

# A Persona-based Analysis of Politeness in Japanese and Spanish

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Nov. 15th, 2020

# Introduction

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## Japanese

- (1) *yamada-san-wa asita koogi-o nasar-u.*  
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'(i) Ms. Yamada will have a lecture tomorrow;  
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## Spanish

- (2) *Profesor, ¿tiene usted horas de oficina mañana?*  
professor have.3P.SG you.POL hours of office tomorrow  
'Professor, do you have office hours tomorrow?'

# Introduction

## Guiding questions

- | How much inter- and intra-speaker variation is there in the use of politeness forms in Japanese and Spanish?
- | What is the source(s) this variation?
- | What is the nature of these politeness features? Are they comparable in Japanese and Spanish?

## Goals of this talk

- | Present data that highlights variation in each language.
- | Develop a Bayesian pragmatic model for how politeness interacts with various contextual factors simultaneously.
- | Illustrate how Bayesian inferences (statistical learning) allow for the creation of specific personas of discourse participants.

# Roadmap

## Background

Japanese

Spanish

Interim Summary and Desiderata for Model

## A Bayesian Dynamic Pragmatics Account

Dynamic Pragmatics

Discussion

## Dynamic update as persona-learning

## Theoretical Implications and Future Work

Extending our Model

Conclusions

# Background

## Japanese: Subject Honorifics

- (3) a. *yamada-san-wa asita koogi-o sur-u.*  
Yamada-Ms.-TOP tomorrow lecture-ACC do-PRS  
'Ms. Yamada will have a lecture tomorrow.'
- b. *yamada-san-wa asita koogi-o nasar-u.*  
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Yamada-Ms.-TOP tomorrow lecture-ACC do.SH-PRS  
'(i) Ms. Yamada will have a lecture tomorrow;  
(ii) the speaker respects the referent of the subject  
(= Ms. Yamada).'

- | Truth conditionally, (a) and (b) are equivalent
- | (b) delivers secondary information that the speaker expresses their respect for the referent of the subject (= *Ms. Yamada*)

## Japanese: Addressee Honorifics

- (4) a. *yamada-san-wa asita undoo-o sur-u.*  
Yamada-Ms.-TOP tomorrow exercise-ACC do-PRS  
'Ms. Yamada will do exercise tomorrow'
- b. *yamada-san-wa asita undoo-o si-mas-u.*  
Yamada-Ms.-TOP tomorrow exercise-ACC do-AH-PRS  
'(i) Ms. Yamada will do exercise tomorrow;  
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Yamada-Ms.-TOP tomorrow exercise-ACC do-AH-PRS  
'(i) Ms. Yamada will do exercise tomorrow;  
(ii) the speaker respects the addressee.'

- | Again, at-issue meaning is equivalent in (a) and (b)
- | (b) delivers secondary information that the speaker expresses their respect for the addressee (= *Ms. Yamada*)

## Japanese: Initial Assessment

- | Traditional Japanese linguistics has tacitly assumed that SH and AH as instances of the same honorific property.
- | Their differences have not been the target of theoretical investigation (Kikuchi 1997 [1994]).
- | If politeness meanings are regulated by same principle, SH and AH should pattern together.

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- | Traditional Japanese linguistics has tacitly assumed that SH and AH as instances of the same honorific property.
- | Their differences have not been the target of theoretical investigation (Kikuchi 1997 [1994]).
- | If politeness meanings are regulated by same principle, SH and AH should pattern together.
- | This does not happen (AH without SH):

- (5) *asita happyoo-o si-mas-u-ka?*  
tomorrow presentation-ACC do-AH-PRS-Q  
'(i) Are you having a presentation tomorrow?;  
(ii) the speaker respects the addressee (< -mas).'

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- | Allow for variation within T forms

- | Prescriptive factors govern use

- | Discourse-based corpus studies show intra-speaker variation allows for personal identity creation dependent on context (Helinks, 2015; Fernández-Mallat, 2020)

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*que eres fresca eh?*

'**you're<sub>T</sub>** such a rascal, eh?'

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*sí*

‘yes’

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(6) A grandmother speaking to her infant granddaughter:

<i>cómo está mi niña?</i>	‘how are <b>you<sub>U</sub></b> honey?’
<i>cómo está?</i>	‘how are <b>you<sub>U</sub></b> ?’
⋮	
<i>para adónde vai cabrita</i>	‘where are <b>you<sub>V</sub></b> going young lady’
⋮	
<i>que eres fresca eh?</i>	‘ <b>you’re<sub>T</sub></b> such a rascal, eh?’
<i>sí</i>	‘yes’

- | All three forms employed: (1) *usted*, (2) *vos*, (3) *tú*
- | Variation shows navigation of authority and care, alongside other lexical discursive markers and intonation (Prieto et al., 2011)
- | Such variation is observed in institutional contexts, as well (Fernández-Mallat, 2020).

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## Similarities

- | General consensus on when to use politeness-oriented expressions
  - | SH and *usted* make reference to social hierarchy
- | Strategic violation of socially expected politeness is permitted
  - | SH, AH and Spanish personal pronouns allow speaker to perform certain identities, within limits

# Intermin Summary

## (7) **Teacher-Student Test**

Can a teacher/president (someone with a higher social status) use the honorific form to a student/employee (someone with a lower social status) without intentionally violating the expectation in the society?

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Desiderata for a pragmatic model of politeness in Japanese and Spanish:

1. **Prior condition:** prior to the new utterance, the context expects the speaker to use/not to use a politeness-oriented expression.
2. **Posterior condition:** by (not) being produced by the speaker, a politeness-oriented expression changes the context in a certain way.
3. **Relation with social/pragmatic factors:** more than one factors contribute to the choice of the politeness-oriented form. When a language has more than two honorific systems, each system may have different weights to these factors.

# A Bayesian Dynamic Pragmatics Account

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## Our departure point

- | **Multiple factors**: rather than a single, dominant pragmatic factor (Kikuchi 1997 [1994]; McCready 2014, 2019)

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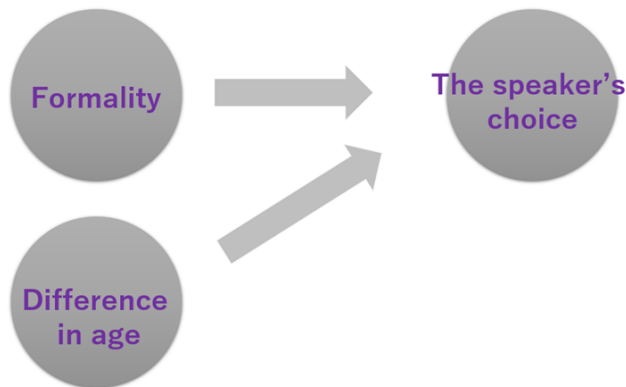
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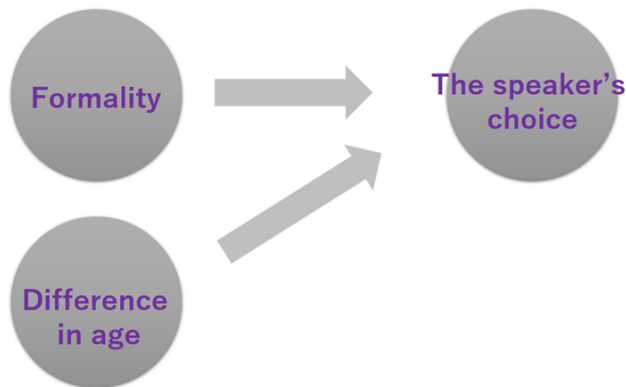
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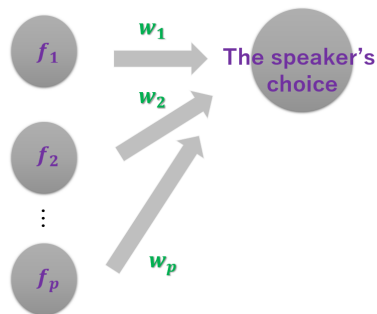


- | How can we model their pragmatic profiles?

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(cf., Brown and Levinson 1987; McCready 2014)

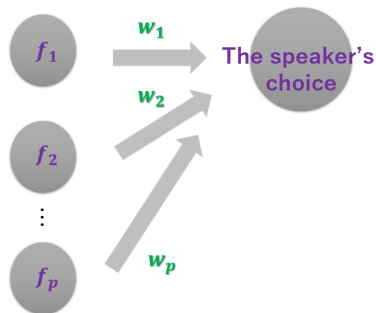


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(8)  $w_1 f_1 + w_2 f_2 + \dots + w_p f_p$



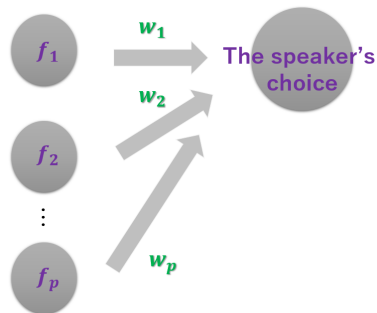
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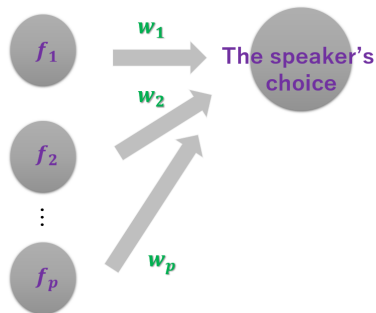
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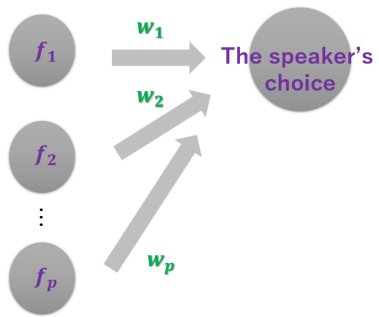
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So



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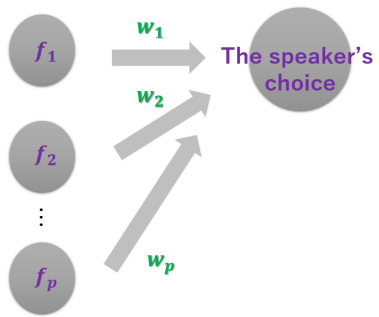
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For Japanese, we use  $\mathbf{w}^a$  for AHs and  $\mathbf{w}^s$  for SHs.

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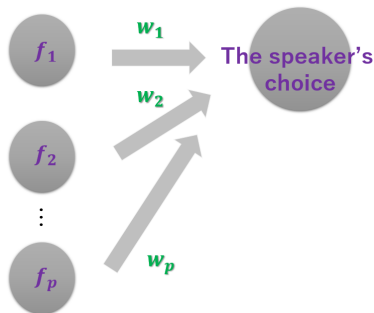
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$$= \mathbf{w}^T \mathbf{f}$$

So



For Japanese, we use  $\mathbf{w}^a$  for AHs and  $\mathbf{w}^s$  for SHs.  
 For Spanish, we use  $\mathbf{w}$ .

## 3.1 Dynamic pragmatics

### Structured Discourse Context

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 $c = \langle cg; qs; tdl \rangle$

(Version 1 out of 3)

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b.  $p =$

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$\infty$	$\langle$	<i>alice</i>	;	$w_{alice}^a$	;	$w_{alice}^s$	$\rangle$	;	$\infty$
$\infty$		$\langle$	<i>bob</i>	;	$w_{bob}^a$	;	$w_{bob}^s$	$\rangle$	$\infty$
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				$\vdots$					
$\infty$	$\langle$	<i>zelda</i>	$;$	$w^a_{zelda}$	$;$	$w^s_{zelda}$	$\rangle$	$;$	$\infty$

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Model 1: Single value approach (cf., Potts and Kawahara 2004)

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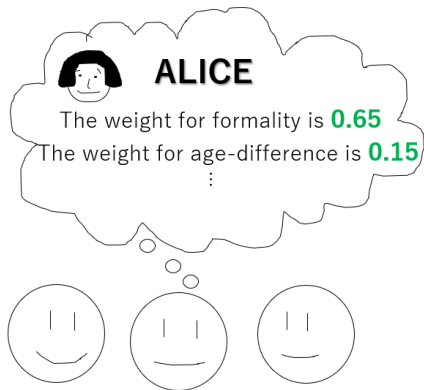
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$$\langle \text{alice}; \begin{matrix} \text{O} & & 1 \\ & 0:65 & \\ \text{B} & 0:15 & \text{C} \\ \text{A} & & ; \mathbf{w}_{\text{alice}}^s \end{matrix} \rangle$$

⋮

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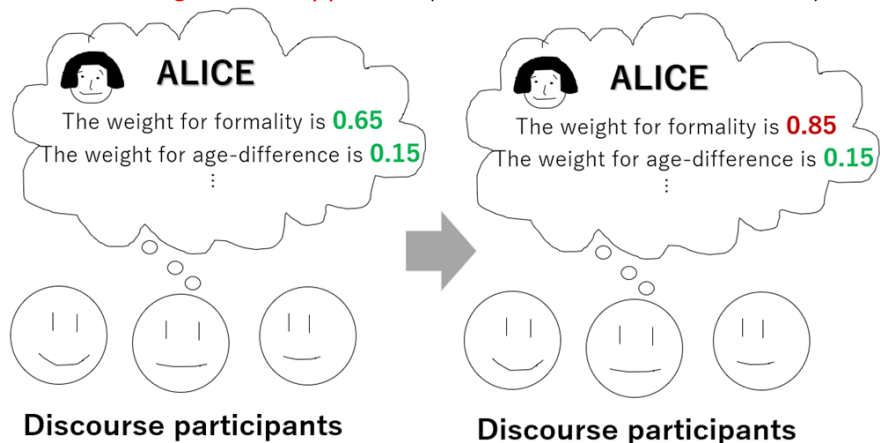


Discourse participants

$\circ$  1  
0.65  
< *alice*; @ 0.15 C A ;  $w^s_{alice}$  >  
⋮

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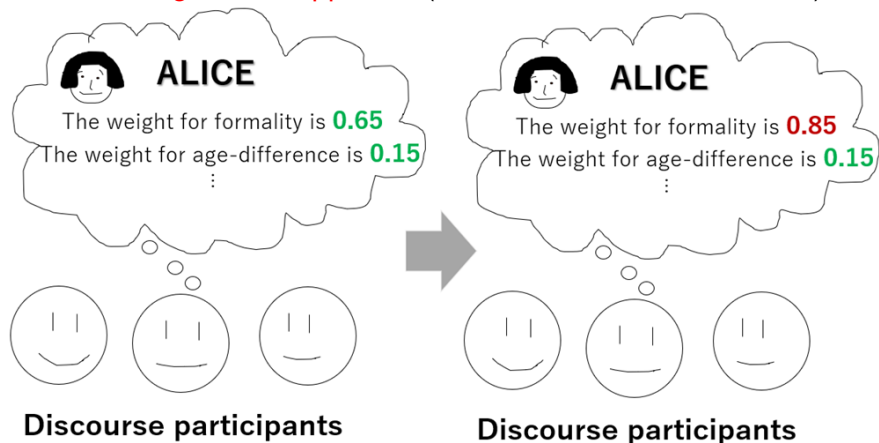
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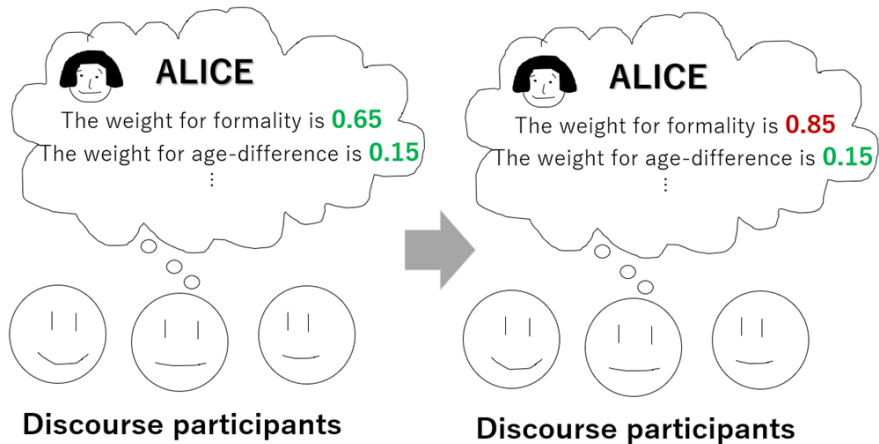


$$\begin{matrix} \circ & 1 \\ & \mathbf{0:65} \\ & \mathbf{0:15} \\ & \vdots \end{matrix} \begin{matrix} \text{A} \\ \text{B} \\ \text{C} \\ \text{A} \end{matrix} ; \mathbf{w^S}_{\text{alice}} >$$

$$\begin{matrix} \circ & 1 \\ & \mathbf{0:85} \\ & \mathbf{0:15} \\ & \vdots \end{matrix} \begin{matrix} \text{A} \\ \text{B} \\ \text{C} \\ \text{A} \end{matrix} ; \mathbf{w^S}_{\text{alice}} >$$

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**Problem:** Too confident!

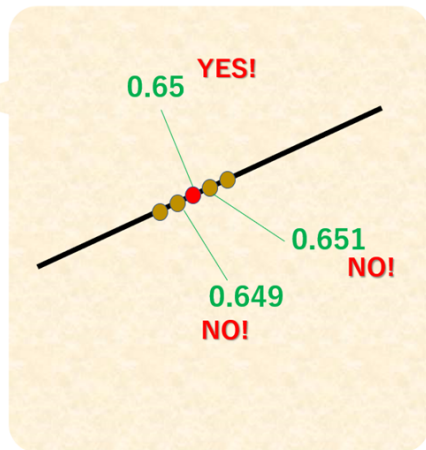


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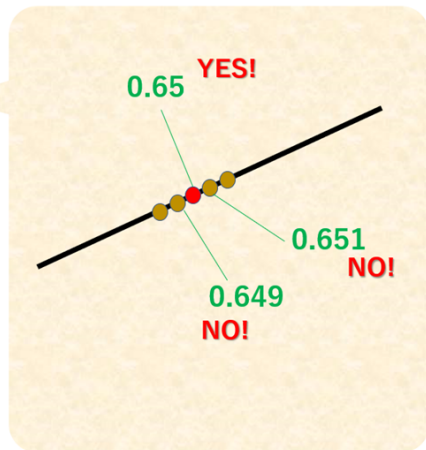
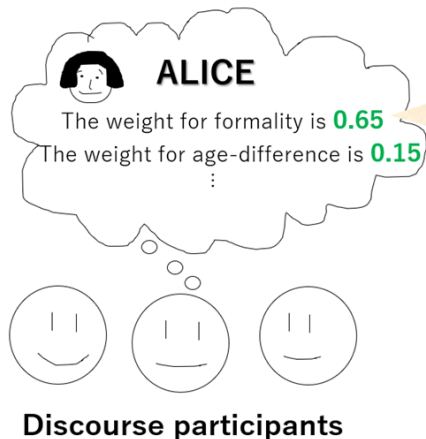


**Discourse participants**



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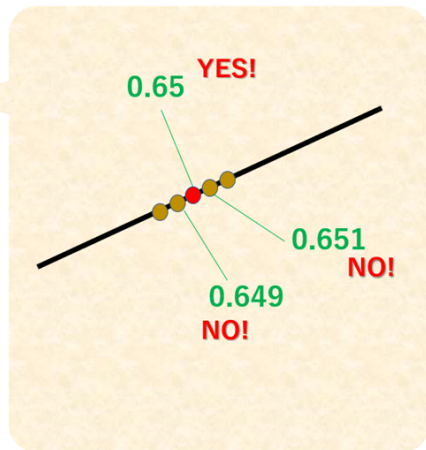
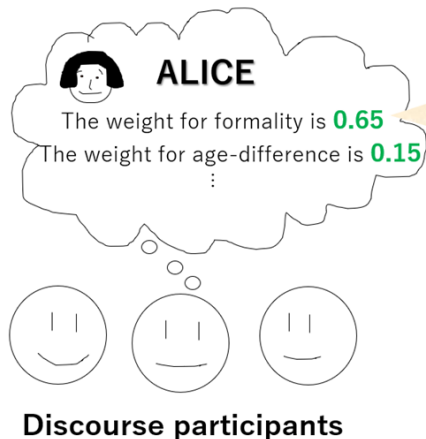
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How can we be so sure about one particular value?

## 3.1 Dynamic pragmatics

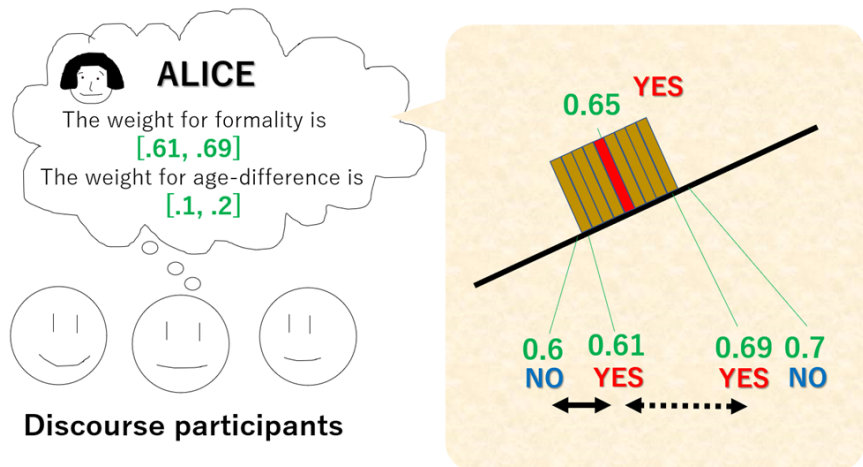
**Problem:** Too confident!



How can we be so sure about one particular value? We wish to incorporate a certain kind of **uncertainty (= probability)**.

## 3.1 Dynamic pragmatics

**Model 2: Interval approach** (cf., Potts 2007; McCreedy 2014, 2019)

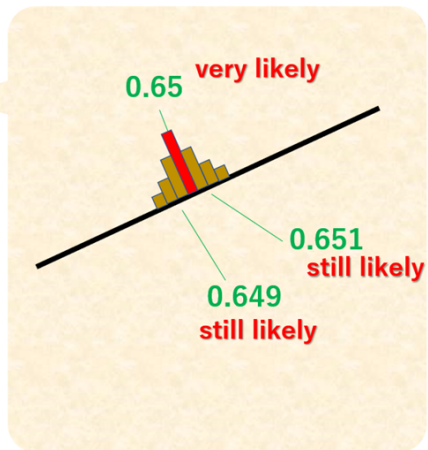
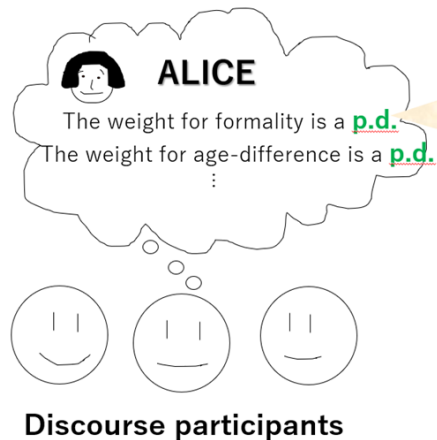


### 3.1 Dynamic pragmatics

Our model: A Bayesian Dynamic Pragmatics (Yamada 2019)

Sufficiently uncertain:

Uncertainty states are represented as probability distributions.



## 3.1 Dynamic pragmatics

### A discrete model

(11) Structured Discourse Context (Version 2 out of 3)

a.  $c = \langle cg; qs; tdl; p \rangle$  1 9

$\langle \text{alice}; @ \text{B} \text{A}; w_{\text{alice}}^s \rangle;$

b.  $p =$   $\vdots$

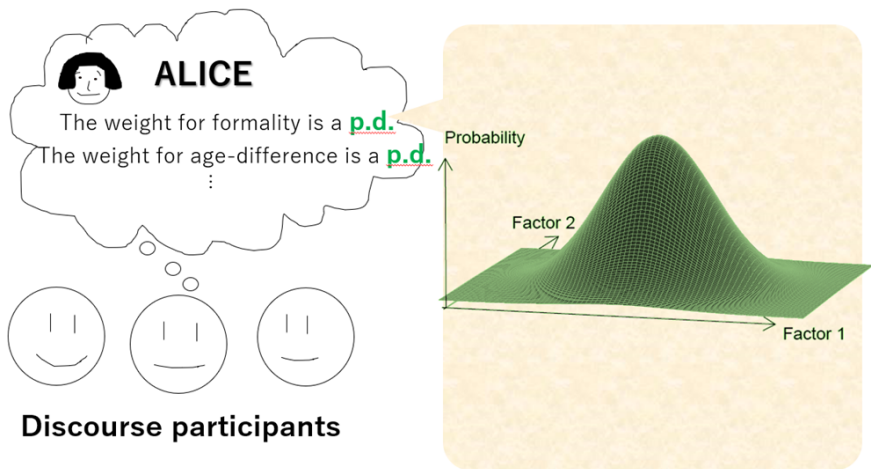
$\vdots$   $\vdots$





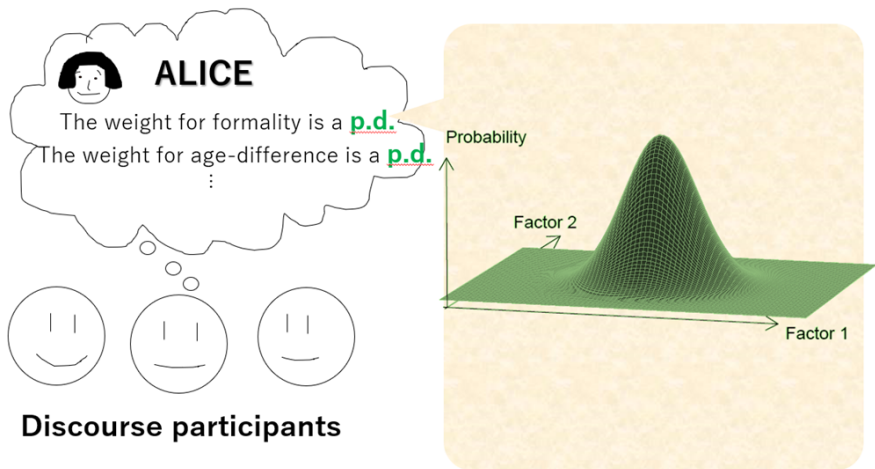
## 3.1 Dynamic pragmatics

**Proposal:** Context change = a change in distribution



## 3.1 Dynamic pragmatics

**Proposal:** Context change = a change in distribution



## 3.2 Discussion

### Desiderata

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Multiple factors	Prior context	Posterior context
?		

---

## 3.2 Discussion

### Desiderata

Multiple factors	Prior context	Posterior context
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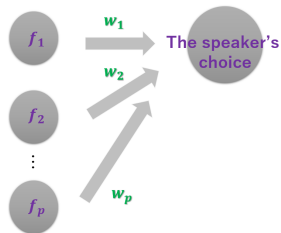
$$(13) \quad \mathbf{w}^T \mathbf{f} = w_1 f_1 + w_2 f_2 + \dots + w_p f_p$$

## 3.2 Discussion

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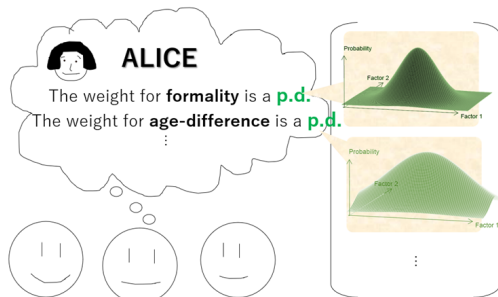
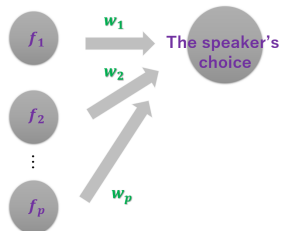
## 3.2 Discussion

### Desiderata

Multiple factors    Prior context    Posterior context

?

$$(13) \quad \mathbf{w}^T \mathbf{f} = w_1 f_1 + w_2 f_2 + \dots + w_p f_p$$



As for **formality**,  
we are relatively sure.

As for **age-diff.**,  
we are vaguely sure.

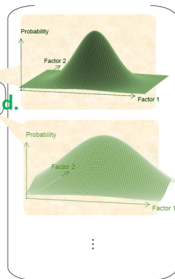
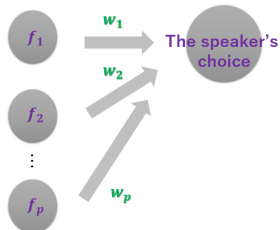
Discourse participants

## 3.2 Discussion

### Desiderata

Multiple factors    Prior context    Posterior context

$$(13) \quad \mathbf{w}^T \mathbf{f} = w_1 f_1 + w_2 f_2 + \dots + w_p f_p$$



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Discourse participants

## 3.2 Discussion

### Desiderata

Multiple factors	Prior context	Posterior context
$\rho$	?	

$$(14) \quad \mathbf{w}^T \mathbf{f} = w_1 f_1 + w_2 f_2 + \dots + w_p f_p$$

## 3.2 Discussion

### Desiderata

Multiple factors	Prior context	Posterior context
$\rho$	?	

$$(14) \quad \mathbf{w}^T \mathbf{f} = w_1 f_1 + w_2 f_2 + \dots + w_p f_p$$

**Fact:** The audience can estimate how Alice behaves even before she has started talking to a new addressee (prior to the their utterance).

## 3.2 Discussion

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**Our model:** As long as we have already estimated the weights of the relevant factors, we can make a prediction!

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$$(15) \quad \mathbf{w}^T \mathbf{f} = 0.65 \quad 1 + 0.15 \quad 0 + \dots + 0.22 \quad 2$$

## 3.2 Discussion

### Desiderata

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## 3.2 Discussion

### Desiderata

Multiple factors	Prior context	Posterior context
<i>p</i>	<i>p</i>	?

**Fact:** Speakers use politeness-oriented expressions strategically.

**Our model:**

## 3.2 Discussion

### Desiderata

Multiple factors	Prior context	Posterior context
$p$	$p$	?

**Fact:** Speakers use politeness-oriented expressions strategically.

**Our model:** The speaker makes their audience estimate the weight parameters as intended.

## 3.2 Discussion

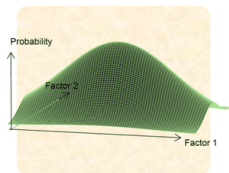
### Desiderata

Multiple factors	Prior context	Posterior context
$\rho$	$\rho$	?

## 3.2 Discussion

### Desiderata

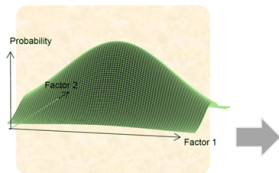
Multiple factors	Prior context	Posterior context
$P$	$P$	?



## 3.2 Discussion

### Desiderata

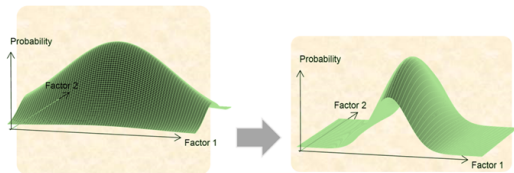
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## 3.2 Discussion

### Desiderata

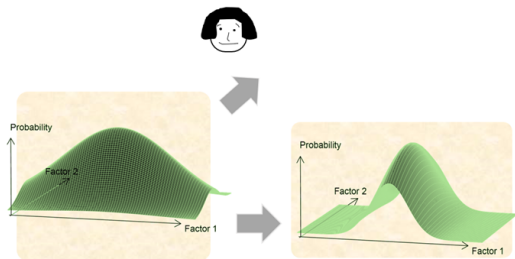
Multiple factors	Prior context	Posterior context
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## 3.2 Discussion

### Desiderata

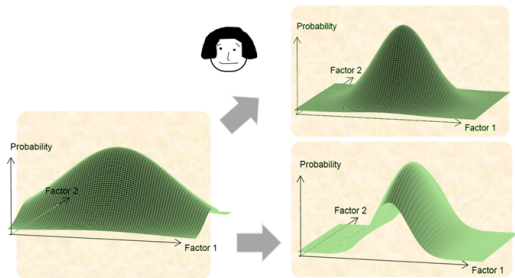
Multiple factors	Prior context	Posterior context
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## 3.2 Discussion

### Desiderata

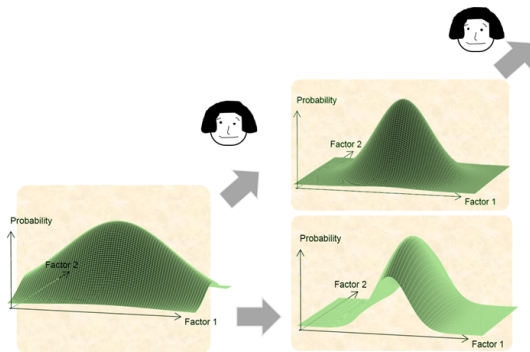
Multiple factors	Prior context	Posterior context
$P$	$P$	?



## 3.2 Discussion

### Desiderata

Multiple factors	Prior context	Posterior context
$P$	$P$	?



## 3.2 Discussion

### Desiderata

Multiple factors	Prior context	Posterior context
$\rho$	$\rho$	?

## 3.2 Discussion

### Desiderata

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Multiple factors	Prior context	Posterior context
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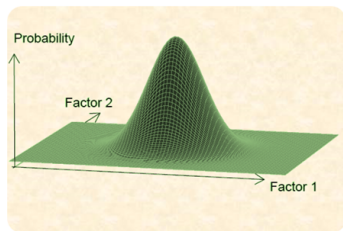
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*p* *p* *p*

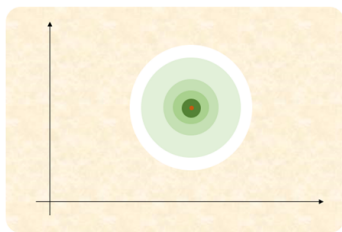
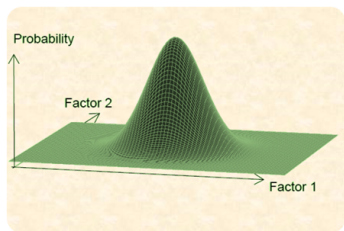
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Dynamic update as persona-learning

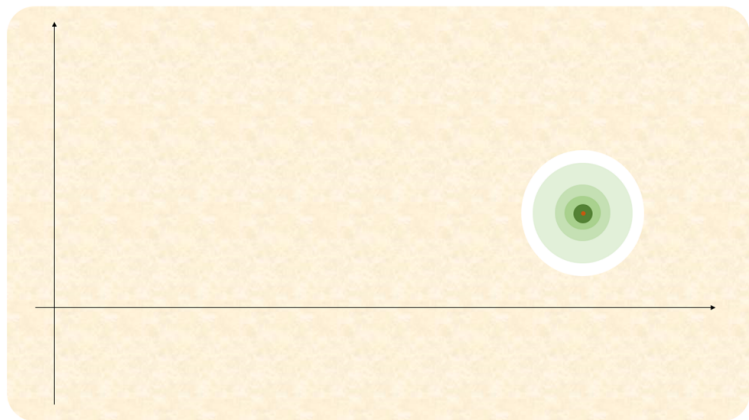
# Dynamic update as persona-learning



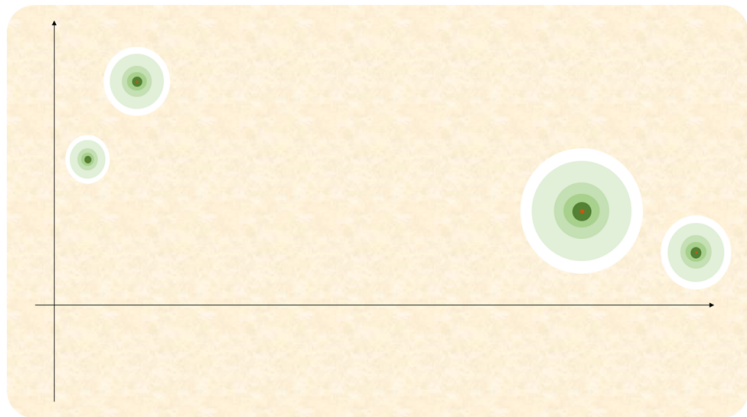
# Dynamic update as persona-learning



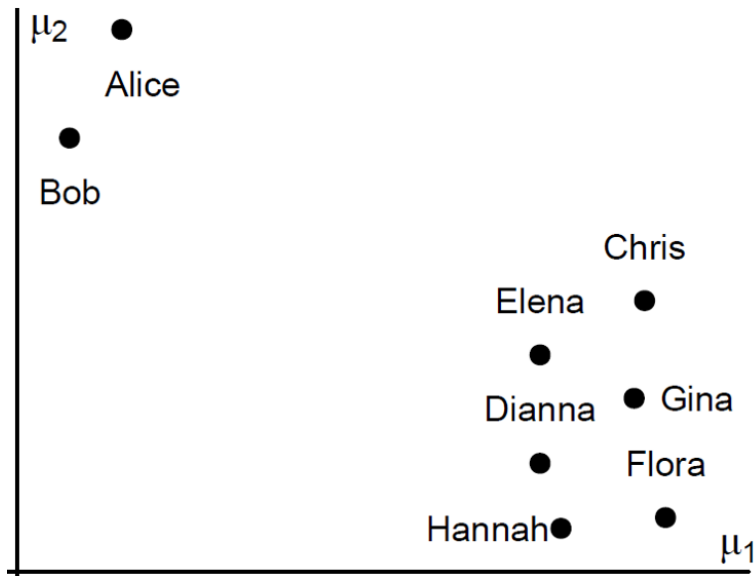
## Dynamic update as persona-learning



## Dynamic update as persona-learning



## Dynamic update as persona-learning



## Theoretical Implications and Future Work

# Extending our Model

## German (*du/Sie*)

- | A man in his mid-thirties went to the barbershop to have his hair cut.
- | His barber was male and appeared to be the same age.
- | The two men spent the duration of the haircut speaking in the third-person (equivalent to English 'one') because neither of them was confident to commit to a formal (*Sie* 'you') or familiar (*du* 'you') address form and corresponding relationship.
- | The speaker relayed this story still with ambivalence about how he should have acted.

# Conclusions

- | We present a model of politeness-oriented features in Japanese and Spanish based on statistical learning.
- | At observational level, politeness expressions are strategically used by speakers to create context-specific personas.
- | Our model articulates the link between existing analyses of persona and dynamic pragmatic theories for politeness.
- | Future work will formalize this how different languages encode politeness features in the syntax and semantics.

¡Gracias!  
Arigatou!  
Thank you!

Questions?

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