

The medium is still the message: Canadian federal
politicians' gestural stance markers of credibility and opinion

By

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Abstract

This thesis is about gestural/textual stances of Canadian federal politicians – how and what two speakers/gesturers convey about their political messaging in 2019 before the Federal election. In particular the focus of this thesis was to understand their stances as their spoken utterances are marked by co-verbal manual and non-manual gestures. In short, the aim of this study was to collect and analyze their gestures. The central relationships under study were:

1. What are the gestures that are used most often to reflect a speaker's stance; &
2. Is there a unique contribution of gestural stance markers to overall stance in the composite utterance, and if so, how much?

Once the manual gestures were coded and organized, they were interpreted as they co-occurred with text. Additionally, stance marking was developed into a coding checklist of stance and non-stance marking of non-manual gestures based on findings in the gesture literature.

I found that gestures with finger combinations tended to display speakers' opinion-based stances more than signify points (BEATS) in their discourse involving their convincing/credibility-based stances. Second, basic hand orientation of palm-based gestures revealed an inverse relationship between the two speakers. This pattern emerged in two of the four basic orientations: Palm lateral and palm vertical. For Pierre Poilievre (hereafter 'P'), gestures with a palm facing laterally or vertically tended to be used twice as often for stances conveying his credibility than for conveying his opinion. On the contrary, the same hand gestures with the lateral or vertical hand orientation conveyed Elizabeth May's (hereafter 'M') opinion twice as often as they did for expressing her credibility. Additionally, I found that non-manual gestures such as smiles, shrugs, eyebrow raises, posture shifts, lean-ins, head-tilts, head shakes, and the division of gesture space all supported both speakers'/gesturers' use of multiple viewpoints to convey their stances.

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Dedication

I dedicate this thesis to Yuliya, for your constant support.

3.

4.

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Chapter 1: Introduction

This thesis is about stances of a couple of Canadian federal politicians – how and what the two speakers/gesturers convey about their political messaging. In particular the focus of this thesis is to understand their stances as their spoken utterances are marked by co-verbal manual and non-manual gestures. My interest in researching this topic are threefold: first, I was very interested to know more about how a speaker/gesturer can convey their attitude and-all to what they are saying in the visual-manual modality, at times doing so simultaneously – via textual content and gesture, in addition to textual content and prosody and yet at times ‘saying’ different things in each respective modality; second, my previous background with signed language and sign linguistics researchers has opened up and expanded the intrigue and curiosity; third, the status of gesture in stance at the time of beginning my literature review appeared to me to be quite extensively and well researched and at the same time quite compartmentalized. This final reason provided a rationale for my interest to kindle and for previous background to become foreground. Before outlining the main chapters of this work, here I’d like to extend my gratitude to my advisor for his insightful and supportive words, “Bring what you know AND be open to what you might find. And follow the data.” Thank-you.

The thesis opens with a literature review of stance as it has been studied in its many incarnations – textual, phrasal, prosodic, and gestural. This chapter ends with some gesture studies references that positions gestural stance marking to be followed up in the conclusion concerning the role of multiple viewpoints in discourse. Chapter three is next and outlines the data and methods.

The data for this study involve federal political leaders in the context of the lead up to the Federal campaign of 2019. The methods involve several overlapping approaches such as a form-based manual gesture coding system (Bressem, Ladewig & Müller 2013), used to compile recurrent and recombinant gestural hand parameters. Another coding system is described which highlights a stance-act labeling system (Freeman 2019) in addition to the coding system used for labeling discourse management gestures (Wehling 2017). Additionally, details regarding forced-alignment are discussed and steps to assess the textual content and prosodic contribution of stance is outlined. This is followed by chapter 4: the results and analysis.

In the results and analysis chapter, I first cover hand gestures that were most prevalent in the data. Also the relationship each speaker had to these recurrent gestures is outlined. Then stance act label results for both participants are introduced and then they are analyzed. For two unexpected results, an exploratory semantic and pragmatic (Bednarek 2009) analysis is covered to better explain the results. The last part of the analysis covers the integration of manual and non-manual gestures as they relate to speaker/gesturer stance. Finally, Chapter 5 concludes the work and offers directions for future research.

Chapter 2 – Stance acts: definitions and contexts

2.1 Introduction

In the following chapter I define and describe stance including the contexts in which stance has been studied. I start with a broad definition as outlined by Dubois (2007). Then I introduce stance as it is to be analyzed within Enfield's (2009) construct of composite utterances. A short review will follow, looking at contributions of textual (Biber & Finegan 1989; Thompson 2000; Kärkäinen 2012), and prosodic markers of stance (Freeman, Wright & Levow 2015; Freeman 2015, 2019). Then I highlight the stance-marking contributions involving gesture which inform the focus of this study (McClave 2000; Poggi 2003; Streeck 2009; Ladewig 2011; Debras & Cienki 2012; Debras 2015; 2017; Rice & Hinnell 2015; Hinnell & Rice 2016; Kendon 2004; Müller 2010, 2014, 2017; Ruusuvuori & Peräkylä 2009; Gerwing & Allison 2009; Calbris 2011; Guilbeault 2017; Dancigyer & Vandelanotte 2017; Feyaerts, Öben, Lackner & Papousek 2017; Janzen 2019; van Krieken & Sanders 2019). The unique contribution and collaborative nature of gesture conveying stance is then discussed.

2.2 Position, evaluate, and align

Stance has been described as an act that creates for a given perspective three kinds of consequences, at once: "...I evaluate something, and thereby position myself, and thereby align with you" (Du Bois 2007: 163). Stance can be defined broadly: "Stance is a public act by a social actor, achieved dialogically through overt communicative means, of simultaneously evaluating objects, positioning subjects (self and others), and aligning with other subjects, with respect to any salient dimension of the socio-cultural field" (Du Bois 2007: 163). For the present study, stance will be defined and analyzed in the context of Enfield's (2009) linguistic conceptualization of composite utterances. A composite utterance is defined as "a communicative move that incorporates multiple signs of multiple types" (Enfield 2009: 15). What is simplifying about a composite utterance is that it can be understood as a single phenomenon: "signs co-occurring with other signs, acquiring unified meaning through being interpreted as co-relevant parts of a single whole" (Enfield 2009: 7). Additionally, a composite utterance has the capacity to hold gesture and prosody as contributing aspects to a stance. Thus,

stance demonstrated via gesture is “...visible action as utterance,” (Kendon 2004) and “[P]rosody is “...the stress, intonation, and rhythm of speech” (Loehr 2014).

The perspective taker who takes a stance is also referred to as the stance-taker, and what a stance-taker does in dialogue, is of much interest to the fields of gesture studies, cognitive linguistics, and linguistics more broadly. The stance-taker simultaneously evaluates some topic in focus for its role in discourse. Then the stance-taker positions him- or herself with respect to the topic at hand, and then aligns or disaligns with other speakers... or aligns or disaligns with one's previous-, present- or future-, future-projection (Du Bois 2007). In the following examples, you can see role of the evaluation, position or alignment:

(1) (talking about a photo collage on the wall)

TERRY: It is COOL.

ABBY: it i=s cool.

MAUREEN: it i=s great (Thompson 2002: 132; 11)

Terry's utterance could be considered as evaluative, and less of the other two stance qualities (positioning or aligning). Abby and Maureen's utterances could be imagined to align with the Terry's utterance, but perhaps the evaluative feature of Abby and Maureen's serves to align or possibly extend the evaluative position taken initially by Terry. In so doing the second and third stance-takers accentuate their 'position' over their evaluation, and alignment. Probably, a stance-taker gives signals to their audience, not only how they feel about a topic, think about a topic, and how they know about a topic, but whether they align or disalign to the topic programme or, like in this example, demonstrate a stronger position.

To look deeply at a stance-taker, it is necessary to hold two domains in the balance, measuring stance by audio data only, as it's marked in the composite utterance/prosody sub-domain, as well as the visuo-manual sub-domain, as it's marked in co-verbal gestures.

2.3 Textual stance marking

To begin, the lexical nature of stance has been studied primarily focusing on textual patterns. This occurs whereby a speaker uses a lexical structure which points to a particular stance with respect to a discourse proposition (Gray & Biber 2014). A good entry point into this work is Biber and Finegan's *Styles of Stance in English* (1989). Stance was defined as “...the

lexical and grammatical expression of attitudes, feelings, judgments, or commitment concerning the propositional content of a message (Biber & Finegan, 1989: 93) Here stance was measured in adverbial stance marking as well as adjectival, verbal, and modal forms.

These four forms were divided into 12 categories, based on semantic and grammatical criteria: six affect groups (positive and negative values in adjectives, adverbs, and verbs were grouped together because affect markers occurred very infrequently in their data.

1. Affect markers:

Adverbs: (positive) happily, luckily; (negative) alarmingly, sadly);

Verbs: (positive) I ENJOY, it really PLEASES me that; (negative) I dread, it embarrasses me that; &

Adjectives: (positive) I feel FORTUNATE, it is AMAZING that... (negative) I am SHOCKED, it seems UNNATURAL that

2. Certainty adverbs (indeed, w/out doubt)

3. Certainty verbs (I CONCLUDE, This DEMONSTRATES that)

4. Certainty adjectives (impossible, obvious)

5. Doubt adverbs (perhaps, supposedly)

6. Doubt verbs (I ASSUME, this INDICATES that)

7. Doubt adjectives (alleged, uncertain)

8. Hedges (at about, maybe, sort of)

9. Emphatics (for sure; really; so + ADJ)

10. Possibility modals (might, could)

11. Necessity modals (ought, should)

12. Predictive modals (will, shall)

(Biber & Finegan 1989)

This study on textual stance markers found in the London-Oslo-Bergen (LOB) and the London-Lund corpora (of written and spoken British English), Biber and Finegan (1989) note two striking observations: 1) 65% of their 500 texts have no stance markers whatsoever, leading them to label these examples as ‘faceless texts;’ 2) clusters of examples seem to be both semantically and grammatically organized: one such cluster marked by its grammatical character, is marked primarily by frequent use of adverbials and secondly, by the use of verbs, with no semantic distinction being drawn between doubt and certainty. “These texts show an extreme marking of general evidentiality (both certainty and doubt) for emphasis and to create a general sense of involvement (Biber & Finegan 1989: 110).

(2) OBVIOUSLY his solicitors... are SORT OF chivvyng

(3) we’re JUST SORT OF ... left in the lurch as much as they are REALLY

(Biber & Finegan 1989: 110; a. & b.)

This interesting note about ‘general evidentiality’ and a lack of clear distinction between doubt and certainty perhaps explains a heightened interest in prosody when considering a broader measure of stance markers in the area of discourse. In other studies, textual and prosodic features were accounted for, when determining stance act types (Freeman 2015). This is because prosody can be used by speakers not only to enhance or diminish, but also to reverse the meaning of the text compared to when it’s considered on its own (Freeman 2019). This helps explain Biber and Finegan’s (1989) second finding that verbs mark stance, irrespective of the semantic distinction between doubt and certainty. Before turning to stance studied in text and prosody, and then gesture, I will first turn to phrasal aspects of stance.

2.4 Phrasal stance marking

Kärkäinen (2012) looks at epistemic phrase “I thought” with the associated utterance making up a conversational format. In the study, the conversational formats are used for taking an affective, and epistemic, or an evaluative stance. The study demonstrated that utterances involving *I thought* are formulaic and routine. Explicit evaluative or epistemic stances may follow:

I thought, in the form of

- [*I thought*] + [it/that] + [was] + [(intensifier)] + [evaluative item] or
- [*I thought*] + [(epistemic adverb)] + [X] + [was].

I thought was also shown to be followed by an affective stance, like:

- [I thought] + [interjection/exclamation] + stance utterance/telling].

Finally, epistemic state may be demonstrated within an utterance as in:

- [I thought] + [past predication]. (Kärkäinen 2012: 2203)

Similar findings about stance markers in matrix clauses come from Thompson's (2002) work on "object complements" and conversation. She writes, "The data suggest a different analysis for the great majority of what have been analyzed as complement constructions, involving "epistemic/evidential/evaluative fragments" (Thompson 2002:125). These three functions of fragments comprise her definition of stance and she outlines how they fall into stance formulas below. Thompson (2002: 141) defines stance as "providing epistemic, evidential, or evaluative framing for the utterances they go with."

- I think/I don't think/ I thought/I didn't think
- I guess
- I remember/I can't remember/I don't remember
- I know/I knew/ I don't know/I didn't know (Thompson 2002:139: Table 3)

Out of her study, Thompson (2002) suggests thinking of these "fragments" encompassing turn construction practices, as implements of different actions. Another interesting conclusion she draws is that these fragments can occur in their own prosodic phrase and can be analyzed as mono-clausal utterances:

(4) L; ... this is=,

... pepsin,

I think,

.. **I'm not sure.**

(Thompson 2002:144:31)

Additionally, the phrasal interpretation is not difficult to be understood in the text as illustrated by the other participants and perhaps preliminary evidence that formulaic phrasal stance markers can be used as an independent fragment, as shown in the example above. As a final note, Thompson (2002: 136) proposes reanalyzing what have previously been considered as "utterances involving apparent complements are not bi-clausal constructions with matrix assertive predicates and their clausal complements but are rather best seen as mono-clausal

utterances.” Now what must be considered is how prosody can augment or even reverse the valence of a phrasal stance marker (Freeman 2019).

2.5 Text and Prosody:

Freeman, Levow, Wright, and Ostendorf (2015) assume that prosody plays a role in stance-related discourse functions, stance-strength, and polarity. They defined stance in a broad view used in conversation-analytic in addition to discourse- approaches. They defined stance along the lines of Biber, Johansson, Leech, Conrad & Finegan (1999) as, “personal feelings, attitudes, value judgments, or assessments”, and also from Du Bois (2007) as the social activity of stances taken, synonymously called evaluation. The first study to be considered here comparing different stances with variation in prosody was on prosodic characteristics of many tokens of the type ‘yeah’ (Freeman, Levow, & Wright 2015). This study investigated the prosody of negative ‘yeah’- lexically positive words that express negative stance - in dyads matched by age and matched/crossed gender. In their content analysis, negative ‘*yeahs*’ were examined for stance function including the following: “yeah but” (followed by explanation against preceding stance; “reluctance” (hesitation to accept or agree with preceding stance); “tough problem” (expresses shared difficulty); and “that’s bad” (states agreement with a negative assessment without the empathy implied in “tough problem” e.g. “you’re right, that’s bad.” For the token ‘yeah’ – 2300 instances were found in 34 dyadic conversations between strangers in the American Northwest. ‘*Yeah*’ was found to signify many differences, through intensity, contour and duration cues (Freeman et al. 2015). Although it was predicted that vowel duration, intensity, or pitch patterns were associated with fine-grained differences between stance-act types, pitch did not have significant predictive power (Freeman, et al. 2015), though duration and intensity did. Then Freeman (2019) designed study tasks to elicit Du Bois’ (2007) three kinds of stance function: evaluation, position, and alignment. Freeman (2019:7)) included many overt types of stance that are studied separately and lumped them into one label: opinion-offering included the following stance-taking types: evaluation and evaluative description, appraisal, judgment, appreciation, affect,/affective stance, assessment, subjectivity, intersubjectivity, positioning, alignment, attitude/attitudinal stance, recommendation, persuasion, modality, modulation, and prediction. This can be summarized as “offer opinion or suggestion” (Freeman 2019: 7). The six most common stance-acts were the following: offering opinion/suggestion, minimal stance (often not

acts), convincing/reasoning, agreement, offer + solicit, and softening/hesitation. One interesting finding of the Freeman et al. (2015) study was that prosody in combination with textual content may convey the opposite meaning compared to the textual meaning when textual meaning is taken on its own. An obvious example of this would be when a stance act type of “agreement” becomes a stance act type of “disagreement” when a speaker changes their prosodic characteristics to convey a sarcastic tone in, “I agree, absolutely” (Freeman 2015: 14), which when considering the prosodic characteristics means the opposite of agreement, disagreement, or at least a reluctance to agree. This demonstrates that perlocutionary language like stance can be represented and marked by changes in prosodic characteristics. For that reason, stance in the follow-up study by Freeman (2019) was measured as a gestalt comprised of textual-content and prosody, looking at duration, fundamental frequency (f0), and intensity as correlates to ratings of stance in textual + prosodic content. In the same follow up study certain stance types were signalled by differing vowel durations and intensities (Freeman 2019: 3). The stance-act types were *agreement*, *opinion-offering*, *convincing/credibility*, *reluctance to accept a stance*, and *back-channels* and the nuances between them as measured by duration, (f0) and intensity are as follows: f0 and intensity increased with stance strength, longer vowel duration signaled positive polarity, and a combination of measures distinguished several stance acts: general agreement, weak positive agreement, rapport building, reluctance to accept a stance, stance-softening, backchannels. f0 and intensity were most associated with differences in stance strength and type: Both increased with stance strength, and they helped distinguish several stance-act types. Reluctance to accept and strongly-expressive intonation had very high f0, backchannels very low f0, and (also had sharply-dropping intensity), and lower overall agreement low dipping (f0) also had sharply-dropping intensity. Stance-softening/hesitation showed lowest intensity and rapport building agreement showed highest intensity. While most of these also had longer vowels, vowel duration did not reliably differentiate them. While positive polarity showed longer vowel duration, individual differences between speakers may cloud the use of duration in signaling polarity. Finally, weak-positive agreement stood out with the longest vowels and lowest f0 and intensity. These results demonstrate that prosody in addition to textual-content can account for a larger and more detailed distribution of stance marking in conversational data.

2.6 Gestural stance marking:

Recently, gesture studies using political discourse data have been a rich source for insight into the nature of what people do with their manual and non-manual gestures to support their perspectives. One area of this gestural research involves a construct called viewpoint. Guilbeault (2017: 417) defines viewpoint as, "...someone's ideology or opinions," and he shows that viewpoint begins with the body, in addition to a gesturer's lexical choices (Dancigyer 2012). For example, it has been shown that gestures contribute a simultaneous expression of speaker viewpoint alongside speech, highlighting how language may be inherently multimodal (Guilbeault 2017: 417). Viewpoint research supports this where viewpoint not only "...is communicated through individual grammatical and lexical choices in speech, where personal opinions as well as sensory experiences feature critically in the expression of perspective" (Guilbeault 2017: 419), but is also expressed through the body. "The body is the source of emotions, which underlie desires, goals, evaluative judgments, and moral reasoning –all core features of personal perspective (Guilbeault 2017: 420). Perhaps why gestures lend themselves well to their study within political discourse is because gestures are the visible part of language, and communicating within the political arena requires one to communicate in the public eye. English speakers/gesturers use conventional gestural expressions that show that they are often spatially aware in how language is used to communicate forcefully in physical space. To illustrate this, Wehling (2017: 252) gives the examples of conventionalized and embodied gestures such as the meaning of a raised index finger to signal, "I'd like to speak," or a head nod back-channeling to signal agreement or for an interlocutor to continue speaking. In the context of political discourse, these kinds of co-verbal and back-channeling gestures have been demonstrated to have other pragmatic functions (Kendon 2004; Müller 2004; Calbris & Copple 2011; Müller 2017). Exerting one's stance is a good example of that. A study on the overlap of facial and verbal expressions conveys an intertwined role of face and utterance as it relates to stance (Ruusuvuori & Peräkylä 2009). A gesture can extend temporally beyond the end of a verbal utterance, which serves a stance function. Temporal flexibility entails that a gesture can extend temporally beyond the end of a verbal utterance to signal that speaker/gesturer's stance and/or to signal what an appropriate stance should follow, such as a laugh to signal agreement. Specifically, it was found that facial expressions do not necessarily end with a verbal utterance

ends, but instead the facial expression, in addition to a manual gesture may stretch past the end of a verbal utterance (Ruusuvuori & Peräkylä 2009) to do harmonize interlocutors' stances. This evidence suggests that the role of facial gesture post-verbal utterance is to secure shared understanding and affiliation; a characteristic necessary to assert stance. Additional studies have shown how pragmatic meaning is conveyed in "*How recurrent gestures mean*" (Müller 2013) with a *sweeping away* gesture, *holding away* gesture, *throwing away* gesture, *brushing away* gesture among others. Below, Gerwing and Meredith's (2009) analysis of three coding systems of gestural contribution of meaning found that simultaneous co-verbal gesture allow a speaker/gesturer's communicative message to be dense and more complete when gesture is included. They also show that gestures tend to supply more semantic characteristics in face-to-face conversations than telephone conversations which mean that speaker/gesturers adapt to the communicative setting. Therefore, speaker/gesturers in face-to-face dialogue tend to disseminate their message across modalities, a multi-modal fashion.

Gerwing and Meredith (2009: 314-317) compare three methods of coding for gestures and their concurrent words. Regarding their analysis, each of the three methods displayed a variable picture of the complementary synchrony between gesture and speech.

They reviewed the following three methods:

1. An analysis of deictic expressions referring to gestures, (i.e. the kitchen is *here*)
2. An analysis of the redundancy between information presented in words vs. in gestures,
&
3. An analysis of the semantic features represented in words and gestures.

What they found was that the deictic analysis naturally and substantially underestimated validity of other non-deictic gestures, and therefore demonstrated that its analysis was not adequate as a general measure of general gestural markers. Gerwing and Meredith (2009: 319) use the following example to explain this further: "...none of the three gesture-speech units in Example 1 was accompanied by a deictic expression; however, without these gestures, the speakers' utterance was clearly semantically incomplete." Interestingly, the redundancy analysis predicted correctly that 97% of gestures studied conveyed information not present in the words. It was predictable because the nature of the task highlighted visual-spatial elements (reasoning and spatially-focused discussion) of the discourse and the authors suggest a direction of future research could be to compare the redundancy analysis to other kinds of gestures (Gerwing &

Allison 2009). For the last analysis focusing on the semantic feature model, the semantic feature analysis conveyed more directions for future analysis through its more complete and complex picture. Gerwing & Allison (2009: 324) demonstrated “...individual gestures in face-to-face dialogues were more “dense” with information, conveying significantly more categories of information at once than the gestures in the telephone dialogues did.” For that reason, their prediction support the hypothesis that gestures belong as a main category of meaning making that participate in emergent grammar. They predicted that the qualitative features of gesture are more nuanced and well worth close analysis. For that reason, it’s necessary to become familiar with the gestural “primitives” that have been a hallmark to research into signed languages. I will now address these gestural primitives.

Starting with Stokoe (1960), four hand-shapes have been described to encompass a majority of sign language signs (fist, flat hand, combination of fingers, and single finger). This description lends its focus to the description of American Sign Language (ASL). From insights into signed language, interest has grown and has invited the possibility of witnessing a similar parameter constellation comprising manual gestures in spoken language, specifically looking at recurrent gestures. Recurrent gestures are good candidates of gestural markers indicating stance because of their meta-communicative functions operating on speech (Müller 2014: 1587). I will now turn to defining recurrent gestures and highlighting their pragmatic function.

Recurrent gestures are co-speech gestures that have a consistent form-meaning pairing within a gesture and speech community (Ladewig 2011; Müller 2010). They are conventionalized gestural expressions meaning that there is a basic form in addition to a prototypical meaning. This is true for gesturers for a given speech-gesture community and also for individuals within that community (Müller 2017). Recurrent gestures are hybrids of idiosyncratic and conventional elements and so unlike emblems which are gestures that typically express a full-speech phrase, recurrent gestures serve a function as a meta-communicative device, modifying or mediating speech (Müller 2017: 280). They are grounded experientially in contexts-of-use. Additionally, recurrent gestures when used remain grounded in conventionalized, yet still embodied, experiential frames (Müller 2017). What this means is recurrent gestures can be considered body and limb movements stemming from one’s personal life experience. Furthermore, Müller (2017) found that in certain contexts the same gestural form was used referentially and in others with a pragmatic function. Examples of recurring

gestural forms are many. They include *Palm-Up-Open-Hand* (Kendon 2004), the *Cyclic* gesture, (Ladewig 2011), and the *Palm-Away-Open-Hand* (Müller 2017). Common to all of the recurrent gesture forms, they include a basic form. The basic form involves a shared Gestalt that typically includes two or more features or parameters (i.e. hand-shape feature and parameter of orientation). This basic form does not vary across contexts. Additionally, a given recurrent form involves a conventionalized general prototypical meaning (Kendon, 2004). For example, the cyclic gesture involves movement of rotating hands, a cycling movement from the wrist. The cyclic gesture meaning is typically associated with expressing duration, continuity, as well as general processes. More broadly, recurrent gestures have a hand-shape feature (fist, flat hand, single fingers, or a combination of fingers) and another parameter such as orientation (palm up, palm down, palm lateral, palm vertical) Additional parameters may co-occur to be included in the recurrent gesture, or they may elaborate the meaning of the recurrent gesture to mark a novel meaning, like in an instance of stance. A system of annotation has been developed around these recurrent gestures (Bressem, Ladewig, & Müller 2013) and work began earlier than this in the study (Bressem 2007) outlined below.

The aim of Bressem's (2007) study was twofold: description of parameter use, and count distribution and clusters of gestural form features. Three hypotheses were conducted over 623 co-verbal gestures. This 623-gesture data-set contained the four parameters of hand shapes, orientations, positions and movements of German speakers recorded having natural conversations. Secondly, co-verbal gestures were organized into distributions around these four parameters. The third recorded pattern was based on frequency detection of co-occurrences of co-occurring parameters (Bressem 2007). Among several results that were reported, perhaps most notable was about hand-shape co-occurrences with other parameters. Forms which frequently co-occurred with hand shapes were somewhat restricted showing that only a few types of orientations, movements, and positions co-occurred (Bressem 2007: 23). Furthermore, certain hand shapes in addition to their co-occurrence with particular recurrent gestural forms, also displayed agreement across hand shapes about which other gestural forms they may co-occur with. Beyond the analysis of the form features agreement across hand shapes, the amount of clusters documented varied immensely, for the four recurrent hand shapes (Bressem 2007: 25). Such a study of co-speech gestures with an analysis irrespective of speech, showed the use, distribution, co-occurrence and cluster of gestural form features in four German speakers. This

type of form-based study lends itself well to be adapted for English speakers undertaken in the present study since the results revealed both systematic patterns and immense variability when coding gestures without also coding the spoken utterance at the same time. If such a tool can capture systematic patterns of co-verbal gestures and form features independent of speech, then it is reasonable to assume that using such a form-based coding system can capture systematic gestural pattern making in other languages like in the present study of stance-markers in English. This was especially useful to obtain tabulations of hand shapes and other form features, especially when comparing and integrating other body articulators. Many articulators such as hand, body, and head gestures have been shown to articulate stance in gesture studies (McClave 2000; Poggi 2003; Streeck 2009; Debras & Cienki 2012; Debras 2013; Rice & Hinnell 2015; Hinnell & Rice 2016). Such articulators that convey stance include beats and points (Ruth-Hirrel & Wilcox 2018), proximal and distal deictics (Dancigyer 2019), shrugging (Debras 2017), head tilts (Debras 2012), embodied marking (Rice & Hinnell 2016), viewpoint (Dancigyer & Vandelanotte 2017; Feyaerts, Öben, Lackner & Papousek 2017; & Janzen 2019), eye-gaze and viewpoint (Bröne, Öben, Jehoul, Vranjes & Feyaerts 2017) viewpoint transfer (van Krieken & Sanders 2019), simultaneous viewpoint expression (Guibeault 2017), and linguistic, gestural, and cinematographic viewpoint (Parrill, Stec, Quinto-Pozos & Rimehaug 2016). These phenomena will be discussed in accordance with the results in this study's discussion.

Chapter 3: Data and Methods

3.0 Introduction

For the methods chapter, first I briefly outline the data that was used for this study first (3.1). Then I state the two hypotheses (3.2) in addition to outlining them. Then I include details of the annotations systems starting with the form-based system (3.3), and then the non-manual gestures such as shoulders, torso, face, and facial characteristics (3.4). After such manual parameters and non-manual gestures are covered, then I describe some of the stance act types including details on labeling for polarity (3.5). Following that there is a description of the system to interpret metaphorical force gesture (3.6), counter-balancing and labeling of software (3.7), and segmentation (3.8), and conclusion (3.9).

3.1 Data:

The data for this study were news media press conferences. 5 hours of this data was surveyed before selecting the federal politicians that gestured the most. The politicians that were selected were Elizabeth May from the Green Party of Canada as well as Pierre Poilievre representing the Conservative Party in the roll of finance critic. These two participants were also selected for their central roles in the election campaign. Forty-three minutes of data were collected all of which showed leaders answering questions in front of a live audience. They were all available in the public domain. See Appendix I for data references. Additionally, the main focus of these files was the responses each politician was giving to a journalist.

3.2 Hypotheses:

The aim of this study was to collect and analyze the patterns of gesture. The central relationships under study will be:

1. What are the gestures that are used most often to reflect a speaker's stance; &
2. Is there a unique contribution of gestural stance markers to overall stance in the composite utterance, and if so, how much?

Hypothesis 1

Question one was considered through the lens of a form-based annotation system, selected for its linguistic-semiotic approach. This approach assumes a preliminary analysis that solely concentrates on form to be useful to find regularities and patterns in the gestural form-based parameters alone, without reference to other linguistic characteristics like textual content or prosody (Bressem, Ladewig, & Müller 2013). Such an approach first focuses on the combinations of parameters that recur. Examples of co-occurring patterns would include instances such as recurrent hand shapes with recurrent hand movements or recurrent hand shapes with recurrent hand orientations.

Hypothesis 2

In order to look at question two, regarding the unique contribution of gestural stance marking, there will be a possibility of extending the measurements of stance marking in prosody and textual content. As such, the audio data was separated out from the visual/manual data with the option to code it for further analysis.

3.3 Gesture annotation system

First steps for coding of the gestures involved segmenting for gestures in Elan (Elan 5.9). Segmenting of gestures was carried out without audio to concentrate segmenting efforts in the visual domain while minimizing audio interference. To account for more than one gestural marker co-occurring with speech, as many as 5 gestural tiers were included. In the example below, a total of four gestural channels can be seen: three tiers involving non-manual gestures (first screen shot), and one involving a manual one (second screen shot). Included under 'Annotation of speech' tier there are stance values in the 'stance strength' tier and the 'stance polarity' tier.



Figure 1: Depicts a gestural sequence in a composite utterance, each array having multiple markers (Elan 5.9)

Once a gesture is determined to be primarily in the hand, arm, shoulder, head, face or torso, then additional parameters of manual gestures are specified as appropriate. The following is a screen shot and summary of the steps involved in labeling each manual gestural parameter (Bressem, Ladewig, & Muller 2013):

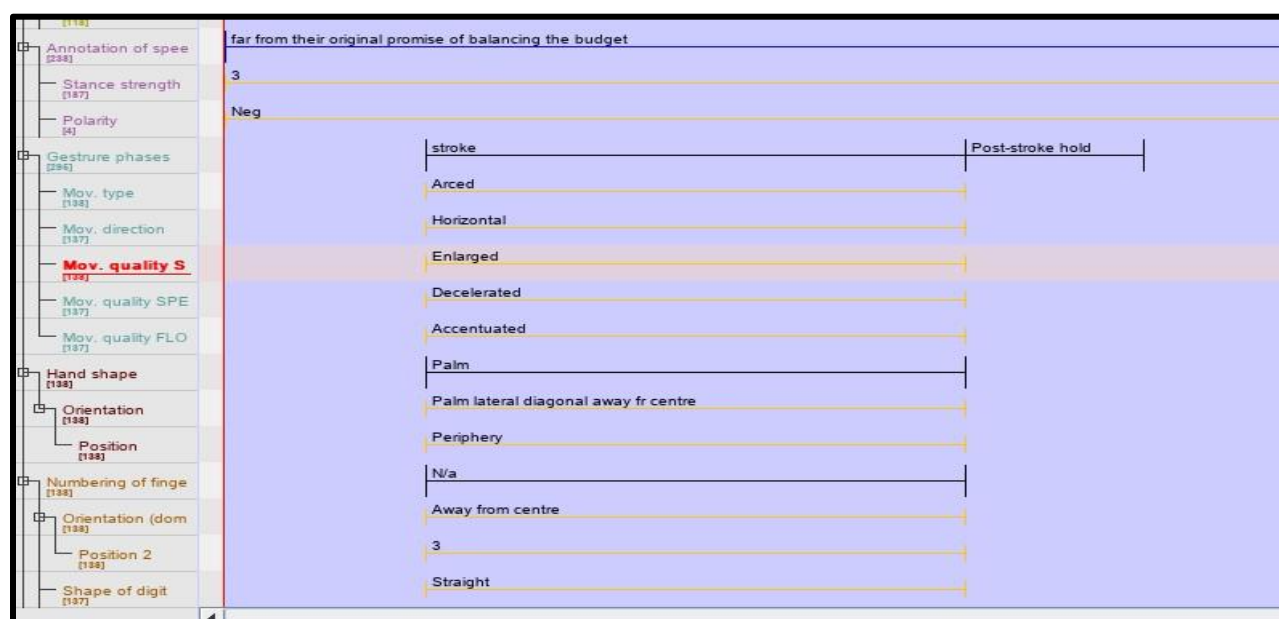


Figure 2: Depicts hand shape parameters for the example below (Elan 5.9)

The following coding system is being used to capture to what extent the recurring hand shape configurations ‘show up’ with stance markers from other body articulators.

- a) The notation of “hand shape” parameter is realized via three steps:

- a. Assign the hand to either a category of ‘two hand gesture’ or one of four categories (fist, flat hand, single fingers, and finger combination)
 - b. Select number of fingers used (1, 1-2, 1-3, 1-5, 2-5)
 - c. Specify the shape of each digit (stretched, bent, crooked, flapped down, connected, touching)
- b) The second parameter is palm orientation, and involves labelling a combination of two orientations: first, choosing from four different basic angles;
- a. Palm up (PU), palm down (PD), palm lateral (PL), & palm vertical (PV),
- Second, orientation is further differentiated in four types regarding the gesture space:
- b. Towards center (TC), away center (AC), towards body (TB), and away body (AB)
- (McNeill 1992: 380)
- Additional less common orientations are also included in labeling the palm’s orientation. This includes the palm’s orientation along the four diagonals (i.e. PVDiAB).
- c) The third parameter is movement and involves labeling three features of movement:
- a. Type of movement: straight, arced, circle, spiral, zigzag, and s-line
 - b. Direction of movement: horizontal (left and right), vertical (up and down), and sagittal (away from body and toward body). (Bressem 2007).
 - c. Quality of movement: characterized markedness and captures the following three aspects
 - a) Size (reduced or enlarged)
 - b) Speed (decelerated, accelerated); &
 - c) Flow of movement (accentuated, unmarked)

See example below of the coding system:



Figure 3: Coding example “Far from their original promise of balancing the budget...”

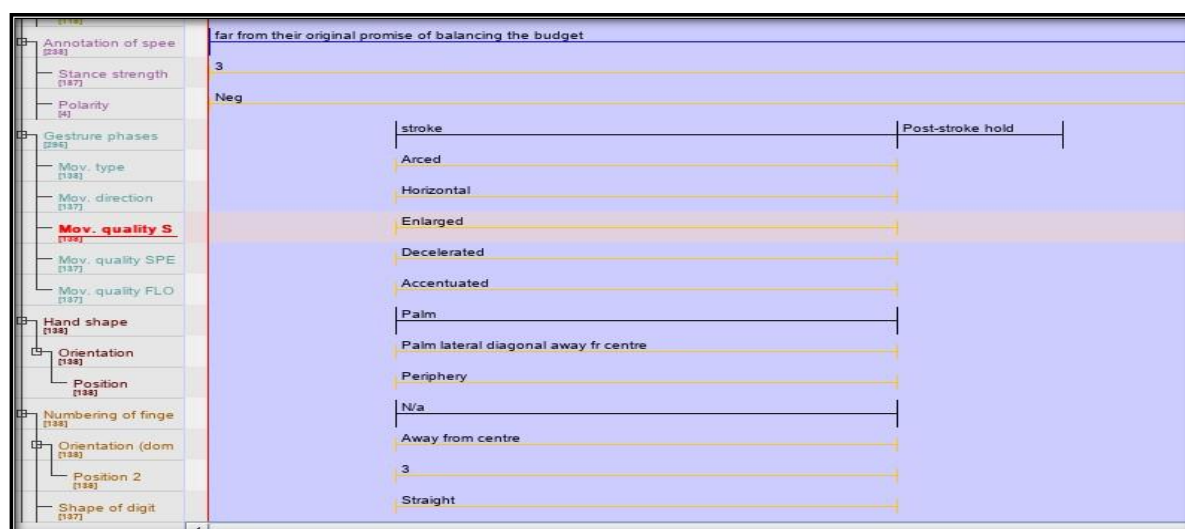


Figure 4: Shows annotation of speech, polarity, gesture phases, and hand-shape parameters

In addition to the parameters that were labeled from this hand shape coding system, gestural stance markers of the head, face, shoulders, torso, and arms were also labelled for their role of stance marking.

3.4 Non-manual gestural stance markers:

3.4.1 Attitudinal, affect, and epistemic shrugs

3.4.1.1 Shrugging

Shrugging is a behaviour that for this study was largely assumed to display varying degrees of stance and non-stance marking. Shrug labels were taken from Debras (2017) and were used to cover a wide array of meanings that could convey a broad range of a gesturer's alignment or disalignment to the topic at hand. Within shrugging several meanings have been demonstrated as linguistic conventionalization falling within three broad categories: attitudinal shrugs, affect-expressing shrugs, and epistemic shrugs (Debra 2017: 23). The specific shrugging labels were grouped as either conveying stance or not. The decision to categorize each shrug as conveying stance or not was based on whether the shrug label seemed to convey a gesturer's active role vs. a passive role. It was assumed that when a speaker is taking a passive role, they are not engaging the subject, directly and actively, and therefore passively convey minimal stance, which was excluded.

3.4.1.2 Attitudinal shrugs:

1. incapacity: "I can't do anything about this" (passive therefore not stance)

2. inaction: “I’m not doing this” (passive therefore not stance)
3. submissiveness: “I’m not in power, you are” (passive therefore not stance)

3.4.1.3 Affect-expressing shrugs:

4. indifference: “I don’t care about this” (passive therefore not stance)
5. rejection: “I don’t like this” (active therefore stance)

3.4.1.4 Epistemic shrugs:

6. epistemic indetermination: “I don’t know what to say” (passive therefore not stance)
7. common ground: “I don’t have anything to add to what we both already know” (active therefore stance)

3.4.2 Mouth/Shoulder shrugging (pre/stroke/post stroke)

8. Disengagement (i.e. “I’m not interested”) (active therefore stance)
9. Ignorance (i.e. “I don’t know about that”) (passive therefore not stance)

(Debras & Cienki 2012)

10. Other: specify shrug further if necessary. It was decided before the coding commenced that if a shrug that was assumed to be stance related appeared not to be stance, then it was given a this ‘other’ label and was indicated in the comments to include

3.4.3 Eyebrows: raised eyebrows

Raised eyebrows have been demonstrated as a preferred perceptual signal to interlocutors to indicate new information or information of a contrastive focus (Borrás-Comes & Prieto 2011). Raised eyebrows have also been referred to in the gesture literature as counter-expectation. Because of its role in parsing information structure, raised eyebrows were coded as a non-stance marker.

11. Counter-expectation (i.e. surprise or shock).

3.4.4 Smiles

Smiles have been demonstrated to convey stance and has been found to convey the following semantic connotations. From Kaukoma, Peräkylä and Ruusuvuori (2015) I adopted all

of their smile labels for coding stance. When occurring in the data, all four of these categories were labeled as indicating stance.

- 12. (Re-enact) Re-enact a past, previously shared emotional stance
- 13. (Evoke) Evoke a new, emotionally appropriate response to the talk;
- 14. (Establish) Establish a stance that is withheld and/or ambiguous in the talk; or
- 15. (OfferAlt) Offer an alternative emotion to frame the talk

(Kaukoma, Peräkylä & Ruusuvuori 2015)

3.4.5 The Eyes.

In recent research by Stec, Huiskes, Wieling, and Redeker (2017), they demonstrated several categories of viewpoint behaviour in quoted dialogue sequences. Their interest was the degree to which multimodal viewpoint is expressed via the contribution of multimodal articulators. For their research, a subset of the annotation scheme from a previous work was used (Stec 2016), and for my research I borrowed their categories for gaze. Additionally, ‘gaze distally’ was added from Janzen (2019), and an ‘other’ category was included to allow for any gaze behaviour that may fall outside of the defined categories. ‘Maintained eye contact’ was grouped as a stance marker, as was ‘gaze distally,’ both of which were assumed to represent the strongest degree of communication, in the case of ‘maintained eye contact’ by transmitting a message directly to an addressee, and in the case of ‘gaze distally,’ that a gesturer is referencing a previously taken stance, and is therefore aligning their stance, or is at least referencing other semantic indices represented in their visual field to help construct their communicated message. This kind of ‘distal gazing’ Janzen (2019) has demonstrated can connect past and present viewpoints in American Sign Language narratives. All other gaze markers were categorized as non-stance: These instances were assumed to involve a gesturer’s turn holding strategy regarding the flow of discourse (Bröne, Öben, Jehoul, Vranjes & Feyaerts 2017), but were not considered to be directly contributing to the gesturer’s stance regarding the subject of the discourse.

- 16. Maintained with addressee (speaker’s gaze is directed to addressee...)
- 17. Away from addressee (speaker’s gaze is not directed to the addressee...)
- 18. Late change (speaker’s gaze is not directed to the addressee throughout...)
- 19. Quick shift (speaker’s gaze jumps around throughout...)

- 20. Unclear (Stec, Huiskes, Wieling & Redeker 2017)
- 21. Gaze distally (Janzen 2019)
- 22. Other (squint; look down etc.)

3.4.6 Head movements

Head movements were first given a basic distinction of stance or non-stance according to their apparent involvement as a discourse function, assisting the gesturer to coordinate themselves with their construction of ideas. These subtle head nods were marked as non stance in contrast to a head movement that could be considered according to the following definition. “Head movement abruptly forward and stops before retraction, or moves backwards, or to the left or right before retraction (Ruth-Hirrel & Wilcox 2018). This kind of ‘abrupt’ movement was assumed to indicate a certain degree or threshold of intensity relating to the forcefulness of the message, and thereby was coded as an indicator of the gesturer’s stance toward the topic. The other markers listed below come from McClave’s (2000) classification system. Generally speaking, inclusivity was typically marked as stance, as was intensification, direct quotes and character viewpoint. All others were marked as ‘not stance.’ Similar to other body articulators, for any head movements that did not fit into one of McClave’s seven categories, then it was coded as ‘other’ with a comment on the notes with any helpful information.

- 23. Inclusivity,
- 24. Intensification,
- 25. Uncertainty
- 26. Direct quotes and character viewpoint
- 27. Deixis and referential use of space
- 28. Lists or alternatives
- 29. Lexical repairs or backchannels (McClave 2000: 876)
- 30. Other (specify)

3.4.7 Head nods

Head nods have been studied elsewhere by Rice and Hinnell (2015) and so a separate category was included called ‘affirmation.’ Additionally, Rice and Hinnell (2015) further researched head movements. ‘Rejection’ and ‘down-toning’ were assumed to be active and therefore marked as stance, ‘uncertainty’ and ‘doubt’ were assumed to be passive, and therefore marked as ‘not stance.’

3.4.8 Posture shifts

All considered stance-related unless indicated by exceptions in the notes tier.

31. Degree of body-partitioning 33=1, 34=2, 35=3 (Rice & Hinnell 2015)

3.4.9 Precision grip

Precision grip typically is the connecting of the thumb and forefinger, and has been demonstrated to signify varying degrees of stance of the gesturer. The exception from the below list is the information structure item which was assumed to signify information structure and therefore ‘not stance.’

36. Indexical focus: discourse/addressee - information structure

37. Indexical focus: addressee – making ‘sharp’ icon

38. Indexical: speaker – ‘having a sharp point’ icon

39. Indexical focus: candidate – indexical icon of brand qualia ‘precise’

(Lempert 2011: 262: 2)

3.4.10 Handedness:

Handedness has been shown to indicate certain political stances (Dragăn 2019). For this reason, handedness was recorded for the analysis.

42. Left hand

43. Right hand

44. Both hands

(Engberg-Pedersen 2011)

Cross-reference with metaphors ‘GOOD IS LEFT’ for left-handers; and ‘THE FUTURE IS TO THE RIGHT’ for speakers with a left-to-right writing system (Nunez & Sweetser 2006).

3.5 Stance-act types

Stance-acts (Freeman 2019: 7) were used to label opinion and credibility based composite utterances according to either textual content and prosody or textual content and gestures or both (the two modalities are predicted to be correlated but an interest for the study is when they vary and how and when do interlocutors harness either or both modalities. Some of the stance act labels (Freeman 2019: 7) including examples are as follows:

- o - Offer opinion, suggestion (i.e. “I think we should” “That’s really important”)
- s - Solicit opinion, or agreement (i.e. what do you think? Is that alright?”)
- c - Convincing/credibility: Support (reasons, evidence, experience) for a stance (e.g. "And that's why..." "I read that..." "I know b/c I was there.")
- a - Agreement, Acceptance, Approval (e.g., "I agree, absolutely)
- x - Unclear (hard to label but clearly stance-related)
- b - Backchannels (e.g. mm-hm, yeah)
- 0 - Minimal-stance (stance not clearly present, e.g., factual questions and answers)

Nominal polarity categories assigned to composite utterances (positive, negative, none, and unclear). Participants’ evaluations were assumed to have a polarity. Polarity was based on participant emotions and attitudes toward their present topics. For many of the composite utterance polarity values, polarity examples from a previous study were sufficient (Freeman 2019: 6). For example, comments of general agreement, approval or willing acceptance of another’s perspective was considered positive (Freeman 2019: 6). Alternatively, negative polarity labels were given based on negative examples like disagreement, rejection, hedging, and negative evaluation (Freeman 2019: 6). For composite utterances without a concrete lexical and/or gestural item signalling polarity, Bednarek’s (2009: 161) cognitive and linguistic dimensions of evaluation were applied. The seven dimensions used are as follows: expectedness (how expected), emotivity (how good/bad), importance (how important), authenticity (how

real/true), power (how easy to deal with), reliability (how likely), and causality (what are the reasons/causes/consequences).

3.6 Stance polarity levels

Polarity measures were also taken at separate labeling sessions, for gesture/textual content. Once these basic polarity and strength values were assigned, then each composite utterance was given one or sometimes two stance act labels. Stance act labels were assigned to composite utterances to determine if stance acts could be meaningfully determined if a given stance act with a certain strength and polarity could be associated with patterns of gestures articulated by the hands, face, head, and torso. These measures of stance polarity, and stance act types were labelled consecutively for gesture/textual content. Then fine grain gestural data was evaluated in order to determine the contribution of gestural stance marking when it is interpreted with the textual content.

Next, two broad features of stance were taken for prosody/textual content and gesture/textual content: polarity (Freeman 2019). Next a polarity label was given to the same composite utterances that have been assigned a stance act label. For stance polarity, they were labeled with “-”, “+”, “0” for neutral, or “x” for unsure.

3.7 Metaphorical force of gesture

Additional typology was used to label the data in order to analyze if metaphorical force is used to communicate stance. Communication acts with respect to manual and non-manual gestures are metaphorical with respect to the conceptual metaphor DISCOURSE SPACE IS PHYSICAL SPACE which involves two other conceptual metaphors CONVERSATION IS A CHOREOGRAPHY and ARGUMENT IS war that correspond to pragmatic intent for inclusion-cooperation and control respectively (Wehling 2017). English speakers/gesturers use conventional gestural expressions that show that they are often spatially aware in how language is used to communicate forcefully in physical space. Wehling’s (2017: 271) typology of discourse management gestures were also labelled in the data to account for their basic force-spatial types including: pushing force, active blocking force, latent blocking force, force removal, and pulling force. Such basic force-spatial types can be reduced to three gesture categories that include: initiating force, response force, and

force conflict resolution (Wehling 2017: 261). These three gesture categories were broken down to reflect a pragmatic intent for inclusion-cooperation on the one hand, and control on the other hand:

Initiating force: content agonism vs. floor agonism

Response force: content antagonism vs. floor antagonism

Force Conflict Resolution: disengagement vs. space restoration

Examples of gestures used to convey force dynamics are stabs, pushes, lean-ins, reaches, raised index finger, raised eyebrows, head tilts, fend-offs, push backs, questioning/angry face, and looking or stepping away.

Additional gestures were also incorporated, in order to glean as many behaviourally diverse indicators of stance. Head movements were labelled as indicating some combination of inclusivity, intensification, uncertainty in addition to narrative functions such as direct quotes, expression of mental images of characters, deixis and referential use of space, lists or alternatives, lexical repairs, and backchannel requests (McClave 2000). Eye gaze was also included for analysis as it has recently been shown to function as a turn-holding device (Brône, Öben, Jehoul, Vranjes, and Feyaerts 2017). For documenting these additional gestures, steps were taken to segment gestural phases for each gesture. Then, component gestural phases such as pre-stroke hold, stroke proper, and the post-stroke hold could be accounted for in order to analyze the complex gestural construction within composite utterances.

3.8 Counterbalance of labeling; software:

These stance act types were independently labeled for prosody and gesture in a counter balanced fashion. This process of labeling stance-act types and polarity in the data was carried out alternating the labelling of the prosody/textual markers on a first pass, and then labeling the gestural/textual markers on a second pass over the same data and then switching the order of labelling for the next 5 minute period and so on. This alternating process was carried out so that should prosodic analysis proceed in a post-hoc fashion any bias from always labeling the combination of one modality (gesture) and textual content before labeling the other modality (prosody) and textual content was avoided. All segmenting of composite utterances and transcriptions for frequency counts and comparisons were conducted using Elan software (ver.

5.9). All hand gesture parameter values were pre-entered into drop-down menus (external control vocabularies) for quick and efficient data entry. Non-manual gestures were added in manually to allow for variation in the data. Additional pre-processing was conducted using FAVE align (github.com/JoFrhwld/FAVE), a forced alignment tool in order to automate the construction of text grids for individual vowel segments from each speaker. These automated text grids were then used to run automated scripts in Praat (5.3.59) for measures of vowel duration, intensity, and f0 which have previously been found to correlate with stance act types (Freeman 2019). A post-hoc acoustic analysis will follow gestural stance marking analysis if it is deemed necessary.

3.9 Segmentation

Composite utterances were segmented using Enfield's (2009: 16) triggers and heuristics. This method is best suited for multimodal data in that it is rather intuitive and allows the grouping of linguistic data according to linguistic conventions, communicative 'stances' or orientations, contextual orientations when certain signs tend to 'group' together. Lastly, segmentations utilized Enfield's (2009: 16) notion of triggers, which allows for the segmenting of linguistic data based on timing and other types of 'indexical proximity.'

In order to separate the gesture phases, the frame by frame marking procedure was used (Seyfeddinipur 2006).

3.10 Conclusion

Taken together, a form-based gesture coding system allows finding recurring patterns that may be present in the data. The goal of using the form-based coding system first is to minimize any subjective interpreting of the gestures and to get a baseline idea of what gestural patterns are there independent of interpretation or reference to co-occurring text. Once the gestures are coded and organized, then they can be interpreted as they co-occur with text, in addition to stance marking developed into a coding checklist of stance and non-stance marking based on findings in the gesture literature. Lastly, text and prosody were minimally coded in order to maintain some basic checks and balances for this dataset to be used at a later time. This allows for a comprehensive analysis of stance marking that occurs in gesture, and so its unique contribution

can be evaluated and compared to stance that can be found in prosodic and textual marking for future research projects.

Chapter 4: Results and Analysis

4.0 Introduction

For this thesis, several features were labeled in order to cast the widest net on the variation of gestural form with respect to stance marking. With the exploratory nature of this project, a whole host of form-based features were labeled independent of utterance textual content. The patterns that emerged are reported below. Second, I explore the pattern of stance labels that were given to each respective composite utterance. Overlaying stance labels upon each composite utterance allowed for each composite utterance to be grouped according to palm orientation with each stance act for further analysis. What pattern emerges is that gestures with finger combinations tended to display speakers' opinions more than signify points in their discourse involving their convincing or credibility. Third, basic hand orientation of palm-based gestures revealed an inverse relationship between the two speakers. This pattern emerged in two of the four basic orientations: Palm lateral and palm vertical. For Pierre Poilievre (hereafter 'P'), gestures with a palm facing laterally tended to be used twice as often for stances conveying his credibility than for conveying his opinion. On the contrary, the same hand gestures with the lateral hand orientation conveyed Elizabeth May's (hereafter 'M') opinion twice as often as they did for expressing her credibility. A similar pattern emerged for both speakers involving the palm oriented vertically. The third part of this chapter accounts for possible reasons for this inverse relationship. Finally, I look at the interplay of hand gestures and other facial and body articulators with respect to speakers/gesturers stance.

4.1 Descriptives

Hand shapes and palm orientations were labeled based on drop down external control vocabularies in Elan 5.9 (archive.mpi.nl.tla/elan). First gestures were segmented based on their gesture phases including pre-stroke, stroke, and post-stroke holds (Bressem 2007), and then hand shape and palm orientations were both labeled for each gesture phrase present for any given gesture. Hand shapes and palm orientations for each of these gesture phases was included in the counts below. The table below (Table 1) shows that two palm orientations dominate all hand shape orientations for both P and M. Palm lateral and palm vertical were used considerably

more often than palm up and palm down. The remainder of the results in this chapter regarding hand orientation focus on the two most common orientations found in the data: palm lateral (PL) and palm vertical (PV).

Table 1: Totals for Basic hand orientations: palm up (PU), lateral (PL), vertical (PV), and down (PD) in the columns; lax (P/M Lax), flat hand (P/M Flat) and combination of fingers (P/M Combo).

	PU	PL	PV	PD	%
P_Lax	14	116	36	16	35.41
P_Flat	5	79	14	0	19.07
P_Combo	14	166	34	20	45.53
	33	361	84	36	100%
	PU	PL	PV	PD	%
M_Lax	41	128	33	20	21.57
M_Flat	21	226	133	59	42.66
M_Combo	26	197	126	19	35.76
	88	551	292	98	100%

The following table (Table 2) shows that three orientations away from body, away from centre, and towards centre (AB, AC, and TC) were common across all hand configurations. Towards the body (TB) was uncommon in at least one of the three categories of hand shape configuration.

Table 2: Total number of orientations to the gesture space: away (AB) and toward body (TB) and toward centre (TC).

	AB	AC	TB	TC	%
P_Lax	29	41	11	92	36.5
P_Flat	30	4	2	52	18.57
P_Combo	29	42	18	124	44.94
	88	87	31	268	100%
	AB	AC	TB	TC	%
M_Lax	94	44	57	114	31.89
M_Flat	40	41	58	83	22.91
M_Combo	231	66	10	131	45.2
	365	151	125	328	100%

For the scope of this project, and due to limited data points, TB hand orientation wasn't analyzed further. For the three remaining basic hand orientations, they were further differentiated to account for diagonal hand orientations that fall away from the four cardinal axes of these basic orientations. It was at this point in the analysis that basic hand shapes (lax, flat, finger combination) categorized into these two orientations (PL and PV) were grouped together based on the stance label that had been given to each composite utterance.

4.2 Opinion and credibility stance act labels corresponding to hand shape and palm orientation

The form-based gestures just described were then analyzed with stance. Patterns began to emerge surrounding two of several stance act labels: convincing/credibility and opinion-offering. These two stance act labels were common throughout the data of both speaker/gesturers, in a way unlike the other stance acts labels. Given the political nature of the

data, this should be unsurprising. Stance acts of convincing/credibility involve epistemic stance-taking that highlight a speaker/gesturer's experience and knowledge and is used to persuade interlocutors to identify and align to the stance being conveyed and acted upon (Biber & Finegan 1989; Conrad & Biber 2000; Fairclough 2003; & Hunston & Thompson 2000). In the data, these convincing/credibility based stance acts could appear isolated, or they could support a subsequent opinion-offering stance act such as making an evaluation or judgment, a positioning or an alignment, an attitudinal stance or a prediction (Conrad & Biber 2000; Thompson 2000; Du Bois 2007).

The palm orientations and directions in the two tables below were all associated with many instances of credibility- and opinion-based stance acts. Additionally, the patterns of credibility and opinion for several palm orientations are similar. The palm lateral diagonal toward centre (PLDiTC) orientation was used more for opinion-based stance acts than for credibility-based stances. Although at first glance the data for M appears less clear cut, when this category is combined with the more basic palm lateral toward centre (PLTC) orientation, the pattern emerges with a very similar proportion. As demonstrated in the data, palm lateral (PL) manual gestures tend to signify agreement or alignment. Palm vertical (PV), also referred to as open hand prone 'vertical palm' gestures (Kendon 2004: 251) are used where a speaker/gesturer has an intention to stop his or her current line of communicative move, or a communicative move being carried out jointly, or from an interlocutor.



Figure 5: Disalignment stance

The palm lateral gesture in figure 5 is interesting because it is between a palm lateral basic orientation (PLTC) and a palm lateral orientation (PLDiTC) that is on an angle towards the median plane, i.e. the body's centre line. Because M is depicting alignment of another political party that aligns with a concept with which her party disaligns, this manual gesture highlights the nuance with which subtle angular adjustments can convey nuanced stance. (I.Rezvukhina, personal communication, March 30th, 2022)



Figure 6: “The super wealthy are definitely – the one percent of Canadians” uses palm vertical (PV) away from body (AB) to signify their exponential income, something she would like to stop in support of the poorest Canadians.

Tables 3: Represents stance acts for M according to all hand gestures with finger combinations and two orientations: palm orientation and direction toward centre (diagonal), toward body, (diagonal) away body, and (diagonal) away centre and toward body

M_combo	Palm lateral (PL) and vertical (PV) palm orientations						
PLTC	PLDiTC	PLTB	PVDiAB	PVAB	PLDiAC	PVDiTB	%
C	C	C	C	C	C	C	
10	8	6	34	8	15	0	38.38
O	O	O	O	O	O	O	
51	10	5	22	21	14	7	61.61
61	18	11	56	29	29	7	100%

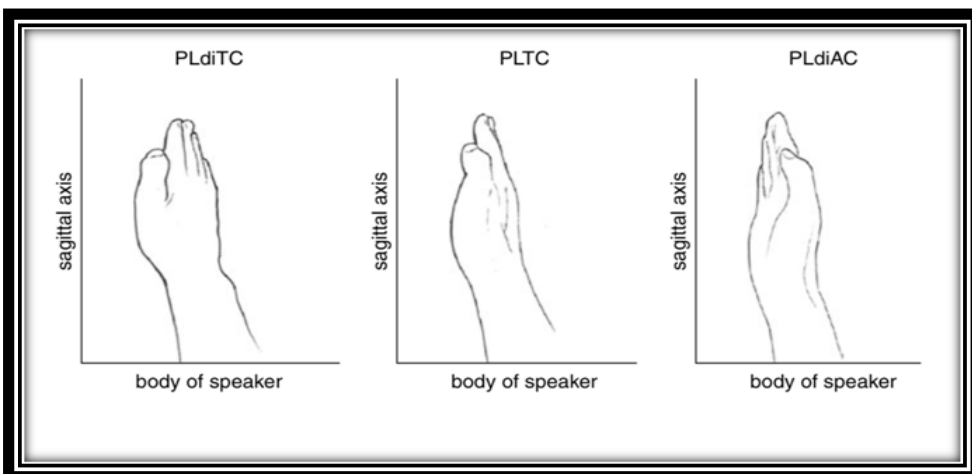


Figure 7: Palm lateral diagonal toward centre (PLdiTC), palm lateral toward centre (PLTC), and palm diagonal away centre (PLdiAC) (Bressem 2013: 1087).

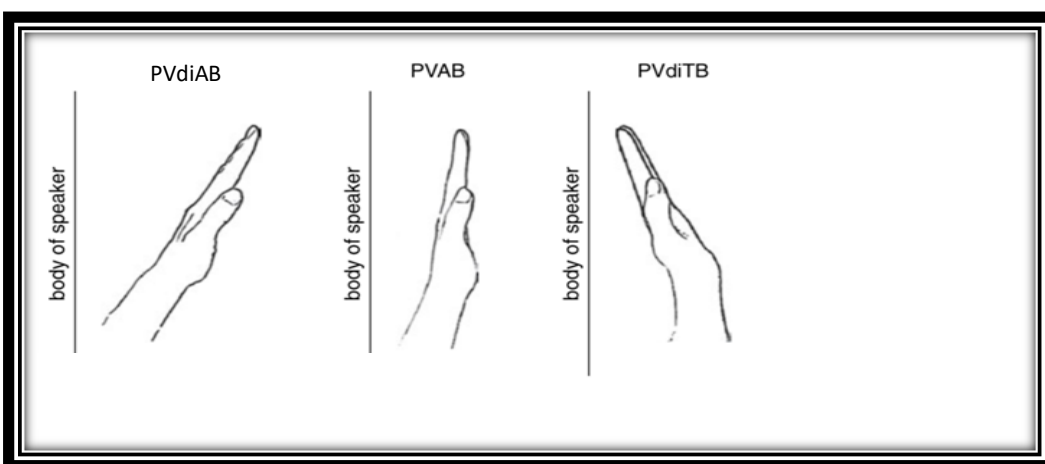


Figure 8: Palm vertical diagonal away body (PVDiAB), palm vertical away body (PVAB), and palm vertical diagonal toward body (PVdiTB) (Bressem 2013: 1087).

Table 4: Represents stance acts for P with palm orientation and palm direction (diagonal) toward or away centre and body.

P_combo	Palm lateral (PL) and vertical (PV) palm orientations + DiTC, TB, DiAB, or TC				
PLDiTC	PLTB	PVDiAB	PVTC	PDTC	%
C	C	C	C	C	C
17	0	15	0	13	44.55
O	O	O	O	O	O
49	3	0	2	2	55.44
66	3	15	2	15	100%

The diagonal angle in the palm lateral and palm vertical orientation used by P is used much more frequently than the simpler orientation. The analysis of the data demonstrated both patterns were consistent for both speakers with palm lateral and palm vertical hand orientations being used more for opinion-based stance acts than for credibility/convincing-based stance acts. This finding that opinion-based stance acts were displayed by two participants of the opposite sex, from different demographic age groups, and also different political parties is perhaps not surprising in the domain of political discourse. The characteristics of finger combinations involving the index finger and thumb (1-2 combo), and also the index finger, thumb, and middle finger (1-3 combo) are common in the gesture literature. These finger combinations are referred to elsewhere by Kendon (2004) as the ring finger and the grappolo respectively, from his work on gesture in Italian gesture studies. Elsewhere, and despite not making any direct comparisons to any meaning beyond the gestural forms exhibited here, other gestural work from American political culture by Lempert (2011: 262) demonstrates the use of a similar finger combination gesture to represent several orders of indexicality from “...a focus effect in discourse to candidate brand.”. In his work studying former president Barack Obama, Lempert (2011: 262)

found four orders of indexicality for the ring finger gesture, what is also called ‘precision grip.’ The first order of his indices refers to a gesture that is used to mark the discourse or addressee, in order to demarcate information structure while the speaker/gesturer is navigating the text. This first index order is least relevant to stance and only serves to illustrate the most basic form of gestural meaning according to speaker/gesturer efforts in coordinating the information structure of the textual content. The three remaining indexical foci pertain to ‘making a sharp effective point, having a sharp effective point, and gesture acting as an indexical icon functioning to brand the speaker/gesturer using it, as if to convey a brand of ‘precision’ in ‘decision.’ There are many instances of this in the data with accompanying speech. For example, In Figure 5 seen here, P demonstrates Lempert’s second level of indexicality where the gesture, ‘represents a meta-pragmatic icon for ‘having a sharp point’ (Lempert 2011: 262).



Figure 9: “You cannot spend fifty-six billion dollars and expect that no one will have to pay for it.”

This speaker/gesturer seems to go further with the use of this gesture seen in Figure 6 below, seemingly branding himself and his political party’s image whereby the gesture occupies the gestural space during an instance of back-channeling. This use does not seem coincidental as it occurs many times throughout the data.



Figure 10: Speaker/gesturer uses an iconic gesture in a novel way to adjust spectacles, potentially branding himself as a precise and effective leader.

Although similar gestures, also referred to as self adaptors can be made to manage anxiety and uncomfortable topics, the manipulation of P's lenses were present throughout the data and although they may serve a function of readjusting the glasses, the manner of doing so, slowly, carefully, cannot be overlooked as being intentional, conveying a sort of speaker/gesturer calculus, or at least a stance act of distancing from or dis-aligning from interlocutors line of questioning. The gesture made with the thumb and index finger combination was labeled as an opinion-based stance act. It took place when P was back-channeling, and also when speaking. The significance of such opinion-signifying gestures can thus signal an opinion about a discourse topic with a varying focus from topics such as a speaker/gesturer's opinion of him- or herself to their motivation of conveying a sophisticated brand on behalf of their political party. Now, I'd like to focus on a pattern of gestures between speaker/gesturers that showed an inverse relationship. P and M displayed opposite tendencies when using the following hand configuration. While using a palm open oriented laterally (PL) and facing toward the centre (TC) or diagonally toward the centre (DiTC) gesture space, P tended more often to convey credibility, where M tended more often to convey opinion-based stance acts.

Table 5: Palm orientations and directions used inversely (total time in sec.)

	Stance		Palm orientation
Speaker/gesturer	Credibility	Opinion	Palm face direction
P	5.614	3.797	PLDiTC
M	14.111	30.428	PLTC

The table above shows two patterns: first, that P and M used a palm lateral gesture in a slightly different form. The numbers in Table 5 represent a total tally (measured in seconds) of instances of these gestures in the data which include pre- and post- stroke holds, in addition to strokes. P uses a diagonal version where the palm is angled toward the central gesture space; while M uses a palm lateral form that has no diagonal. See figures 7 and 8 below.



Figure 11: Palm lateral diagonal towards (PLDiTC) “The Parliamentary Budget Officer’s estimate ranges from twenty billion in an earlier report...”



Figure 12: Palm later toward centre (PLTC) “We’d have a conversation a Respectful conversation a negotiation.”

Both gestural forms have a palm lateral orientation but P favors a version that is angled toward the gestural space toward his body’s centre line. M’s is not angled diagonally. Based on Muller (2014: 1584) and Wehling (2017: 261) P’s diagonally angled palm lateral become dismissive, negative, and agonistic such as stabs toward content from opponents. These gestures are similar to recurrent “Away” gestures that signify, “Sweeping Away, Holding Away, Brushing Away,

and Throwing Away” (Bressemin & Muller: 1596). M’s gestures that do not have the diagonal angle, convey alignment acts, aligning with her previous stance, or the stances of others. Secondly, table 5 highlights that P uses his palm lateral hand orientation more often when communicating his knowledge or experience, associated credibility stance-acts; and M has the opposite pattern. She uses a palm lateral orientation as a part of composite utterances that have been labeled with stance acts signaling her opinion. This was not the only palm orientation to show different stance markers for both speaker/gestureres of these two prevalent stance act types. Table 6 below shows the same pattern:

Table 6: Palm orientations and palm directions used inversely (measure is total amount of time in seconds).

Speaker/gesturer	Stance		Palm orientation
	Credibility	Opinion	Palm face direction (AB)
P	10.626	4.74	PVDiAB
M	8.807	15.39	PVDiAB



Figure 13: PVDiAB “It does not even Include full costing of many of the other Measures” (convincing/credibility stance).



Figure 14: PVDiAB “So burning coal is one of the first things to go” (opinion stance).

The second gesture orientation that indicated P and M use the same orientation for difference stance acts was also a flat hand gesture with palm oriented vertically and palm facing away from the body (PVDiAB). For this orientation, both speakers did use the same version of the palm vertical orientation with the vertical palm on a diagonal facing away from the body. To explore this difference, a survey of textual meaning was conducted using Bednarek's (2009) classification of opinion lexis. This classification system was already used in the data to determine difficult cases of stance act types, and so another step was taken to rate each of the semantic dimensions for each labeled composite utterance, receiving an opinion- or credibility- stance act label.

4.3 Semantic dimensions of stance acts marked differently between speakers/gesturers

The following table 7 represents ratings I made on each utterance of each speaker for each stance category. There are two stance categories for each participant per table – opinion and credibility. The table represents both palm lateral and palm vertical orientations just discussed. The following values were computed in order to make a fine-grain analysis of the semantics and pragmatics of the text that accompanies the hand gestures. Since stance act labels were based on ratings of composite utterances of each speaker, this semantic and pragmatic analysis was intended to analyze differences in the semantics and pragmatics of the textual content of each speaker/gesturer. Represented in table 7 below, there are approximately eight utterances for each category (speaker x stance act). The numbers below each category represent the average rating for all utterances of that specific stance act for each speaker. The dimensions listed in Table 7 were used to explore if average ratings of these dimensions can illustrate why each speaker gestured differently based on the same stance act:

(5) “Only the Conservatives will offer a Universal tax cut.” (Opinion – PVDiAB)

General Ratings:

Expectedness – 4	Emotivity – 4
Importance - 4	Authenticity - 3
Power -2	Reliability - 3
Causality - 2	

Causality ratings for all items for P (C – PVDiAB)

(6) “and then sending working class tax payers the bill after the election.....1	1
(7) “The fifty six billion dollars that J. Trudeau promised in spending today”.....1	1
(8) “this is right out of Kathleen Wyn's playbook we all remember her old trick”.....2	2
(9) “to oversee the creation of the Pharma-care plan.....2	2
(11) “...does not even include full costing of many of the other measures.”.....4	4
(12) “He’s putting fifty-six billion dollars of new promis 4	4
(13) “tsk no the parliamentary budget officer had t- +to indicated to us that he was prepared to cost all of our proposals”5	5

Causality ratings for all items for M (C – PVDiAB)

(14) “This is ah ah ah a theme of our platform.”1	1
(15) “and that strip mine coal, the Evans coal mine all that activity that was going on in Inverness	
(16) “Has now turned in to the Cabot Links Golf Course.....3	3
(17) “but overall, Canada’s fiscal health at the federal government level4	4
(18) “This isn't optional”4	4
(19) “So we're not here to play politics about climate”.....4	4
(20) “The floor became the ceiling and they haven't reached it yet.”5	5
(21) “Science demands these actions”5	5

Table 7: Bednarek’s (2009) seven dimensions of opinion lexis for P and M for credibility and opinion based stances (PVDiAB); expectedness, emotivity, importance, authenticity, power, reliability, and causality.

	Expect.	Emotivity	Import.	Authen.	Power	Reliab.	Caus.
P_Cred	3.375	2.375	3.875	3.250	3.125	2.500	2.875
M_Cred	3.571	3.857	4.571	4.000	1.714	3.857	4.286
P_Opin	3.500	2.750	4.000	2.750	2.625	2.500	2.500
M_Opin	4.000	4.111	4.111	3.667	1.889	2.778	3.889

What stands out from the average ratings collected from each speaker/gesturer's composite utterances for both stance act categories relates to the following subset of dimensions. The dimensions that stand out are listed, and then I briefly outline each one.

1. Causality for both opinion and credibility stance acts for both speaker/gesturers;
2. Reliability for credibility stance acts for both speaker/gesturers
3. Authenticity for credibility and opinion stance acts for both speakers; and
4. Emotivity for credibility and opinion stance acts for both speakers

Relating to the dimension of causality, these ratings were made based on whether the causal links in the speaker/gesturer's argumentation were weak or strong. The ratings were made on a five-point likert scale with 1 indicating weak causality, and 5 indicating strong causality. For the credibility stance label of P, his causality rating average is just below neutral, meaning his ability to make utterances with causal connections in argumentation is less than a neutral rating between weak and strong. On the contrary, my rating average on M's credibility was more than a whole number above neutral, meaning her claims had relatively good causal argumentation. Generally speaking, P was being logical, but his credibility was based on negative evaluations of others and not on relevant facts to support his credibility. This line of reasoning for his credibility is logically consistent with his opinion-stance taking to convey an intelligent brand, but means that his credibility claims are somewhat weak and are perhaps more opinion-like. M's causal rating tended to be higher because her argumentation supporting her credibility corresponded to scientific claims or else they also corresponded to practical examples that illustrated her opinion towards her campaign platform. Therefore, a difference in average causality ratings between speaker/gesturers, with P's credibility causal ratings being less than neutral could at least partially explain the difference in stance act labels associated to the same manual gestures for both speaker/gesturers. Perhaps P's credibility stances were more opinion-like and M's credibility stances were not.

The next dimension is on reliability. This rating is given based on answering ‘how likely?’ For example, in the following sentence that received a credibility stance act label, “He’s putting fifty-six billion dollars of new promises on the national credit card,” the rating I gave was a two, which is less than a neutral reliability rating due to P’s exaggeration. For M, I rated her credibility stance labeled utterances on average about four, which one about one point above neutral between neutral and somewhat likely. My rating is based on her ‘convincing’ argumentation being quite realistic and therefore quite likely. For example, when speaking about including a national energy grid strategy for the Green Party platform she claims that “science demands these actions,” and so answering the question, ‘how likely’ is associated with an increased rating because ‘science’ the majority of Canadians support policies based on science. Though there are some differences here in average credibility ratings for both speakers, there doesn’t seem sufficient evidence that different average ratings on the dimension of reliability explain how they used the same PVDiAB hand shape and palm orientation for different stance acts

The next dimension is ‘authenticity’ which is based on how ‘real/true’ is the opinion or credible statement. Because M’s claims tend to be rooted in well established fact regarding climate change and curbing carbon emissions, the ‘truth’ of her claims and opinions tended to rate well. In her utterance, “Our commitment to a Canadian grid strategy means that the grid isn’t physically loaded and full,” she illustrates her opinion connecting it to a concept of ‘democratizing energy’ so that towns and cities have multiple revenue streams from renewable energy systems. She also connects this to a practical example. For my other participant, P’s authenticity is rated close to neutral I think because he makes claims about other leaders’ character flaws, calling them liars which compromises his authenticity rating average. What’s interesting about P and M’s similar gestures being used for different stances, in the case of the palm vertical diagonal away from body, is that this gesture has been used to describe a ‘holding away’ meaning (Müller 2014: 1587). This could also account for the difference of each speaker’s stances, with P making more ‘holding away’ gestures regarding his opponents and opponents’ actions in credibility stances vs. M’s ‘holding away’ gestures of climate harming policies in her opinion stances. This would indicate that P and M orient differently to claims of credibility and opinion with P using the palm vertical diagonal away body (PVDiAB) gesture to ‘hold away’ his opponents when conveying his own credibility, whereas M uses the PVDiAB gesture to convey

her opinion stances when ‘holding’ away adverse policies and acts that don’t support the Green Party’s campaign platform.

The last dimension where ratings were different between participants was ‘emotivity’ which is how good/bad and how necessary is the point of the utterance. This rating for P highlights his specific role in government and involves making fear-based predictions about the detrimental outcome of re-electing an incumbent government. In P’s utterance, “He’s putting fifty-billion dollars of new promises on the national credit card,” he mixes fact with metaphor that result in a lower rating. On this final point, the inverse relationship I found regarding credibility and opinion being labeled inversely over the same gestural configurations could be because speaker/gesturer P is mixing opinion in with his credibility claims, making it difficult to separate opinion and credibility based utterances. Alternatively, it could be possible that P’s role in government influences his choice to mix opinion and credibility to make more persuasive statements. As I’ve pointed out with regard to P’s authenticity rating, his orientation to his credibility stances may not be adequately captured by Bednarek’s (2009) *Dimensions of evaluation*. Perhaps another dimension could be explored that distinguishes between alignment/disalignment opinion lexis to assess a speaker/gesturer’s stance acts. In the case of P, as the finance critic criticizing the dominant political party, P needs to convey credibility stance acts to demonstrate the ruling party’s flaws while at the same time offering his opinion to weaken popular support and consequentially broaden his own party’s support. For this reason, the way in which P orients to the expression of his opinion and credibility may suggest why the stance labels I gave mapped onto co-verbal gestures and speech inversely compared with M. Additionally, it is worth considering the diagonal orientation to P’s lateral gestures as these gestures are somewhat similar to what Wehling (2017: 264) describes as gestural stabs. Gestural stabs make use of a pointing finger but instead of having a purely referential function, they serve an agonistic function. A component of a gestural stab can be that the stroke phase of the gesture is not co-timed to indicate straightforward referencing. Regarding P’s palm-lateral diagonal toward centre (PLDiTC) hand gesture, it may be the case that P favors this gesture with a more specific diagonal orientation because his credibility claims are attacks on his political rivals, and a palm lateral with a diagonal orientation is more agonistic than a simple palm lateral orientation is. An example of this can be seen below in Figure 7 and 8 where P uses this palm lateral diagonal towards centre (PLDiTC) gesture to point to the journalist asking the question once

referring to him as “you”, and then points to him a second time to refer to “*our opponents*.” Such a recurrent pointing gesture seems to indicate more than just referencing since the speaker/gesturer signals “you” and “our opponents” to the same person in the gallery. The gesture seems to be including the interviewer “you” as one and the same as “*our opponents*.” Additionally, in line with Wehling’s (2017) discourse management gestures this ‘pointing’ gestures also functions as a stab or a fend-off. This function of gesture illustrates the ‘combative’ nature of discourse, and can frames dialogue within a conceptual metaphor.



Figure 15 & 16: that will allow “you...” “...and our opponents and all Canadians to scrutinize it.”

Discourse management gestures and metaphor will be discussed next. Next, the confluence of gestural marking from the rest of the face, head, and body will now be discussed (4.5-4.8), before I offer conclusion for the chapter (4.9).

4.4 Stance and Discourse management gestures

Gestures just witnessed in the above examples (11 & 12) illustrate the manner in which gestures can be considered to be ‘forceful’ in physical space and convey interpersonal ‘control’ (Wehling 2017). In this respect, M and P’s gestures display communication acts that are metaphorical. Such gestures align with conceptual metaphors as in DISCOURSE SPACE IS PHYSICAL SPACE, and ARGUMENT IS WAR. The following two bar chart shows the proportions of gestures that involved no force, initiating force, and antagonizing force for each speaker/gesturer.

Table 8: P's gestures during preliminary remarks

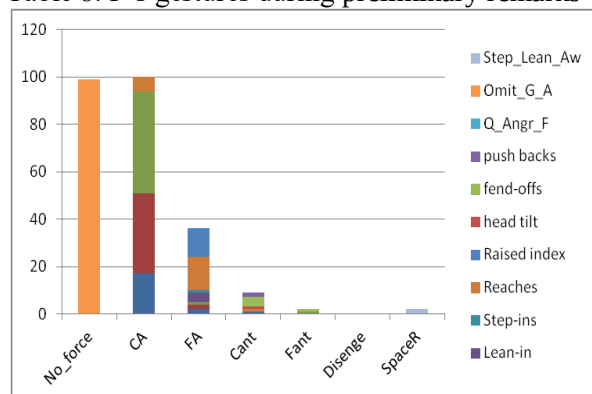


Table 9: P's gestures during questioning period

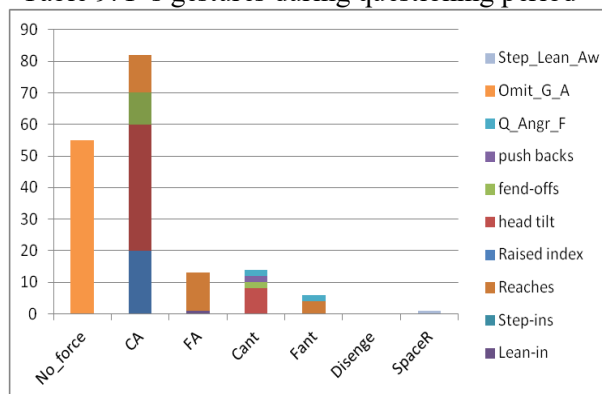


Table 8 and 9 above compare P's rate of 'control' gestures between the time he spent making preliminary remarks at two press conferences (on the left) and the time he spent gesturing while answering questions from the press (on the right) directly after his preliminary remarks. Initially what can be said is that during his preliminary remarks as compared to gestures during questioning almost twice as many composite utterances have no force component. It is also true that the force dynamic type with the most gestures pertains to forceful gestures relating to 'content.' In Wehling's (2017) terms, this falls under the category of 'initiating' force. These are gestures with a 'forward movement' such as pushes, stabs, lean-ins, and palm-upward-open hand gestures. In figure 13 and 14, P uses a push gesture to disalign from a certain kind of spending.



Figure 17/18: Speech tier: "You can't spend fifty-six billion dollars and expect than noone will pay for it."
 Gesture tier: push gesture aligned with 'noone'

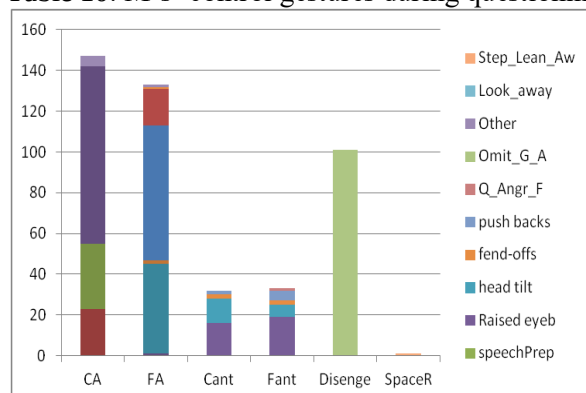
For P, the second dynamic force type frequency differs between these two kind of data. During preliminary remarks, and also from the category of initiating force, P engages in floor agonistic gestures. The behaviour of these dynamic gestures is a ‘pushing’ force against opponents in support of the gesturer’s own political party campaign. These include gestures such as lean-ins, reaches, and raised index finger.



Figure 19/20: Speech tier: “uh we will have a costed complete platform out in due course.”
 Gesture tier: first reach on ‘costed,’ second reach on ‘complete’

It is perhaps not surprising that P’s two main force dynamic control gestures are agonistic during preliminary remarks, in the sense that they are both initiating forces during a ‘monologue’ style of communication. In Table 9, which excludes his monologues, the second most common force dynamic control gestures were of a responding force, although they numbered only a few more than the pattern seen in the preliminary/monologue. What is apparent comparing gestures during preliminary remarks and responding to questioning is that ‘stabbing’ gestures seem to increase slightly, and pushing behaviour decreases. It appears that communication in a monologue discourse still contains many force dynamics, and force dynamics in responding during political question periods contain more aggressive gestures including stabs in addition to pushes.

Table 10: M's 'control gestures during questioning



M's gestures reflected in the table above represent her control gestures during questioning only. Somewhat different to P, both of M's initiating force gestures were both more than composite utterances that either disengaged or did not have any force gestures.

4.5 Cognitive schemas and embodiment used to convey stance

A good example of a two-handed gesture stemming from a physically represented mental space conveyed a credibility-based stance by P. It was used and co-timed with the word, "Guilty!" In figure 1) and 2) below the action of the flat hands movement completes with the forearm parallel to the ground and then is subsequently held in a post-stroke hold. This action of bringing down the hand while at the same time invoking a person's culpability conveys a cognitive schema with some elements of a judge bringing down a gavel in a court of law.



Figure 21/22: "The ethics commissioner is found Justin Trudeau "guilty!"

With the palms facing the gesture space in front of the body, and the exaggerated action being performed by both hands, in addition to the action prolonged with the hands being held in the final position, this gesture composition complements the textual content by invoking a prototypical act of a modern legal system. Additionally, the gesturer makes rapid forward head movement matching intensity of the downward stroke of the parallel hand movement. The gesturer's head nod also appears to signal an affirmative decision of guilt was made also adds emphasis to the overall composite utterance. In a larger cognitive courtroom frame, by engaging the head, the gesturer seems to emphasize his alignment with the guilty verdict and also aligns with a character viewpoint of a judge giving a verdict. There were many stance-laden gestures that invoked cognitive frames like this, each facilitating an observable action supporting a spoken message, and with other body articulators contributing to many composite utterances.

Another example from the other speaker illustrating a cognitive schema and embodiment with the same flat palm lateral gesture (PL) with a palm facing towards centre line (TC) is used in an emblematic gesture, emblematic of a hand-shake. In the instance outlined below in (5), the gesture was made several times and co-timed with several words used to describe the speaker/gesturer's hypothetical interaction to establish mutual benefit.

(5) "We'd have a conversation, a respectful conversation, a negotiation..."

(Pre-stroke hold) Stroke (Palm lateral), stroke (palm lateral) stroke (palm lateral)

Eye-gaze down at hand - - - - - (hold) - - - - - eye-gaze look-up at interlocutor

The gesture in this case seems to convey a feature of what Ladewig (2013) defines as a cyclic gesture, which is often used as a strategy for the speaker/gesturer to construct meaning spontaneously. What the speaker/gesturer appears to be doing is enacting a mental schema of a common meeting scenario in which people shake hands to come to an agreement stance. In the example, as she attempts several words to describe her meaning, she repeats the hand-shake-like gesture in a circular, cyclic movement, seemingly searching not just her mind, but her lived embodied experience. Establishing a context like this, with a cognitive frame out of which the kind of agreement she is referring to, comes, is an example of how gestural innovation creates a mental space whereby a speaker/gesturer can make her stance while connecting the present moment to a conceptual scene from the past. In (5), this characteristic continuous rotational

movement of a cyclic gesture paired with the gestural handshake co-timed with vocabulary moving from a distal or remote sense to a more central, paradigmatic and prototypical sense highlights what Ladewig (2014: 1605) calls the cyclic gesture's, "...semantic core of cyclic continuity." Given the combination of the gesture's movement away from the gesturer's body and the continuous movement, this particular gesture is perhaps an innovative mixture of a cyclic gesture combining with a handshake conceptual blend and one of many gestures utilizing the flat hand palm lateral orientation found in the data to convey stance.

4.6 Gestural misalignments illustrate weak stance.

In the data, approximately forty stance marker types were labeled, indicating varying degrees of stance. Head nods or head beats without intensity were considered gestural beats which have been highlighted elsewhere in the literature as representing discourse management and textual alignment that a speaker uses (Ruth-Hirrel & Wilcox 2018). Such movements are assumed to be self-directed and convey minimal stance to speaker/gesturer addressees. Eighteen out of forty stance markers were considered weak stance. Other head nods were labeled as more stance-related, and were characterized differently including additional features such as movement acceleration and intensity. Additionally, head nods that comprised a gestural unit, therefore having more than one gestural phase including a preparation, a stroke, and a retraction or a return to a neutral position, were considered to indicate stance by signifying the speaker's opinion or attitude to the discourse. Lateral head movement, also referred to as head shakes also were labeled with respect to their co-verbal messaging. Therefore headshake and stance down-toning, and headshake and topic or comment indicating rejection were considered to indicate more stance than if a headshake indicated doubt or uncertainty. A head nod with intensity and gesture unit phases could also be labeled as indicating speaker/gesturer's affirmation about the content of the message. The following series of images are intended to show how gestures cluster together, and in this example, how the lack of gestural and textual alignment and messages can be equated to a speaker/gesturer's weak stance.



Figure 23-28: sequence of images highlight head, eye, hand, and body misalignments

“Ah we will- we **will** have...”

Precision grip gesture **not** aligned with text.

No beat present with initial as a

precision grip gesture

Eye movement looks **away**... away.

“...our **platform**”

Head nod on “platform” which is **not** a new or contrastive focus of emphasis, therefore

fore gestural stance again does not align with textual content

“**out** well in time...”

Precision grip aligned on “out,” but gesture marked atypically on body, functioning more

self-soothing self-adaptor and weak stance. Gaze still



“uh...”

Head shifts from neutral space, Away from weak messaging.

“We have given...”

Speaker/gesturer eye gaze and hand gesture in opposite directions therefore not integrated

“...all the measures.”

Eye gaze is looking away from addressee and also away from hand gesture stroke. No pre or post stroke hold.



Figure 27: P seems to compensate for weak hand, eye, and head gestures by puffing out chest and broadening body frame

Simultaneously, while precision grip gesture does not align with speech, speaker/gesturer puffs out chest and widens elbows. These are just some of the misalignments illustrating weak stance. They are illustrated here to show how a strong stance depends on a speaker/gesturer's gestures. Examples in the following sections will highlight how a gesturer/speaker can convey a much stronger stance when his or her gestures support their speech.

4.7 Facial gestures: smiles, mouth shrugs, and eyebrow raises

Smiles and other facial gestures were found throughout the data. Below, each of the smiles for M represents all four of the category of smiles outlined by Kaukoma, Peräkylä, and Ruusuvuori (2015). The female speaker from the Federal Green Party smiled more than the male speaker from the Conservative Party (female = 46; male = 16). Figure 20) which depicts evoking a new and emotionally appropriate response tended to co-occur with the text. The smile depicted in Figure 21) which represents a character viewpoint for the speaker occurred throughout the verbal utterance. This smile type is also evident elsewhere in the data (see for example Figures 29-35). Additional smiling behavior which more specifically relates to stance shows up in the data, as seen in the smiling types below in Figures 20-23).



Figure 30: Smile evoking a new and emotionally appropriate response to the talk. "One of my favorite,"



Figure 31: Reenact a previously shared emotional stance
"...moments of 'aha'!" "Eureka!"



Figure 32: Offer an alternative emotion to frame the talk
“Once you eliminate the cost of filling your car...”



Figure 33: Establish a stance that is withheld and or ambiguous in the talk. “That’s not rhetoric. That’s what we’re doing.”



Figure 34: Offer alternative emotion to frame the talk: “...that will allow **you** our opponents and all Canadians to scrutinize it.”

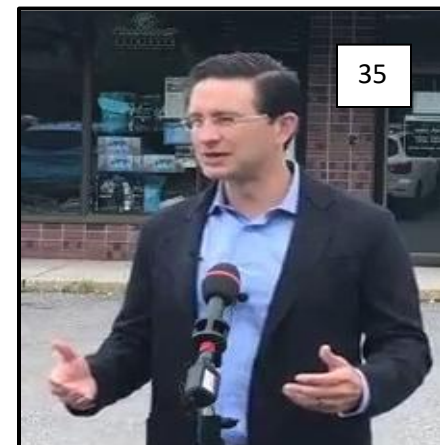


Figure 35: Evoke a new emotionally response to the talk. “Well I suspect that the people you hang around with are not representative of the whole country.”

Figure 26) below represents M’s smiling face before taking any questions for this press conference. The size of her smile is big with her eyes intently focusing her gaze at the first question. The sequence continues with her showing surprise, reflected in her raised eyebrows and smile attenuating, and with the mouth also conveying a mouth shrug. By figure 29), the smile is now overshadowed by a low unfocused gaze and a second instance of raised eyebrows, showing surprise once again. Her gestural behavior reflects a mix of stance acts, culminating in Figure 31) where M leans-in conveying her party’s position that their commitment to balanced budgets, “...is not ideological, it’s just prudent.”



Figure 26: M from smiling toward a new question



Figure 27: then conveying surprise with raised eyebrows at content of the new question



Figure 28: Then looks down and gestures a mouth shrug, possibly to mask her reaction.



Figure 29: Then another eyebrow raise conveying surprise again, now a reduced smile.

After finishing the spoken utterance, the composite utterance continues shown below in Figures 32) & 33), with what seems like a blend of a muted mouth shrug, and a smile which, when following her eye contact, M's smile, which also is minimal, seems to be directed at the person giving the next question. Therefore, the gestural behavior appears to show a guarded response regarding the Green Party's position on their stance of balancing a budget, should they be elected. Previous research from Ruusuvuori et al. (2009: 377) have shown the predictable nature and function of a smile at the end of a spoken utterance which is used to secure shared understanding and inter-subjective affiliation. Here the speaker/gesturer indicates a measured response, which may reflect a combination of her party ideals which she revealed from a bait-and-switch in the lead up to this question-response interaction. In the preamble to the question, M offered a very sharp stabbing gesture along with the words '*balanced*' to indicate her party's financial record for the previous election. After baiting M to reveal her party's position balancing a budget, the interviewer then changed their position align with the incumbent party who was the only party who did not campaign on balancing the federal budget. Now set up to either contradict or hedge from her previously revealed position, M hedges. M's composite utterance continues

after her vocal utterance is complete and gives a facial gesture that seems half smile half shrug. Ruusuvuori et al.'s (2009) main finding that facial expressions can stretch the temporal boundaries of an action seems to support M's hedge in Figure 31). In 30) M displays a mouth and shoulder shrug and head tilt conveying the beginning of a hedge stance act. Then in Figure 31), a lean-in offers a new party position ('prudence') followed by a straightened posture followed with a faint mouth shrug and faint smile conveying a more neutral expression than her opening smile at the beginning of the exchange.



Figure 40: "So our commitment to budgets that are balanced..."



Figure 41: "...is not ideological, it's just prudent."



Figure 42: M's smile is withheld after composite utterance in Figure 31) ends, with a small mouth shrug in its place.



Figure 43: M's smile returns to her face just as her eyes meet gaze of next interlocutor's question.

4.8 More Shoulder Shrugs and strong stance

Of the four kinds of attitudinal shrugs that I found in the data, what is evident is that the forms of the shrugs can look the same, but when interpreted with their co-gestural text, the shrugs can represent many kinds as outlined by Debras and Cienki (2014). Additionally, shrugs that were conveyed alongside hand gestures clarified a speaker/gesturer's stance.



Figure 44: Attitudinal shoulder shrug of Incapacity or indifference conveys a lack of action or disagreement, eyes look down, hands in neutral position, head tilt. “He’s uh, Jihadi Jack...”



Figure 45: Attitudinal shoulder and mouth shrug conveying incapacity, similar to Figure 38; however, eye contact is maintained here with addressee. M gestures this while her verbal utterance indicates their commitment to balanced budgets are prudent, and not ideological.



Figure 46: Mouth shrug conveying ignorance “This is what we have to do if we want to ensure that, the stability of the global atmospheric and climactic systems allows children alive today to get to their natural lifespan.”

M’s mouth shrug in Figure 46 is made while she makes a gesture using a combination of her thumb, fore- and middle fingers – a gesture that received comparable stance act labels to her precision grip gestures with thumb and index finger. As outlined above regarding precision grip gestures, this gesture seems to convey the speaker/gesturer’s attitude and opinion that what she is saying is more than important for its contents, and consistent with Lempert’s (2011) fourth order

of indexicality. This gesture seems to convey more than ‘having a sharp point, which would indicate the speaker’s significance in being argumentatively sharp and effective as a leader. I argue this hand gesture is consistent with Lempert’s highest order of indexical focus which has the intended effect of branding. This is evident by the orientation of her hand which appears with the finger tips pointing back at the speaker, thus emphasizing the central image of the Green Party as the ‘right’ party for organizing the Canadian populace around the cause of aligning with global greenhouse emission targets. The juxtaposition of a mouth shrug signifying ignorance and the hand gesture signifying the opposite I believe communicates the scope of a problem (sustaining human life amidst climate change) that has no clear and easy solutions (global involvement). The incompatibility of these two gestures may support other work in gesture studies that highlights the present of multiple viewpoints in a gesturer/speaker’s message (Guilbeaut 2017; Janzen 2019; van Krieken & Sanders 2019).

4.9 Character viewpoint and stance

In this case, M’s mouth shrug may represent her own character viewpoint and her own doubts about ‘solving’ the climate crisis, and her hand gesture, seemingly pointing back at herself, could represent her critics or simply significant ‘others’ viewpoint. These kinds of multiple viewpoints have been shown by Janzen (2019) regarding their simultaneity and the capacity of the speaker/gesturer shift. It is interesting to note the presence of these patterns in English given that his data were focused on gestures signing in American Sign Language (ASL). Along with a second viewpoint example, another group of shrugs was represented in the data as seen in the next examples. These are epistemic shrugs and can be seen in the two figures directly below. Figure 47 and 48 show two viewpoints ostensibly in diametrical opposite viewpoints: total doubt and no doubt with an overall stance act of credibility. This construction demonstrates P’s capacity to respond effectively as lead finance critic opposing the liberal party. First, his eyebrow raise signifies the start of a new comment in a topic-comment structure (Engberg-Pedersen 2011; Janzen 2017). Second, his shoulders shrug to demonstrate epistemic common ground, thereby aligning with the lead-in question just asked. He communicates his surprise at what the interviewer is implying – that there is any room for doubt that the Liberals are hiding the true cost of their campaign platform. For P, the Liberal party’s lack of financial transparency is conveyed using viewpoint, first by his lowered gaze, apparently representing a character

viewpoint with his gaze focused in the space between his outstretched palms, oriented upwards and open. The outstretched palms offer a larger structure, a spatial frame of reference (Enfield 2004: 64). This gestural frame of reference is used to enact a character viewpoint shown looking through the Liberal campaign budget and not finding big ticket items, therefore implying hidden costs to the Canadian public. The frame of reference becomes back-grounded information, even as it recurs a moment later. It becomes clear with his next fore-grounded gesture that his open palms and the space in between represent a ground for his subsequent gesture. His next gesture in 40 and 41 supports this when he performs a gesture with his left hand imitating ‘anyone’ reviewing budget items and not finding big ticket items like Pharma-care. , “...I defy anyone to go through the platform and find where he [Justin Trudeau] has included that fifteen billion dollar cost.”



Figure 47/48: Epistemic shrug conveying common ground with shoulders and hands
 “Oh yes, well there’s no...” “...no doubt.”



Figure 49-52: P is occupying a character viewpoint (49-51), a mouth shrug in 52 conveys how anyone who reviews the Liberals platform would remain ignorant after reviewing it. More simply, this shrug also could signify P’s own negative evaluation of this outcome.

Other examples in the data can be used to show how character viewpoint is used even minimally with gaze to convey stance of the speaker (in figure 53/44). Then the same gaze structure is used for a character viewpoint that uses an elaborate act (in figures 56-63). In the first sequence, in Figure 53) and 54) M uses eye gaze to reflect how her future elected self or any other person would act when policing would be polluters. The gesture is initiated with an eyebrow raise, likely signifying topic-comment structure (Engberg-Pedersen 2011; Janzen 2017), then comes a shoulder shrug signifying ‘rejection’, and then the speaker/gesturer’s gaze alternates from her present viewpoint in Figure 53), to a character viewpoint in Figure 54), and then back to her present viewpoint in Figure 55). In the next sequence, M uses the same gaze just described, looking in the same leftward and upward direction, in order to frame the attitude of her colleagues who she describes as eagerly awaiting nearby when she characterizes them as ‘chomping at the bit.’ In this example, gaze is used in two directions, one upwards and leftwards depicting her colleague’s character as waiting eagerly, and in a second direction, gazing downward and frontward, presumably to complement her hand gestures which demonstrate eagerness and readiness to move through a crowd of people to get to the podium to answer questions. Such display of viewpoint demonstrates the almost infinite potential of gesture used to convey much more than the speaker/gesturer’s stance, but the stance of virtually anyone in any setting.



Figure 43/45: “You can’t produce this much CO2...” Affective shrug; rejection, character viewpoint expressed with distal eye gaze.

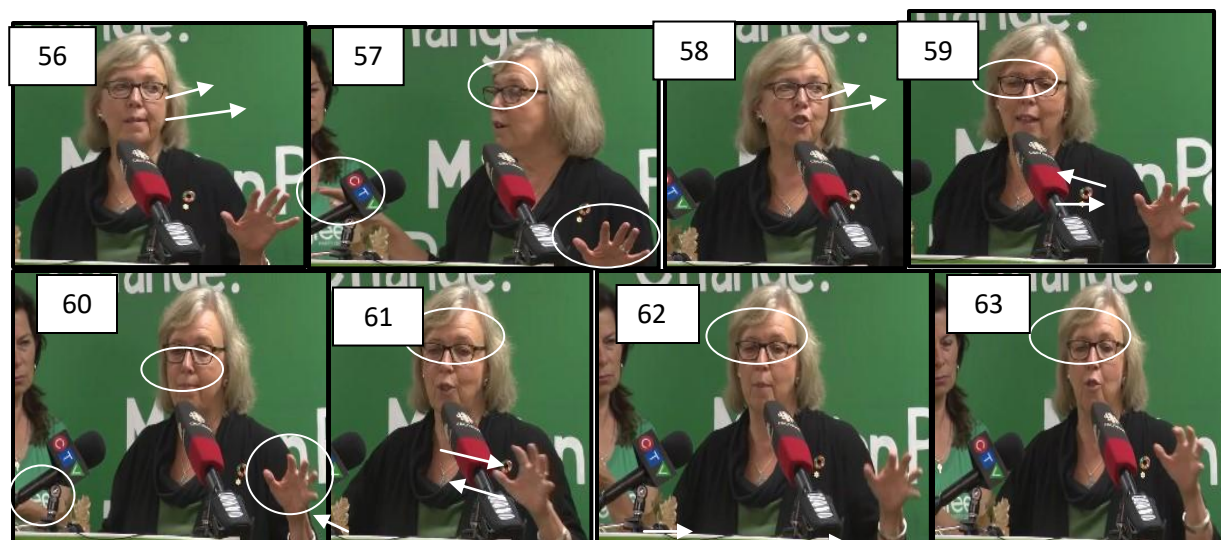


Figure 56-63: M shows a character viewpoint of a fellow party member ‘chomping at the bit.’



Figures 64-69: Listening while back-channeling, making branding type gestures gazing into right gestural space in 64-66). Then in Figure 68, P breathes nervously shifting gaze and body posture to left gestural space while looking down and away, before shifting gaze and right-hand gesture back to right gesture space in Figure 69.

P appears to move from listening and back-channeling with branding type gestures (see Figures 64-66). Then, before shifting to left gestural space (Figure 68) , in Figure 67 observe P pulling at left cheek, perhaps unaware and losing control over his gestural branding, or perhaps signaling the questioning journalist is “cheeky” or asks a “cheeky” question” while maintain his gaze and still facing right gesture space. Then in Figure 68 with posture shifting to face left gestural space P takes a very large breath facing into left gesture space, perhaps conveying fear or being uncomfortable or quelling anger. While breaking from a tightly controlled image brand, P also breaks eye gaze and looks down, and then regains composure and proceeds to gesture back into the right gesture space while maintaining eye contact. P’s right hand palm lateral facing diagonal toward centre (PLDiTC) synced with both eye contact and head movement conveys intensity with his coordinated gestural movement which continues as he builds both his credibility stance and evaluation in the upcoming sequence again involving character viewpoint



Figure 70-72: P uses metonymy and character viewpoint with his right hand to signify his party’s alignment with a former liberal minister who is also a doctor. P’s forward movement of his hand representing Doctor Hoskins functions to highlight his messaging of a transparent Conservative platform.

P maps “doctor Hoskins“ by moving his right hand forward, seemingly “revealing” or “bringing forward” via character viewpoint a competent person with whom he is aligning his stance. Then P moves his right hand backwards to indicate from where doctor Hoskins has come, from a previous party affiliation, “a former liberal minister.” P does not switch hands and use left hand to convey known or previous information with respect to its narrative reference, but instead uses sagittal front-back axis to highlight how Dr. Hoskin’s stance, once Liberal, now aligns with the Conservatives. This kind of gestural behavior demonstrates how a competent speaker/gesturer

can utilize several locations to index referents in their discourse and then access several axes of movement in order to convey their alignment or disalignment.



Figure 73-76: P shows contrastive use of horizontal, sagittal and vertical gestural space in order to build his stance.

In the same position closer-to-the-body position, P makes a gesture beat on the same spot of the right hand's same resting position from the previous gesture "a former liberal minister," conveying events happening in the past, "appointed by Justin Trudeau." This point is also significant for stance, as it implies that Doctor Hoskins' former affiliation with the liberal party is now somehow affiliated with the Conservative party's costing of its most expensive campaign platform item – the Pharma-care Plan. This is still the beginning of P's gestural sequence which now switches to his right hand. He continues to take up more and more of his gestural space. This functions to build his credibility, thereby reinforcing his stance. This can be interpreted in light of the conceptual metaphor IMPORTANCE IS SIZE (MetaNet Metaphor Wiki 2022), with a larger size connoting more significance. P then switches to his left hand to convey 'the creation' in, "the creation of a Pharma-care Plan." Additionally, there is evidence from previous research to indicate that speaker/gesturers utilize a larger gesture space to index their topics and comments (Engberg-Pedersen 2011). In this example, P demonstrates this first by morphing a distally past event typically conveyed in a horizontal and larger plane, instead into a small right-hand gesture along the sagittal front-back plane. Then P switches to his left hand and in the left gesture space he uses the vertical plane to represent a concept from the past – a formerly created Pharma-care plan. Now having indexed a new concept (Pharma-care plan) in the left gesture space, he now switches to his right gesture space to indicate its estimated value. To indicate other estimates for another political party (The Green Party) he switches to the left gesture space, and uses both horizontal and vertical planes to index this new discourse subject material in gesture space not previously occupied during the current answer to the journalist's question. He also uses the vertical plane to indicate increasing estimated costs associated with the Pharma-

care Plan, from multiple sources, with a greater value represented in a higher vertical space, thus reflecting the conceptual metaphor: MORE IS BIG (MetaNet Metaphor Wiki 2022). This also reflects a conceptual metaphor of more of something is portrayed as being higher in vertical plane (Lakoff & Johnson 1989; Lakoff and Nuñez 2000).

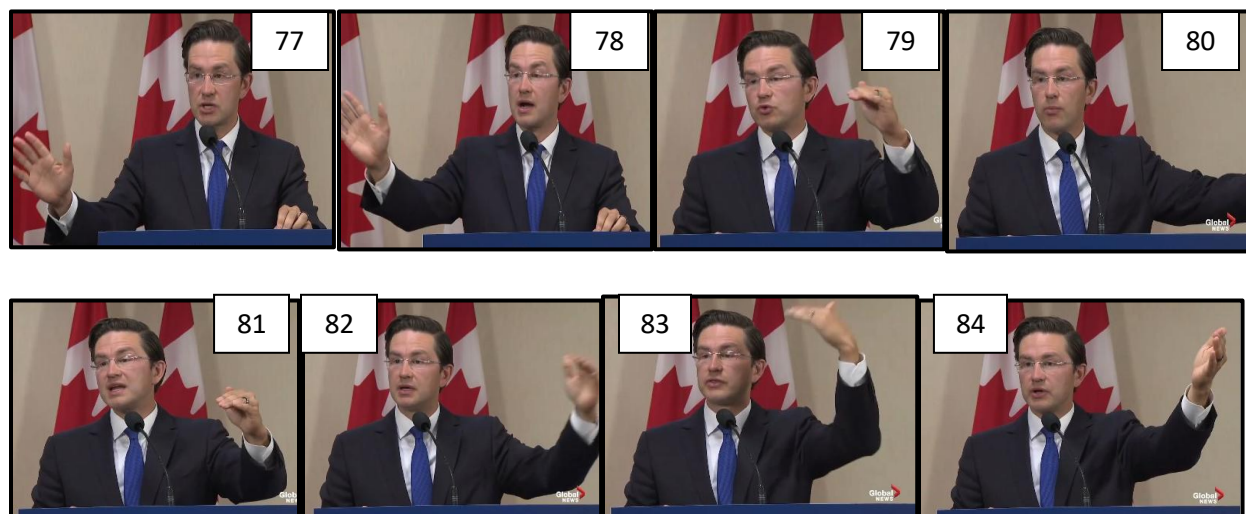


Figure 77-84: P continues to build stance with both left and right gesture spaces, in addition to index more perspectives in higher vertical gestural space.

P comes back to repeat the original gesture from the sequence (shown in Figure 71) to conclude this discourse sequence with a palm lateral right handed gesture. This is used to convey the same agreement stance he made when he initially responded, that P's government is campaigning on a platform that is not fully-costed, but as he's just illustrated is transparent on big ticket items, unlike the Liberal party, who are campaigning on uncoded promises, soon to be billed to the national credit card



Figure 85-86: Affective mouth gesture
Conveying rejection, a disagreement stance about his claim of a Liberal lack of transparency

Figure 87-88: P then uses palm vertical diagonal away from body (PVDiAB) with a downward and away movement in credibility/convincing stance, dis-aligning with the Liberal government.

Then in Figure 82 shown above, P makes a mouth shrug conveying an affective stance, before his next gesture. Now that P has delivered his stance signifying his party's transparency and credibility, in addition to his party's precision and efficient decision-making by welcoming an expert costing analysis by a former Liberal minister and licensed physician, P now finishes his stance by dis-aligning with the Liberal party, conveying a disagreement stance with an affective mouth shrug conveying rejection. As seen above in Figures 85 and 86, then P's gestural behavior now uses a lower gestural space and also utilizes a two-handed gesture that disaligns with the Liberals by using a gesture to push the Liberals campaign down and away (see above Figure 87 and 88, further dis-aligning from his position. This use of gestural space to license rejection ideas from which a speaker/gesturer dis-aligns uses a conceptual metaphor frame where GOODNESS IS VERTICALITY (MetaNet Metaphor Wiki 2022) where P aligns himself with those who are morally good and 'upright', and diametrically opposite to his stance where his hands are positioned, is the Liberal party, down and morally bad.

4.10 Conclusion

The nature of this qualitative research has highlighted the plethora of co-verbal gestural signs that give a broad perspective regarding speaker/gesturer stance. Conveying a strong stance necessarily includes the use of multiple facial, head, and bodily articulators that must be deployed through multiple planes and aligned with co-gestural speech. The extensive use of both proximal and distal locations to the body allows a speaker/gesturer to convey his or her position through multiple viewpoints and conceptual spaces, and here in the context of political discourse, to highlight their stance with respect to their party's perspective. Additionally, hand gestures are used to further specify the speaker/gesturer's stance, often specifying their relationship to topics within the discourse, in addition to employing force dynamics that visually communicate their position within the socio-cultural field. The limitations of my analysis and directions for future research will be discussed in the conclusion.

Chapter 5: Conclusion

5.0 Introduction

This thesis has aimed to explore the multifaceted nature of stance as it is manifested via a speaker/gesturer's deployment of their body in space. The benefit in doing such a study has allowed for an exploration of a plethora of variation, in the multiple signs and multiple sign types that can be employed to convey the position, evaluation, and alignment components of stance (Du Bois 2007). All of these components require the speaker/gesturer's complex bodily engagement to communicate using multiple spaces to convey their meaning (Feyaert, Brône, and Oben 2017; Janzen 2019; Lu 2019). The research questions I set out to answer were as follows:

1. What are the gestures that are used most often to reflect a speaker's stance; &
2. Is there a unique contribution of gestural stance markers to overall stance in the composite utterance, and if so, how much?

The data that were used involved forty-three minutes of video divided equally between two participants. The methods that were used involved three coding systems and two additional systems to further interpret the results: first, a form-based annotation system (Ladewig, Bressemer and Müller 2013) to address gestural forms independent of textual content; second, another coding system was used to label any non-manual articulations that could be associated with stance which drew on several independent empirical studies (McClave 2000; Borrás-Comes & Prieto 2011; Engberg-Pedersen 2011; Lempert 2011; Debras & Cienki 2012; Kaukoma, Peräkylä and Ruusuvuori 2015; Debras 2017; Rice and Hinnell 2015; Stec, Huiskes, Wieling, and Redeker 2017; Brône, Oben, Jehoul, Vranjes & Feyaerts 2017; Janzen 2019); and third, a stance label

coding system was used to label composite utterances based on the combination of manual and non-manual gestures in addition to textual content (Freeman 2019). This third coding system was originally used to code for stance acts based on textual content and prosody, with which prosody would have been included in the analysis if the gestural data coded had more instances of stance acts other than credibility- and opinion-based stance acts. In a study analyzing a broader range of stance acts, Freeman (2019) showed that credibility- and opinion-based stances do not have different measures of prosody and duration. For that reason and due to the majority of stance acts associated with manual gestures involving opinion- and credibility-based stances only, prosody and duration ratings were not explored.

For interpretation, the first of two systems and the one used to interpret the inverse relationship that was found in the data, a semantic and pragmatic approach (Bednarek 2009) was used to explore variation in meaning in the textual data. Lastly, to interpret some of the metaphoric and conceptual spaces surrounding the gestures and stance, a system of floor taking and content exchange were used (Wehling 2017).

What I've shown in the data is that stance-taking necessarily involves any number of viewpoints, that can be articulated simultaneously, and through multiple mental spaces and cognitive schemas. These viewpoints, spaces, and schemas are supported by any number of articulators that include manual and non-manual gestures. In this concluding chapter, I'll address a number of points of interest about what was learned including what gestures tend to be used more often by these two speakers, and what has the data revealed about the unique contribution of stance that gesture can provide. I will close with some directions for future research.

5.1 Gestural patterns in stance

5.1.1 Manual gestures in stance

Taking in view the most basic and central hand configurations and palm orientations, similar to previous research, recurrent patterns of at least two hand configurations were common in the data:

- finger combinations and lax/flat hand(s);

Gestures involving fists or single finger gestures tended to be use for discourse related coordination, such as enumeration of list items, or pointing into gesture space to index and keep track of discourse referents but not specifically for stance. The palm orientations that were common, innovative, and used most often in conveying stance were as follows:

- palm lateral (PL) and palm vertical (PV); and
- toward centre(TC), away from centre(AC), away from body (AB)

Other orientations such as palm up (PU) and palm down (PD) were used less often to convey stance, as well as a palm orientation towards body (TB). Regarding palm up (PU) open hand gestures, when they were present they were used correspondingly as stance acts of solicitation, or as a less well defined stance of ignorance, or incredulity. More often an open palm gesture was used not fully parallel to the ground (PD) nor facing up (PU), but flat facing laterally (PL) and held at a slight diagonal away from the centre gesture space (diAC). This configuration was only used by M, the female speaker/gesturer. Such a hand gesture, when it was used, was used in pointing to a metaphorical other, or was used as a co-timed beat aligning with the speaker/gesturer's spoken utterance. For M it was uses equally for opinion- and credibility-based

stances. Another palm orientation that was not common was the palm facing down (PD). A similarly marked gesture that was more common was palm vertical and diagonally facing away from the body (PVDiAB). This gesture tended to be used while the speaker/gesturer was talking ‘down’ other politicians (by P) or talking ‘down’ unfavourable ideas (by M). It appeared that the gesture was showing a physical action putting or pushing down and away and dis-aligning from the person or idea that they were speaking of or speaking about.

5.1.2 Common hand shape configurations: finger combinations and lax/flat hand

Both speaker/gesturers favored using a finger combination gesture combined with the palm facing laterally, toward the gesturer’s centre line to convey more opinion-based stances than they did credibility-based stances. They also used this same orientation with lax and flat hand configurations but they each use the lax and flat configurations to mostly convey either opinion (M) or credibility (P). These two orientations that combined with flat or a lax hand were used differentially by the two speakers. Observed in this study, M used a flat or lax hand shape with a palm lateral hand orientation to convey more opinion- than credibility- associated gestures. Alternatively, P used a flat or lax hand shape with a palm lateral (on a diagonal) hand orientation to convey more credibility- than opinion- associated gestures. With respect to hand gestures made including a combination of fingers, both P and M used them to convey opinion-based stance acts more than credibility-based stances. Many examples of both finger combination and flat hand gestures bore out in the data.

5.2 Non-manual gestures in stance

Many other gestures were found in the data and also many other mouth, face, eye, head, and body articulators. This was done using character viewpoints, as well as multiple

viewpoints, often using a combination of head movements, eye gazes, mouth shrugs and smiles in order to convey their experience and attitude as it relates to the topic. The temporal area of composite utterances immediately before and after the textual content is used to convey stance through the use of shrugs and smiles, at times both being employed simultaneously. Further research is needed to explore this. Eye gaze was used to look down and immediately in front of the speaker/gesturer to embody a character viewpoint. Downward –looking gaze was also used to emphasize a character viewpoint and also toward a hand gesture to bring the interlocutors attention to their gesture-supporting stance. Gaze was also used to gaze into the distance, above the conventional sight line that was used to maintain gaze with interlocutors. Such distant gazes appeared to emphasize left gestural gazes into a metaphorical distant past, and right gestural gazes into a metaphorical distant future. Moreover, this kind of ‘forward’ and ‘backward’ gazing seemed to be used to align with former and future positions. More work is needed to explore this.

5.3. Conclusion

Composite utterances of a multimodal nature are perhaps best characterized through a qualitative study like this. Additionally, it highlights that the interactive nature of dialogue is perhaps one of the best mediums to capture this complex nature of composite utterances (Feyaert, Bröne, and Öben 2017: 141). For this reason, it is essential to the development of stance research for studies focusing on naturalistic data to continue. It also illustrates that many frames of interaction can be recalled and acted upon in the present. Such communication paradigms effectively partially map (Mittelberg 2017) common scenes of human experience onto real-time communication events by drawing on contiguous elements or actions from embodied experience that are highly salient to others within the same shared socio-cultural field. Even

without being conscious of witnessing such cognitive frames, interlocutors are drawn in by a speaker/gesturer conveying stance in this way. These common enacted scenes highlight a certain kind of metaphor called metonymy (Mittelberg & Waugh 2009). It's also the case that more basic gestural movements along the physical planes of movement are now thought also to be more metaphorically based. Gestural behavior along the physical planes of movement tends to follow conceptual metaphor mappings that result from the human experience living and interacting in an upright standing position from an embodied perspective (Lakoff & Johnson 2003). Such gestural behaviour in the vertical, horizontal and sagittal planes rely on form-meaning mappings that are heavily entrenched and are used to conceptualize more abstract domains (Dolscheid & Casasanto 2015). “[They] show that when metaphor and polarity are juxtaposed, the congruity effects support metaphorical thinking, not markedness/polarity correspondence” (Dolscheid & Casasanto 2015: 10).

In addition, force dynamics of gestures found in the data highlight that speaker/gesturers do make extensive use of gestural behaviour for metaphorical ‘control’. This gestural behavior emphasizes that speaker/gesturers are spatially aware in the use of their language choices to forcefully communicate in physical space (Wehling 2017). This type of gesture use also highlights the metaphoric nature of communication and that the stances that speaker/gesturers take when they are conveying their message can portray not only alignment or disalignment but also a dynamic relationship to others with the uses of pushes, stabs, reaches and lean-ins to name a few. Other research on perceived competence of political leaders suggests that politicians that use conceptual metaphors and embodied construal in their messaging may influence perception of their competence (Horchak, Giger, & Garrido 2018: 7). Horchak et al. (2018: 10) found that perceptions of movement affect perceptions of competence of individuals when expressed in a

metaphoric relation. In other words, politicians' embodied self demonstrating successful approach postures along a metaphorical path conveys the following embedded conceptual metaphor - AN ARGUMENT IS A JOURNEY (Lakoff & Johnson 2003). This kind of stance-taking in a metaphorical narrative has the potential to strengthen a politicians' perceived competence in sharing their opinion and conveying their credibility. Future research will now be discussed.

5.4 Future research

For future research regarding all of these manual and non-manual gestures and the study of how they support the construction of stance, I'd like to see this work extended into multimodal viewpoint in combination with conceptual blending and mental spaces research. What I have demonstrated here is that sophisticated eye-tracking equipment isn't needed in order to capture the many kinds of eye gaze among other body articulators such as smiles and mouth shrugs and many more. Additionally, future research could benefit from measuring the additive nature of gestural stance. It is well documented that the simultaneity of gestural behavior presents unique challenges in order to measure and quantify each articulator's contribution to a speaker/gesturer's overall stance. Additionally, there is a growing body of work on stance conveyed in prosody and textual content (Freeman, Levow, & Wright; Freeman 2015, 2019). A future study would benefit from exploring ways to account for stance in both of these domains. Lastly, more work needs to be done to analyze the temporal extension that the gestural modality can make beyond the boundaries of the spoken utterance. Such work needs to explore the interplay of mouth shrugs and smiles that differentially convey stance at the beginning and end of interactional turn-taking and speaker/gesturer intention to convey appropriate responses to

their previous stances. Such an endeavor could support efforts to answer questions that no one thinks to ask and everyone wants to know but doesn't know where to start. Other cultural prototypes demonstrate this age old question. Who in Western art seems to be smiling and mouth shrugging at the same time? The research is now developed enough to systematize a measured response. Furthermore, other research directions would include manual and non-manual gestures conveyed via multimodal viewpoint and stance-taking, taking into account the effectiveness of messaging that uses metaphor. Lastly, exploring these avenues of research would be enriched considerably if they included and explored gender differences.

Appendix

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