



## Analyzing the relationship between the English impersonal appearance construction and framed clause deicticity: a quantitative study

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## Abstract

This paper deals with the English impersonal appearance construction (*it seems/appears*) and its relationship with the propositions over which it scopes. Attention focuses on four aspects: the presence/absence of explicit personalization via circumstantial element *to me*; the use of conjunctive, comparative or elided binder; the modal/temporal deicticity of the framed proposition; and the instantiation of these features across written and spoken modes of communication. These features are considered on account of prior studies assigning semantic correlates to their occurrence on the basis of qualitative analysis. The study applies log-linear analysis, a statistical technique that allows exploration of associations between two or more categorical variables, to test the degree of association between the four aspects mentioned. Three significant effects are included in the final model: a three-way interaction between mode of communication, binder choice and personalization, and two two-way associations between personalization and framed clause deicticity, and between binder choice and framed clause deicticity. The identified associations are discussed in the light of relevant literature and qualitative findings. The paper ends with concluding remarks and critical reflections on the use of log-linear analysis for the study of linguistic variation.

**Keywords:** appearance construction; log-linear analysis; modal assessment; subjectivity.

## 1. Introduction

Interpersonal meaning generates prosodic structures whose elements reinforce one another across group/phrase and clause boundaries (Halliday, 1970). Co-selection and co-restriction between certain elements in interpersonal structure is strongly grammaticized, as in the ordering of Subject and Finite in the realization of English speech functions. Other elements do not display paradigmatic co-selections or co-restrictions, but tend to collocate with specific elements in clause structure. Tucker (2001), for example, draws attention to the tendency of modal Adjunct “possibly” to occur in clauses with temporal Finite, noting its distinctive contribution as epistemic modifier of temporal realis propositions and challenging the apparent synonymy of Adjunct-modified clauses with modal clauses. The balancing-out of assessment values in ‘evaluative harmonies’ within and beyond the clause has also been noted in Martin and White (2005) and Hood (2010), who observe that positively loaded evaluations resonate with one another in recognizable discourse patterns. A special type of interpersonal prosodic structure is the one involving extra-clausal modal assessment, as in interpersonal metaphors of modality (Halliday, 1985, 1994; Taverniers, 2008, 2014). Modality metaphors enable explicit subjective and objective orientations of assessment and increase the delicacy of semantic differentiations for the enactment of certainty (Halliday & Matthiessen, 2014: 699). In theory, modality metaphors can assess any clause regardless of its deicticity type and the presence/absence of modal Adjuncts. However, exploration of the functional collocation of modality metaphors may reveal unsuspected associations that can illuminate their distinctive semantic contribution.

Modality metaphors based on mental projection have received extensive discussion in linguistics literature, the consensus being that they constitute explicitly subjective probability assessments (e.g.: Halliday, 1985; Aijmer, 1997). This paper deals with the ‘impersonal appearance’ construction (*it seems/appears that*) and its role in the assessment of propositions and proposals via evidentiality and modalization (epistemic modality). This construction is traditionally not considered within the realm of interpersonal grammatical metaphor in SFL literature. Halliday and Matthiessen (2014: 539) list it among impersonal projections of the mental type without explicitly indicating the nature of the assessment they enact. Taverniers (2014) considers the impersonal appearance construction in her grammaticalization continuum of interpersonal metaphors, placing it in a paradigm with *it appears to me*, *it’s apparent* and *apparently* and indicating its nature as a near-subjective construction. The metaphoricality of the construction can be probed by applying relevant linguistic tests, including tagging, double negation and rewriting as elaboration nexus (see examples 1, 2 and 3 below) (Halliday, 1985, 1994; Taverniers, 2008). However, as the tagging test in example 1 suggests, it is also possible for the construction to react grammatically as an experiential element, which shows that the appearance process may retain its experiential perceptual meaning in certain linguistic contexts. In semantics, typology and grammaticalization research, the impersonal appearance construction has been addressed among other appearance constructions, including phasal

verbal predicates (reality phase) and attributive appearance clauses (Chafe, 1986; Mithun, 1986; Gisborne & Holmes, 2007; Aijmer, 2009; Usonienė & Šinkūnienė, 2010). In this body of research, the English impersonal appearance construction is associated with hearsay evidentiality, subjectivity and intersubjectivity, probability, hedging and perception.

- (1) It seems commodity prices have increased since the implementation of trade tariffs, haven't they?/doesn't it?
- (2) It doesn't seem commodity prices have increased since the implementation of trade tariffs = It seems commodity prices haven't increased since the implementation of trade tariffs.
- (3) ?Commodity prices have increased since the implementation of trade tariffs, which seems.

Two features that have drawn researchers' attention concern the variability of the binding device with which the construction is attached to the framed proposition (including conjunctive binder *that*; comparative binders such as *like* and *as if*; and binder omission), and the presence/absence of personalization. The first feature has motivated a differential classification of the construction depending on the binder type employed. Aijmer (2009) considers the *that*-binder variant separately from the comparative binder variants (*it seems as if/like*), associating the latter with hedging, irreality and appearance. Gisborne and Holmes (2007) also group these variants separately as SEEM/APPEAR 4 (*that*-binder) and SEEM/APPEAR 5 (comparative binder), linking the *that*-binder variant with propositional evaluation. Like other matrix clause constructions, such as *I think* and *they say*, the impersonal appearance construction accepts binder omission (also known as 'zero complementizer', e.g. Elsness, 1984). Binder omission has motivated a variety of studies seeking to probe the extent to which it is semantically motivated and associated to grammaticalization processes (Elsness, 1984; Thompson & Mulac, 1991; Aijmer, 1997; Kearns, 2007). Among possible underlying mechanisms in binder elision are counted thematic complexity, syntactic reanalysis, stylistic variation and informational density loss. Elsness (1984) notes that binder elision is especially frequent in cases involving short simple thematic structures and suggests that it indicates a closer juncture between the matrix clause and the framed clause. Thompson and Mulac (1991) link binder elision with syntactic reanalysis in the grammaticalization of 'epistemic phrases', a position criticized in Aijmer (1997), who believes it to be a stylistic choice. While *that*-binding is most frequent in written registers (Finegan & Biber, 1995), it is likely to be motivated by underlying factors having to do with the information structure of the clause (cf. Kearns, 2007). In the case of the impersonal appearance construction, binder elision could index its loss of informational prominence with respect to the framed proposition and thus be a textual indicator of metaphoricity.

Personalization of the impersonal appearance construction, typically achieved by the use of circumstances of angle (*it seems/appears to me*), is interpreted by Aijmer (2009) as constitut-

ing a separate construction with a distinct semantic profile involving subjective certainty, but not evidentiality. She classifies *it seems to me* as a 'subjectifier' (cf. Nuyts, 2001) which assesses propositions based on information he/she exclusively possesses and is therefore a source of authority. The assumption is that only in cases of explicit personalization is it possible to speak of the impersonal appearance construction as encoding subjectivity, lack thereof indicating intersubjectivity (information source enacted as possessed by a community of speakers). However, it can be argued that explicit personalization is not a necessary condition for subjectivity in this construction due to the inherent subjectivity of appearance processes. As Barron (1997) indicates, appearance verbs such as 'seem' refer, by default, to the speaker's viewpoint, unless otherwise specified. Subjectivity may thus be more widely conceived, following Langacker (1991), as the extent to which the construction presupposes the speakers' viewpoint, whether or not the speaker features explicitly in it. In the case of the impersonal appearance construction, contexts in which the speaker is reasoning deductively from evidence denote subjectivity (example 4), whereas contexts in which the construction is used to introduce hearsay evidence are intersubjective (example 5). Personalization of appearance constructions is thus not a pre-condition for their subjectivity, but a marked foregrounding of the speaker as a subjective agent.

- (4) A superior design of this study may be drawn up using a more in-depth questionnaire consisting of more questions and more ways of assessing the investigated characteristics. Alternative methods of research that do not involve self evaluation could be used. A few examples are observational methods, interviews involving participants' family or friends and also task based experiments. Ultimately, **it seems that** generalisations about characteristics that left-handers possess cannot be made. Therefore, there is no reason to encourage left-handers towards certain fields of career or to expect increased productivity by delegating tasks according to handedness. (BAWE)
- (5) The perception of dirt within England to this day at least, is one of varying degrees of distain. The mere presence of it within our homes be it, mud from a shoe on a once pristinely white carpet or something less obvious such as a sock on the kitchen table often leaves the observer with feelings of anguish at its inappropriate positioning. Quite often, **it seems that** dirt can be allied with things associated with the outside world being brought in doors, in this common case the indoors is subsequently polluted as a result of the offending object. (BAWE)
- (6) Sorry! I just wanna go back to the issue of transparency, and there's this idea that sponsorship is very transparent, so you know exactly what the goals are, what the objectives are # not necessarily on both parties, but especially biased for the sponsor, mm and **it seems to me that** just because it tra- #it's transparent, i.e. the limitations are explicit, doesn't kind of justify them really, because sometimes if you do accept into a sponsorship you are incredibly limited. (MICASE)

While binder choice and personalization are both used to classify appearance construction variants and are held to denote semantic implications, the relationship between these variables has not been explored, which suggests that they occur independently from one another.

er. There are reasons, however, to suspect that they can have a degree of association. Regarding context and, specifically, mode of communication, it is possible for the binder choices associated to spoken registers to associate more strongly with personalization, adopting the general postulate that explicitly subjective modality is more frequent in spoken discourse (e.g. Biber et al., 1999). Additionally, following Elsness (1984), it can be assumed that personalization associates negatively with the zero binder variant because it enlarges the distance between the matrix clause and the framed proposition.

Another issue deserving attention is the extent to which the impersonal appearance construction associates with the interpersonal structure of the framed proposition. While the grammatical potential exists for the construction to assess any clause type, certain interpersonal aspects of the framed clause may show prehension and complementarity with the construction or some of its variants. The relationship between the semantics of the framed clause and appearance constructions has been noted in previous studies. Woodbury (1986) associates the primary tense of the framed clause with the nature of the evidential assessment encoded by perceptual verbs. He offers support for the hypothesis that, “when the time reference of an evidential category is different from that of the proposition in which it occurs, the resulting evidential value will be non-experiential” (1986: 195). In her study of the phasal *seem* construction (*seems to* + verb), Usonienė (2000) associates the experiential concreteness of the right-side elements of construction with the extent to which the clause has an evaluative, perceptual or epistemic modal meaning.

In this study, the relationship investigated is that between the impersonal appearance construction and the deicticity of the Finite element of the framed proposition. The theoretical justification for this focus comes from Tavernier’s (2008, 2014) notion of “double grounding” and “double scoping”. According to Taverniers, a special feature of interpersonal metaphor is its provision of a secondary grounding to the framed proposition, complementary to the primary grounding offered by its Finite element. Taverniers borrows the term “grounding” from Langacker (1991) in order to stress the fact that the temporal and modal deictic elements bring the proposition down to earth, that is, they make it arguable with respect to the speaker’s here-and-now perspective. As a metaphorical modal construction, the impersonal appearance construction constitutes a secondary grounding of the proposition, which elaborates on and nuances the interpersonal meaning of the Finite element. In exploring the relationship between these elements, it is possible to comprehend the ways in which this complementarity functions and, specifically, whether particular types of framed clause deicticity are more strongly associated with it.

In sum, the focus of this paper is on exploring the degree of association existing between binder choice and personalization of the impersonal appearance construction and the modal/temporal deicticity of the framed proposition. Additionally, the degree to which these features are associated to the written vs. spoken distinction is also examined with a view

to determining the extent to which variation in these features is situationally motivated. In doing so, this paper builds on and extends the existing body of literature on appearance constructions by exploring the implicit association between its formal features and the framed proposition, offering additional tools for refining interpretations of their semantic nature. In a more general sense, this paper contributes to the understanding of interpersonal metaphoricality as a broader phenomenon by considering the yet unexplored relationship between a modal construction and its framed proposition. The methodological approach employed in this inquiry is quantitative in order to bring out significant underlying associations that may escape the bare eye. This approach is justified in the methodology section and, subsequently, relevant findings are presented and discussed. The paper finishes by presenting general conclusions and implications.

## 2. Methodology

Studies of appearance constructions in English and other languages have relied on a variety of methodological approaches, including introspection (Cornillie, 2007), contrastive translation (Aijmer, 1997, 2009; Usonienė, 2000) and experimentation (Sanders & Spooren, 1996). The general focus has been on the identification and validation of the semantic correlates of each appearance construction, with little attention being paid to their functional collocation with framed proposition elements. The nature of the issues explored in this paper calls for a quantitative approach that can adequately capture statistically significant associations, that is, those in which strong evidence exists of a pairing motivated other than by random co-occurrence. This paper utilizes log-linear analysis as an approach to testing the association between one contextual variable (mode of communication), two grammatical aspects of the impersonal appearance construction (personalization and binder choice) and one aspect of the framed proposition (deicticity). As discussed above, there are theoretical reasons to assume a degree of correlation between these variables: personalization, as an overt marking of subjectivity, would balance the subjective grounding of framed clause deicticity and motivate binder use (rather than binder elision), and the three variables would be sensitive to the written vs. spoken distinction. These theoretical assumptions require empirical validation and a more nuanced description of the associations, if any, between the discussed variables.

Log-linear analysis is an appropriate data analysis choice in this study, since it allows comprehension of associations between two or more categorical variables (thus extending the analytical power of chi-square statistics, which can only test associations between two variables). Log-linear analysis assigns the same status to all the variables under study, assuming independence between them. Through backward elimination of candidate models based on goodness of fit and parsimony criteria, log-linear analysis enables researchers to select the most parsimonious model that best fits the observed data, based on the logarithmic calculus of observed vs. expected frequencies. Developed throughout the 20th century and imple-

mented in social science since the 1970's, log-linear analysis is specially suitable in addressing some common research problems in linguistics and discourse studies, including the relation between contextual variables and grammatical variables and the collocation between structural elements (Rietveld & Van Hout, 1993; Paolillo, 2002).

Despite its usability, this statistical technique has been scarcely employed in linguistic research. In sociolinguistics, it has been applied in modelling the factors involved in dialectal and sociolectal variation, including age, sex, social class and occupation (Girard & Larmouth, 1988). It has also been applied in first language acquisition research, as in Li (2002), who studies the association between Chinese aspect marker use (M), semantic verb class (V) and children's age (A), finding an association between aspect marker use and age ( $\{AV\}$ ) and between semantic verb class and aspect marker use ( $\{AM\}$ ). Log-linear analysis has also proved useful in modelling the dynamic unfolding of linguistic resources in spoken interaction. Gnisci and Bakerman (2007) apply log-linear techniques for the dynamic modelling of lawyer-witness interaction, considering the variables of turn-taking, turn length and content of previous turn. Their analysis shows that lawyers can constrain the length and content of witnesses' responses in courtroom discourse. By applying log-linear analysis to a dataset of conceptual metaphor use in psychotherapist-patient interaction, Tay (2017) identifies three-way interactions between therapy phase, metaphor function and the participant using the metaphor; and between therapy phase, metaphor function and metaphor target.

An interesting study from the standpoint of the present paper is De Haan & Van Hout (1986). The authors use log-linear analysis to model the relationship between the length (L), position (P) and function (F) of post-modifying clauses and the text type in which they occur (T) (fiction or non-fiction), identifying as significant effects PLT, FLT, PFT and PFL. The present paper resembles De Haan and Hout's study in that it also involves one contextual variable and three grammatical variables intervening in the English impersonal appearance construction, as specified below:

- Mode: written or spoken
- Personalization: impersonal (*it seems*), personalized (*it seems to me*)
- Binder: *that*-binder (*it seems that*), comparative binder (*it seems like/as if*), zero binder
- (Framed clause) mood: temporal (present, past, future), modal (high, medium, low)

The variables meet the mutual independence criterion in that there is no co-restriction between the above grammatical features. The observations are circumscribed to the clause/ clause complex rank and are extracted from different texts (thus avoiding discursive/cohesive interdependence). Sample size was determined following the  $n \times n \times 5$  rule of log-linear analysis. A minimum sample size of 420 instances ( $2 \times 2 \times 3 \times 7 \times 5$ ) was established as sufficient to explore correlation between the specified variables. A total of 540 instances were manually

extracted from the BYU Corpus and LAMAL corpora interfaces. To ensure adequate sample representativeness, sampling was based on findings from a pilot corpus study that investigated the use of the impersonal appearance construction across written and spoken registers of modern English. The corpora consulted were the Corpus of Contemporary American English (COCA) (Davies, 2008), the Corpus of Global Web registers (GlowBe) (Davies, 2013), the TV corpus (Davies, 2019), the British Academic Written English corpus (BAWE) (Gardner & Nesi, 2013), the British Academic Spoken English corpus (BASE) (Thompson & Nesi, 2001) and the Michigan Corpus of Academic Spoken English (MICASE) (Simpson et al., 2002). Stratified random sampling was performed according to the proportion of instances across the corpora consulted, as illustrated in table 1:

**TABLE 1**

Stratified random sampling of the impersonal appearance construction across corpora

CORPUS	MODE	INSTANCES (NORMALIZED TO 1.000.000 TOKENS)	%	SAMPLED
COCA (Academic)	Written	59.8	9.66	53
BAWE	Written	83.54	13.55	73
GLOWBE	Written	112,1	17.81	98
BASE	Spoken	54.15	8.75	47
MICASE	Spoken	110.34	17.83	96
TV corpus	Spoken	198,74	32.11	173

Sampled instances were pasted onto spreadsheets and manually annotated for the variables above mentioned. The mode of communication, binder and personalization variables are self-evident and thus do not require validation (although they were subjected to verification to avoid erroneous miss-classification). The framed clause Mood (deicticity) variable requires more analytical effort, although the features to consider are well defined and unequivocal for the trained analyst. The Mood variable considers temporal and modal deicticity. In the former subcategory, the language feature to consider is primary tense: in the clauses *they **have** arrived*, *we **had** eaten* and *it **will** have gone*, primary tense is present, past and future respectively. More complex tense specifications beyond primary tense lie outside the theoretical notion of finiteness and are thus excluded from analysis. In modal deicticity, the values included correspond to the traditional division of modals according to modal value: high (must, have to), medium (may, can) and low (might, could). Lexical expressions of probability/possibility were also analyzed as medium-value modality (e.g. *it's likely/probable/possible*). Cohen's Kappa for intra-rater reliability of the Mood variable is 0.799, indicating high analytical consistency.

The resulting dataset was processed through the log-linear model selection function of the SPSS statistical software (IBM Corp., 2017), which automatically carries out a backward elimination procedure to determine the best fitting model for the data. After performing log-linear regression, chi-square statistics were applied to the associations bearing statistical significance in order to assess strength of association and to determine the values contributing significantly to the variation.

### 3. Findings and discussion

Table 2 shows the backward elimination process leading to the best fitting model for the data under consideration. The selected model includes a three-way interaction (Mode \* Binder \* Personalization) and two two-way associations (Personalization \* Mood, and Binder \* Mood). This interaction and the associations are analyzed through chi-square statistics in the remainder of this section. The likelihood ratio for the model is  $\chi^2$  (48): 55.663,  $p$ : .209.

**TABLE 2**

Step summary of backward elimination

STEP SUMMARY						
STEP <sup>a</sup>		EFFECTS	CHI-SQUARE <sup>c</sup>	DF	SIG.	NUMBER OF ITERATIONS
0	Generating Class <sup>b</sup>	MODE*BINDER*PERSONALIZATION*MOOD	.000	0	.	
	Deleted Effect	1 MODE*BINDER*PERSONALIZATION*MOOD	5.594	12	.935	4
1	Generating Class <sup>b</sup>	MODE*BINDER*PERSONALIZATION, MODE*BINDER*MOOD, MODE*PERSONALIZATION*MOOD, BINDER*PERSONALIZATION*MOOD	5.594	12	.935	
	Deleted Effect	1 MODE*BINDER*PERSONALIZATION	9.127	2	.010	4
		2 MODE*BINDER*MOOD	18.481	12	.102	4
		3 MODE*PERSONALIZATION*MOOD	10.210	6	.116	4
		4 BINDER*PERSONALIZATION*MOOD	19.920	12	.069	4
2	Generating Class <sup>b</sup>	MODE*BINDER*PERSONALIZATION, MODE*BINDER*MOOD, BINDER*PERSONALIZATION*MOOD	15.805	18	.606	
	Deleted Effect	1 MODE*BINDER*PERSONALIZATION	7.377	2	.025	4
		2 MODE*BINDER*MOOD	19.233	12	.083	3
		3 BINDER*PERSONALIZATION*MOOD	18.915	12	.091	4

	Generating Class <sup>b</sup>		MODE*BINDER*PERSONALIZATION, MODE*BINDER*MOOD, PERSONALIZATION*MOOD	34.719	30	.253	
3	Deleted Effect	1	MODE*BINDER*PERSONALIZATION	7.572	2	.023	4
		2	MODE*BINDER*MOOD	19.374	12	.080	4
		3	PERSONALIZATION*MOOD	31.965	6	.000	2
	Generating Class <sup>b</sup>		MODE*BINDER*PERSONALIZATION, PERSONALIZATION*MOOD, MODE*MOOD, BINDER*MOOD	54.093	42	.100	
4	Deleted Effect	1	MODE*BINDER*PERSONALIZATION	10.085	2	.006	4
		2	PERSONALIZATION*MOOD	35.197	6	.000	4
		3	MODE*MOOD	1.570	6	.955	3
		4	BINDER*MOOD	24.606	12	.017	3
	Generating Class <sup>b</sup>		MODE*BINDER*PERSONALIZATION, PERSONALIZATION*MOOD, BINDER*MOOD	55.663	48	.209	
5	Deleted Effect	1	MODE*BINDER*PERSONALIZATION	10.131	2	.006	4
		2	PERSONALIZATION*MOOD	35.777	6	.000	2
		3	BINDER*MOOD	25.859	12	.011	2
6	Generating Class <sup>b</sup>		MODE*BINDER*PERSONALIZATION, PERSONALIZATION*MOOD, BINDER*MOOD	55.663	48	.209	
a. At each step, the effect with the largest significance level for the Likelihood Ratio Change is deleted, provided the significance level is larger than .050.							
b. Statistics are displayed for the best model at each step after step 0.							
c. For 'Deleted Effect', this is the change in the Chi-Square after the effect is deleted from the model.							

### 3.1. Mode of communication, binder and personalization

Table 3 shows the cross-tabulation of binder and personalization choices across the written and spoken modes, together with relevant statistics. There is significant interaction between the mode of communication, binder choice and personalization ( $p: 0.034$ ). However, the association is only significant in spoken English (Cramer's  $V: 0.243$ ), where the conjunctive *that*-binder shows far more personalization than statistically expected, and the comparative binder variant shows significantly less personalization than expected.

Frequent co-occurrence of the conjunctive binder and personalization may link with Elsness' (1984) "style", "weight distribution" and "closeness to clause juncture" factors. Conjunctive binder use frequency would thus increase in more formal speech situations and in clausal junctures with higher thematic complexity, and decrease in more informal speech with less complex thematic structure. These factors would explain the observed distribu-

**TABLE 3**

Cross-tabulation of BINDER and PERSONALIZATION across the levels of MODE

BINDER * PERSONALIZATION * MODE CROSS-TABULATION						
MODE			PERSONALIZATION		TOTAL	
			IMPERSONAL	PERSONALIZED		
Spoken	That-binder	Count	65	23	$\chi^2 (2, N = 325) = 19.267$ p: .000 Cramer's V = .243	
		Expected Count	74.5	13.5		
		Std. Residual	-1.1	2.6		
	BINDER	Comp. binder	Count	102	4	
			Expected Count	89.7	16.3	
			Std. Residual	1.3	-3.0	
	No binder	Count	108	23		
		Expected Count	110.8	20.2		
		Std. Residual	-.3	.6		
	Total	Count	275	50		
		Expected Count	275.0	50.0		
	Written	That-binder	Count	110	10	$\chi^2 (2, N = 222) = 2.131$ p: 0.345 Cramer's V = .048
Expected Count			108.6	11.4		
Std. Residual			.1	-.4		
BINDER		Comp. binder	Count	12	3	
			Expected Count	13.6	1.4	
			Std. Residual	-.4	1.3	
No binder		Count	79	8		
		Expected Count	78.8	8.2		
		Std. Residual	.0	-.1		
Total		Count	201	21		
		Expected Count	201.0	21.0		

tion of personalization across the conjunctive and zero binder variants, considering the fact that sampling included both academic and non-academic English corpora. Manual data inspection, however, shows that both binder choices co-occur with personalization in informal and academic contexts, and with propositions of variable thematic structure complexity (examples 7-10).

- (7) **Written non-academic:** As a white woman married to a black man, it seems to me the more the white devil pats the black man on the head like a dog and gives him approval, the black man forgets his people and the black backs they stepped on to get them where they are. (GLOWBE)
- (8) **Written academic:** For this reason, it seems to me that the empirical analysis of the impact of CB independence on economic performance should be considered an interesting insight to the problem but not, in general, conclusive. (COCA)
- (9) **Spoken academic:** So I think Labrousse is a very... is a wonderful example, it seems to me, of the way... the type of history which Braudel is is asking for. (BASE)
- (10) **Spoken non-academic:** It seems to me that a unified party will get a lot more work done and go a long way towards healing our nation and the world. (TV)

Kearns' (2007) information density loss hypothesis appears more fitting to the observed data, although not in her formulation that binder omission signals the status of the proposition as the main predication. The impersonal appearance construction, as argued in the theoretical preliminaries, invariably constitutes an assessment of the main proposition, especially when personalized. Information density loss, in this context, applies to cases in which the framed proposition is a rhetorically prominent contribution (e.g. it introduces a proposal or it is evaluatively loaded). Binder omission in these cases iconically shortens the distance between the proposition and the personalized variant as an overt subjectivity marker. In some cases, binder omission is accompanied by parenthetical extraposition, which foregrounds the overt subjective marker as News within the proposition (example 9). Conjunctive binder use, in turn, would be favoured in cases involving more rhetorically or evaluatively neutral propositions with a less marked informational contrast with the construction. This proposed explanation would relate to the notion of evaluative prosodies in propositional semantics, indicating how speakers exploit the interplay between textual and interpersonal structures to index relevance and attitude.

The comparative binder variant, the second most frequent one in the analyzed data, is not only impersonal in most instances, but it also displays far less personalization than (statistically) expected (Std. residual: -3.0). This finding would support the view that the comparative binder variant is qualitatively different from the conjunctive binder variant (Gisborne & Holmes, 2007; Rooryck, 1997). In particular, Gisborne and Holmes' suggestion that the comparative binder variant is more clearly evaluative seems to match the observed rate of personalization. Under the structural principle that interpersonal elements balance one another to create prosodic harmony (Halliday, 1970), it is plausible to assume that significant lack of personalization in the comparative variant is partly motivated by its inherent evaluative meaning. Speakers might thus avoid personalization in the interest of preventing thematic saturation of evaluative and subjective meanings.

### 3.2. Personalization and Mood

Table 4 shows the cross-tabulation of framed clause Mood across the impersonal and personalized construction categories. The association between these variables is highly significant ( $p: .000$ ), especially concerning the distribution of the personalized variant across temporal modal deicticity values. This relationship is theoretically interesting in that it suggests a balancing-out of interpersonal values between the construction and the framed proposition, and, thus, the interaction of these elements as prosodic structure. It appears that impersonality is the unmarked choice for propositions grounded closer to the speaker's here-and-now perspective, either in ongoing present experience or in past experience. Personalization, on the other hand, is more likely to occur in propositions removed from the here-and-now perspective and grounded on prediction or probabilistic modal assessment. Personalization, as discussed in the theoretical preliminaries, represents an overt marking of subjectivity, and its co-occurrence with future tense and modal deicticity suggests that it functions as a compensatory strategy in the assessment of propositions for which the speakers have no evidence other than conjecture. In other words, personalization would be more at risk in cases the speaker has less access to ongoing or past experience as a source of information. This formulation would apply to the two outer extremes of modality, that is, low and high certainty; but medium-value modality appears to lack a strong association with personalization.

**TABLE 4**

Cross-tabulation of MOOD across the levels of PERSONALIZATION

		PERSONALIZATION * MOOD CROSS-TABULATION							
PERSONALIZATION		MOOD						STATISTICS	
		PRESENT	PAST	FUTURE	MODAL LOW	MODAL- MEDIUM	MODAL- HIGH		MODULATION
Impersonal	Count	310	77	14	14	34	2	25	$\chi^2 (6, N = 547) = 41.194$ $p: .000$ Cramer's $V = .274$
	Expected Count	299.3	69.6	19.1	19.1	35.7	3.5	29.6	
	Std. Residual	.6	.9	-1.2	-1.2	-.3	-.8	-.8	
Personalized	Count	34	3	8	8	7	2	9	
	Expected Count	44.7	10.4	2.9	2.9	5.3	.5	4.4	
	Std. Residual	-1.6	-2.3	3.0	3.0	.7	2.1	2.2	

Modulation also co-occurs with personalization more frequently than (statistically) expected. Modulation refers to the assessment of propositions in terms of possibility or ability, and to

the assessment of proposals in degrees of obligation or desirability. In the latter case, personalization can boost the force of the proposal by foregrounding speakers' subjectivity and authority, an effect comparable to comment Adjuncts "as I see it" or "in my opinion". This usage in conjunction with modal deicticity constitutes a mood metaphor in which a proposal occurs as if it were an indicative clause, softening the modal responsibility assigned to the addressee (Halliday & Matthiessen, 2014: 706). Consider example 11 below:

- (11) For this reason, **it seems to me that** the empirical analysis of the impact of CB independence on economic performance **should** be considered an interesting insight to the problem but not, in general, conclusive.

In example 11, the framed proposal is grounded on the interpersonal "me and you" space between speakers and addressees, and it places modal responsibility on addressees' discretion to comply. The first assessment layer propositionalizes the request by grounding it modally, presenting it as if it were an offer of information. The modulated proposition is inherently subjective (it is grounded on the speaker's subjectivity). The impersonal appearance construction constitutes an additional layer whose role is to make the orientation of the modality explicit, highlighting the speaker's role as initiator of the request. The personalized variant highlights subjectivity further, amplifying the idiosyncratic nature of the framed proposal.

### 3.3. Binder and Mood

Table 5 shows numeric values and statistics for the cross-tabulation of binder across Mood categories, these variables showing significant association ( $p: 0.027$ ) according to the log-linear model in table 2. This association is surprising from a theoretical standpoint in that clause deicticity has not been considered as a factor affecting binder choice in prior studies (Elsness, 1984; Kearns, 2007; Tagliamonte & Smith, 2005). In general, for most deicticity choices, the ratio of observed vs. expected instances falls within a normal statistical range: conjunctive and zero binder are the two most frequent binder choices for temporal and modal Finites. Past tense deicticity, however, shows two associations beyond the expected statistical range: one negative association with comparative binder and one positive association with binder elision. This finding may resonate with the previous discussion of the interaction between mode, binder and personalization and of the association between Mood and personalization. The former indicated a negative association between comparative binder and personalization; and the latter, a negative association between past tense and personalization. The negative association between past tense and comparative binder completes this triad, strengthening the hypothesis that past tense favors lesser subjectivity in the impersonal appearance construction. The positive association between past and the no binder variant, on the other hand, is less easily interpretable from a theoretical perspective. Elsness' (1984) hypothetical factors for binder omission refer to the thematic structure of the proposition, and Kearns'

(2007) information density loss seems less fitting as an explanation in that past tense deicticity, in itself, does not foreground the proposition evaluatively.

**TABLE 5**

Cross-tabulation of MOOD across the levels of BINDER

		BINDER * MOOD CROSS-TABULATION						TOTAL	
		MOOD							
		PRESENT	PAST	FUTURE	MODAL LOW	MODAL- MEDIUM	MODAL- HIGH	MODULATION	
That- binder	Count	122	29	11	8	18	3	17	X <sup>2</sup> (12, N = 547) = 23.128 p: 0.027 Cramer's V = .145
	Expected Count	130.8	30.4	8.4	8.4	15.6	1.5	12.9	
	Std. Residual	-.8	-.3	.9	-.1	.6	1.2	1.1	
BINDER Comp. binder	Count	86	8	2	8	11	0	6	
	Expected Count	76.1	17.7	4.9	4.9	9.1	.9	7.5	
	Std. Residual	1.1	-2.3	-1.3	1.4	.6	-.9	-.6	
No binder	Count	136	43	9	6	12	1	11	
	Expected Count	137.1	31.9	8.8	8.8	16.3	1.6	13.6	
	Std. Residual	-.1	2.0	.1	-.9	-1.1	-.5	-.7	

The semantic nature of past tense may be partially responsible for the association. Past tense grounds the proposition with respect to non-immediate internalized experience, drawing on speakers' ability to recall reality (rather than to perceive ongoing reality or 'project' experience onto unrealized events) (Langacker, 1991). Like the rest of temporal deictic choices, past tense deicticity implies a realis condition—an implication that the proposition is real and factual. The factuality of a past tense clause lies in the speaker's subjective assessment of non-immediate experience as a truthful fact. Along these lines, pairing of a past tense clause with the impersonal appearance construction enacts the assessment explicitly by suggesting an inferential link between present states-of-affairs and past events. In doing so, speakers re-position the realis condition of the past tense proposition vis-à-vis what is warranted by immediate reality, e.g. by what is apparent or inferable. This mechanism differs subtly from the re-positioning implied by modal auxiliaries and cognitive projection-based modality metaphors, which ground the clause vis-à-vis the range of possible/probable events. Example 12 illustrates this point:

- (12) There is no sign that the Dacians grew food up here. There are no cultivated fields. Instead archaeologists have found the remains of dense clusters of workshops and houses, along with furnaces for refining iron ore, tons of iron hunks ready for working, and dozens of anvils. **It seems the city was a center of metal production**, supplying other Dacians with weapons and tools in exchange for gold and grain. # The site is lush and quiet.

The speaker in the excerpt frames the proposition “the city was a center of metal production” within the range of interpretations warranted by immediate reality (dense clusters of workshops, furnaces for refining iron ore, iron hunks, dozens of anvils). The speaker may have used temporal grounding (e.g. The city was a center of metal production), thus implying univocal correspondence between immediate reality and the proposition: the presence of furnaces, iron hunks and anvils can only indicate the status of the city as a metal production center. However, the fact that the proposition constitutes an inference based on available evidence places the factuality status of the proposition as contestable or (partially) negotiable. The speaker may as well have grounded the proposition probabilistically (e.g. The city must/may/might have been a center of metal production), which implies a remove from immediate reality into the domain of what the speaker knows to be valid under comparable circumstances; as Langacker (1991) argues, a probability involves projection of internalized experience onto perceived/imagined events. Probabilistic grounding enacts the assessment as being founded on knowledge of what is valid under comparable circumstances. The epistemic grounding presupposed by the impersonal appearance construction implies no remove from immediate reality (immediacy referring to what the speaker constructs as the present state-of-affairs, not to objective spatiotemporal proximity), thus its negative association with subjectivity. Binder omission may, additionally, act as an iconic shortening of semiotic distance between the construction and the past tense proposition, indicating access to more reliable evidential sources (this would also explain why binder omission is more frequent in present tense, but relatively infrequent in future and modal deicticity).

#### 4. Concluding remarks

This study has explored the extent to which prosodic association exists between the English impersonal appearance construction and the deicticity of the framed proposition. The findings reported above motivate the conclusion that such an association does exist, particularly concerning the relationship between mode of communication, binder and personalization; between personalization and (framed clause) mood, and between mood and binder choice. The study thus extends the empirical base for the hypothesis that the meaning of the impersonal appearance construction is affected by the presence/absence of personalization and by the binder type chosen (Gisborne & Holmes, 2007; Aijmer, 2009).

The study has additionally suggested that these aspects of the construction interact prosodically with the deicticity of the framed proposition by creating prosodic harmony and balancing-out subjectivity. This finding resonates with Halliday and Matthiessen's (2014: 699) claim that modal assessments, and, in particular, modal metaphorical assessment, refine the delicacy of semantic differentiations available to speakers for assessing propositions and expressing subjectivity. In particular, the impersonal appearance construction can act as an alternative locus of subjectivity for the framed proposition and as an evidential enactment of its reliability. Taverniers' (2014) notion of "double grounding" and "double scoping" is thus nicely illustrated by this construction, since it re-positions the temporally/modally grounded proposition within the subjective space of speaker's evidential/modal assessment.

The mechanisms underlying binder choice are less clearly inferable from the analysis. There does not seem to be an identifiable reason for why speakers use conjunctive binder, comparative binder or zero binder in the construction. The proposal advanced concerning the higher likelihood of binder omission in evaluatively loaded propositions is only supported by manual revision of instances, and other contextual and discursive factors are bound to play a role in this enigmatic variation (cf. Elsness, 1984).

Quantitative methods such as log-linear analysis can aid the analyst in isolating association and interaction patterns hidden from the bare eye. While the study of linguistic phenomena in very large corpora represents an empirical milestone in the field, the incorporation of statistical techniques such as log-linear analysis can amplify the reach of analytical endeavors by revealing unsuspected relations between categories. These techniques are not without limitations, however. Log-linear analysis, for example, requires a high proportion of category pairings to contain instances, a condition that cannot obtain in certain grammatical analyses (e.g. there cannot be pairing of probability-type modality and imperative mood). The assumption of mutual independence between categories and instances is also problematic when extending analysis beyond the clause (a log-linear analysis of cohesive strategies in discourse would be unfeasible). Finally, it is possible for the analyst to inadvertently build biases into log-linear models from the sampling criteria: this study, for example, sampled instances based on the written vs. spoken distinction, which forces mode of communication to be a significant variable (when it may, in fact, have little or no significance). This technique thus needs to be part of a larger toolkit of approaches to the study of linguistic variation.

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