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The affective meanings of bowing in a web corpus of Japanese

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ABSTRACT

This paper explores, through the lens of the Theory of Affective Pragmatics (TAP), the metadiscourse around bowing in a web corpus of Japanese. Bowing is a highly routinised non-verbal behaviour that, I argue, has come to be associated with specific functions and emotions in the Japanese context. Specifically, the study examines 136 mentions of bowing. These instances were identified through lexical searches and discuss, evaluate or prescribe the act of bowing, assigning specific meanings to it. The focus is on (a) (the representation of) the pragmatic functions of bowing; and (b) the emotions it is taken to express and/or elicit. The findings suggest that bowing is an emotional expression that can be used to engage in multiple and often overlapping speech acts (apologising, requesting, thanking, acknowledging/greeting) and based on which specific emotions (e.g. regret, shame, gratitude) can be inferred.

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1. Introduction

In this study, I combine the Theory of Affective Pragmatics (TAP (Scarantino, 2017a,b, 2019a,b)) with other frameworks within pragmatics to explore bowing, a non-verbal behaviour that expresses and elicits emotions and, in certain interactional contexts, is given and expected by default. I take bowing to be an emotional expression, not because expressing emotion is the only thing it does, but because its other social and interactional functions in context, though extending beyond the expression of emotion alone, nonetheless depend on it. Methodologically, I use corpus-assisted methods to identify mentions or representations (that is, *metadiscourses*) of bowing episodes in a specialised web corpus of Japanese.

The article is organised as follows. Section 2 introduces the main theoretical frameworks and concepts I use to analyse and interpret bowing episodes: the Theory of Affective Pragmatics (TAP), and the notions of conventionalisation and metadiscourse. Section 3 provides a brief overview of previous studies on bowing and presents the procedures I followed for the identification of bowing-related lexical items, which are then used as entry points into the corpus. Sections 4 and 5 illustrate the research questions, data and methods. Section 6 presents the results. Section 7 addresses some of the limitations of the current study and poses some open questions. Section 8 concludes the paper by summarising the main points.

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2. Theoretical approaches to bowing

2.1. Theory of Affective Pragmatics (TAP)

Scarantino's TAP accounts for the frequently neglected non-verbal, embodied and emotional dimension of communication and provides a taxonomy for the analysis of communicative moves made available by the expression of emotion. According to the theory, 'much of what we can do with language we can also do with non-verbal emotional expressions' (Scarantino, 2017b, p. 165). *Emotional expressions* include facial expressions, bodily movements, gestures, postural changes, and other non-verbal bodily displays that can be taken to mean roughly what a speech act means (in other words, that can be taken to be *speech act analogs*) primarily in virtue of the fact that they convey emotions and their meaning(s) are 'causally or constitutively' (Scarantino, 2017b, p. 172) associated with such emotions. For example, a sad face may mean something along the lines of 'Help me!' (in speech act terms, a Directive, of which more below), and may get the recipient(s) to do something, and a happy face may convey a desire to affiliate ('I like you!', in speech act terms, a Behabitive or Expressive; see below); both are meant to make the recipient(s) act in ways that benefit the producer (Fridlund, 2015, p. 5; Scarantino, 2017b, pp. 170, 178).

More recent versions of TAP (Scarantino, 2019b) acknowledge that emotional expressions can be *overt*, as when one says 'I am angry', or *natural*, as when one bares one's teeth. Sometimes a natural emotional expression alone is enough to realise a speech act analog. More often, however, overt and natural emotional expressions are intertwined and co-occur to generate meaning. For the scope of the current research, I find it helpful to clearly distinguish between verbal utterances and non-verbal emotional expressions, hence in what follows I use the term 'emotional expressions' to refer exclusively to non-verbal resources that acquire pragmatic meaning in virtue of the fact that they convey emotion.

But what exactly can we do with emotional expressions? Scarantino departs from the labels used in traditional Speech Act Theory (SAT), as theorised by Searle (1979), to categorise four things that we can accomplish using emotional expressions. Table 1 presents Scarantino's taxonomy, alongside Searle's original taxonomy, with verbal and non-verbal examples adapted from Scarantino (2017b).¹ No example of a Proclamative emotional expression (the equivalent of Declarations in SAT) is provided here because, according to Scarantino (2017b), this specific function may require the use of language to be communicated, given the lack of non-linguistic institutions that can generate non-linguistic equivalents of Proclamatives. The subscripts L and EE stand for Language and Emotional Expressions respectively, that is, the medium used to carry out the said communicative move.

Table 1
Non-linguistic analogs of speech acts.

Function	SAT	Example	TAP	Example
Expressing what's inside	Expressives_L	'I'm sorry'	Expressives_{EE}	Baring one's teeth (= 'I am angry')
Directing other people's behaviour	Directives_L	'Pass me the salt!'	Imperatives_{EE}	Sad face (= 'Help me!')
Representing what the world is like	Assertives_L	'The cat is on the mat'	Declaratives_{EE}	Sad face (= 'I have suffered a damage')
Committing to future courses of action	Commissives_L	'I will come to your party'	Commissives_{EE}	Angry face (= 'I am going to attack you')
Changing the world	Declarations _L	'You are now husband and wife'	(Proclamatives _{EE})	//

Note that in Table 1, first column from the right, the emotional expressions 'Sad face' and 'Angry face' (the latter possibly overlapping with 'Baring one's teeth') occur more than once. This is because the same emotional expression can be used to engage in more than one communicative action at the same time. For example, a sad face engages in an Expressive_{EE} ('I am sad'), but it also engages in an Imperative_{EE} ('Help me!') and a Declarative_{EE} ('I have suffered a damage'). Emotional expressions are in fact multifunctional: one single emotional expression indexes multiple speech act analogs. This multifunctionality reflects the complex relationship between emotional expressions and emotion types: one emotional expression can make manifest multiple emotions, and one emotion type can be associated with multiple communicative moves. For a discussion of the possible limitations of this taxonomy, see Fridlund (2017) and Section 7.

An important way in which my work partly deviates from TAP as originally proposed is that, in Scarantino's work, every emotional expression engages in all four communicative moves at once. Departing from this view, I argue that all emotional expressions convey emotion, hence *directly* or *primarily* engage in an Expressive_{EE}. The expression of emotion can then serve additional functions: it can be functional to make other people act in a certain way (Expressive/Imperative_{EE}), represent some aspects of the world (Expressive/Declarative_{EE}) or commit the producer to future actions (Expressive/Commissive_{EE}).

¹ In Austin's original taxonomy of speech acts, the class of Behabitives (what Searle calls Expressives) includes 'the notion of reaction to other people's behaviour and fortunes and of attitudes and expressions of attitudes to someone else's past conduct or imminent conduct' (Austin, 1962, p. 159). The explicit reference to the expressions of attitudes as reactions to other people's behaviour is very much in line with the notion of emotional expressions.

Other combinations are possible, and it is not difficult to envisage situations where more than two communicative moves are at play (we will see in Example (4) how one can convey regret (Expressive_{EE}) while asking someone to do something (Imperative_{EE}) and committing themselves not to repeat the said action (Commissive_{EE}). These hybrid labels (I will focus on Expressive/Imperative_{EE}, Expressive/Declarative_{EE} and Expressive/Commissive_{EE}, but this list is by no means exhaustive) are not envisaged in Scarantino's work and intend to illustrate that not all communicative functions are always equally relevant. For instance, I may show anger towards my sister who keeps stealing my clothes because I want her to stop (an Expressive/Imperative_{EE}), or I may show anger towards a car driver who is yelling at me because I want/am going to punch her (an Expressive/Commissive_{EE}). Hence, even if we accept that emotional expressions make four communicative moves simultaneously, in real-world interactions it is often the case that only some of these moves are 'optimally relevant' (Sperber and Wilson, 2001; see also Wharton and De Saussure, 2023).

2.2. Conventionalisation

An important dimension of bowing as an emotional expression relates to the notion of conventionalisation. Conventionalisation as intended here is 'a relationship holding between utterances [and bodily movements] and context, which is a correlate of the (statistical) frequency with which an expression is used in one's experience of a particular context' (Terkourafi, 2003, p. 151). Bowing is conventionalised because it came to be associated through recurrent exposure with certain social and interactional meanings in certain contexts (for example, it is associated with greetings in service encounters (Arita, 2022) or with the acknowledgement of debt in co-present conversations (Ohashi, 2010)). Japanese speakers have learnt that bowing is systematically embedded into certain conversational rituals, which means that they also have expectations on when and how other people should bow, and their approval or disapproval partly depends on the extent to which their expectations are met (Verschuere, 1999, pp. 181, 182). Terkourafi's definition of conventionalisation accounts for the influences that culture and society have on verbal as well as non-verbal emotional displays and nicely fits the bottom-up approach employed here, where frequency of occurrence is a key factor in the association of form and meaning.

The current study adds to the literature on conventionalisation by focusing on the role of emotion in conventionalised behaviour: through regularity of co-occurrence, bowing came to be associated also with certain emotion types, which are now a core part of its meaning. If we take emotions out of the semantics of bowing, we cannot account for why, when and how people bow to one another. Hence, bowing benefits the producer both because it is an emotional expression (emotional expressions make evolutionary sense because, generally, they are in the interest of the producer) and because it is conventionalised – when the display of gratitude, regret, devotion, etc. through bowing meets the recipient's expectations, the producer succeeds in projecting a deferential persona who is able to display emotions and perform politeness *as expected by the Japanese society*.

Importantly, the producer of an emotional expression can display certain emotions even in the absence of relevant internal causes or, vice versa, can suppress bodily changes that would reveal their internal states, if that serves their interactional goals. From the recipient's perspective, recognising that the producer has taken the trouble to show an emotional display that is appropriate to the context is sometimes enough for the act to be felicitous, even if the recipient recognises that such emotional display does not match the inner state of the producer. This is in striking contrast with both the sincerity condition in traditional Speech Act Theory (Austin, 1962, p. 39) and Ekman's (1992) idea that there is one-to-one mapping between emotional expressions and their internal causes. If we accept that (voluntary) emotional expressions like bowing can be effective quite independently of whether the producer is actually (taken to be) undergoing a certain emotion, we also partly solve the problem of having to make assumptions about inner realities which are unverifiable anyway (see Hansen and Terkourafi, 2023).

Specific attention to the voluntary, hence potentially strategic (which does not necessarily imply full selfconsciousness) nature of emotion displays is of course not new. Ekman et al. for example investigate the ability to produce facial movements intentionally to feign, mock or mask emotions (Ekman et al., 1980). The former function is elsewhere labelled as *surface acting*, that is, the act by which 'a person feigns emotions that are considered appropriate or desirable in a given context' (Fuoli and Bednarek, 2022, p. 258).² Surface acting, however, seems to imply a negative connotation that does not necessarily apply to emotional expressions like bowing, which may not be 'veridical' or 'sincere' (i.e. may not match the actual inner state of the producer) but are key in maintaining smooth interpersonal relationships and functional to the elicitation of a (positive) emotional response in other people.

By combining TAP with the notion of conventionalisation we get, in my view, a more robust account of how certain emotional expressions, and in particular emotional expressions over which we have some control, came to be associated through recurrent exposure with specific emotional displays and (speech act) functions in context, and how this association is exploited for social purposes.

² Surface acting is contrasted with *deep acting*, where 'the person seeks to alter their inner feelings in order to make them consistent with their public emotional display' (Fuoli and Bednarek, 2022, p. 258).

2.3. Metadiscourse

Metadiscourse is another key notion that informs my methodological approach and will help me locate and investigate bowing episodes in actual texts. The prefix *meta*-comes from the Greek *meta* 'above' or 'beyond' and indexes specific attention to a higher level of meaning people draw from when communicating – and when communicating about communication. In the present work, it is used as a blanket term that includes many different forms of reflexive awareness (Diegoli, 2025, p. 102). It overlaps to some degree with *first-order usages* (Watts, 2003), *metacommunication* (Ruesch and Bateson, 1951), *metapragmatic discourse* (Silverstein, 1993), among other terms, but is favoured over these because previous works on metadiscourse tend to focus on the *functional* dimension of communication, on what people do when they talk or write about communication itself (see e.g. Culpeper (2011); Diegoli (2025); Kádár and Ran (2019)). Prototypical examples of metadiscourse as intended here include labelling, evaluating and/or commenting on someone's action (e.g. *is that a threat?*; *I didn't mean to be rude*; それは謝罪とは言わない *sore wa shazai to wa iwanai* 'that is not an apology'), which is always a way of positioning the speaker/writer in relation to the utterance, its propositional content, and the other people involved in the interaction. Importantly, however, I take metadiscourse to include linguistic expressions referring to facial, postural, vocal and all other kinds of bodily changes that go well beyond the purely linguistic dimension of communication. While metadiscourse makes use of 'words' then, its object can be any kind of communicative action, including emotional displays. To go back to one of the examples of metadiscourse provided above, *I didn't mean to be rude* may refer to a previous utterance that has been perceived as rude, but it may also refer to a bodily movement, like slamming the door, that is equally open to impolite inferences.

I will use metadiscursive elements as search terms in a corpus (see Section 5). This specific way of locating and investigating representations of non-verbal behaviour through corpus searches is relatively innovative, but by no means new. Of particular note is a recent study by Jucker (2023), who investigates descriptions of apologetic gestures and facial expressions in the Corpus of Contemporary American English (COCA), showing that narrators assign specific illocutionary functions to non-verbal behaviour. By searching for collocational patterns that combine apology-related metapragmatic (or, to use the term preferred here, metadiscursive) expressions (e.g. *apology*, *apologetic*) with communicative gestures (e.g. *shrug*, *smile*), Jucker identifies a limited set of non-verbal behaviours that are regularly described as apologetic; in his fictional data, these apologetic gestures are more often than not 'silent', meaning that it is left entirely to the non-verbal behaviour to characterise an act as apologetic. They are emotional expressions that perform speech act analogs.

The metadiscursive approach to speech acts comes with its own strengths and weaknesses. Metadiscourse may reflect stereotypes and beliefs, or it may be used strategically for pursuing one's goals (e.g. dis/affiliation, deception, projection of a positive self-image), which means that it does not necessarily reflect reality. More importantly, it does not provide access to speech acts as they took place in real-world, multimodal interactions, but only to their description and representation. With this caveat in mind, I take the metadiscourse around bowing to be a valid source of information on the structured understandings around how people (should) behave and what they (should) feel. Methodologically, metadiscourse also provides an entry point into the data that nicely fits the corpus approach adopted here, which requires me to pre-identify potential lexical searches that can then be used to locate relevant chunks of text in corpora (see Section 5). In turn, a corpus approach to (the representation of) bodily movements can account for the recursive and cumulative meanings of emotional expressions in a way that small-scale qualitative approaches cannot.

In the following section I explore in more detail how all this applies to bowing.

3. Bowing

Bowing is the 'act of bending the head or upper body downwards' (Ohashi, 2010, p. 189). Four features of emotional expressions are particularly relevant to the study of bowing:

1. Emotional expressions are multifunctional (a sad face may mean both 'I'm sad' and 'Help me!');
2. Emotional expressions do not need to be 'sincere' to convey information;
3. Emotional expressions are at the service of the producer's social motives;
4. Emotional expressions can be positioned along a continuum, from involuntary (e.g. widening of the eyes in fear) to voluntary (e.g. a 'poker' face) emotional expressions.

I will argue that instances of bowing, just like all other emotional expressions, are often (albeit not always) *multifunctional* emotional expressions (point 1) that, by making manifest the internal state of the producer, affects the recipient(s)' behaviour and represents what the world is like. Specifically, we will see that manifesting one's emotion(s) (or the emotions that one is expected to feel in that situation – point 2) through bowing is at its core a form of social payment that entails evaluating something or someone as good or bad, in the attempt to make the recipient(s) act, think or feel in a way that

benefits the producer. Bowing in fact always happens in front of (real or imagined, physically or virtually present) others because it is an intrinsically *social* behaviour that serves the producer's goals (Scarantino, 2017a, p. 173) (point 3) by expressing emotions that are considered appropriate to the context and hence are positively evaluated. Finally, the social dimension of bowing is closely linked to the fact that it is a *voluntary* display of emotions (point 4). As already mentioned, bowing in fact differs from reflexively produced emotional expressions (e.g. widening of the eyes in fear): it is a behaviour over which we have some control (it is not fully reflexive or automatic); and it has been acquired. As such, it is linguaculture-specific and can be used strategically at the service of im/politeness. For example, and going back to point (1), it may be used to engage in multiple and often overlapping communicative acts (e.g. apologising, requesting, thanking) by conveying emotions (e.g. regret, appreciation, gratitude) that are appropriate to the pragmatic function in question.

Importantly, not all bowing episodes are the same. Up until now, I have used the term bowing as if were a single behaviour. In reality, and as we will see, the metadiscursive vocabulary indexing the act of bowing in Japanese is very rich and may be taken to refer to different emotional expressions.

3.1. Previous studies on bowing

Bowing as a conventionalised body movement with social meaning has been attested in the Japanese context since the third century. It is assumed to have become associated with politeness/pro-social behaviour because exposing the back of the head and lowering the gaze makes the producer vulnerable, and hence shows that no hostility or harm is intended (Takeda et al., 2017, p. 67).³

It is now actively taught in educational and professional contexts (Arita, 2022, p. 38) and is commonly used in everyday situations to greet (the Japanese term used in this case is *aisatsu*, of which more in Section 6.1), apologise or thank someone (Shibata et al., 2014), among other things. One can bow in a standing position (*ritsurei* 立礼) or, less commonly because highly ritualised and/or more self-face threatening, in a sitting position (*zareii* 座礼). Bows (especially the standing types) are frequently categorised depending on their bending angle, that is, the degree to which the head and upper body are bent forward; deeper bows tend to be associated with apologising and thanking, while less deep bows are often interpreted as greetings (Shibata et al., 2014). In general, bowing tends to elicit positive emotions in the recipient(s), and experimental studies have associated bowing with perceptions of attractiveness (Osugi and Kawahara, 2024).

In the Japanese linguaculture, bowing is systematically integrated into conversational organisations of episodes where there is a temporary debit-credit imbalance (e.g. thanking: you have done something for me and I owe you one (Ohashi, 2010)) and, more generally, into any conversational ritual (Goffman, 1967) where the basic principles of *indebtedness* (Coulmas, 1981), *reciprocity* (Culpeper and Tantucci, 2021) and *joint social action* (Holtgraves, 2002) are at play – and in fact bowing is often quickly reciprocated by the recipient (Ide, 1998, p. 518; Ohashi, 2010, pp. 199, 200).

Indebtedness in particular is an emotionally loaded notion that, as we will see, covers many of the emotion types that participants spontaneously bring up in the metadiscourse around bowing, or that we can infer from the co-text of bowing episodes. It has been discussed in the literature mainly in relation to the speech acts of thanks and apologies in Japanese, which in fact often involve bowing episodes. Indebtedness is related to thanks and apologies because both speech acts imply that one participant in the interaction is indebted to the other (Coulmas, 1981, p. 79), either because the producer has done something bad to the recipient (in apologies), or because the recipient has done something good for the producer (in thanks) (Diegoli, 2025, p. 93). However, some degrees of indebtedness are involved also in many other situations where the producer 'banks a credit in case there is a problem, so as to preventively avoid inferences of impoliteness on the receiver's part' (Diegoli, 2025, p. 176). Acknowledging one's potential indebtedness to others, both verbally (for example by saying 'I owe you one' in English) and non-verbally (for example by bowing, as shown by Ohashi (2010, pp. 199–200)), becomes a basic means of sustaining a positively valued 'balance of payments' (Culpeper and Tantucci, 2021, p. 150), and as such plays a role in systems of courtesy in general, which in fact 'can also be viewed as forms of insurance against undesired fatefulness' (Goffman, 1981, p. 176). We will see in Section 6.1 how bowing episodes can be seen as habitual, standardised and symbolic 'payments' that (re-)balance obligations by acknowledging one's indebtedness towards others, or as forms of 'insurance' that prevent a state of disequilibrium. Either way, emotions are at play.

Far more could be said on bowing, which is a complex body movement that involves other actions (low gaze, specific hand positions, a bent posture of variable duration, etc.) that potentially offer additional information and affect people's perceptions and inferences. The aim of this brief overview was to shed light on at least some features of bowing in the Japanese linguaculture, while showing that, if there is no shortage of psychological, experimental and social studies on bowing, linguistic research on its communicative functions in real-life contexts is sparse. The present research contributes to the study of bowing by framing it as an emotional expression whose core emotional meaning can be traced back to the

³ Interestingly, previous studies from the United States found that head and gaze down are consistently linked with shame (Keltner, 1995), an emotion that, as we will see, is likely to play a key role in bowing episodes.

notions of indebtedness and reciprocity, as first shown in Ohashi's (2010) work; conversely, it contributes to TAP by stressing that culture permeates the emotion process.

3.2. Bowing-related lexical items

It should be clear at this point that, despite some underling common threads, there are different types of bowing, involving different degrees of (in)debtedness, different body movements, representing different emotions, and hence performing different communicative acts. In the current study, the lexical items (a term I take to include single 'words', as well as longer expressions, some with internal variation; see Partington and Diegoli, 2025, pp. 64–66) that index acts of bowing and were used as entry points into my main corpus (the Yahoo! Chiebukuro data corpus, which I introduce in Section 5) were selected combining (a) dictionary searches using the GENIUS Japanese-English Dictionary, 3rd edition (Minamide et al., 2011), where I looked for translations of the English terms *bow*, *bowing*, etc.; (b) thesaurus searches in Sketch Engine using the 10-million words web corpus jaTenTen11 (Kilgarriff et al., 2014), where I searched for synonyms of the items identified through (a) dictionary searches; and (c) AI queries in ChatGPT-4. The AI queries were developed following the prompt design strategies illustrated in Yu et al. (2024) and are available as additional materials. AI queries were expected to provide prompts that had not been identified through the other media used; however, this was not the case, as the lexical items provided by ChatGPT-4 largely overlap with those identified via dictionary and corpus searches.

Table 2 illustrates and describes the seven main lexical items and corresponding body movements identified following this mixed methodology. These are the items I used as search terms in the corpus presented in Section 5. Figs. 1–3 visualise three out of seven bow types. All examples are from my data (see Section 5). For reasons of space, even when multiple inflected forms were found, the table reports only the most frequent or the lemmatised form.⁴

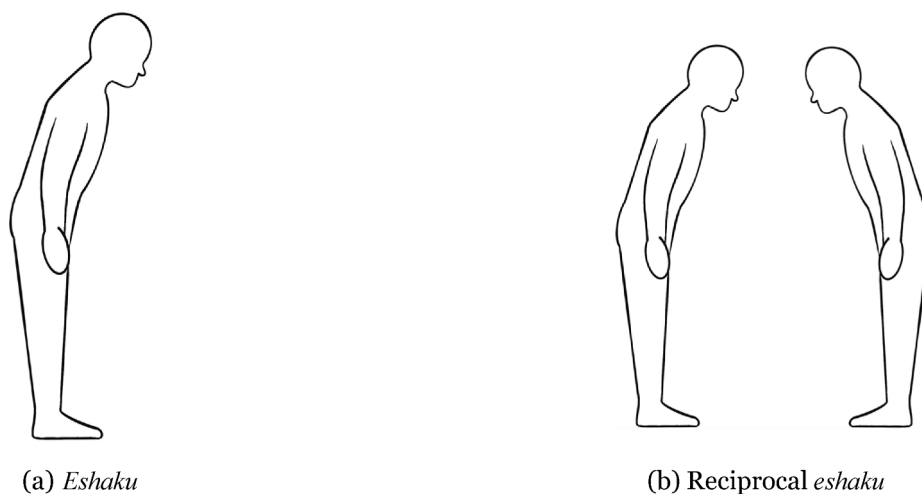


Fig. 1. Eshaku

⁴ The searches gave back also

- *atama ga sagaru* 頭が下がる 'admire/respect (someone/something)', as in: 生活保護を避けたいという意気込みは、頭が下がる *seikatsu hogo o saketai to iu ikigomi wa, atama ga sagaru* 'I admire/respect (lit. my head lowers to) the determination to avoid (relying on) welfare';
- *atama (ga) agaru** 頭(が)上がら* 'be indebted to (someone)', as in: 減額してもらい前の嫁には [...] 頭が上がらない *gengaku shite-morai mae no yome ni wa [...]* *atama ga agaranai* 'I feel indebted to [lit. I can't hold my head up to] my ex-wife for agreeing to reduce the (child support) payment'
- *pekotto* ぺこっと (onomatopoeia similar to *peko peko*, see line 1 Table 2);
- *heifuku* 平伏 (deep bow similar to *dogeza*), as in: 祭式作法で平伏(頭を下げる)する *saishiki sakuho de heifuku (atama o sageru) suru* 'bowing deeply (lowering one's head) following the ritual protocol'

These four lexical items are not listed in Table 2 and were not further explored because the former two are idiomatic expressions that, although semantically related to key features of bowing (namely, the notion of indebtedness and the desire to elicit positive emotions in the recipient), do not refer to situations where the body movement of bowing actually took place/should have taken place/normally takes place, etc., while the latter are extremely infrequent (they occur only once) and semantically redundant (they are immediately followed by other bowing-related lexical items).



Fig. 2. Keirei/saikeirei



Fig. 3. Dogeza

The functional and emotional dimensions of the bow types described in Table 2 are analysed in Section 6.

A final note of caution. Searching for the terms illustrated in Table 2 in a corpus allowed for a high degree of precision (precision is high when the hits retrieved from the corpus turn out to be what we were looking for, and in fact the episodes I collected by looking for the lexical items listed in Table 2 are always episodes of bowing). The degree of recall (recall is high when the retrieved hits are close to the total number of hits actually present in the corpus) is likely to be lower, as it is possible, and indeed very probable, that a number of bowing episodes remained undetected because they were verbalised in ways other than those listed in Table 2. Future studies may combine corpus methods with experimental methods or more elaborate computational tools (e.g. vector space models, see Diegoli and Öhman (2024)) to identify semantically similar lexicogrammatical searches that may have escaped the process followed here.

4. Research questions and aims

My aim is to explore what people (say about what they or others) are trying to do when they bow by categorising: (1) the pragmatic functions that bowing is taken to perform; and (2) the emotions bowing (appears to) express and is (supposedly) aimed at eliciting. These two aims are closely linked, as pragmatic functions are carried out also (primarily?) through the expression, negotiation and suppression of emotion. These aims were operationalised as the following research questions (RQs), which guided the manual annotation of the data:

- 1 What are the pragmatic functions of bowing? That is, what are people trying to do with it?
- 2 Can the act of bowing be taken to express and/or elicit specific emotions? If so, which emotions?

Note that for bowing to be an emotional expression it has to express emotions, and hence it would make sense to start by categorising the emotions bowing expresses and/or elicits (RQ2), and then move up to the annotation for pragmatic functions (RQ1). However, as further discussed in Section 6.2, the association of bowing with specific emotion types revealed itself to be more complex than initially envisaged. In fact, there is substantial variation in the expression of emotions, and non-verbal emotional expressions are often more open to interpretation than specialised linguistic patterns, which can be associated with a higher degree of probability with illocutionary intentions. This justifies my choice to start at the illocutionary level, and then attempt to deduce what emotions, if any, are at play.

Table 2
Bow types.

No.	Lexical item	Example	Description
1	(お)辞儀 (o)jigi	彼氏の親にペコッとお辞儀しただけで通り過ぎただけです。 <i>Kareshi no oya ni peko-tto o-jigi shita dake de tōri-sugita dake desu.</i> 'I just bowed quickly to my boyfriend's parents and walked past.'	General term that can refer to different bow types; generally used with the honorific prefix o-.
2	ぺこぺこ <i>peko peko</i>	正直この件では気を使わなくてもいいのにぺこぺこしなきゃいけない事でいららしてしまいました <i>Shōjiki kono ken de wa ki o tsukawanakute mo ii noni, peko peko shinakya-ikenai koto de iraira shite-shimaimashita.</i> 'To be honest, I got angry because I still had to bow even if there was no need to be so considerate about this matter.'	Onomatopoeia referring to repeated bows.
3	頭(を)下げ* <i>atama (o) sage*</i>	これは国際慣習で習近平国家主席が来日したときも天皇に頭を下げて挨拶にいきました。 <i>Kore wa kokusai kanshū de, shūkinpei kokka shuseki ga rainichi shita toki mo tennō ni atama o sagete aisatsu ni ikimashita.</i> 'This is an international custom, and even when President Xi Jinping visited Japan, he bowed and went to greet the Emperor.'	Periphrasis meaning 'lowering one's head'; general term that can refer to different bow types.
4	土下座 <i>dogeza</i>	上司に[...] 謝罪しると土下座を強要してきました。怖くてその場で土下座をしたのですが、、、仕事を辞めたいです。 <i>Jōshi ni [...] shazai shiro to dogeza o kyōyō shite kimashita. Kowakute sono ba de dogeza o shita no desu ga ... shigoto o yametai desu.</i> 'My boss [...] forced me to kneel and bow deeply and apologise. I was scared, so I did it ... but now I want to quit my job.'	Very deep bow that involves kneeling on the ground with the forehead and both hands touching the floor.
5	(最)敬礼 (sai)keirei	山門から入り本門の前で止まり 最敬礼、そのまま中へは入らず、踵を返し帰って行くのが通例のようです。 <i>Sanmon kara hairi honmon no mae de tomari saikeirei, sono mama naka e wa hairazu, kakato o kaeshi kaette iku no ga tsūrei no yō desu.</i> 'The usual practice seems to be to enter through the main gate, stop in front of the main hall, bow deeply , and then without going inside turn on one's heel and leave'	Standing bow of about 30° (<i>keirei</i>) or 45° (<i>saikeirei</i>).
6	会釈 <i>eshaku</i>	私には好きな女性があります。[...] 恥ずかしく会釈しかできない程ですが、近い内に告白しようと考えています。 <i>Watashi ni wa suki na josei ga imasu. [...] Hazukashikute eshaku shika dekinai hodo desu ga, chikai uchi ni kokuhaku shiyō to kangaete imasu.</i> 'There's a girl I like. [...] I'm embarrassed and all I can do is give her a slight bow/nod , but I'm thinking of declaring my feelings to her soon.'	Standing light bow of about 15°.
7	一礼 <i>ichirei</i>	代表者が[...] 塩を周囲にまき、清める。一同黙禱 代表者にあわせて、二礼二拍手一礼 <i>Daihōsha ga [...] shio o shūi ni maki, kiyomeru. Ichidō mokutō daihōsha ni awasete, nirei nihakushu ichirei.</i> 'The representative [...] scatters salt around the area to purify it. Everyone observes a moment of silence following the representative's lead: two bows, two claps, one bow .'	Single standing bow, which is usually part of a ritual sequence.

5. Data and methods

I searched for the lexical items listed in Table 2 in three main data sets, or (sub)corpora, retrieved from Yahoo! Chiebukuro data corpus (LY Corporation, 2023a), a web corpus of general Japanese built by the LINE Yahoo Corporation between April 01, 2019 and March 3, 2022 and currently stored on the Informatics Research Data (IDR) repository. Yahoo! Chiebukuro is a question-and-answer (Q&A) forum founded in 2004 by the Yahoo! JAPAN corporation. With 52 million registered users, Yahoo! Chiebukuro is currently the largest community-driven Q&A forum in Japan (LY Corporation, 2023b) and hosts different subfora, organised around specific topics.

My three (sub)corpora come from three different subfora, or sections, within the Yahoo! Chiebukuro data corpus: *ikikata to renai, ningen kankei no nayami* 生き方と恋愛、人間関係の悩み ‘ways of living and romantic relationships, relational worries’ (the Relationships corpus), *manā, kankonsōsai* マナー、冠婚葬祭 ‘manners, ceremonies’ (the Manners corpus) and, by way of contrast, *nyūsu, seiji, kokusai jōsei* ニュース、政治、国際情勢 ‘news, politics, international affairs’ (the News corpus). The first two categories were selected because my aim at this stage was to identify (mentions of) bowing episodes, and considering their interactional/social focus, these two categories were deemed to be more likely to elicit episodes of bowing. The third category was included in the attempt to collect scenarios that may not occur, or occur relatively infrequently, in the former two.

On Yahoo! Chiebukuro, each thread starts with an original poster who asks a question on the forum, to which other users can reply with one or multiple answers. When there are two or more answers to one question, the original poster can select the response they find most helpful by awarding it the Best Answer badge. During the data sampling, I collected ten thousand question and their corresponding best answers from the Relationships and News categories, while the Manners category was much less productive, and produced a total 3087 question-and-(best) answer pairs, all included in the corpus (see Table 3). The decision to collect only the best answers, along with their corresponding questions, rather than including all available answers or unsolved questions, was made to ensure a balanced distribution of questions and answers. This procedure resulted in an Excel file where each row contains three columns with the question title, the question content and the relative best answer, corresponding to a question-and-(best) answer pair. The data was tagged with TagAnt and processed with AntConc (Anthony, 2023). Within AntConc, each question-and-answer pair was treated as a single text file.

Table 3 provides more information on my corpora (recall that each text file corresponds to a question-and-answer pair).

Table 3
Tokens and text files count across the three corpora.

	Relationships	News	Manners	Total
Tokens	2,960,852	2,810,817	857,526	6,629,195
Text files	10,000	10,000	3087	23,087

The Relationships, News and Manners corpora were used to identify bowing episodes through concordance analysis, which locates the occurrences of a particular search term in a corpus. Each concordance, which corresponds to one bowing episode, was then manually annotated for pragmatic functions (RQ1). When appropriate, I assigned up to two pragmatic functions to each bowing episode. I then attempted to associate each bowing episode with specific emotions (RQ2).

6. Results

6.1. Annotation for pragmatic function

In addressing RQ1, I started by categorising the speech act functions, and from there moved to the corresponding communicative function/move in TAP (see Table 1). Other approaches are possible and may lead to slightly different results.

I annotated all bowing episodes for speech act/communicative functions twice, with a three-month interval between the two sessions. The extremely high raw intra-rater agreement (97.06) and Cohen’s k (0.956, $p < 0.001$) increase the reliability of the results.

My main findings, which are visualised in Fig. 4, confirmed that bowing is primarily an Expressive_{EE}: its core communicative function is the expression of regret and gratitude, and it is the analog of apologies and thanks. By expressing emotions, bowing can at the same time direct other people’s behaviour, hence functioning as an Expressive/Imperative_{EE}, or represent where the producer stands in relation to the recipient, hence functioning as an Expressive/Declarative_{EE} (on the reasoning behind these hybrid labels, and how they differ from the taxonomy used in TAP, see Section 2.1). While I recognise that bowing can function as an Expressive/Commissive_{EE}, for example when it is part of an apology event where the producer conveys regret while committing themselves not to repeat the said offence, this function is rarely made explicit in my data and remained very marginal (but see (4) below). Hence, it is not further addressed here.

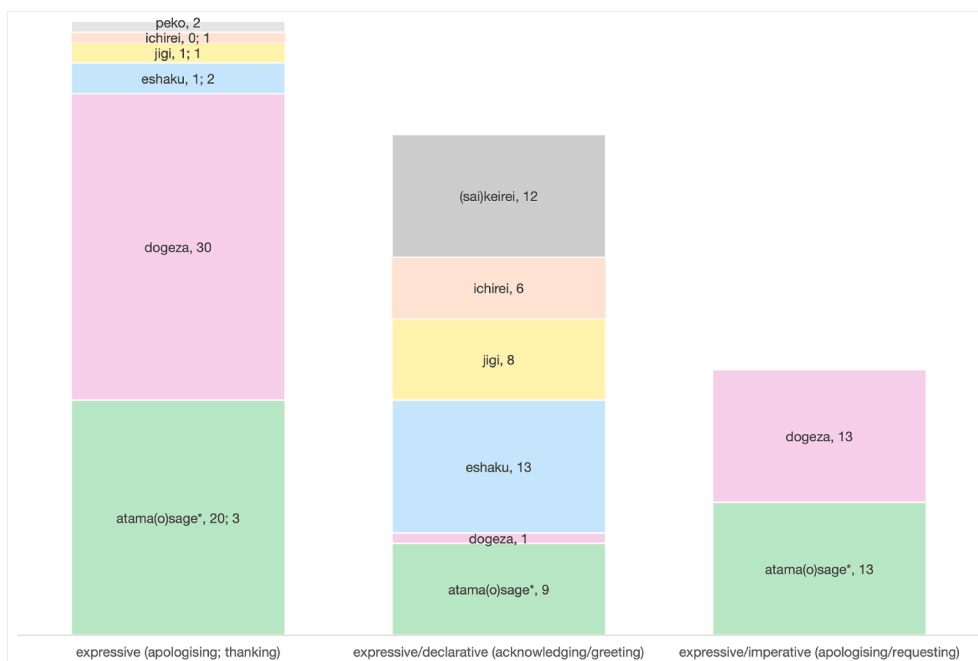


Fig. 4. Bow types by emotional expression type.

6.1.1. Bowing as an Expressive_{EE}

Bowing is most frequently used as an Expressive_{EE} to express what's inside (61/136), with the aim of conveying an apology (out of 61 Expressives_{EE}, only 7 were categorised as thanking; their frequencies are shown in the figure after the semicolon). This does not mean that bowing as an Expressive_{EE} does not do other things in context (for example, bowing may be part of an apology event where the producer expresses regret *and* commits themselves not to repeat the same offence in the future). Nonetheless, other potential communicative functions are very marginal and would largely be the result of speculation on my part.

When bowing as an Expressives_{EE} is used to apologise, two patterns became apparent: bowing tends to be accompanied by (a) a conventionalised apology formulae, as in (1) where we have the apology expression *sumimasen deshita* 'I'm sorry' conveying (formulaic) regret; or (b) a speech act label making the apology explicit, as in (2) and (3) (see also Table 2, line 4):

- (1) すみませんでしたと頭を下げ、その年は頑張りました。
Sumimasen deshita to atama o sage, sono toshi wa ganbarimashita.
 'I bowed and said 'I'm sorry', and worked hard that year.'
- (2) 韓国は早く日本に土下座して謝って、穏便に済ましたほうがいいと思いませんか？
Kankoku wa hayaku nihon ni dogeza shite ayamatte, onbin ni sumashita hō ga ii to omoimasen ka?
 'Don't you think South Korea should kneel and bow deeply and apologise to Japan soon, and settle things?'
- (3) まず帰ったときに頭下げて謝ってはいかががでしょう？そして早めに自立してその家を出るべきです。
Mazu kaetta toki ni atama sagete ayamatte wa ikaga deshō? Soshite hayame ni jiritsu shite sono ie o deru beki desu.
 'How about when you go back home you first bow and apologise? Then you should become independent and leave that house as soon as possible.'

Bowing as an Expressive_{EE} is the most prototypical form of bowing as an emotional expression, both because it is the most frequent and because it is the one where the credit-debit imbalance is higher and the emotional dimension is most evident.

6.1.2. Bowing as an Expressive/Imperative_{EE}

Bowing as an Expressive/Imperative_{EE} (26/136) is a way of directing other people's behaviour by expressing what's inside. We have a very clear example of how directing is done in context in (4), where the verbal message accompanying the bowing makes use of the form *-te/de hoshii* 'I want (someone) to (do something)':

- (4) 離婚覚悟で夫に話を出したところ、「もうやらない、浅はかだった、気持ちは一度も離れたことがない、離婚だけはしないでほしい」と土下座され、離婚は保留ということにして今に至ります。
Rikon kakugo de otto ni hanashi o dashita tokoro, 'mō yaranai, asahaka datta, kimochi wa ichido mo hanareta koto ga nai, rikon dake wa shinai-de hoshii' to dogeza sare, rikon wa horyū to iu koto ni shite ima ni itarimasu.
 'When I was prepared to divorce and brought up the topic with my husband, he kneeled and bowed deeply, saying, 'I won't do it again, it was thoughtless of me, my feelings for you have never changed, please don't divorce me'. So we decided to put the divorce on hold, and that's where things are at now.'

In (4), *-de hoshii* (translated as ‘please + V’) directs the recipient’s behaviour, while the co-text preceding the bowing episode expresses what’s inside. The expressing function is verbalised via strategies conventionally associated with apologies (an Expressive speech act): a promise to never repeat said action (‘I won’t do it again’) and an admission of wrongdoing (‘it was thoughtless’). These verbal strategies, accompanied by bowing, express negative emotions, perhaps regret and/or guilt.

6.1.3. Bowing as an Expressive/Declarative_{EE}

Finally, bowing is frequently used to express what’s inside while, at the same time, representing what the world is like (49/136). The first example illustrated in Table 2 shows how this is actually done in real-world situations; below I report the same example within its extended co-text:

- (5) あたしの親は卒業式には来てなかったのですが彼氏の親は来ていました。その際に私は彼氏の親にペコッとお辞儀しただけで通り過ぎただけです。親にちゃんと挨拶するべきでしたかね?(泣)
Atashi no oya wa sotsugyōshiki ni wa kite-nakatta no desu ga, kareshi no oya wa kite-imashita. Sono sai ni watashi wa kareshi no oya ni peko-tto o-jigi shita dake de tōri-sugita dake desu. Oya ni chanto aisatsu suru beki deshita ka ne? (naku)
 ‘My parents didn’t come to the graduation ceremony, but my boyfriend’s parents did. At that time, I just **bowed quickly** and walked past. Do you think I should have greeted [aisatsu] them properly? (crying character)’

By bowing to her boyfriend’s parents, the producer is expressing a (mildly) positive attitude towards them (‘I like you/I want you to think well of me’) and at the same time she is representing where they stand in the relationship. A similar example is the following:

- (6) 私には好きな女性があります。[...] 恥ずかしくて会釈しかできない程ですが、近い内に告白しようと考えています。
Watashi ni wa suki na onna ga imasu. [...] Hazukashikute eshaku shika dekinai hodo desu ga, chikai uchi ni kokuhaku shiyō to kangaete imasu.
 ‘There’s this girl I like. [...] I’m embarrassed and all I can do is give her a **slight bow/nod**, but I’m thinking of declaring my feelings to her soon.’

This type of bowing is a prototypical form of *aisatsu* (a term that we have already met in (5) and in line 3 of Table 2):

aisatsu is a broad folk notion which refers to a wide variety of fixed verbal formulae and nonverbal rituals that mark demeanor among the interactants. The types of *aisatsu* range from casual everyday verbal routines such as greetings like *ohayoo* (‘good morning’), saying *ojama shimasu* (literally meaning ‘I will get in the way’) upon entering someone’s living or working space, thanking and apologizing when the situation requires, etc. *Aisatsu* also extends to more specific cultural and ritualistic behaviors such as bowing (Ide, 1998, p. 526).

Aisatsu is a form of linguacultural-specific conventionalised behaviour that explicitly extends to non-verbal bodily changes and serves social purposes (see Section 2.2 on conventionalisation). It is particularly apt to describe highly conventionalised and recurrent emotional expressions that manifest themselves in predictable ways and have limited emotional weight, and hence limited (self-)face-threat potential – as opposed to highly emotionally loaded and very (self-)face-threatening acts, such as a *dogeza* conveying an apology (an Expressive_{EE}).

It may be argued that bowing as form of *aisatsu*, which functions as an Expressive/Declarative_{EE}, is a symbolic body movement that regulates interaction but does not necessarily express emotions. It seems to me that bowing, which as we have seen in Section 3.1 is closely related to the emotionally loaded notions of indebtedness and reciprocity, is always linked, albeit to different degrees, to emotions and, depending on contextual features, can convey regret, guilt, gratitude or, more generally, the producer’s positive attitude towards the recipient(s), while attempting to elicit positive emotions in the recipient.

We may then think of the emotional expression of bowing as a multifunctional entity located on a continuum: on the one end we have supportive episodes where the emotional meaning is backgrounded but interacts and is functional to other aspects of communication; on the other, we have remedying episodes where the emotional dimension is more evident. Bowing as an Expressive/Declarative_{EE} is one of the former, bowing as an Expressive_{EE} is one of the latter, and bowing as an Expressive/Imperative_{EE} is somewhere in between, perhaps closer to the remedial end (see Fig. 5). The question then is not *if* emotion plays a role in bowing episodes, but whether emotion is a core element in the communicative process (all things being equal, an apologetic bowing is ‘felicitous’ precisely because it is primarily an expression of regret), or whether it

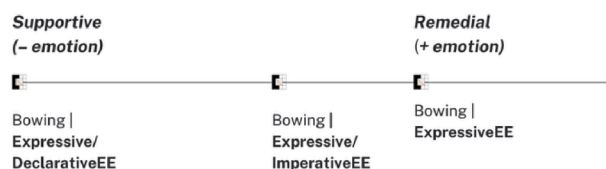


Fig. 5. Bowing as an emotional expression along the supportive-remedial continuum.

functions alongside other types of information in the production and inferencing of meaning (greeting someone by bowing to them responds primarily to social expectations, but it is also a formulaic expression of a generally positive attitude toward the recipient).

Finally, it is also worth noting that, in both examples of bowing as an Expressive/Declarative_{EE}, the emotional expression alone is sufficient to convey the message and get things done, with no need for it to be aided by language. This applies more generally to bowing as an Expressive/Declarative_{EE}, while bowing as an Expressive_{EE} or Expressive/Imperative_{EE} seems to depend more on language for the message to come across.

6.2. Zooming in on emotions

I have argued that bowing is an emotional expression because it communicates and/or elicits emotions, albeit to different degrees depending on the situation and the type of bowing. Up to this point, however, emotions were taken into account only indirectly, in so far as we can infer that the producer is undergoing a certain emotion from the way they behave, how they move their body, and what they say or write. In this section, in the attempt to answer RQ2 *Can the act of bowing be taken to express and/or elicit specific emotions?*, I zoom in on emotion(al) words that appear in the extended co-text of bowing episodes and further strengthen the claim that bowing is in fact an emotional expression. However, I will argue that, while the association of speech acts with emotional expression types is relatively straightforward, emotions often elude simple categorisation: we can engage in speech act analogs through the expression of emotions, but singling out what emotions are at play in any given situation is a process fraught with difficulties.

6.2.1. Emotion words

Sometimes, the co-text of bowing episodes presents words and expressions that explicitly name a particular emotion (examples in English include *happy*, *anger*, *worried*, and so on). I will call these *emotion words* (Bednarek, 2008; Pavlenko, 2008). Emotion words are a window into the layperson's *perception* of emotions and solve the issue of having to make hypotheses on the producer's inner states because participants in the interaction are labelling them for us. In Section 6.1, (6) presents at least two emotion words: *suki-na* 'like, fancy' and *hazukashikute* 'embarrassing, embarrassed'. In this situation, bowing (specifically, the *eshaku*-type) is an Expressive/Declarative_{EE} that conveys positive affect and embarrassment, perhaps something close to love.

Other two examples are reported in Table 2, lines 2 and 4. In both situations, the producer is being pressured to display certain emotions even if they are not consistent with their actual inner state (what in Section 2.2 was referred to as *surface acting*) and this elicits negative emotions. Specifically, in line 4 bowing (and to make things worse the *dogeza* type!) is explicitly demanded by someone in a position of power, and the poster ends up performing the *dogeza* out of fear. In line 2 bowing (the *peko peko*-type, again imposed by others) elicits anger, a negative emotion further reinforced, in the original Japanese text, by the verb ending form - *te shimaimashita*, which conveys the producer's negative evaluation of/negative emotion towards an event without explicitly labelling the emotion in question. -*te shimaimashita* is a type of emotional construction further addressed below.

6.2.2. Emotional words

People can explicitly label their inner states, but more often they convey, describe and elicit emotions through *emotional* or *emotion-laden words* (Bednarek, 2008; Pavlenko, 2008) – more precisely, *lexical items* (on my use of the term lexical item, see Section 3.2). Emotional lexical items do not refer directly to specific emotions, but are nonetheless related to some kind of emotional experience and provide valuable insights into emotion production. Emotional words range from discursive strategies to lexical and semantic sets and morpho-grammatical choices, as well as a combination of these, and include for example repetition, insults, interjections and intensifiers.

In this very brief discussion of emotional words, I focus on morpho-grammatical elements that can index emotional meanings, despite never explicitly mentioning specific emotions. The verb ending form -*te shimaimashita* is one example of such emotional words. Another relatively frequent emotional word is the modal expression *beki* 'should'. In (5) (Section 6.1), *beki* is used as part of the utterance *chanto aisatsu suru beki deshita ka ne? (naku)* 'should I have greeted them properly? (crying character)', where it conveys regret for not having behaved in a certain way. The emotional meaning is further reinforced by the kanji emoticon, where the Chinese character 泣 *na(ku)* 'cry' is enclosed between round brackets to visually convey negative emotion. Similarly, the construction *shika V-nai* 'the only thing <SBJ> can/could <V> is' in (6) (Section 6.1) *eshaku shika dekinai* 'all I can do is give (her) a slight bow' has a negative connotation, in this context related again to negative emotions (specifically, it seems to me, embarrassment) elicited by not being able to greet properly the girl the producer likes, or introduce himself to her. These emotional words contribute to the pragmatic and affective meanings of bowing, which are iteratively and cumulatively construed in interaction through multiple verbal and non-verbal resources.

A final note. In the examples discussed in this and the previous section, bowing generally indexes or elicits negative emotions (embarrassment, regret, etc.). However, bowing can be associated with positive emotions too: in (7) below, bowing (the *eshaku*-type) as an Expressive_{EE} is accompanied by a smile indexing positive affect/gratitude, and we know from the literature (see Section 3.1) and previous textual examples that bowing is generally aimed at eliciting positive emotions in the recipients.

- (7) お店から車で出ようとしたら、女子高生が歩道を歩いていたので、停止して待ってたところ、僕の顔を良く見て、笑顔で会釈してピョコピョコ小走りに通過し、また笑顔で会釈しました。
Omise kara kuruma de deyō to shi-tara, joshikōsei ga hodō o aruite-ita node, teishi shite matte-ta tokoro, boku no kao o yoku mite, egao de eshaku shite pyoko pyoko kobashiri ni tsūka shi, mata egao de eshaku shimashita.
 'When I was about to drive out of the store, a high school girl was walking on the side walk, so I stopped and waited. She looked at me, smiled and gave me a slight bow/nod, passed by and then again smiled and gave me another slight bow/nod.'

I will not attempt here to categorise each concordance according to the emotion type(s) that are caused or elicited by the bowing episode in question because the close reading of the data made apparent that there is substantial variation in the expression of emotions, both verbal and non-verbal (Barrett et al., 2019). Moreover, people usually feel more than one emotion at once. Hence, the association of body movements with specific emotions should be cautious – especially when the participants in the interaction do not provide us with explicit clues on what they are feeling. However, it seems to me that the broader notions of indebtedness and reciprocity (see Section 3.1) can account for many of the emotions involved in bowing episodes, most prototypically (conventionalised) regret/guilt ('I'm in your debt because I did something bad/didn't do something good, and bowing to you is a way of paying you back') and gratitude ('I'm in your debt because because you did something good for me, and bowing to you is a way of paying you back'). Mismatches in perceptions of one's symbolic debits or credits with others are always associated with negative emotions (see Table 2, lines 2 and 4), further reinforcing the assumption that a balance of payments is the normal and hence positively valued state of things (Culpeper and Tantucci, 2021).

To conclude, emotion(al) words are pervasive in the co-text of bowing episodes, suggesting that bowing is indeed very closely related to the expression and elicitation of emotions. However, what emotions are exactly at play is a question that awaits further research.

7. Limitations and open questions

The main innovation and potential limitation of the current study relates to the use of corpus-assisted methods, through which I explored *representations* or *mentions* of bowing episodes (both falling under the umbrella term 'metadiscourse') in a written web corpus of Japanese. This implies, as already noted in Section 2.3, that I did not investigate bowing episodes as they took place in real-world, multimodal settings. While corpus-assisted methods can open up a new dimension of research into emotional expressions that is worth exploring, it would greatly benefit from observations in natural or experimental settings. Below are some open questions summarising the issues that I met during the data analysis and highlighting some additional limitations of the current study – and possibly of TAP more broadly.

- In the absence of explicit emotion words that guide our annotation of linguistic data, how can we associate with an acceptable degree of probability bodily movements and specific emotions?
- If we draw exclusively from a metalanguage in English, are we imposing English notions of emotions to interpret data across languages? For example, when I say that a certain bowing episode is caused by feelings of 'regret' and 'guilt', or that elicits 'anger', am I imposing English notions of 'regret' 'guilt' and 'anger' on data in Japanese?
- Are the component parts of complex emotional expressions (e.g. lowering the gaze or putting the hands in a certain position while bowing, or, going back to Table 1, baring one's teeth in an angry face) emotional expressions in and of themselves? Do they carry meaning on their own, or only when combined with other components?
- Do different yet overlapping labels (e.g. *eshaku*, *keirei*, *jigi*) index different emotional expressions? Or are we dealing with one single emotional expression that can acquire different meanings depending on the context?

With reference to this last issue specifically, I have talked of 'types of bowing' or 'bow types' (see Sections 3.2, 6.1 *et passim*) because I take different labels to index (slightly) different emotional expressions. Two main observations back up this argument. First, if we go back to Table 2, we can see that we are dealing with a continuum along which some bow types overlap to a great degree (*atama (o) sage** and *jigi* can be taken to be umbrella terms that include all or most of the others, and *saikirei* is functionally very similar to *keirei*). However, others are so different that they can hardly be taken to be the same bodily movement (compare for example *eshaku* and *dogeza* in Figs. 1 and 3). Second, at least in my data, there is a clear functional relation between bow types and pragmatic functions, as shown in Fig. 6. This functional relation has also been observed in previous studies on bowing (Takeda et al., 2017).

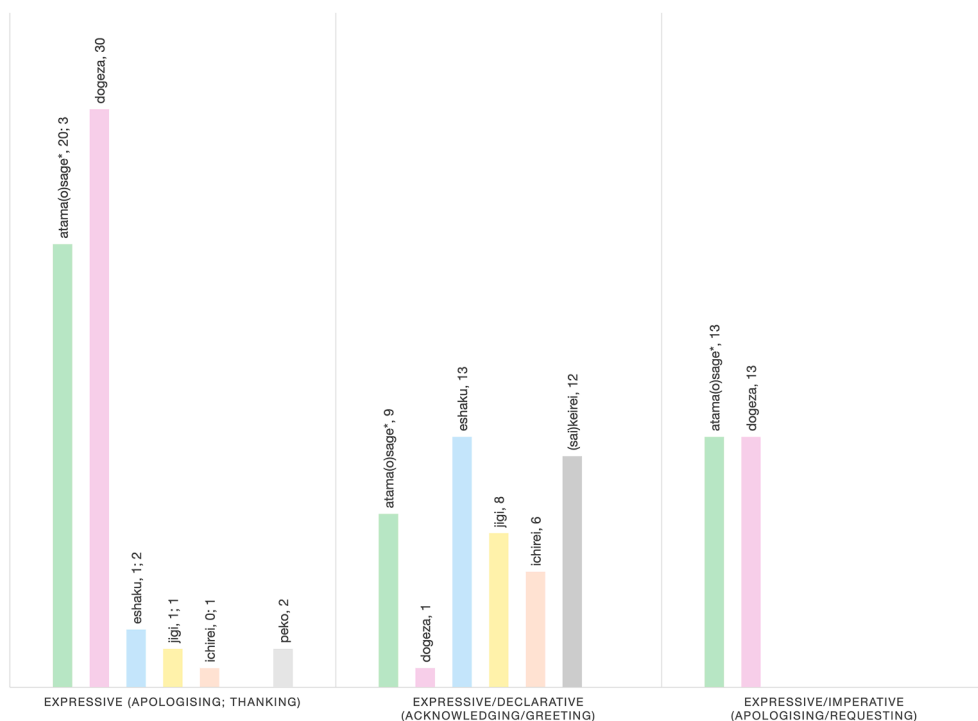


Fig. 6. Relation between bow types and pragmatic functions/emotional expressions.

In the figure, we may notice that *dogeza* is used for apologising and requesting (in this order), while *eshaku*, *ichirei* and *(sai)keirei* are used almost exclusively for acknowledging/greeting. The periphrasis *atama(o)sage** is the only lexical item used across all three emotional expression types, and is in fact the least specific. These findings suggest that, at least in my Japanese data, different bow types realise different emotional expressions – a point often overlooked in the literature on the topic, where refers to underspecified bodily changes such as ‘frowning’ (Scarantino, 2019b) and ‘smiling’ (Wharton, 2003) are not uncommon.

8. Conclusion

I take bowing to be an emotional expression because in my Japanese data it is almost invariably related to the expression and elicitation of emotions: it is used to perform emotionally loaded speech acts (apologies, thanks, requests, greetings) in virtue of the fact that it expresses emotion, and its descriptions/representations make extensive use of emotional language. However, it is quite different from other emotional expressions: it has been acquired through recurrent exposure, it requires some degree of intentionality, it is linguacultural specific and highly conventionalised.

With these features in mind, I asked: what are the pragmatic functions of bowing? What are the emotions expressed and/or elicited by bowing?

The corpus-assisted analysis of metadiscourses around bowing episodes as observed in a web corpus of Japanese revealed that bowing is a multifunctional emotional expression whose core meaning is the *expression* of indebtedness towards the recipient(s). In my data, this core meaning can be functional to *represent* where the producer stands in the relationship with the recipient(s), or to *direct* their behaviour.

Indebtedness is a highly emotionally loaded notion in itself, but is yet to be empirically associated with a specific (set of) emotion(s). The associations of bowing episodes with specific emotion types proved challenging, which is why I started by categorising the communicative moves bowing performs. In certain contexts, bowing seems to be a way to communicate (formulaic) regret/guilt, acknowledgement (that is, mild positive affect) and gratitude, in the attempt to elicit positive emotions in the recipient(s) and prompt them to exchange reciprocal benefits. Several examples suggest that a potential mismatch between what the producer is feeling and what they are conveying by bowing is not necessarily detrimental to their communicative goals (emotional expressions do things in context regardless to whether they match the producer's internal state), but can elicit negative emotion in the producer themselves (one may perceive that they are giving more than what they owe, or conversely that they are not giving enough). Future studies may combine different methodologies to assign bowing to the expression of specific emotions, and then identify the communicative moves it performs.

The present study expands TAP by proposing a taxonomy that illustrates that not all communicative functions of emotional expressions are always equally relevant. By paying focused attention to a linguacultural-specific emotional expression, it paves the way for moving beyond what the single (English-speaking) individual is feeling towards a more comprehensive understanding of how affect and social meaning co-constitute each other in real-world interactions across languages. Methodologically, it argues for a bottom-up, corpus-assisted approach to the study of emotional expressions that, despite its limitations, is expected to promote accountability and open up a new dimension of research.

CRediT authorship contribution statement

Eugenia Diegoli: Writing – review & editing, Writing – original draft, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization.

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Declaration of competing interest

The author declares that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The author does not have permission to share the corpus data. Additional materials (AI queries, intra rater agreement) are available on the author's [Open Science Framework page](#).

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