Some Puzzles of Politeness and Impoliteness within a Formal Semantics of Offensive Language

Carl Vogel

Computational Linguistics Group
Centre for Computing and Language Studies
School of Computer Science and Statistics
Trinity College Dublin
Dublin 2, Ireland
`vogel@tcd.ie`

Abstract. Puzzles of linguistic politeness and impoliteness are outlined. A framework for articulating formal semantic theories of linguistic politeness and impoliteness is adopted. The framework provides a foundation for a semantic theory that builds on past argument that (im)politeness behaviors arise from offence management associated with disgust. The theory is shown to explain some of the puzzles of (im)politeness.
Keywords: politeness, impoliteness, offence, disgust, semantics, pragmatics

1   Introduction

Some forms of conflict involve participants intending or experiencing psychological offence, as opposed to more physically impinging threat. Offensiveness may be modulated by behaviors of politeness and impoliteness. An upsetting message may be tempered by polite delivery, or a message that is literally positive may be reversed through impolite conveyance (see [15]). Among the features that comprise delivery are forms of linguistic packaging. The means, cross-linguistically, of creating emphasis within propositional content of a message, partly with reference to information states of interlocutors, have been discussed as "information packaging" [41]. Herein, attention is drawn to the fact that attitudinal orientation to both message content and interlocutors is also potentially packaged linguistically.

Linguistic manifestations of politeness and impoliteness present some puzzles about human behavior. A number of these puzzles are detailed in the next part of this paper. However, the main puzzle of linguistic politeness and impoliteness is an existential one. That these linguistic flourishes exist at all is at odds with other linguistic behaviors which tend to minimize communicative effort.

Aspects of linguistic politeness and impoliteness are well explained from the point of view of semantic theory, and may ultimately be integrated into a multi-dimensional account of meaning in the context of interaction [9]. Such an approach may, as here, be sympathetic to the idea that perceptions of (im)politeness

may differ among interlocutors in particular situations [14]. However, perspectivalism is not obviously more necessary in accounts of (im)politeness than of propositional content, for which it is also necessary [25]. This article details an attempt to use a semantic analysis of linguistic (im)politeness to explain some of the puzzles of (im)politeness. A number are resolved by noting the semantic function of politeness in signaling attitudinal orientation.

The semantic theory of impoliteness described in the third part of this paper is intended to partially specify what is meant by expressions regarded as polite or impolite. A truth-conditional approach to semantics articulates the constraints that the world has to satisfy in order for relevant expressions to be correctly interpreted as true or false, polite or impolite. Because of the situated element of (im)politeness, articulating the constraints on the world which have to be in place in order for an utterance of a sentence to be evaluated as, for example, true and impolite also provides a reasonable characterization of what makes non-linguistic behaviors in the same situations also be deemed impolite, and therefore a semantic theory of the sort described here provides an effective interface to pragmatic theory, as well. Addressing some of the puzzles of politeness and impoliteness through the semantic theory provides an evaluation of the theory.

The semantic theory invoked here is informed by the view that politeness and impoliteness behaviors are manifestations of offence management, offence rooted in disgust [45, 44].[1] This etiological account of politeness and impoliteness has the advantage of offering an explanation for the existential puzzle of linguistic (im)politeness: the energy required for these locutions is significant, and unlike other forms of complexity in language, for example, referential descriptions, which become less involved and more phonologically reduced with each reference in conversation, the language of (im)politeness does not appear to undergo reduction on the same scale. The explanation which anchors (im)politeness in disgust management holds that it is the desire not to be seen as disgusting which prompts politeness and the perception of disgust which draws out impoliteness. This theory is feasible because of the nature of the human disgust response: disgust triggers are generally felt as irreversibly polluting;[2] the response, which has physical oral-facial realizations connected to expulsion reflexes, includes subsequent avoidance even after a single exposure; the disgust response generalizes from primary sources to associates in relatively unfettered contagion; associates may be conceptual as well as tangible. Because the disgust response, once triggered by an encounter, leads to immediate and future avoidance,[3] and since people generally dread ostracism, it is in the interest of social agents to avoid triggering disgust. Politeness mechanisms are therefore adaptive mechanisms

---

[1] This is an evolutionary account that anchors politeness in selective processes associated with disgust. Alternative accounts, from the perspective of socio-cultural development, also exist [4].

[2] Attempts to reverse pollution often involve symbolic treatments that are more vigorous than any physical cleansing that would be strictly necessary.

[3] The effects of proximity have been argued to discriminate disgust and fear [31]: separation by a small distance and secure barriers mitigates fear, but with the same intervening distance and iron bars, disgust is not diminished.

that mitigate disgust. Impoliteness is explained as well by the experience of (generalized) disgust triggered by the target of impoliteness and the desire the impolite speaker has for this view of the target to be shared by witnesses.[4] The persistent effort involved in the language of (im)politeness makes sense in light of the profound power of the disgust response.

The paper proceeds by describing some of the other puzzles of linguistic (im)politeness (§2). In §3 a formal semantic theory of (im)politeness is detailed, and §4 addresses the puzzles within this framework. The semantics makes use of events as ontological primitives, but assumes that these can be examined at varying levels of granularity. That is, the semantics does not require an extensive ontological inventory, but rather specifies constraints that must hold on events that figure into acts of (im)politeness, linguistic or otherwise.

2 Puzzles of (im)politeness

(Im)politeness behaviors in general present some puzzles: as indicated above, the biggest puzzle is that linguistic politeness is so persistently ornate. An explanation has already been provided for this, and the framework for semantic analysis of (im)politeness that arises from formalizing aspects of offence management can also elucidate other curiosities surrounding (im)politeness. The issues described in this section are possibly surprising in contrast to other aspects of language or first glances at how the semantics of politeness might function.

2.1 Linguistic or extra-linguistic

One puzzle is whether (im)politeness is a feature of language at all, or rather only a feature of behavior more generally. To focus on linguistic (im)politeness is to attend to dimensions of offence mitigation and accentuation that are achieved through language, apart from dimensions of offence management that are conducted via other channels of communication. Some have essentially argued that there is no place for a linguistic theory of (im)politeness, since perceptions of such are subjectively reached and given the claim that linguistic forms do not have politeness or impoliteness inherently in their meaning [46]. Others have argued that (im)politeness is inherent in the meaning of some forms of language [13, pg. 118]. That an expression is ambiguous or conveys layers of meaning is not sufficient to dismiss the importance of semantics in the interpretation of (im)polite language, just as semantic theory provides critical illumination of the interpretation of metaphorical language (see [42, 43])

---

[4] Impoliteness contains the risk for the speaker that the act will be viewed by witnesses without sympathy for the speaker's view but in favor of the perspective of the impoliteness target.

2.2 Excess

For example, although politeness is a positive behavior by default, excessive politeness, obsequiousness, is not esteemed (see (1));[5] thus, politeness is not monotonically additive.

(1) Please, allow me to most humbly and with supreme deference offer to your superlatively splendid self the information that the time is 12:30.

2.3 Circular spectrum

It has been noted that in some contexts, language that might otherwise be understood as rude is actually part of the normal code for interaction [6], and is therefore less reasonable to understand as impolite. Additionally, in some of contexts that include interactants who are exceedingly familiar (such as family), it can be deemed impolite to use the language of politeness: an example like (2.a), in contrast to (2.b), may well be less appropriate for communication with one's parents than for a colleague or client.

(2) a. Please, let me know what time you'd like me to arrive.
    b. Let me know what time you'd like me to arrive.

Note that this is distinct from the possibility of mock (im)politeness, in which an ironic interpretation is forced. Rather, the same utterance, without ironic intent, may obtain a politeness-polarity switch depending on the context. Therefore, while it is natural to think of a mono-dimensional scale between politeness and impoliteness, it is worth considering whether a more appropriate conceptualization is not a spectrum, but a color wheel.[6]

2.4 Saussureanism

Saussurean communicators use language with the same meaning-form mapping for interpretation as for production, and it seems that natural language in general is used in this bi-directional way. This is not a necessary truth about language, but one that could have evolved differently. With evolutionary models, it has been shown that Saussureans "win" over imitators and calculators under relevant initial-state assumptions [27]. Nonetheless, people are not manifestly Saussurean with respect to offence and offensive language. A behavior may offend the speaker when produced by others, but the speaker may not intend nor notice offence felt by others when the speaker produces the same behavior.[7] Thus, it seems that the language of (im)politeness is not completely Saussurean.

---

[5] Conversely, impoliteness, when used as a tool of iconoclasm, may earn esteem [30], in the sense that comics like Groucho Marx are appreciated. This may be connected to the macabre attraction that disgust triggers have: as pointed out by others, [31], the oral-facial expulsion reflex on the verge of vomiting in response to a disgust trigger proceeds *as if* the substance had been ingested, even if it has not – the disgust response requires imagining contact.

[6] Perhaps a color spindle is a more appropriate conceptualization (cf. [19])

[7] See Babrius' "The Two Wallets":

2.5 Learning

The poverty of the stimulus argument for the innateness of aspects of natural language syntax is based on observations surrounding language learning, which occurs quickly during development and in the absence of explicit language teaching and despite a relative dearth of negative examples.[8] In contrast, the language of politeness appears to be explicitly taught [24, 20] and slowly learned. Given the arguments made above attempting to explain the existence of the language of (im)politeness through a need for disgust management in social settings, coupled with one-shot learning from any immediate encounter with a disgust trigger, one might expect the opposite, that linguistic (im)politeness would be learned quite quickly. However, the disgust response generalizes rapidly from the trigger to associates of the trigger, and it is in this period of association that "accidental" triggers emerge. Thus, the systematic behaviors within a culture condition common associates, and therefore cultural specificity in disgust triggers, and, perhaps surprisingly, relatively slower assimilation of the resulting conventions.

2.6 Synonymy

While acknowledging that humans have a deep-seated urge to avoid synonymy in natural language and create discriminations in use conditions where none necessarily existed before, in order to avoid full truth-preserving and use-preserving intersubstitutability of expressions, one might use the struggle to differentiate senses as evidence of initial synonymy in language. People are not reliable in their judgements of relative (im)politeness of various expressions available to modulate the manner of presentation.[9] Thus, it is possible to find cases in which (3.a) is not fully intersubstitutable with (3.b), and similarly for (4.a) and (4.b); however, it will be difficult to obtain reliable judgements for either pair that one is more (im)polite than the other. Where such expressions are not reliably ranked in (im)politeness by the same individual on different occasions, then one has an argument that relative to (im)politeness considerations they are synonymous expressions.

> Prometheus was a god, but of the first dynasty. He it was, they say, that fashioned man from earth, to be the master of the beasts. On man he hung, the story goes, two wallets filled with the faults of human kind; the one in front contained the faults of other men, the one behind the bearer's own, and this was the larger wallet. That's why it seems to me, men see the failings of each other very clearly, while unaware of those which are their own.

(Fable 66, 1-8, p82. Babrius and Phaedrus: Fables, trans. Ben Edwin Perry) 1965 Loeb Classical Library: Harvard University Press.

[8] It is bolstered by results from formal language theory which show that in the absence of negative examples, an infinite context-free languages cannot be learned "in the limit" [23], thus lending support to the notion that some of the structures within language be innate rather than learned.

[9] Similar facts obtain with respect to quantifying determiners in natural language [38].

(3) a. May I move by, please.
   b. Excuse me, please.
(4) a. You're in my way.
   b. Move.

That equivalence classes of (im)politeness are available, resulting in synonymy, is not at odds with the notion that gradedness is also available, and that some expressions are reliably and robustly deemed more polite than others. Extremes in the gradient are associated with taboo words. Interesting support for the notion of a circle of gradience (see §2.3) is in the fact that labels associated with extremely positive and negative concepts are both subject to taboo.

2.7 Taboo objects have exceptional anaphoric potential

Within the discussion of taboo topics, it has been noticed long ago that suppressed objects of verbs of excretion are available as antecedents to anaphora although suppressed objects of other verbs are not accessible [40].[10] Contrast the potential antecedents (indicated with superscripts) of the pronoun *it* in the examples (5) and (6).[11]

(5) After the gun fired, it$_{\text{the gun}/\text{\#the bullet}}$ dropped to the ground.
(6) After the dog defecated, it$_{\text{\#the dog}/\text{the excrement}}$ bore the missing ring.

The imagination is evidently more robust in constructing an unmentioned antecedent in the situation normally associated with disgust. This is consistent with the activity of imagination that is evidently rapid and vigorous in the human disgust response (see fn. 5) since the physical reactions proceed as if contact had occurred, even when they have not.[12]

2.8 Metaphorical, yet metaphorically inert

(Im)politeness expressions may be non-literal, as in the examples of (7), but in yet another asymmetry between the language of politeness and impoliteness, politeness expressions are seldom themselves metaphorical vehicles. Compare (9.a) and (9.b): in these examples, expressions of politeness (9.a) and (9.b) are used to construct non-literal sentences about how easy the new hires found use of the photocopier. While with sufficient effort, nearly every expression may be used in a novel, non-literal way, it appears easier to use the language of impoliteness to construct a metaphor (9.b) than it is to do so with the language of politeness (9.a). Thinking of the accessibility of metaphorical interpretation as akin to accessibility of antecedents to anaphors, this situation appears to be

---

[10] This is akin to the claimed asymmetry in the quantity of labels for negative emotions in relation to named positive emotions [32].
[11] The prefixed symbol (#) is used to indicate semantic infelicity.
[12] This does not include disgust reaction to smells, since smells do entail indirect ingestion of the disgust trigger.

the complement of the blocking of the accessibility of indefinite noun-phrases as antecedents to pronouns by negation, as in the contrast between (10.a) and (10.b) [28]. In the case of accessibility of metaphorical interpretation in (9), the "negative" expression (impoliteness) allows the link while politeness blocks it.

(7) a. Please, make yourself at home.
    b. Buzz off, you.
(8) a. That manager/photocopier cradles new hires.
    b. That manager/photocopier vulcanizes new hires.
(9) a. #The new hires were made at home by the photocopier.
    b. The new hires were buzzed off by the photocopier.
(10)a. I own a bicycle. It is green.
    b. I do not own a bicycle. #It is green.

2.9 Impoliteness may be reflexive, but not politeness

While accepting that the primary use of language is within thought, rather than for communication, one must concede that linguistic politeness is one dimension of language use that is quintessentially communicative. Because other agents are not involved in thinking for oneself, as opposed to thinking for speaking,[13] pragmatics principles such as in (11)[14] do not have force.

(11)a. Putting oneself before others is impolite.
    b. Putting others before oneself is polite.

Thus, manifestations of (im)politeness expressions within thought for oneself are surprising. However, the greater curiosity is that private thought appears to asymmetrically favor impoliteness over politeness. I personally can easily enough imagine having thoughts that express negative politeness (12), but I am extremely unlikely to entertain a reflexive thought with positive politeness (13).

(12)Idiot_i, why did I_i let the toast burn?
(13)#Carl_i, please t_i enjoy this toast I_i've made.

2.10 Summary

A number of puzzles of (im)politeness have been indicated. Among these, an asymmetry is evident in which some possibilities are available within the language of impoliteness that lack counterparts among expressions of politeness. In analyzing these puzzles further, it is necessary to have a clear view of the semantics of linguistic forms that may be deployed to achieve (im)politeness effects. Accordingly, a formal semantics has recently been proposed for the analysis of linguistic (im)politeness [44]. The next section (§3) presents the core of this theory, and the section that follows the next (§4) demonstrates to how the semantics makes sense of some the puzzles of (im)politeness behaviors.

---

[13] See [37].
[14] See [44].

3 Semantics of (im)politeness

The theory outlined in this section is developed more extensively elsewhere [44]. This presentation draws upon that account.

3.1 The semantic model

The denotations of linguistic expressions of politeness and impoliteness are events that are constrained by predications of relative offence as experienced by the speaker of those expressions in relation to the participants in the triggering events.[15] Treating such events, which are accompanied by relations among their participants, as the denotation of expressions of (im)politeness allows for semantic and pragmatic analysis to make reference to a shared ontology. Pragmatic inference about an utterance will also make reference to the events that are in the denotation of the utterance.

It is useful to characterize relevant properties of event types as in (14), treating events as particulars which instantiate the type.[16] An event token e of the type $\hat{e}$ makes relevant relations true among arguments and has certain other properties as specified. Events have temporality, tense, aspect, and mode (*realis* or *irrealis*). Any event particular e will fix values for these features, according to the level of granularity with which it is viewed.[17] Events are taken to have proto-agents and proto-patients (see [16]). Syntactic person is used to characterize the fillers of these proto-roles, the event participants. Events have *use* and *cost* for each participant. A three-valued polarity system (with 1 representing positive value, 0 representing neutral value, and -1 representing negative value) may be deployed within simple calculus of use and cost to establish a *net* value. Table 1 provides a possible specification of the combination of values of *use* and *cost* to yield *net* values.

---

[15] See (27) and (28) for characterization of the sets of events denoted by impoliteness and politeness expressions, respectively. The next paragraphs explain the terms used by those characterizations. Taking denotations of expressions to be sets of events may be compared with treatements of modality that analyze propositions as sets of possible worlds [33] or with situation theoretic approaches to meaning that take denotations to be sets of supporting situations [11].

[16] Feature-value matrices provide an effective visual organization of bundles of first-order descriptions. See [29, 10] for details of some feature logics and equations on paths through feature-value structures.

[17] Formal models that enable variable granularity in analysis of events exist [17].
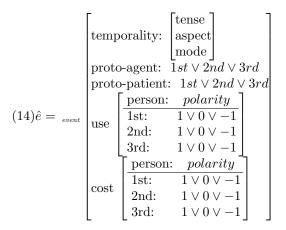
$$(14)\hat{e} = {}_{event} \begin{bmatrix} \text{temporality:} & \begin{bmatrix} \text{tense} \\ \text{aspect} \\ \text{mode} \end{bmatrix} \\ \text{proto-agent:} & 1st \vee 2nd \vee 3rd \\ \text{proto-patient:} & 1st \vee 2nd \vee 3rd \\ \text{use} & \begin{array}{|c|c|} \hline \text{person:} & polarity \\ \hline \text{1st:} & 1 \vee 0 \vee -1 \\ \text{2nd:} & 1 \vee 0 \vee -1 \\ \text{3rd:} & 1 \vee 0 \vee -1 \\ \hline \end{array} \\ \text{cost} & \begin{array}{|c|c|} \hline \text{person:} & polarity \\ \hline \text{1st:} & 1 \vee 0 \vee -1 \\ \text{2nd:} & 1 \vee 0 \vee -1 \\ \text{3rd:} & 1 \vee 0 \vee -1 \\ \hline \end{array} \end{bmatrix}$$

Table 1. A specification of *net* offence/affinity as a function of *use* and *cost*

use \ cost	1	0	-1
1	1	1	0
0	1	0	-1
-1	0	-1	-1

The relative offence ($\hat{o}$) experienced by an agent in response to an event resolves the disjunctions in (15).

$$(15)\hat{o}(e) = {}_{attitude} \begin{bmatrix} \text{before-}e: & \begin{array}{|c|c|} \hline \text{person:} & polarity \\ \hline \text{1st:} & 1 \vee 0 \vee -1 \\ \text{2nd:} & 1 \vee 0 \vee -1 \\ \text{3rd:} & 1 \vee 0 \vee -1 \\ \hline \end{array} \\ \text{during-}e: & \begin{array}{|c|c|} \hline \text{person:} & polarity \\ \hline \text{1st:} & 1 \vee 0 \vee -1 \\ \text{2nd:} & 1 \vee 0 \vee -1 \\ \text{3rd:} & 1 \vee 0 \vee -1 \\ \hline \end{array} \\ \text{after-}e: & \begin{array}{|c|c|} \hline \text{person:} & polarity \\ \hline \text{1st:} & 1 \vee 0 \vee -1 \\ \text{2nd:} & 1 \vee 0 \vee -1 \\ \text{3rd:} & 1 \vee 0 \vee -1 \\ \hline \end{array} \end{bmatrix}$$

The model allows for sequencing of events and varying attitudes as sequences and events within them unfold. In a null context, speakers are assumed to maintain a default evaluation of the participants as in (16), in which by default the speaker has a positive self-evaluation which is equal to the evaluation of all

others.[18] However, a reasonable alternative specification is available according to the temperament being modelled – for example, in (17) the speaker has a positive self-evaluation and lesser evaluations of others, but none are considered negatively.

$$(16)_{\text{attitude}} \begin{bmatrix} \text{person:} & polarity \\ \hline \text{1st:} & /1\,\boxed{\text{i}} \\ \text{2nd:} & /\boxed{\text{i}} \\ \text{3rd:} & /\boxed{\text{i}} \end{bmatrix}$$

$$(17)_{\text{attitude}} \begin{bmatrix} \text{person:} & polarity \\ \hline \text{1st:} & /1 \\ \text{2nd:} & /0 \\ \text{3rd:} & /0 \end{bmatrix}$$

The propensity for triggers of disgust to spread to associates in a contagion is modelled with the sharing of the minimum value of the offence level as in (18).[19] Because this is a worst-case formulation of contagion in which all are deemed contaminated within an event if any are, the principle, even expressed as a conditional, must be understood as dependent on additional parameters not specified here.

(18) Contamination spreads

$$(MIN\{\boxed{\text{j}} \mid \exists\,\boxed{\text{i}}, \hat{o}(e)\text{:after-}e\text{:person:}\boxed{\text{i}}\text{:polarity:}\boxed{\text{j}}\} = -1) \implies$$
$$\forall\,\boxed{\text{k}}, \hat{o}(e)\text{:after-}e\text{:person:}\boxed{\text{k}}\text{:polarity} = -1$$

When extreme values emerge, follow-on reactions by the reflecting agent may be expected, depending on other constraints that are in effect at the time. As appropriate to the levels of offence associated with each participant in an event being commented upon (whether an dialogue event within an ongoing conversation or in the rest of the external world), linguistic behaviors may be anticipated.

3.2   Predictions

Predictions about the behavior of a speaker may be made on the basis of further instantiation of $\hat{o}$ and the $\hat{e}$ on which it depends. Below, θ-polarity refers to the final value within $\hat{o}$ for the corresponding grammatical person or the proto-agent of the triggering event (e). The defaults (19-23) characterize reasonable expectations of how a speaker might intend to react to the event e being spoken about in situations that are marked by divergence from the default evaluation of event participants (16) (cf. [2]).

---

[18] A formal framework for default feature structures is available [34]; the value to the right of the slash is defeasible. Co-indexing encodes value sharing.

[19] This formulation is hopefully more clear than that of [44]; however, this one, too, involves polymorphic notation – here, in that the "=" of the antecedent is a test of equality while the one in the consequent is an assignment.

(19) If 1st-polarity $<$ 2nd-polarity, expect politeness
(20) If 1st-polarity $>$ 2nd-polarity, expect impoliteness
(21) If 1st-polarity $<$ proto-agent(e)-polarity, expect politeness
(22) If 1st-polarity $>$ proto-agent(e)-polarity, expect impoliteness
(23) If 1st-polarity $=$ 2nd-polarity, expect politic behavior.

These principles may yield conflicting expectations. The first (19) is triggered when the speaker has a greater estimation of the person addressed than self-estimation, and an expectation of politeness is licensed. The penultimate principle (22) leads to an expectation of impoliteness that conflicts with the expectation arising from (19) when the speaker's self-estimation exceeds the speaker's estimation of the proto-agent of the event being commented upon, as the latter may be a third-party. The result may be a mixed signal towards deference to the addressee and disdain for the third party. The final principle (23) conveys the default that only marked behavior is appropriate to label polite or impolite, and therefore the expectation for unmarked situations of equal addresser and addressee polarity is merely *politic* behaviour, following the terminology adopted by Watts [46].

It may be useful to entertain additional principles in relation to extreme values, as in (24).

(24) a. If 2nd-polarity < 0, expect impoliteness.
    b. If 2nd-polarity > 0, expect politeness.

However, given tendencies of pejoration in language change [5] there may asymmetrically be evidence for (24.a) as a robust principle but not (24.b). Additionally, the applicability of all these principles may vary with culture, age, gender, personality, context, and so on.[20]

3.3 Interpretation

From (im)polite language corresponding further specification of $\hat{o}$ and $\hat{e}$ may be inferred. Expressions of impoliteness support the inference that the speaker's response to an event e'' is consistent with the conjunction of (25.a) and (25.b). A neutral comment by the speaker supports the inference of (26.a) and (26.b).

(25) a. $\hat{o}(e^{\clubsuit}) =$ $_{attitude}$ $\left[\text{after-}e^{\clubsuit}: \left[\begin{array}{ll} \text{person:} & polarity \\ \hline \text{1st:} & > -1 \\ \text{2nd:} & < 1 \end{array} \right] \right]$

    b. $\hat{o}(e^{\clubsuit})$:after-$e^{\clubsuit}$:person:1st:polarity $>$ $\hat{o}(e^{\clubsuit})$:after-$e^{\clubsuit}$:person:2nd:polarity

(26) a. $\hat{o}(e^{\dagger}) =$ $_{attitude}$ $\left[\text{after-}e^{\dagger}: \left[\begin{array}{ll} \text{person:} & polarity \\ \hline \text{1st:} & 1 \vee 0 \vee -1 \\ \text{2nd:} & 1 \vee 0 \vee -1 \end{array} \right] \right]$

---

[20] On gender, it has been noted that over time a number of words related to women have obtained pejorative connotations with which they did not begin ("hussy" or "wench", for example), but that words related to men have sometimes gained improved connotations (e.g. "knight") [18].

b. $\hat{o}(e^\dagger)$:after-$e^\dagger$:person:1st:polarity $=\hat{o}(e^\dagger)$:after-$e^\dagger$:person:2nd:polarity

More generally, epithets of impoliteness may be taken to denote sets of events in which the speaker's ultimate self-estimation exceeds the speaker's estimation of others (27). In contrast, epithets of politeness express sets of events constrained by the opposed relation (28).

(27)$\lambda e.[\hat{o}(e)$:after-e:person:1st:polarity $> \hat{o}(e)$:after-e:person:2nd:polarity$]$
(28)$\lambda e.[\hat{o}(e)$:after-e:person:1st:polarity $< \hat{o}(e)$:after-e:person:2nd:polarity$]$

These denotations are not assumed to exhaust the meanings of corresponding expressions. The lexical semantics of any two expressions of (im)politeness may separate them further, conveying other vivid associations. However, on the current theory, with respect to (im)politeness, addressing someone as "fool" supports the same inference as addressing the person as "spittle", in terms of the speaker's estimation of the addressee versus the speaker's self-estimation.[21] One may wish to argue further that this is the same meaning contribution provided by acid delivery [15].

4 Puzzles revisited

That the framework provides a theoretical explanation of both general and uniquely linguistic puzzles of (im)politeness demonstrates that the semantic framework offers a useful interface to pragmatics (§2.1). To dismiss the possibility of a theory of linguistic (im)politeness on the basis of the fact that virtually any expression may be used politely or impolitely extends to dismissing all of semantics given that any expression may be used literally, metaphorically or ironically. However, this dismissal seems wrong, since, for example, irony is parasitic on literal meaning. Thus, in the view adopted here, both linguistic and extra-linguistic aspects of (im)politeness may be understood in relation to the perception of agents participating in events. The constraints involved may or may not lead to linguistic articulations. One need not accept all of the postulates in Leech's theory of pragmatics [35] to agree with his view that, "if we approach meaning from a point of view which combines semantics and pragmatics, the result can be a satisfactory explanation..." (p. 7). As pragmatics is about the contextualized use of language, holding, as this semantic theory does, the denotation of (im)politeness expressions to be sets of events (constrained as appropriate to the relevant perception of offence and disgust according to the agents involved) individuates the same locus of reasoning as is employed in pragmatic inferences about language use in context.

The framework posits structure on events additional to the usual descriptive content. These constraints relate, as indicated, to the relative offence-polarity with which various dialog participants and potentially third parties are viewed, and the relative use and cost of events for the agents. One consequence of this

---

[21] A theory which supports infinite graduations of esteem or disgust is not antithetical to the present work, but is not central to the present cause, either.

treatment is that equivalence classes of (im)politeness exist as individuated by those constraints: all of the expressions that yield the same values are effectively synonymous (§2.6) to the extent that they support the same inferences regarding the speaker's estimation of the agents involved in the triggering event. As mentioned above, lexical semantics may supply means of differentiating expressions of (im)politeness, but relative to the inferences directly connected to (im)politeness alone, synonymy obtains.[22] The current treatment of polarity does not provide a direct model of a cyclical politeness spectrum (§2.3).

Semanticists since Reichenbach are accustomed to thinking about distinctions among utterance time, event time, and reference time. It is also necessary to take into account the utterer's stance on events, the use and cost, for themselves and others. Interpretation of communicative actions as polite or impolite constrain the possible stance values. Therefore, the possibility for politeness to be excessive (§2.2) is explained by the determination of inconsistent information between stance values known (or presumed by reasonable default) to be in place and those derived from utterance interpretation. During pragmatic evaluation, the self-contradiction implied by an obsequious utterance fails to earn esteem, just as with other unreliable or manifestly deceptive behaviors.

Using the defaults of interpretation expressed so far, a reflexive thought such as (12) (see §2.9) encodes a self-appraisal along the lines of (29).[23] This is at odds with the defeasible provisions of both of the default interpretation principles (16) and (17). The example involves self-reference at two points in time: the event of burning of the toast and the utterance utterance event. There is also implicit reference to the event preceding the burning of the toast. It is coherent for the speaker to adopt the perspective of superiority of the pre-toast-burning-self over the post-toast-burning-self, thus leading to the expectation of impoliteness. Moreover, if principle (24.a) has force, impoliteness is independently expected for this example. Thus, reflexive impoliteness expressions like (12) are sensible.
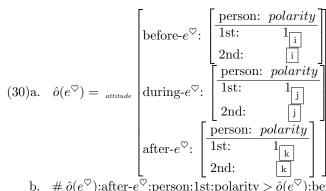
$$(29)\text{a.} \quad \hat{o}(e^{\triangle}) = {}_{attitude} \begin{bmatrix} \text{before-}e^{\triangle}: & \begin{bmatrix} \text{person:} & polarity \\ \hline \text{1st:} & (1 \vee 0)_{\boxed{\text{i}}} \\ \text{2nd:} & \boxed{\text{i}} \end{bmatrix} \\ \text{during-}e^{\triangle}: & \begin{bmatrix} \text{person:} & polarity \\ \hline \text{1st:} & (0 \vee -1)_{\boxed{\text{j}}} \\ \text{2nd:} & \boxed{\text{j}} \end{bmatrix} \\ \text{after-}e^{\triangle}: & \begin{bmatrix} \text{person:} & polarity \\ \hline \text{1st:} & (0 \vee -1)_{\boxed{\text{k}}} \\ \text{2nd:} & \boxed{\text{k}} \end{bmatrix} \end{bmatrix}$$

---

[22] An anonymous reviewer disagrees with some of this, but that is possibly with respect to a version of the theory in which it is claimed that the relevant expressions are fully intersubstitutable and undifferentiable on lexical-semantic grounds. This stronger view is not argued here.

[23] The intended interpretation of the co-indexing (e.g. $\boxed{\text{i}}$) is of structure sharing, including between the resolution of the disjunction in the 1st person value with the second-person value.

b. $\hat{o}(e^{\triangle})$:after-$e^{\triangle}$:person:1st:polarity $<$ $\hat{o}(e^{\triangle})$:before-$e^{\triangle}$:person:1st:polarity

That the contrasting example (13) is less felicitous constitutes possible evidence that the principle of extreme positive values (24.b) does not have force. The infelicity of the reflexive politeness example (13) could be explained by the impossibility of signalling greater esteem than is already conveyed in the default discussed above (16) with respect to the situation being evaluated (30).[24] While at face value both of these expressions ((12) and (13)) are contrary to the prediction of politic behavior with equal first and second person polarity, in the case of the politeness reflexive, unlike the impoliteness example, a differentiation of polarities associated with the co-extensive first and second person roles is more difficult to achieve. The constraint expressed by the explicit language of politeness cannot be satisfied in this formulation (30.b).

$$(30)\text{a.} \quad \hat{o}(e^{\heartsuit}) = {}_{attitude}\left[\begin{array}{l} \text{before-}e^{\heartsuit}: \left[\begin{array}{ll} \text{person:} & polarity \\ \hline \text{1st:} & 1_{\boxed{i}} \\ \text{2nd:} & \boxed{i} \end{array}\right] \\ \text{during-}e^{\heartsuit}: \left[\begin{array}{ll} \text{person:} & polarity \\ \hline \text{1st:} & 1_{\boxed{j}} \\ \text{2nd:} & \boxed{j} \end{array}\right] \\ \text{after-}e^{\heartsuit}: \left[\begin{array}{ll} \text{person:} & polarity \\ \hline \text{1st:} & 1_{\boxed{k}} \\ \text{2nd:} & \boxed{k} \end{array}\right] \end{array}\right]$$

b. $\#$ $\hat{o}(e^{\heartsuit})$:after-$e^{\heartsuit}$:person:1st:polarity $>$ $\hat{o}(e^{\heartsuit})$:before-$e^{\heartsuit}$:person:1st:polarity

Notice that a further contrasting example (31), involving not the language of reflexive politeness, but politic commentary, is not problematic.

(31) I_i am enjoying this fine toast I_i've made.

Thus, self-praise is not predicted to be prohibited on this account, but self-politeness is.

The puzzles of learning (§2.5) and the incompletely Saussurean nature (§2.4) of the language of (im)politeness are both partly explained by the complexity of the calculus involved in using politeness expressions, relative to other most aspects of language use. Cooperative use of definite noun phrases presupposes that the addresser is able make a reasonable calculation of what entities might be shared in a common ground understanding of salient possible references. Even in the use of definite noun phrases, it has been shown that speakers tend to make use of a notion of common ground that is inclined to their own world view rather

---

[24] This would be an explanation in the spirit of the observation within generalized quantifier theory that positive strong determiners as arguments to existential assertions amount to tautologies, thereby accounting for the oddity of non-contrastive and non-demonstrative uses of sentences like "there is the person at the door" (cf. "there is a person at the door") [3].

than to the information available to interlocutors [26], demonstrating that calculations of addressee states are not straightforward. The calculation necessary in the proposed framework is additional to that required by the easily learned aspects of language, and partly accounts for the complexity of learning involved in (im)politeness, sensitive to triggers that are established by convention in the chain of association and to the relative status of interlocutors. While the calculators in Hurford's simulations were the worst performers in competition with Saussureans and imitators in establishing strategies for communicating messages [27], it is open that the calculating strategy may be necessary in optimal packaging of the message.

This discussion has demonstrated some of the successes of the semantic theory of linguistic (im)politeness described here in explaining several of the puzzles of (im)politeness that have been noted.

5   Final remarks

Not all of the puzzles of linguistic (im)politeness are addressed in this article, and there is more to say about each of the puzzles within this framework. However, the semantic theory outlined has been demonstrated to have some traction in explaining a number of the puzzles. It is demonstrated that some aspects of politeness are appropriately treated as linguistic and through formal semantics. The calculation involved in politeness management is too important for it to disregard views of interlocutors and therefore a strictly Saussurean strategy for linguistic packaging may be inappropriate. The fact that politeness expression augmentation can create disgust at a point of excess, rather than managing disgust positively arises through conflicting constraints. Asymmetry in the relative availability of reflexive impoliteness over reflexive politeness is also modelled. The complexity of politeness also makes it no surprise that linguistic politeness learning is at a different pace to language learning, generally.

Theories of (im)politeness have tended to focus on pragmatic theory.[25] The literature on politeness and impoliteness properly accords a major role for context in the evaluation of the experience of (im)politeness [1]. However, appeal to the norms of language use within communities of practice to determine what counts as polite or impolite implicitly relies on the possibility of straightforward semantic interpretation to decode content and levels of politeness (e.g. [39]). Following Goffman's analysis of human interactions in terms of "face" [21, 22], much work has been guided by a view of politeness as "facework" [8]. An alternative view [36, 7, 12] gives priority to relation management more than to agents in themselves, and in this conception, (im)politeness is seen as "relational work". In exceedingly coarse-grained terms associated with networks of communicating agents, the "facework" approaches may be seen as giving primary attention to the nodes (the agents), and the "relational work" approaches may be seen as attending primarily to the links (relations between agents), while the analysis

---
[25] Of course, some others also emphasize that forms of language associated with (im)politeness expressions are open to semantic interpretation [13].

presented here addresses (im)politeness as the management of a fog of offence that might otherwise engulf the whole network of agents and their relations.

The view pursued here is thus not at odds with those prior conceptions, but rather contains a distinct focus. The overarching effort is an attempt to contribute both to explanation of the perception of acts as polite or impolite and to the specification of the ontology required by a formal truth-conditional semantics for linguistic (im)politeness. It is argued that speakers use polite forms in order to avoid invoking disgust and impolite forms when they do not mind disgusting others.[26] Specifying denotations of expressions of (im)politeness as sets of events provides a semantic ontology also presupposed by pragmatic analysis of the phenomena. It is claimed that this approach clarifies some of the puzzles of (im)politeness, but others remain for future analysis.

Acknowledgements

References

1. Allan, K., Burridge, K.: Forbidden Words: Taboo and the Censoring of Language. Cambridge University Press (2006)
2. Altmann, G., Riška, A.: Towards a typology of courtesy in language. Anthropological Linguistics **8**(1), pp. 1–10 (1966). URL http://www.jstor.org/stable/30029136
3. Barwise, J., Cooper, R.: Generalized quantifiers and natural language. Linguistics and Philosophy **4**(2), 159–219 (1981)
4. Bax, M.: An evolutionary take on (im)politeness: Three broad developments in the marking out of socio-proxemic space. In: M. Bax, D.Z. Kádár (eds.) Understanding Historical (Im)Politeness, pp. 251–277. John Benjamins: Amsterdam (2012)
5. Borkowska, P., Kleparski, G.: It befalls words to fall down: Pejoration as a type of semantic change. Studia Anglica Resoviensia **47**(4), 33–50 (2007)
6. Bousfield, D.: Impoliteness in Interaction. Amsterdam: John Benjamins (2008)
7. Bousfield, D., Locher, M. (eds.): Impoliteness in Language: Studies on its Interplay with Power in Theory and Practice. Berlin: Mouton de Gruyter (2008)
8. Brown, P., Levinson, S.: Politeness: Some Universals in Language Usage. Cambridge University Press (1987)

---

[26] Recall fn. 4. It is held in this article that impoliteness forms are expected when the speaker feels greater levels of offence from others than self-offensiveness. Accordingly, if a speaker is disgusted, then one expects impoliteness. However, this is always at the risk of in turn disgusting not just the target of any such impoliteness, but also any witnesses to the communication. Thus, ultimately, impolite forms are used when the triggers of disgust for the speaker are so great that the risks of being deemed disgusting by others are outweighed.

9. Bunt, H., Alexandersson, J., Chae, J.W., Fang, A.C., Hasida, K., Petukhova, O., Popescu-Belis, A., Traum, D.: Iso 24617-2: A semantically-based standard for dialogue act annotation. In: Proceedings LREC 2012 (2012)

10. Carpenter, B.: The Logic of Typed Feature Structures. Cambridge Tracts in Theoretical Computer Science 32, Cambridge: Cambridge University Press (1992)

11. Cohen, A.: No alternative to alternatives. Journal of Semantics **26**(1), 1–48 (2009). DOI 10.1093/jos/ffn005. URL http://jos.oxfordjournals.org/content/26/1/1.abstract

12. Culpeper, J.: Reflections on impoliteness, relational work and power. In: D. Bousfield, M. Locher (eds.) Impoliteness in Language: Studies on its Interplay with Power in Theory and Practice, pp. 17–44. Berlin: Mouton de Gruyter (2008)

13. Culpeper, J.: Impoliteness: Using Language to Cause Offense. Cambridge University Press (2011)

14. Davies, B.L., Haugh, M., Merrison, A.J. (eds.): Situated Politeness. Bloomsbury: London (2011)

15. D'Errico, F., Poggi, I.: Acidity. The hidden face of conflictual and stressful situations. Cognitive Computation (2014). To appear: http://link.springer.com/article/10.1007/s12559-014-9280-1

16. Dowty, D.: Thematic proto-roles and argument selection. Language **67**(3), 547–619 (1991)

17. Fernando, T.: Segmenting temporal intervals for tense and aspect. In: Proceedings of the 13th Meeting on the Mathematics of Language, pp. 30–40. Association for Computational Linguistics (2013)

18. Fitch, W.T.: An invisible hand. Nature **449**, 665–667 (2007)

19. Gärdenfors, P.: Conceptual Spaces: The Geometry of Thought. Cambridge: MIT Press (2000)

20. Gleason, J.B., Perlmann, R., Greif, E.: What's the magic word: Learning language through politeness routines. Discourse Processes **7**(4), 493–502 (1984)

21. Goffman, E.: The Presentation of Self in Everyday Life. New York: Doubleday (1956)

22. Goffman, E.: On face-work. In: Interaction Ritual: Essays in Face-to-Face Behavior, pp. 5–45. New Brunswick, NJ: Transaction Publishers (1967). Reprinted 2008

23. Gold, E.M.: Language identification in the limit. Information and Control **16**, 447–74 (1967)

24. Greif, E.B., Gleason, J.B.: Hi, thanks, and goodbye: More routine information. Language in Society **9**(2), 159–166 (1980)

25. Healey, P., Vogel, C.: A situation theoretic model of dialogue. In: K. Jokinen (ed.) Pragmatics in Dialogue Management, vol. 71, pp. 61–79. Gothenburg Papers in Theoretical Linguistics (1994). Proceedings of the Special Session within the XIVth Scandanavian Conference of Linguistics and VIIIth Conference of Nordic Linguistics. August 16-21, 1993

26. Horton, W.S., Keysar, B.: When do speakers take into account common ground? Cognition **59**, 91–117 (1996)

27. Hurford, J.: Biological evolution of the saussurean sign as a component of the language acquisition device. Lingua **77**, 187–222 (1989)

28. Kamp, H., Reyle, U.: From Discourse to Logic. Kluwer (1993)

29. Kasper, R., Rounds, W.: A logical semantics for feature structures. In: Proceedings of the 24th Annual Meeting of the Association for Computational Linguistics, pp. 257–266. Columbia University, New York, NY (1986)

30. Van Kleef, G.A., Homan, A., Finkenauer, C., Gündemir, S., Stamkou, E.: Breaking the rules to rise to power: How norm violators gain power in the eyes of others. Social Psychological & Personality Science **2**(5), 500–507 (2011)

31. Kolnai, A.: Disgust. In: B. Smith, C. Korsmeyer (eds.) On Disgust, pp. 29–91. Open Court Press: Chicago (2004 (1929)). Translated by Elisabeth Gombrich, Elizabeth Kolnai and Barry Smith

32. Kolnai, A.: The standard modes of aversion: Fear, disgust and hatred. In: B. Smith, C. Korsmeyer (eds.) On Disgust, pp. 93–108. Open Court Press: Chicago (2004 (1929)). Translated by Elisabeth Gombrich, Elizabeth Kolnai and Barry Smith

33. Kratzer, A.: The notional category of modality. In: J. Eikmeyer, H. Rieser (eds.) Words, Worlds and Contexts, pp. 38–74. Berlin (1981)

34. Lascarides, A., Briscoe, T., Asher, N., Copestake, A.: Order independent and persistent typed default unification. Linguistics and Philosophy **19**(1), 1–89 (1996)

35. Leech, G.N.: Principles of Pragmatics. Longman: London (1983)

36. Locher, M., Watts, R.: Relational work and impoliteness: Negotiating norms of linguistic behaviour. In: D. Bousfield, M. Locher (eds.) Impoliteness in Language: Studies on its Interplay with Power in Theory and Practice, pp. 77–99. Berlin: Mouton de Gruyter (2008)

37. MacNeill, D.: Growth points cross linguistically. In: J. Nuyts, E. Pederson (eds.) Language and Conceptualization, Language, Culture & Cognition, pp. 190–212. Cambridge University Press (1997)

38. Moxey, L.M., Sanford, A.J.: Communicating Quantities: A Psychological Perspective. Lawrence Erlbaum (1993)

39. Schnurr, S., Marra, M., Holmes, J.: Impoliteness as a means of contesting power relations in the workplace. In: D. Bousfield, M. Locher (eds.) Impoliteness in Language: Studies on its Interplay with Power in Theory and Practice, pp. 211–229. Berlin: Mouton de Gruyter (2008)

40. Tic Douloureux, P.R.N.: A note on one's privates. In: A. Zwicky, P.H. Salus, R.I. Binnick, A.L. Vanek (eds.) Studies out in Left Field: Defamatory Essays Presented to James D. McCawley, pp. 45–51. John Benjamins: Philadephia (1992). Originally published in 1971

41. Vallduví, E., Engdahl, E.: The linguistic realization of information packaging. Linguistics **34**(3), 459–519 (1996)

42. Van Genabith, J.: Metaphor, logic and type theory. Metaphor and Symbol **16**(1 & 2), 43–57 (2001)

43. Vogel, C.: Dynamic semantics for metaphor. Metaphor and Symbol **16**(1 & 2), 59–74 (2001)

44. Vogel, C.: Denoting offence. Cognitive Computation (2014). To appear: http://link.springer.com/article/10.1007/s12559-014-9289-5

45. Vogel, C.: Intended and unintended offence. In: S. Bassis, A. Esposito, F.C. Morabito (eds.) Recent Advances of Neural Network Models and Applications, Smart Innovation, Systems and Technologies Volume 26, pp. 395–404. Springer International Publishing (2014)

46. Watts, R.J.: Politeness. Cambridge University Press (2003)