compliment). However, because politeness in KSL has not been thoroughly investigated, it is challenging to determine the patterns that appear in different social settings. Our study firstly attempts to investigate the relationship between politeness and nonmanual features in different settings. This study contributes to the field by providing data that reveals politeness in KSL.

2. Methodology

2.1 Speech contexts

We elicited two speech acts commonly associated with research on politeness: giving compliments and apologies (Blum-Kulka and House 1989). The data for the elicitations are summarized in Table 1 and Table 2. Included are a range of speech acts directed to a superior and to a peer, resulting in two hierarchical tiers. Hierarchy 1 involves a role-playing dialogue between a subordinate (intern) and a superior (supervisor), while Hierarchy 2 involves the role-playing dialogue between two peers (colleagues). The two hierarchical tiers apply to two different settings: *apologies* and *compliments*.

Table 1. Context A (apology)

	Intern vs. S	Supervisor (person ab	oove)				
Intern:	부장님, 이제	어제까지 완성되었습니	요청하신 다.	사업계획	획서가		
	pwucang-n		yochengha-si-n		yhoykse-ka		
	supervisor-		l request-HON-RI	EL business	business.plan-NOM		
	icey now		wanseng-toy-ess-supni-ta. finish-PASS-PAST-HON-DEC				
	정말	죄송합니다.	TIST HOLV BLC				
	cengmal very	coysongha-pni-ta. sorry-HON-DEC					
	"Superviso I am very	r, now I have finishe sorry."	ed the business p	olan you reques	ted.		
Supervisor:	김사원, 주면	이렇게 중요한 어떡하나!	서류를	늦게			
	kimsawen, Kim, cwu-myen give-CONI	such important-lettekha-na!	n-n selyu-lul REL document-A	nuckey ACC late			
	"Kim, how	v come you give me	such an importa	nt document so	late!"		
Intern:	정말 제대로	죄송합니다. 지키겠습니다.	다음에는	꼭	마감일을		
	cengmal	coysongha-pni-ta.	taumey-nun	kkok	makamil-ul		
	very	sorry	next time-TOPI	C definitely	deadline-ACC		
	ceytaylo	cikhi-keyss-supni-ta					
	definitely	meet-FUT-HON-DE	iC .				
TT 1 2	"I am so	sorry. Next time, I v	vill definitely med	et the deadline.	,,		
	"I am so s	taff (equal, colleague)	vill definitely med				
Hierarchy 2: Staff Kim:	"I am so s Staff vs. St 최부장, 완성되었나	aff (equal, colleague) 어제까지 네.	vill definitely med	et the deadline. 서류가	이제		
	"I am so s Staff vs. St 최부장, 완성되었는 choypwuca	aff (equal, colleague) 어제까지 네. ung, ecey-kkaci	vill definitely med) 요청한 yochengha-n	서류가 selyu-ka	이제 icey		
	"I am so s Staff vs. St 최부장, 완성되었나	aff (equal, colleague) 어제까지 네. ung, ecey-kkaci yesterday-until	vill definitely med) 요청한	서류가	이제 icey		

	cengmal r		you requested ye	sterday is	now finis	shed.	
Staff Choi:	김부장, 주면	이렇게 어떡하나!	0 4	서류를		늦게	
	kimpwucang,	ilehkey	cwungyoha-n	selyu-lul		nucke	ey
	Kim,	such	important-REL	document-	-ACC	late	•
	cwu-myen	ettekha-na	!				
	give-COND	how-Q					
	"Kim, how o	come you giv	ve me such an im	portant doc	ument so	late!"	•
Staff Kim:	정말 『	미안하네.	다음에는	꼭	마감일	을	제대로
	지키겠네.						
	cengmal r	nianha-ney	taumey-nun	kkok	makami	l-ul	ceytaylo
	very s	sorry-ASP	next.time-TOPIC	definitely	deadline	-ACC	definitely
	cikhi-keyss-n	ey.					
	meet-FUT-AS	SP					
	"I am so son	rry. Next tim	ne, I will definitely	meet the	deadline'	,,	

Table 2. Context B (compliment)

Hierarchy 1:	Intern vs. S	Supervisor (1	person above))			
Staff:	이번달 올랐습니다	전체 가.	실적이	저번	달	보다	
	ipental olu-ass-sup	cenchey ni-ta.	silcek-i	cepe	ntal	pota	
	this.month increase-PA	entire AST-HON-D	profit-NOM EC	last.r	nonth	than	
	"The entire	profit in the	nis month wa	s more	e increa	ased than the one	e in last month"
CEO:	자네 팀 올랐네.	덕분에	이번딯	<u>}</u>	전체	실적이	많이
	caney thin your team olu-ass-ney increase-PA	n thanks.t			cenchey entire	y silcek-i profit-NOM	manhi a.lot
	ta cand all you "Thanks to	r thank	wun-i-ya! ks.to-COP-AS	P! v		.,	ney. ASP
Staff:	아닙니다. 아니겠습니	회장님 니까.	께서	,	애쓰신		덕분

	ani-pni-ta. hoycang-nim-kkeyse no-HON-DEC CEO-HON-NOM ani-keyss-supni-kka. not-FUT-HON-Q	ayssu-si-n tekpwun hardwork-HON-REL thanks.to
-	"No, isn't it all thanks to the CEO's	hard work?"
Hierarchy 2:	Staff vs. Staff (equal, colleague)	
Staff Lee:	이번달 전체 실적이 저	번달 보다 올랐네.
	ipental cenchey silcek-i ce	epental pota olu-ass-ney.
	this.month entire profit-NOM las	st.month than increase-PAST-ASP
	"The entire profit in this month was me	ore increased than the one in last month"
Staff Kang:	자네 팀 덕분에 이번달	전체 실적이 많이
	올랐네.	
	caney thim tekpwun-ey ipental	cenchey silcek-i manhi
	your team thanks.to this.month	n entire profit-NOM a.lot
	olu-ass-ney.	
	increase-PAST-ASP	
	다 자네 덕분이야!	정말 대단하네.
	ta caney tekpwun-i-ya!	cengmal taytanha-ney.
	all your thanks.to-COP-ASP!	very excellent-ASP
	"Thanks to your team, the entire profit	
	It is all thanks to your work! Very ex	ccellent"
Staff Lee:	아니네 다 자네가 애쓴	덕분 아니겠는가.
	ani-ney ta caney-ka ayssu-n	tekpwun ani-keyss-nunka.
	no-ASP all you-NOM hard.work	-REL thanks.to not-FUT-Q
	"No, isn't it all thanks to your hard w	vork?"

2.2 Data collection and procedure

For the data collection and procedure, a native KSL signer and an official sign language interpreter were recruited. The native KSL signer provided KSL data as part of a large-scale corpus database building project in KSL at C University. The native signer is a male in his early 50s and uses standard KSL. He has worked as an official sign language interpreter as well as a KSL expert for over 16 years in a government institute. The second participant is a female Korean speaker who is professionally trained and has

In order to improve reliability of data, we consulted five professional KSL signers to confirm how politeness can be systematically controlled in nonmanual features in KSL. Based on the advises, we presumed that the male native KSL can be a representative of presenting the politeness data in KSL. And, for the further study, we plan to recruit more KSL signers to investigate how nonmanual features systematically mark politeness in KSL.

worked as an official sign language interpreter for over ten years.

First, we provided the dialogue in written Korean (Hangul, see Table 1 and Table 2) to the sign language interpreter (the second author) and the native KSL signer.² Next, the second author described the specific settings and contexts in the dialogue and asked him to perform a role-play in KSL. This procedure took approximatively one hour in total. Then, the KSL signer filmed himself using a camcorder (Panasonic HC-VX1) in a recording room at the National Institute of Korean Sign Language Education. Thus, he took turns playing roles as 'a person below (intern)' and 'a person above (boss)' in the Hierarchy 1 dialogue. He also role-played 'a person equal (colleague)' in the Hierarchy 2 dialogue. The process for filming took approximately 30 minutes. After the filming, the third author transcribed the sign language data and glossed both manual features and nonmanual features for five hours. Reliability of the glossed data was cross-checked and confirmed with the corresponding author, who was also a professor in the Sign Language Linguistics Department at C University. For transcription and glossing, the second author utilized Face Action Coding System (FACS, see Cohn, Ambadar and Ekman 2007; Nam, Won, and Heo 2011; Kim, Nam, and Cho 2020). The specific coding is described in Table 3, and all glossing and transcriptions are uploaded on Open Science Framework (OSF, https://osf.io/jrbxe)

eyes	mouth	head	upper body	sign
				space
-squint eyes	-mouth gesture	-forwarded head	-narrow shoulders	-small
-widen eyes	-mouthing	(head nod)	-lower shoulders	-large
	-lip pucker	-head up	-bend forward	
	-tight lips	-head down	-bend back	
		-head left		
		-head right		
	-squint eyes -widen	-squint -mouth gesture eyes -widen -mouthing eyes -lip pucker	-squint -mouth gesture -forwarded head -widen -mouthing (head nod) eyes -lip pucker -head up -head down -head left	-squint eyes -mouth gesture -forwarded head -narrow shoulders head -widen -mouthing (head nod) -lower shoulders eyes -lip pucker -head up -bend forward -tight lips -head down -bend back -head left

Table 3. Coding system for nonmanual features

3. Results

We will present all the glossed data first, and then compare the nonmanual features directly

² Note that the KSL signer was bilingual of written Korean and KSL. We acknowledge that he might have influenced by honorifics in written Korean.

between the hierarchical orders (a person above vs. a person equal) in both contexts (apology and compliment).

3.1 Apology

FINISH

3.1.1 Hierarchical order: A dialogue between an intern and supervisor

A role-playing dialogue between an intern and a supervisor is demonstrated below. The KSL dialogue was translated into five sentences in Korean. Nonmanual features of each sign are transcribed. In (1) and (2), an intern apologizes to his supervisor for the late submission of a business plan that his boss requested the day before.

(1) 'Sir, the business plan you requested by yesterday is now finished.'
head left/head up/narrow shoulder/squint eyes/small signing space
DEPARTMENT-LEADER-HON
head left/head up/narrow shoulder/squint eyes/small signing space
YESTERDAY UNTIL REQUESTED
head left/head up/narrow shoulder/squint eyes/small signing space
BUSINESS PLAN
head down/narrow shoulder/squint eyes/small signing space
MAKE
head left/head up/mouth gesture/head nod/large signing space

- (2) 'Sorry.'

 head left/head up/narrow shoulder/squint eyes/small signing space
 SORRY
- In (3), the supervisor is upset and scolds him for submitting the business plan late.
 - (3) 'Kim, how could you give me such an important document so late!'

 <u>head right/head down/grimace</u>

 HEY LATE

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head right/head down/grimace

IMPORTANT DOCUMENT RECEIVE

head right/head down/raising/widen/grimace/head nod

WHAT

In (4), the intern apologizes to the boss again and promises to meet the deadline in the

future.

(4) 'I am so sorry.'

head left/head up/bending the upper body/head down/squint eyes

GESTURE SORRY

(5) 'I will make sure to meet the deadline next time.'

head left/head up/raising

NEXT

head nod/head down

DATE UNTIL

head left/head up/head nod

MAKE SURE CHECK

head left/head up/tight lips/squint eyes/bending the upper body

PROMISE

3.1.2 Hierarchical order: A dialogue between colleagues

This section demonstrates the role-playing dialogue between the colleagues Kim and Choi. Like the dialogue above, five sentences were transcribed into Korean. The same Korean sentences were given to the signers except for honorifics, since the dialogue is between colleagues. In (6) and (7), Kim apologizes to his colleague Choi for the late submission of the business plan.

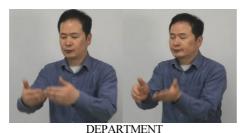
(6)	'Choi, the business plan you requested by yesterday is now finished.
	head left
	CHOI DEPARTMENT LEADER

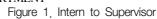
	head left
	YESTERDAY UNTIL REQUEST
	head left
	BUSINESS PLAN
	head left
	MAKE
	head left/mouth gesture/head nod/small signing space
	FINISH
(7)	'Sorry.'
	head left/head down/squint eyes
	SORRY
His col	league, Choi, then becomes upset about submitting the document late, as shown
in (8).	
(8)	'Kim, how could you give me such an important document so late!'
	head right
	KIM DEPARTMENT LEADER
	head right/grimace
	IMPORTANT DOCUMENT LATE RECIEVE
	head right/widen/grimace/head back
	WHAT
-	Kim apologizes to Choi and promises him to meet the deadline next time, as
seen in	(9) and (10).
(9)	•
	head left/squint eyes
(4.0)	SORRY
(10)) 'I will make sure to meet the deadline next time.'
	head left/raising
	NEXT

head left DATE UNTIL MAKE-SURE head left CHECK head left/tight lips **PROMISE**

3.1.3 Comparison

In this section, we compare nonmanual features between the apology to a person above and apology to a person equal. First, when the signer role-played the intern communicating with his boss, nonmanual features such as head up, head down, bending the upper body, and small signing space were observed. The nonmanual features were used differently when communicating with the supervisor as an intern from when communicating with a colleague. Figure 1 demonstrates that the signer narrowed and lowered his shoulders and bent his upper body forward, resulting in using a smaller signing space when he role-played an intern communicating with his supervisor. In contrast, Figure 2 shows that he did not bend his upper body and his shoulders were not shrunk when the context indicated equal hierarchy. It is also noteworthy that the lexical sign LEADER demonstrated variations depending on the context. Specifically, when the intern addressed his supervisor, he used his left hand under the lexical sign LEADER to indicate more politeness. In contrast, the use of the left hand was not observed in the equal hierarchy.







LEADER







DEPARTMENT Figure 2. Colleague to Colleague

Next, the head position was different across the hierarchies. The left picture of Figure 3 shows that the head position and shoulders were down when he role-played an intern. However, in the right picture of Figure 3, his head was not lowered nor his shoulders narrowed when addressing his colleague. The patterns remain consistent in Figure 4. When he role-played an intern, he consistently bent both his head and upper body.







YESTERDAY

Figure 3. Intern to Supervisor (left) vs. Colleague to Colleague (right)







PROMISE

Figure 4. Intern to Supervisor (left) vs. Colleague to Colleague (right)

Moreover, an additional gesture to mark politeness was observed in the role-play between the intern and supervisor. Figure 5 shows that he squinted his eyes and bent his upper body forward before signing the lexical word SORRY. We believe that the additional gesture before SORRY was used in order to enhance the degree of politeness to the supervisor. Recall that humble culture is well-described in JSL as well as Japanese. This additional gesture may be an element of polite culture in Korean adopted into KSL via language contact. Given that using two hands marks more politeness in Korean, the additional use of the left hand in the supervisor-intern hierarchy also indicates more politeness in KSL. In other words, the gesture provides evidence that KSL shares crosslinguistic and cultural notions with spoken Korean.

In addition, the signer used his left hand additionally for the lexical sign SORRY to mark more politeness in Figure 5, whereas this feature was not observed in Figure 6. Although both Figures 5 and 6 show the nonmanual feature 'squint eyes' and 'head nod' in the context of apology, the features of bending the upper body forward and the additional use of the left hand were only found in the intern-supervisor hierarchy that required more politeness. Given that the additional left hand was used for the lexical signs LEADER and SORRY in the intern-supervisor hierarchy, the use of the left hand is interpreted as a variation for marking higher politeness in these lexical signs.



Figure 5. Intern to Supervisor



Figure 6. Colleague to Colleague

More critically, signing space was different across the hierarchies. Figure 7 shows that the signing space was larger when the lexical sign FINISH was signed to the supervisor compared to the colleague (Figure 8). In the previous literature (e.g., George 2011;

Mapson 2014), recall that small signing space was used to mark more politeness in JSL and BSL. However, our results demonstrated that small signing space may not always indicate more politeness. When emphasizing the lexical sign FINISH to the supervisor, a larger signing space was employed. Thus, larger signing space may indicate more politeness in contexts that require emphasis. The larger signing space might be interpreted as a prosodic cue (e.g., intonational change) in spoken languages, which demonstrates acoustic cues of clear speech and prominence in polite speech (e.g., Idemaru et al. 2020). This will be discussed further in the discussion section.



Figure 7. Intern to Supervisor



Figure 8. Colleague to Colleague

3.2 Compliment

3.2.1 Hierarchical order: A dialogue between an intern and a supervisor

In the compliment context, a supervisor and an intern give compliments to each other in turn. The KSL dialogue was translated into six sentences in Korean. Again, nonmanual features of each sign are transcribed. In (11), the intern tells his supervisor that the profit this month increased more than last month.

(11) 'Sir, the profit this month increased more than last month.' head left/head up/head down HON head left/head up A-MONTH COMPARE TODAY head left/head up/lowered shoulders **SCORE** head left/head up/lowered shoulders/head nod/larger signing space **INCREASE** In (12) and (13), the supervisor praises the intern for increasing the profit. (12) 'Thanks to your team, the profit increased a lot this month.' head right/head down THEM FAVOR BECAUSE head right/head down MANY SCORE INCREASE (13) 'Very excellent!' head right/head down THEM EXCELLENT head right/head down/bending the upper body **BEST** In (14) and (15), the intern replies and praises his supervisor's hard work. (14) 'No.' head left/head up/bending the upper body/squint eyes NO (15) 'Isn't it all thanks to your hard work?' head left/head up/bending the upper body/narrow shoulders HON EFFORT FAVOR head left/head up/head nod RIGHT

3.2.2 Hierarchical order: A dialogue between colleagues

This section demonstrates the role-playing dialogue between colleagues Kim and Choi. As above, six sentences were transcribed into Korean. The sentences were the same except for excluded honorifics, since the dialogue portrays an equal hierarchy. In (16), Choi tells his colleague Kim that the profit increased a lot.

(16)	'The profit this month increased more than last month.'
	head left
	A-MONTH COMPARE TODAY
	head left
	SCORE
	head left/head nod/small signing space
	INCREASE

In (17) and (18), the Kim praises his colleague Choi for increasing the profit.

(17) 'Thanks to your team, the profit increased a lot this month.'

head right

THEM

head right/grimace/lip pucker

FAVOR BECAUSE

head right/small signing space

MANY SCORE INCREASE

(18) 'Very excellent!'

head right

THEM EXCELLENT

head right/bending the upper body back/widen eyes

BEST

In (19) and (20), Choi replies and praises his colleague Kim's hard work.

(19) 'No.' head left/grimace NO

(20) 'Isn't it all thanks to your hard work?' head left

HON EFFORT FAVOR

head left/head nod

RIGHT

3.2.3 Comparison

Here, as in the section above, we compare the nonmanual features between complimenting a person above and complimenting a person equal. In the intern-supervisor hierarchy, the same nonmanual patterns were consistently observed in both apology and compliment contexts. When the signer role-played the intern communicating with his supervisor, nonmanual features such as head up, head down, narrow shoulders, bending the upper body, and squinting eyes were observed. Figures 9, 10, and 11 demonstrate that he narrowed and lowered his shoulders and bent his upper body forward. Thus, in the context of delivering the news about increased profit to his supervisor (Figure 9), he bent his upper body and narrowed his shoulders. In addition, similar features were also used when he role-played an intern and said, 'No, it is all thanks to your hard work' (Figures 10 and 11). More importantly, in Figures 9 and 11, the lexical honorific sign HON was included at the beginning of the signing in the intern-supervisor hierarchical context. Thus, we observed that the lexical signs played a role in marking more politeness in the compliment context, as well.



Figure 9. Intern to Supervisor



Figure 10. Intern to Supervisor



Figure 11. Intern to Supervisor

In contrast, those features did not appear in Figures 12, 13, and 14. In the equal hierarchical setting, he neither bent his upper body nor narrowed his shoulders. Moreover, the position of his head was neither up nor down, showing the equal hierarchy between the colleagues. Also, unlike above, the HON sign was not observed in the equal hierarchy setting (Figure 12 and Figure 14).



Figure 12. Colleague to Colleague



Figure 13. Colleague to Colleague



Figure 14. Colleague to Colleague

Importantly, similar to the signing space in the apology context, larger signing space was also used in the intern-supervisor hierarchy in the compliment context. Recall that the larger signing space was used in the apology context when emphasizing the lexical sign FINISH to the supervisor. Similarly, when the intern signed the lexical sign INCREASE, a larger signing space was used (compare Figure 15 to Figure 16). This might be similar to the acoustic cues for hyper-articulation and/or prominence markers in spoken languages.



Figure 15. Intern to Supervisor



Figure 16. Colleague to Colleague

Again, this may also indicate that smaller signing space does not always indicate more politeness. In the context of emphasizing lexical signs, the larger signing space could mark more politeness in the supervisor-intern hierarchy. Even though smaller signing space is used nonmanually, the sign for a specific word becomes more clearly articulated to emphasize the word. As in Section 3.1.3, we conclude that signing space may play an important role in indicating prominence and clear speech.

4. Discussion

This study aimed to discover politeness strategies in KSL. Our findings demonstrated that KSL makes use of nonmanual features systematically to mark politeness. Some of the nonmanual markers were consistently used in apology and compliment settings, while others differed between the two settings.

First, nonmanual features such as squinted eyes and head down appeared consistently and exclusively in the apology settings, regardless of the hierarchical order. In contrast, those features were not observed in the compliment settings. Moreover, the smaller signing space was primarily observed in the apology setting, indicating that the smaller signing space might be used in limited contexts. Thus, the nonmanual features of squinted eyes, head down, and use of smaller signing space may play a role in conveying sincerity exclusively in an apology context.

Next, in both apology and compliment settings, the following features were consistently observed in polite contexts: (i) nonmanual features of squinted eyes, head nod, narrow and lowered shoulders; ii) usages of the left hand; iii) larger signing space for lexical signing). These nonmanual features are interpreted as politeness markers since

they were only observed in the supervisor-intern hierarchy.

Importantly, similar to JSL, the feature of bending the upper body was also found in our data. This feature is not primarily observed in Western signing contexts (George 2011; Yoon and Kim 2022). Similar to the humble speech in Japanese (George 2011; Yoon and Kim 2022), the feature of bending the upper body in KSL might be influenced by Korean language and culture. Thus, this also can be interpreted as evidence of language contact. In Korean, recall that speakers often constrain their body positions toward their supervisors, in addition to greeting others with a bow in daily life contexts, to mark more politeness (Brown and Winter 2019). Thus, similarly, the feature of bending the upper body in KSL may display the gesture of suppressing and minimizing signers' space to show their lower status, as well as increasing and emphasizing their submissiveness to a superior, resulting in marking more politeness (Brown and Winter 2019).

Furthermore, additional usages of the left hand were observed in both apology and compliment settings that required more politeness. For instance, when the signing DEPARTMENT LEADER, the signer used his left hand additionally in both apology and compliment settings. Moreover, in the intern apologizing to supervisor role-play, the signer used two hands for the lexical sign SORRY. Again, given that using two hands to give and receive objects indicates more politeness to the person above (e.g., elderly, and someone who has higher social status) in Korean culture (Brown 2022), the additional use of the left hand suggests that KSL and Korean share same notion of politeness.

Finally, and critically, we observed a larger signing space for lexical signs in both apology and compliment settings. Our results suggest that a smaller signing space may not always indicate more politeness in certain lexical signs. Recall that smaller signing space is often compared to whispering, but larger signing space is compared to shouting in speech (Crasborn 2001; Mapson 2014). Thus, smaller signing space is considered a polite signing feature in JSL and BSL (George 2011; Mapson 2014). Unlike the previous findings that described smaller signing space as a politeness marker, a larger signing space was employed when emphasizing the lexical signs for FINISH and INCREASE in the intern-supervisor hierarchy. The larger signing space was not observed in the equal hierarchy in either the apology or compliment settings. Note that even though we did not ask the signer to sign and mark prominence for the lexical signs FINISH and INCREASE in the supervisor-intern hierarchy, he naturally used a larger signing space, emphasizing the FINISH and INCREASE only when he role-played the intern signing to the

supervisor. Similar to hyper-articulation in polite speech (e.g., Kang and Guion 2008), the larger signing space may play a role in displaying more clarity for lexical signs in polite contexts.

In spoken Korean, in polite speech, recall that suprasegmental cues seemed to be less observed, while segmental cues were enhanced. For suprasegmental cues, either intonational changes or F0 fluctuation were less likely observed. The intensity of speech was weak and F0 was lowered in general (e.g., Idemaru et al. 2019). In contrast, segmental cues such as VOT of stops and formant values of vowels were more enhanced in polite speech (e.g., Kang and Guion 2008). Given that the signing space in KSL is comparable to the intensity (amplitude) of speech production in Korean (e.g., Yoon and Kim 2022), the use of a larger signing space for the lexical signs may represent an opposite pattern from Korean. As noted in previous literature, if a larger signing space represents 'shouting' in KSL, it is noteworthy that 'shouting' could be observed in polite settings in KSL, at least for certain lexical signs like FINISH and INCREASE. Unlike the acoustics cues in Korean, because quieter intensity and less F0 fluctuation is often observed in polite speech in Korean, using a larger signing space for certain lexical words may represent an interesting case of marking politeness in KSL.

There is another possible interpretation. Again, the larger signing space was used for the lexical signs FINISH and INCREASE. Thus, the larger signing space for FINISH and INCREASE might be similar to the enhanced segmental features in polite Korean speech. In other words, similar to the segmental cues for hyperarticulation in polite speech, the larger signing space might be employed to highlight and hyperarticulate the message: 'I have just FINISHED the business plan that you requested yesterday' and 'the profits this month INCREASED'. Just as Korean speakers use enhanced segmental cues and show hyper-articulation to speak more clearly in formal contexts, the larger signing space for certain lexical signs may display more 'clarity' in KSL. Thus, signing with a larger signing space may demonstrate more politeness for lexical signs in certain contexts. In our interpretation, for the nonmanual features, similar to the weakened suprasegmental cues in Korean, a small signing space might be applied exclusively for the non-lexical signs to mark more politeness by minimizing the signer's space with lowered upper body and narrowed shoulders. In contrast, comparable to the enhanced segmental cues in Korean, in manual features for certain lexical signs, a larger signing space may be utilized to sign more clearly to the person above. And the larger signing space might indicate more politeness and be considered more polite in KSL.

In addition, the KSL signer simply tried to emphasize the lexical signs FINISH and INCREASE by marking prominence in polite settings. However, it is unknown how much the emphasis and prominence markers play a role in conveying more politeness in both Korean and KSL. In Korean, when prominence is marked, both segmental and suprasegmental cues are enhanced (e.g., Cho 2022). For example, when Korean speakers produce a sentence in focused conditions, segmental cues (e.g., vowel formants) become clearer through maximizing effort. In addition, suprasegmental cues such as F0 and intensity become higher and louder in production (Choi, Kim and Cho 2020). Thus, there is also a possibility that phonetic cues such as louder intensity and more F0 fluctuation for certain lexical words may also be observed in polite speech. However, again, because the previous studies have not investigated how acoustic cues to mark prominence appeared in polite settings, it is unclear whether the enhanced F0 and intensity would be still observed in prominence (focused) conditions even in polite speech. More importantly, even if those cues are observed in polite speech, it is still unknown whether Korean listeners perceive and judge those acoustic cues marking prominence to be more polite in hierarchical settings (see Tatham and Morton 2006 for relationships between speech production and perception). Thus, it is unclear if those acoustic cues indicating prominence are considered to be more polite in Korean. Again, although we did not ask the KSL signer to emphasize certain lexical signs, the larger signing space was observed. In alignment with phonetic cues marking prominence, when he role-played the intern signing to his supervisor, he might have judged that clear signing for the lexical signs (and thus, larger signing space) could be more polite when communicating with the superior. However, it is unclear whether the larger signing space appears in other sign languages in polite contexts. Further study can investigate the relationship between prominence cues and politeness in Korean, KSL, and other sign languages.

5. Conclusion

In conclusion, similar to JSL, nonmanual features of bending the upper body, head nod, narrowed shoulders, and smaller signing space were observed in more polite settings in KSL. In JSL, head nod, bending the upper body, and smaller signing space were more frequently observed in polite settings. In BSL, the feature of bending the upper body was not observed, but smaller signing space was noted in polite settings. Thus, the use of small signing space was consistently observed in sign languages of both East Asian and Western culture. However, unlike the previous findings in JSL and BSL (e.g., George 2011; Mapson 2014), larger signing space was employed in KSL for lexical signings such as FINISH and INCREASE in polite settings. We conclude that it might be related to either prominence cues or hyperarticulated segmental cues in KSL.

Our study primarily attempted to investigate systematic relationships between nonmanual features, contexts, hierarchical orders, and politeness in KSL. We examined variations in KSL and shed light on sociolinguistic and politeness studies in KSL. However, our study included only one KSL signer and limited hierarchical orders (intern-supervisor vs. colleague-colleague). Thus, the sociolinguistic variations in KSL and features in politeness can be investigated with more KSL signers in different contexts in future studies.

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