

Social meaning at the semantics-sociolinguistics interface

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Abstract

This paper analyzes sociolinguistic variation from a formal semantics/pragmatics perspective. Using tools from dynamic semantics, I provide a testable account of what impacts sociolinguistic variants have on the context, especially as compared to other kinds of non-at-issue meaning like presuppositions and expressives. I examine southern (U.S.) monophthongization ($/aɪ/ \rightarrow [a:]$) as a case study. I propose that social meaning can formally construed as a context change potential (CCP), specifically a CCP that imposes a restriction on both the input and the output context of the utterance. I argue that examining social meaning under a semantic perspective gives us vital insight into lexical competence and the typology of linguistic meaning.

Keywords: social meaning, sociolinguistic variation, dynamic semantics, formal pragmatics, context change potential, conventional implicature, non-at-issue meaning

1 Introduction

You and someone else could be discussing something as objective as what the seventh digit of π is, but whether you like it or not, you are often times communicating much more than mathematical truth. In (1) Devon is proposing something to be a fact to (the resistant) Abhi, but intentionally or unintentionally, he is communicating something else to her as well: he's from the southern region of the United States.

- (1) Devon: The seventh digit of **pi** [pa:] is **five** [fa:v]!
Abhi: No!

The source of this secondary message is of course his monophthongization of /pai/ as [pa:] and /farv/ as [fa:v]. This is a very salient feature of Southern English in the United States (Allbritton, 2011; Plichta and Preston, 2005; Labov et al, 1972; Labov, 1994; Thomas, 2004). In this way, socially-conditioned alternations point to certain properties about the speaker (Ochs, 1992; Silverstein, 2003; Eckert, 2008). I call this extra layer of meaning that variants carry **social meaning**. This paper concerns what impacts social meaning has on the discourse context.

Social meaning is secondary in that it's not the "main point" of the sentence (Smith et al, 2010). we can see this to be true in (1), where Abhi's *No!* is only taken to be contesting Devon's idea that 5 is the seventh digit of *pi* (the objection is justified; it's 6). She's not contesting his regional affiliation.

Other kinds of meaning are secondary like this too, like the supplemental clause (bolded) in (2).

- (2) Devon The seventh digit of pi, **which I doubled checked online right before this**, is five.

Abhi: No!

As with before, the ever-persistent Abhi is only contesting the unbolded part (cf., Potts, 2005). Her *No* cannot be interpreted as ‘You did not double check this online right before this’.

We might wonder why we add extra meanings like this in our speech. With (2) it’s fairly clear: the supplement is an explanation of how Devon (thinks he) knows the seventh digit of π . It is supposed to help Abhi with the evaluation of the main part of the sentence (cf., Potts, 2005). Devon’s monophthong is a bit more mysterious, since southernness has nothing to do with π . This paper asks fundamental questions like this, concerning what exactly we are doing in discourse when we stylize our speech.

Semanticists have had a lot to say about cases like (2) (e.g., Potts, 2005; AnderBois et al, 2013), but excepting Smith et al (2010), cases of sociolinguistic variation like (1) has gone under the radar. It is for good reason, because it is not immediately clear that something like monophthongization is about linguistic competence per se. [pa:] says ‘southern’ but so does big bouffant hair. Is our ability to conventionally attach meaning to slightly different linguistic forms really just our linguistic competence, or is it a part of our more general, semiotic cognitive competence? I argue that semanticists do have reasons to think seriously about sociolinguistic variation, and pick up where Smith et al (2010) left off to offer a formal account of the contextual effects of social meaning. My proposal will be that at the basic level, [a:] requires that the speaker be southern prior to the utterance, but that the speaker also updates the context by proposing ‘I am [properties conventionally associated with southernness] plus [whatever prior beliefs you have about me]’. This predicts many descriptive observations of sociolinguistic variants, including their non-at-issue-ness, hearer-orientedness, (non-)redundancy, and capability to be denied in specific ways.

This paper is organized as follows. In §2 (*Social meaning*), I begin with some sociolinguistic background on social meaning, to be followed by an overview of the theoretical (semantic) framework I will be assuming. I end this section with a discussion of why we should study social meaning in formal semantics. In §3 (*Data*) I provide descriptive data concerning the pragmatic properties of social meaning, and articulate five observations that I will account for in my analysis. §4 (*A semanticist’s take on the indexical field and the Bush effect*) translates some known sociolinguistic effects into semantics-friendly terms using set theory. §5 (*Analysis*) provides an analysis of social meaning using a dynamic semantic theory. §6 (*Testing the model out*) is the “report card” section that demonstrates the model to see how the five descriptive observations are accounted for. In §7 (Discussion) I discuss the broader implications of this work, and point to remaining issues that the proposed analysis predicts. §8 (*Conclusion*) is a brief conclusion to summarize the main points of the paper.

2 Social meaning

2.1 Sociolinguistic background

Two grammatical alternatives (called variants) can truth-conditionally mean the same thing, but they are not completely identical. They can differ in terms of the extra layer of socio-

pragmatic meaning that they carry, and the speaker's use of a particular variant affects how they come across to the hearer. Consider the pair of variants (**bolded**) in (3). (3a) and (3b) have the same truth condition, but the choice between the velar -ing [ŋ] variant and the alveolar -in [n] variant affects our overall impression of the speaker.

- (3) a. I loved **surprising** [s.pɹaɪzɪŋ] you with Clint Eastwood
b. I loved **surprisin'** [s.pɹaɪzɪm] you with Clint Eastwood

American English speakers consistently report that the velar variant sounds more educated and more articulate than the alveolar variant (Campbell-Kibler, 2006, 2007, 2008). We can also often make inferences about where the speaker is from based on their speech style, as in (4). The standard variant with the diphthong [laɪf] in (4a) does not evoke particular regional characteristics, but the monophthongized version of it in (4b) surely does. Monophthongization is a salient feature of southern (U.S.) English (Allbritten, 2011; Plichta and Preston, 2005; Labov et al, 1972; Labov, 1994; Thomas, 2004).

- (4) a. That is the most incredible moment in my **life** [laɪf]
b. That is the most incredible moment in my **life** [la:f]

These are just some examples of how we come to notice differences in the way we speak and assign meanings to these differences. This is the practice of segmenting the social landscape and figuring out who is in what category via language (Eckert, 2008). This is sociolinguistic variation.

In Third Wave variationist terms, variants *index* properties and stances (Ochs, 1992; Silverstein, 2003; Eckert, 2008, among others). I will call this kind of meaning **social meaning**. In the semantics literature the discussion of *social meaning* has often been limited to variants which have morphosyntactic alternations with respect to speaker-hearer relations (e.g., honorific marking in Japanese and Thai (Potts and Kawahara, 2004; McCready, 2014) and *tu/vous* distinction in French (Levinson, 1979)), but in this paper a wider range of socially-indexing meanings is under this umbrella. I take social meaning to be any one of these secondary layers of meaning that point to some social categorization of the speaker and/or the hearer. So this includes honorifics, but also the classic cases of sociolinguistic variation like the *-in/-ing* alternation and regional variation.

Labov examined the sociolinguistic alternation between the diphthong [ai] and its centralized version [ʌɪ] on Martha's Vineyard in his 1963 study. [ʌɪ] was recognized as a feature of the local, "fishermen's" dialect on the island. Besides fishermen, there was another social group that tended to centralize: teenagers who had positive attitudes about the island and intended to spend their adulthood there. Labov's interpretation of this was that [ʌɪ] doesn't just mean 'Martha's Vineyard' — it also indexes local pride and authenticity. In this way, variants can evolve to acquire additional social meaning that stems from the original one.

The "original" social meaning is what Labov (1971) calls an *indicator*, and Silverstein (2003) the **first-order index** of a variant. As a result of evaluating the population that uses that variant, additional meanings become associated with it. In Labov's terms this additional meaning would be a *marker*, and in Silversteinian terms, the **higher-order (nth order) index**. Another well-known case of this evolution of social meaning is Southern English. The first-order meaning of monophthongization is southerness, but perception studies also show that hearers associate higher-order properties like *friendly* and *uneducated* with southerness (Allbritten, 2011).

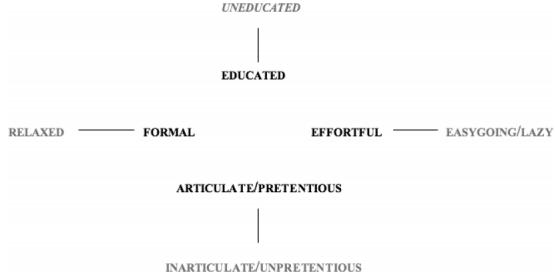


Figure 1: The indexical field of *-ing/-in* (Eckert, 2008). Black = meanings for the velar variant, gray = meanings for the alveolar variant

The point here is that social meaning is actually a complex web of properties, not a singleton property. A variant doesn't just mean X, it means X plus some other properties associated with it. As Eckert (2008) stresses, the construction of higher-order indices isn't necessarily a linear process. It is not that first-order meaning ϕ leads to second-order meaning $\phi + \alpha$, which leads to third-order meaning $(\phi + \alpha) + \beta$, and so on. Such a path is possible, but what Silverstein and Eckert say is that in addition to $\phi + \alpha$, the same variant could have $\phi + \gamma$ as a separate available higher-order index as well. It really is a “web” of social meanings in this way. Eckert calls this indexical “web” the **indexical field** of a variant.

Figure 1 on the next page is an Eckert-style visualization of this concept. The idea is that *-in* can mean ‘uneducated’, ‘easy going’, ‘inarticulate’, ‘relaxed’, or some combination of these properties. By exploiting properties like these that are associated with variants, the speaker creates a persona. Note that a persona is not a product of just one property. For example, *-in* alone doesn't “mean” the ‘easygoing surfer dude’ persona. A speaker expresses different social meanings via different stylistic practices (linguistic or otherwise), and you take a sum of that and *that* is the persona. A fronted /u/ may say ‘Californian’, a Quiksilver shirt may ‘surfer’, and the *-in* may say ‘easygoing’. The hearer adds that up to land on the perception of ‘surfer dude’, for example. The objective of this paper is to provide a formal account of this variationist notion of social meaning and its descriptive effects in discourse by using tools from semantic/pragmatic theory.

2.2 Social meaning is non-truth-conditional

The informal characterization of social meaning as being that “extra layer” of meaning already suggests that we are dealing with something beyond the truth condition of a sentence. Smith et al (2010) show this to be true in their careful descriptive overview of social meaning. (5) is based on their experimental findings from an acceptability judgment task.

- (5) Josh: Oh, is pie [pa:] their specialty?
 Alan: # No, you're not from the South

If Josh asks *Is pie their specialty?*, for Alan to respond *No* can only have one interpretation, which is the negation of the proposed at-issue content: ‘No, pie is not their speciality’.

What (5) attempts is to make the target of the negation the social meaning coming from the monophthongization. None of the seven participants in Smith et al.'s study found this to be felicitous. This judgement is also true of *assertions* with social meaning. (6) shows that you can only directly react to the at-issue proposition of an assertion, and not the secondary social meaning.

- (6) Josh: Pie [pa:] their specialty
- Alan: # No, you're not from the South
- Alan': No, pie is not their specialty.

The Data section (§3) will lay out more detailed descriptive observations concerning social meaning. It is sufficient to conclude for the time being that social meaning is non-truth-conditional. Because it will be helpful to bear in mind what the theoretical questions are when the detailed descriptive observations are introduced, next I provide a brief background of the formal theory I will be assuming.¹

2.3 Dynamic semantics

Any theory of meaning that deals with just sentence-internal, truth-conditional meaning might be called a *static* semantic theory. For example, the static denotation of the sentence in (7) is standardly its intension: the set of worlds in which Kellie Pickler got out of a speeding ticket.

- (7) Kellie Pickler got out of a speeding ticket
- $\rightsquigarrow \lambda w \exists x [\text{speeding-ticket}_w(x) \wedge \text{get-out-of}_w(\mathbf{k}, x)]$

A static theory of meaning is foundational to semantic theory and gets many things done in terms of composing sentence meaning out of its subparts. It becomes problematic, however, when multiple sentences or clauses become involved. One such case is cross-sentential anaphora. Consider the mini two-sentence discourse in (8a), which involves the pronoun *it* and its antecedent *a ticket*. (8b) is a reasonable first shot at the representation of what it is conveying.

- (8) a. Kellie got [a ticket]_i. It_i was for speeding.
- b. $\lambda w \exists x [\text{ticket}_w(x) \wedge \text{get}_w(\mathbf{k}, x) \wedge \text{for}_w(x, \text{speeding})]$

Truth-conditionally, (8b) is harmless in that it correctly predicts (8a) to be true if and only if Kellie got a ticket and the ticket was for speeding. There is, however, a compositional discomfort: the denotation of the first sentence *Kellie got a ticket* is nowhere to be found in (8b) as a subformula. Another way of stating the problem is that (8b) is also the denotation for the single sentence *Kellie got a ticket for speeding*. Trying to separate out the two sentences in the denotation leaves us with an illicit unbound variable in the last conjunct:

- (9) a. Kellie got [a ticket]_i. It_i was for speeding.
- b. $\lambda w \exists x [\text{ticket}_w(x) \wedge \text{get}_w(\mathbf{k}, x)] \wedge \text{for}_w(x, \text{speeding})$

¹Note omitted for anonymous review

With $\mathbf{for}_w(x, \mathbf{speeding})$ dangling at the end in (9b), the anaphoric link between *it* and *a ticket* is now lost. There have been a number of theories proposed to deal with this cross-sentential problem (cf., Discourse Representation Theory (DRT) (Kamp, 1981), File Card Semantics (FCS) (Heim, 1983), Dynamic Predicate Logic (DPL) (Groenendijk and Stokhof, 1991)). Without going into the formal details of the specific theories, the core idea is that in discourse, sentences participate in a relay of information. Truth conditions and intensions are not enough: we must make reference to the discourse and the information contained within it to make sense of something like anaphora. This idea is illustrated in (10). The circled numbers are “check-points” at which new information is potentially introduced in the discourse.

- (10) ^①Kellie got a **ticket**.^② ^③ It was for speeding.^④

To better explain the “dynamic” part of dynamic semantics and what I mean by “relay”, I am going to shift to a contemporary version of Heim (1983)’s metaphor to explain what is happening in (10). Imagine that discourse is like a small, 3’x2’ whiteboard. At check-point ①, there is nothing on the whiteboard. But by the time you say the first sentence and get to ②, you have put two post-it notes on the board: a yellow one that says *Kellie* and a pink one that says *ticket*. Yellow for animate, pink for inanimate. You write on the *Kellie* post-it note that she got a ticket, and on the *ticket* post-it you also write that this was something that *Kellie* got.

Now you take the whiteboard and give it to the second sentence. We are at checkpoint ③; where the first sentence left off with the whiteboard and where the second one begins. Because the second sentence has the word *it* in it, it has a special requirement before it does anything to the whiteboard: the whiteboard needs to have a pink post-it note on it. So the passing of the whiteboard is successful, and by the time we get to check-point ④, we have written on the pink “*ticket*” post-it note that this was a ticket for speeding. The whiteboard has been updated.

The whiteboard is the context and the post-it notes are the different discourse parts. By context I mean the discourse context in the Stalnakerian sense: a tuple (set) of discourse parts and objects. The idea is that in discourse, we keep track of different sorts of information, including which objects have been introduced, which proposed information has been agreed upon, who has publicly committed to what, and so on. The post-it notes are a metaphor for these different components of discourse. For anaphora, the relevant post-it notes are the ones about discourse referents.

In dynamic semantics, sentence meaning is a relay of contexts. Each sentence has a pre-utterance context and a post-utterance context, and the contribution of the sentence is to relate those two contexts in some way. This is what Heim calls the **context change potential (CCP)**² of a sentence. A typical thing to happen is to take the pre-utterance context and add new information to it. This paper operates on this theory that the meaning of a sentence is its CCP. Ultimately, I will argue that social meaning is a CCP too.

(11) is one template for what a CCP formally is. Taking contexts to be semantic objects, C is the input (pre-utterance) context and C' is the output (post-utterance) context. The contribution of a sentence is to relate these two contexts in a specific way. Since a context is a tuple (set) of discourse parts (\approx the “post-it notes”), the CCP encodes instructions to update one or more of these discourse parts.

- (11) $\lambda C \lambda C' [\text{ this is how } C \text{ should relate to } C']$

²Or *file change potential*

So then our task is to precisify “this is how C should relate to C' ” by figuring out which discourse parts are affected, and how. This depends on what kind of sentence we are talking about. This speaks to the contrast between sentences like (12a) and (12b). The former has the illocutionary force of an assertion, and the latter has that of a question.

- (12) a. Kellie got a speeding ticket
- b. Did Kellie get a speeding ticket?

The illocutionary meaning of a sentence is what we do to the discourse in making an utterance (cf., Austin, 1975; Searle, 1975, 1979, 1976, 1965); it’s a CCP. The two sentences in (12) involve the same proposition *Kellie got a speeding ticket*, but they do different things with it in the context. One major difference between the two is that an assertion of p says ‘I (=the speaker) believe this’, but a polar question does not express this kind of commitment (Farkas and Bruce, 2010). But they both have in common that they’re proposing to add information to the **common ground (CG)**, the set of propositions taken to be true in the discourse (Stalnaker, 1978). The point of having a conversation is to figure out what’s true and what’s not in our world, and the way that we accomplish this is by negotiating what should and shouldn’t go in the CG (Stalnaker, 1978). In formal pragmatics, this place of negotiation in the context is the **question under discussion (QUD)**. The QUD is a stack of issues (questions) in the discourse (Roberts, 1996). Our task in discourse is to resolve these issues and increase the CG.

In (13) and (14), I show a fairly informal formalization of the CCP of an assertion vs. a polar question (this will be properly formalized later in the paper as the need arises). The assumption is that there is a speech act operator **ASSERT** that takes a proposition (e.g., *Kellie got a speeding ticket*) as an argument, giving the sentence the force of assertion (Krifka, 2001). **INTERR** is the interrogative version for polar questions.

- $$(13) \llbracket \text{ASSERT} \rrbracket(p) = \lambda C \lambda C' \left[\begin{array}{l} \{p\} \text{ is the top-most issue in the QUD in } C', \wedge \\ \text{what I believe in } C' \text{ is what I believed in } C \text{ plus } p, \wedge \\ \text{I would like to add } p \text{ to our current CG in } C \end{array} \right]$$
- $$(14) \llbracket \text{INTERR} \rrbracket(p) = \lambda C \lambda C' \left[\begin{array}{l} \{p, \neg p\} \text{ is the top-most issue in the QUD in } C', \wedge \\ \text{I would like to add either } p \text{ or } \neg p \text{ to our current CG in } C \end{array} \right]$$

(13) and (14) are basically a type-driven version of Farkas and Bruce (2010)’s proposal.³ A CCP is something that takes two contexts and relates them: a semantic object of type $\langle c, \langle c, t \rangle \rangle$. If we replace p with *Kellie got a speeding ticket* in (13) and (14), we get the meaning of (12a) and (12b) as their CCP, respectively.

Now to (finally) return to social meaning, let us replace p in (13) with *Pie [pa:] is their specialty*. We can directly react to the primary meaning of this sentence (e.g., “No!” = ‘No, pie is not their specialty’), meaning that *this* part is an issue in the QUD. The question is where the secondary meaning of ‘the speaker is southern’ is in the context. Because we cannot directly contest it (e.g., “No!” ≠ ‘No, you are not southern’), this part is *not* in the QUD. So simply put, it seems that social meaning adds something to a CCP like (13)/(14), but we don’t know how, or even which “post-it note” it acts on for that matter. That is what this paper aims to solve.

³Note omitted for anonymous review.

2.4 Why social meaning in formal semantics?

Using dynamic semantics and CCP's to analyze social meaning certainly looks promising considering its non-truth-conditional nature. In fact, other types of secondary meanings like expressive meaning (e.g., *damn*, (Potts, 2007)) and honorific marking (Potts and Kawahara, 2004; McCready, 2014) have been analyzed as something that acts on the context of utterance.

However, using formal linguistic theory to analyze social meaning can be worrying because social meaning is not limited to language. How we dress and how we act contributes to our identity too (Eckert, 1989, 2000, 2005, 2008). How a country artist speaks may say ‘southern’, but perhaps a pair of cowboy boots may, too. Can we say, then, that the cowboy boots have a CCP too? This is actually not a radical idea, considering non-linguistic updates to the context has been thought to be possible for some time. Stalnaker (1978) for example notes that if an actual donkey walks into the room, it is henceforth presupposed that there is a donkey, and anaphoric reference to it is possible (see also Lewis (1979)). We do not necessarily have to introduce the referent with a linguistic indefinite (e.g., literally saying *A donkey walked into the room*). When seen this way, non-linguistic context changes and language are not completely separable. Here is the social meaning version of this: a blonde female wearing a pink and blue Lilly Pulitzer dress saying *life* [la:f] is not going to be perceived in the same way that a bearded man wearing a John Deere cap saying *life* [la:f] will be. For this contrast to be possible, the non-linguistic elements must be able to update the context too. So yes, clothing can have a CCP too.

If physical objects like clothing can have social meaning, we must wonder what other things carry social messages too. There are many things in the world that we come to conventionally associate “meaning” to — fonts, for example. A curriculum vitae composed in Comic Sans surely doesn’t convey seriousness, and the IHOP logo in Times New Roman is just not right. A color theory manual says that blues and greens “make us feel renewed,” while red and oranges “are comforting, spontaneous, and welcoming” (Marks et al, 2009). These observations get us deeper and deeper into our worry. By studying social meaning, are we actually leaving the perimeters of linguistics? Is this still a theory about language? I argue yes, specifically that we learn something about lexical competence from this study.

I would say that even things like color and font are analyzable using notions like a CCP. But that is certainly not to say that color, font, and fashion statements are a part of our linguistic competence. They surely aren’t. Just because something is analyzable with formal linguistic tools doesn’t make it language. But with a growing interest in multimodal linguistics — analyzing music and dance with linguistic tools, for example (Patel-Grosz et al, 2018; Schlenker, to appear) — we push ourselves to think at cognitive interfaces. This not unrelated to the fundamental question in linguistics of what exactly the lexicon is, if there is one. Is the lexicon — our “mental dictionary” — separate from world knowledge — our “mental encyclopedia”? Studying something like social meaning that teeter-totters between the two gives us a great testing ground for seeing if, e.g., Jackendoff (1988) is right that what we call the “lexicon” is just a part of general cognition. To put it another way, it is not clear if the CCP function that gets us from [pa:] to ‘the speaker is southern’ is the same function that gets us from a red traffic light to ‘stop’ in our minds, but asking that question at least gets us a better introspection of the boundaries of linguistic and cognitive competence.

Another, more concrete reason for studying social meaning under the lens of formal semantics is that we also may learn something about very-obviously linguistic phenomena,

like subjective meaning. One argument I will be making in this paper is that social meaning is a proposal of a certain persona, pending hearer approval — very much like the illocutionary meaning of an assertion. One motivation for this is that social meaning can be rejected via a reaction like “Poser!”. Details will follow in the Data section in §3, but the basic effect is shown in (15) below.

- (15) Josh: Oh, is pie [pa:] their specialty?
 Alan: Poser! You’re not a southerner.

One interesting consequence of the poser effect is that it applies to non-linguistic expressions of social meaning as well. For example, if Kellie wears a Metallica shirt with the intent of communicating ‘I’m a Metallica/heavy metal fan to the observer (e.g., Ozzy Osbourne), this can be shut down with “Poser!”:

- (16) Kellie: (wearing Metallica shirt)
 Ozzy: Poser!

Another, more crucial observation is that “Poser!” can also be a reaction to sentences involving predicates of personal taste (cf., Lasersohn, 2005), like *awesome* in (17).

- (17) Kellie: Metallica is an awesome band
 Ozzy: Poser!

This paper does not intend to fully explain cases like (16) and (17), but in §7 (Discussion) I do have suggestions for the application of my proposed analysis to examples like these. The take-away here though, is that there are other areas of language that behave suspiciously similarly to canonical examples of social meaning. Language is therefore not at all separable from expressions of social categorization, and for this, I advocate the need for studying all levels of social meaning formally.

3 Data

3.1 Kellie Pickler: a case study

This paper examines Southern English as a case study of social meaning in a formal semantics/pragmatics framework. In particular, I focus on the social meaning and discourse-pragmatic properties of the monophthongization of the diphthong /aɪ/, realized as [a:]. Monophthongization is a part of a series of vowel chain shifts in the Southern Vowel Shift and is one of the most salient features of Southern English (cf., Allbritten, 2011; Plichta and Preston, 2005; Labov et al, 1972; Labov, 1994; Thomas, 2004). Since regional variants have a fairly clear first-order social meaning (e.g., ‘Southernness’), it is an ideal case study for a preliminary investigation of social meaning within semantic theory. Sociolinguistic studies on Southern English also have findings on higher-order characteristic perceptions (Allbritten, 2011), which is another reason to pursue it as an example of how the proposed model works.

One phenomenon I aim to model is *style shifting* within discourse. As someone who is not a native speaker of Southern English, I do not wish to presume where style shifting occurs by using constructed examples. For this reason, I will use examples from the speech of an actual Southern English speaker throughout the paper. Specifically, I will analyze the speech

style of American country artist Kellie Pickler. Pickler is a caucasian female, born in 1986. She grew up in Albemarle, North Carolina (central North Carolina). She is most recognized as a contestant from *American Idol*, and is known for her zany yet endearing personality on television. Importantly, the southernness of her speech is quite salient to the general public, which makes her an ideal example in an investigation of social meaning. She is described as having a “southern twang”⁴, and some call her “the true definition of a Southern belle”⁵. It is quite clear from the public discussion of her persona that Southernness is a large part of her identity and speech.

(18) is a transcript of a naturally occurring conversation⁶ between Ellen DeGeneres (American comedian) and Kellie Pickler on *The Ellen DeGeneres Show*, aired in 2015. Ellen DeGeneres is a caucasian female, born and raised in Metairie, Louisiana (southeast Louisiana), age 57 at the time of the recording (born 1958). She has no noticeable Southern features (e.g., monophthongization of /aɪ/, diphthongization of /ɪ/, etc.) in her phonology based on my perception. Pickler is 29 years old in this recording. During this portion of the interview, they are discussing Pickler’s husband. This particular interview was chosen because Pickler noticeably styleshifts between Southern English and standard English during it.⁷

The underlined words in (18) are words with an underlying diphthong /aɪ/; i.e., potential places where Pickler could monophthongize. A single underline indicates words she does monophthongize. For example, *life* /laɪf/ in Line 3 is realized as [la:f]. She monophthongizes most diphthongs in this conversation. The double underline in Line 27 indicates the (only) word that she does *not* monophthongize. That is, she pronounces *lives* /laɪvz/ here as [laɪvz], retaining the diphthong. I have isolated these two examples as (19) and (20), respectively.

- | | | |
|------|--|----|
| (18) | E: We do always have fun. And I loved surprising you with Clint Eastwood. | 1 |
| | E: That has to be your favorite appearance. | 2 |
| | K: That is <u>like</u> , the most incredible moment in <u>my life</u> . | 3 |
| | E: Yeah. | 4 |
| | K: I mean, aside from <u>like</u> , marrying <u>my</u> husband, of course. | 5 |
| | E: Yes. | 6 |
| | K: He's the m – there's <u>my</u> husband (gestures top of scale) and then there's <u>Clint</u> <u>right</u> there (gestures slightly lower than top of scale). <u>Riiight</u> there. | 7 |
| | E: Yeah. [laughs] He is – Kyle is just a – he seems <u>like</u> – y'all – you're both just madly in love with each other, aren't you? | 8 |
| | K: He is such a sanctuary and such just – he's just a good man, and he loves me, and he's amazing. | 9 |
| | E: And I know that. | 10 |
| | K: And he doesn't <u>mind</u> that <u>I</u> kissed Clint Eastwood on that show. | 11 |
| | E: Yeah. | 12 |
| | K: I curled up in the fetal position in his lap, poor thing. | 13 |
| | E: But that was a while before – were you married then? You weren't married then. | 14 |
| | K: I believe we were. | 15 |
| | E: Oh, okay. | 16 |

⁴Source: <http://www.opry.com/artist/kellie-pickler>

⁵Source: <http://whatupmag.com/culture/music/country-icon-kellie-pickler-feels-blessed-successful-career/>

⁶Retrieved via Youtube: <http://www.youtube.com/watch?v=aeQHb012Ges>

⁷Acknowledgement omitted for anonymous review.

- K:** Yeah. (raises hand) Guilty. 17
 E: Okay. I believe we were. 18
K: I believe we were. 19
 E: Uh, so this new show – 20
K: Yes. 21
 E: Is a lot about – and I say that ‘cause I’m watching the two of you together and he puts up with a lot with you. He really does. 22
K: Bless his heart, yeah. 23
 E: So it’s a reality show, and it’s you in Nashville, right? 24
K: Mm-hmm. 25
 E: And how did this come about? 26
K: You know what? We have just been so blessed with to surround ourself by good company. We have great friends and great people in our lives. 27
K: And we laugh a lot, we love each other. And it was like, television needs this. 28
- (19) That is the most incredible moment in my life [la:f] (monophthong)
 (20) We have great people in our lives [laivz] (diphthong)

Figure 2 is a spectrogram of Pickler’s realization of *lives* /laivz/ as [laivz] in (20)/(18-Line27). The rising F2 indicates the gradual fronting involved in the transition from [a] to [i]. This is a very clear diphthong.

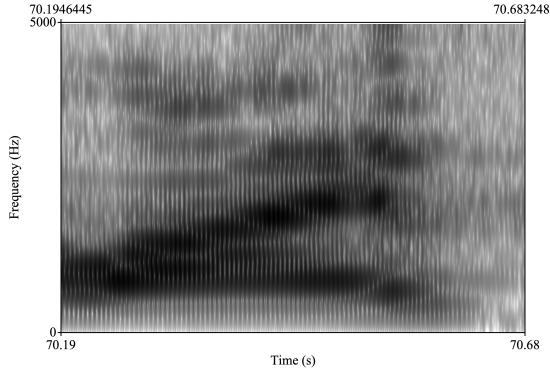


Figure 2: Kellie Pickler’s pronunciation of *lives* [laivz] in (20)(standard diphthong)

Figure 3 is a spectrogram of Pickler’s pronunciation of *life* /la:f/ as [la:f] in (19)/(18-Line3). The non-rising F2 indicates monophthongization.

For readability, whenever the full context of the conversation is required for the analysis, I will refer to (21), which is a shortened version of the full conversation in (18).

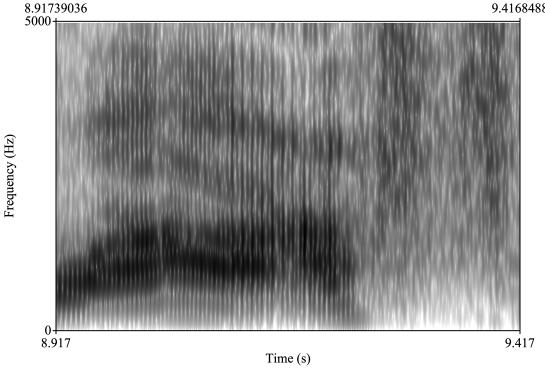


Figure 3: Kellie Pickler’s pronunciation of *life* [la:f] in (19) (monophthongized)

- (21) E: I loved surprising you with Clint Eastwood. That has to be your favorite appearance.
K: That is the most incredible moment in my [ma:] life [la:f].
E: Yeah.
E: So how did this new show of yours with your husband come about?
K: We have great people in our lives [la:vz].
E: (nods)
K: And we laugh a lot, we love each other.
E: (nods)
K: And it was like [la:k], television needs this.
E: Yeah.

This basic introduction of the data confirms a well-documented but important fact about social meaning: *speakers participate in style shifting by switching between variants*. I will call this Observation 1.

- (22) **OBSERVATION 1 (Style shifting):** Speakers style shift in discourse by switching between variants.

We can speculate possible reasons for Pickler to want to switch to the standard variant in the place that she did. The shift occurs when she is expressing her gratitude for the people she has in her life. She is perhaps exploiting the sophistication and educatedness known to be associated with standard forms to communicate a more serious, less comedic persona.

Note that in principle, there is at least one more variant that is known to be associated with linguistic and social attractiveness. That would be RP British English (cf., Ladegaard, 1998). However, it is far from natural for a Southern English speaker to switch to British English to portray sophistication, even if she is aware the dialect is associated with this perception. In (23) we imagine Pickler saying the relevant line (*We have great people in our lives*) with a British (RP) accent.

- (23) E: I loved surprising you with Clint Eastwood. That has to be your favorite appearance.
- K:** That is the most incredible moment in my [ma:] life [la:f].
- E: Yeah.
- E: So how did this new show of yours with your husband come about?
- K:** #We have [hav] great people in our [a:] lives [laivz].

Something is certainly unnatural about (23). Kellie Pickler is not licensed to speak British English because she is not British. This is Observation 2.

- (24) **OBSERVATION 2 (Speak your own dialect):** It is infelicitous for a speaker to shift to a non-native dialect.

I acknowledge that there are some potential counterexamples to this observation, such as the “Harry Potter marathon” context below.

- (25) (Quinn and Cara (both American) are about to start a Harry Potter movie marathon.)
- Quinn: Shall we start [start]?
- Cara: Oh absolutely.

In (25), the fact that British English is related to the topic at hand (Harry Potter) somehow makes the adoption of the non-native dialect more acceptable. I will discuss this sort of example in §6.2 in conjunction with the analysis. For the time being, Observation 2 refers just to basic anomalous cases like (23).

3.2 Social meaning is a persona *proposal*

The idea that assertions are a *proposal* to update the common ground — not a *direct* update of it — has been around at least since Stalnaker (1978). Ginzburg (1997; p.66) emphasizes this, and the idea was (re-)popularized more recently by Farkas and Bruce (2010). The data supporting this claim is a simple but effective one: you can say *no* as a reaction to an assertion (Ginzburg 1997, Farkas and Bruce 2010), thereby refusing to let the proposition enter the CG. (26) is an example of this sort of interaction.⁸

- (26) Finn: Escape? He's one man against an army. We have to help him. We have to fight.
- Poe: No, no. We are the spark that'll light the fire that will burn the First Order down. Skywalker's doing this so we can survive. There's gotta be a way out of this mine.

Finn proposes that they have to fight. Poe says no. The moral of the story is that you don't get to decide on your own what goes in the common ground; you have to get the hearer's approval first.

Social meaning has a proposal nature to it too. A monophthongized diphthong may conventionally mean ‘I'm southern’, but if the hearer does not buy it the speaker is not successful in conveying that persona. I call this the **poser effect** and it has a real manifestation

⁸Source: https://transcripts.fandom.com/wiki/Star_Wars_Episode_VIII:_The_Last_Jedi

descriptively: you can say “Poser!” to deny a persona proposed by another speaker. (27) is an example, a constructed conversation between country singer Taylor Swift and Kellie Pickler. Taylor Swift, an internationally recognized country(-pop) artist, is actually born and raised in Pennsylvania. If she were to adopt a southern accent as in (27), it is felicitous for Kellie to call her out as a poser. Similarly in (28), Kellie can be accused of being a poser for putting on an insincere “intelligent” persona.

- (27) Taylor: Two plus three is five [fa:v]
Kellie: Poser!
- (28) Kellie: We have stupendous people in our lives [laɪvz]
Taylor: Poser!

Note that “Poser!” can only deny social meaning; it cannot be used to negate at-issue meaning. In (29), Kellie cannot use *poser* to mean that Taylor’s statement is truth-conditionally false.

- (29) Taylor: Two plus three is four.
Kellie: # Poser! It’s five.
Intended: ‘That’s not true! It’s five.’

Note that “Poser!” is also infelicitous as a reaction to non-at-issue meaning that is unsatisfied: it does not work for unmet presuppositions (30) or for false supplements (31). This test truly targets socially indexing expressions.

- (30) Josh: The test in class today is going to be so hard!
Alan: # Poser! There is no test in class today!
Intended: ‘That’s not true! There is no test in class today.’
- (31) Josh: The test, which is on Tuesday, is going to be so hard!
Alan: # Poser! The test is on Wednesday!
Intended: ‘That’s not true! The test is on Wednesday.’

I will call this effect **Observation 3**, summarized below.

- (32) **OBSERVATION 3 (Poser):** Social meaning requires acceptance by the hearer.

3.3 The non-at-issue-ness of social meaning

There are two more observations. Since these observations compare social meaning to other kinds of linguistic meaning, I take a detour here to layout a map of different kinds of meaning first.

Social meaning is a kind of *non-primary* meaning. By “non-primary” I mean it in a broad and fairly untechnical way: the meaning in question is not the main point of the sentence.⁹ When Kellie monophthongizes *life* [la:f], it contributes the rough meaning of ‘I am from the South (and possess qualities you associate with it)’, but this intuitively feels like a *secondary* kind of meaning (cf., Smith et al, 2010). To rephrase the intuition, (33) is not the same thing as (34), even though they roughly convey the same meaning.

⁹I’m intentionally avoiding the term *non-at-issue*, because *non-at-issue* by its traditional use concern entailments, and therefore would exclude conversational implicatures.

- (33) That is the most incredible moment in my life [la:f]
- Primary:** ‘That is the most incredible moment in my life’
- Non-primary:** ‘I am from the South (and possess qualities you associate with it)’
- (34) That is the most incredible moment in my life, and I am from the South (and possess qualities you associate with it)
- Primary:** ‘That is the most incredible moment in my life, and I am from the South (and possess qualities you associate with it)’

Many kinds of meanings are “non-primary” in this sense. Figure 4 shows a basic typology of different kinds of linguistic meanings. “†” indicates non-primary meanings — social meaning is potentially one of these. The purpose of this and the next subsection is to figure out which one it is (cf., Smith et al (2010) for a similar overview, supplemented by experimental findings). I begin by giving a basic overview of the different kinds of meanings in Figure 4, and then situate social meaning within this typology.

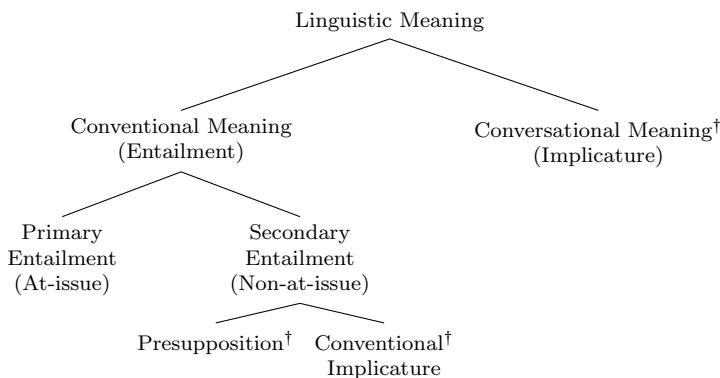


Figure 4: Typology of linguistic meaning (adapted from Smith et al. 2010, p.134)

The **at-issue** or primary entailment of sentence is its “main” semantic contribution. In the bolded sentence in (35)¹⁰, the at-issue meaning is that a particular female sibling of Gretchen’s is getting married on Saturday.

- (35) Linda: Aw Gretchen, why so droopy?
 Gretchen: **My sister’s getting married on Saturday.**

There is another entailment present in this sentence, which is the **presupposition** triggered by the determiner *my*. *My sister* presupposes that Gretchen (the speaker) has a sister. This is a **non-at-issue** entailment. A presupposition is what must be true in order for the main sentence to have a truth value (Strawson 1952). In this case, this means that if it turns out that Gretchen doesn’t have a sister at all, we cannot judge *My/Gretchen’s sister*

¹⁰Source: https://www.springfieldspringfield.co.uk/view_episode_scripts.php?tv-show=bobs-burgers&episode=s09e14

is getting married on Saturday to be true or false. There would be a truth value gap because there was a precondition that was not met.

There is another “unsaid” meaning in Gretchen’s utterance: a **conversational implicature** along the lines of ‘Gretchen is not happy that her sister is getting married on Saturday’. Assuming the Gricean cooperative principle (Grice, 1975), we assume that Gretchen’s utterance is somehow related to the question that Linda asked. One inference one can make based on such assumptions is that this wedding is upsetting her (hence the sad face). Other inferences are possible: e.g., ‘Gretchen does not want to go to the wedding,’ ‘Gretchen is not happy about having to find a date’, and so on. That is exactly the point of conversational implicatures: the inferred content varies depending on the context. There is not a one-to-one correspondence between form and conversational implicature. Put in terms of this example specifically, this means that *My sister’s getting married on Saturday* does *not* always carry the secondary meaning of ‘Gretchen is not happy that her sister is getting married on Saturday’. By just altering the preceding context slightly in (36), we can confirm this to be true.

- (36) Linda: Aw Gretchen, why’re you so smiley?
 Gretchen: **My sister’s getting married on Saturday.**

The same sentence now implies the opposite of what it implied before. Now we infer ‘Gretchen is happy that her sister is getting married on Saturday’.

Conversational implicatures contrast with **conventional implicatures** (CI’s) (Grice, 1975; Potts, 2005). This is a slightly confusing name because CI’s are not implicatures at all; they’re entailments. CI’s are often contrasted with conversational implicatures because conversational implicatures from form ϕ do change from context to context; CI’s do *not*. The underlined portion of (37), a supplemental expression (parenthetical), is a CI (cf., Potts, 2005).

- (37) Linda: Aw Gretchen, why so droopy?
 Gretchen: **My sister, who I haven’t seen in a long time, is getting married on Saturday.**
At-issue: ‘My sister is getting married on Saturday’
CI: ‘I haven’t seen my sister in a long time’

Let’s say *who I haven’t spoken to in a long time* denotes $\lambda x.\neg\text{see-in-long-time}(\text{speaker}, x)$. This is conventional because it *always* means that. This is non-at-issue because it’s not a part of the primary entailment; it merely provides a side comment on it (Potts, 2005).

One diagnostic for non-at-issue entailments is their behavior under “holes” like negation, antecedent of conditionals, and questions (Karttunen, 1973; Potts, 2005). Both presuppositions and CI’s survive them; i.e., (38a-c) all still carry the presupposition ‘The speaker has a sister’, and (39a-c) all still entail ‘I haven’t spoken to my sister in a long time’.

- (38) My sister is getting married on Saturday
Presupposition: ‘The speaker (Gretchen) has a sister’
 a. It is not the case that my sister is getting married on Saturday (negation)
Still presupposes: ‘The speaker (Gretchen) has a sister’
 b. If my sister is getting married on Saturday, then I need to find a date (antecedent of conditional)
Still presupposes: ‘The speaker (Gretchen) has a sister’

- c. Is my sister getting married on Saturday? (question)
Still presupposes: ‘The speaker (Gretchen) has a sister’
- (39) My sister, who I haven’t spoken to in a long time, is getting married on Saturday
CI: ‘I haven’t spoken to my sister in a long time’
- a. It is not the case that my sister, who I haven’t spoken to in a long time, is getting married on Saturday (negation)
Still entails: ‘I haven’t spoken to my sister in a long time’
 - b. If my sister, who I haven’t spoken to in a long time, is getting married on Saturday, then I need to find a date. (antecedent of conditional)
Still entails: ‘I haven’t spoken to my sister in a long time’
 - c. Is my sister, who I haven’t spoken to in a long time, getting married on Saturday? (question)
Still entails: ‘I haven’t spoken to my sister in a long time’

The point of these tests is that these environments only affect the at-issue entailment of the sentence. For example, the negation in (38a) denies that Gretchen’s sister is getting married on Saturday, but it does not deny that she has a sister, which is the presupposed part. Similarly, (39a) also negates the at-issue content (‘My sister is getting married on Saturday’), but it does *not* negate the supplemental content: the speaker is not denying that she hasn’t spoken to her sister in a long time.

3.4 Testing social meaning

Social meaning also survives classic holes, suggesting minimally that it is not a part of the at-issue meaning (Smith et al, 2010). (40) shows this in the same way that Smith et al (2010)’s findings show.

- (40)
- a. It is not the case that that is the most incredible moment in my [ma:] life [la:f]
 Still entails: ‘The speaker is southern (and possess qualities associated with it)’
 - b. If that is the most incredible moment in my [ma:] life [la:f], then I’ll be damned.
 Still entails: ‘The speaker is southern (and possess qualities associated with it)’
 - c. Is that the most incredible moment in my [ma:] life [la:f]?
 Still entails: ‘The speaker is southern (and possess qualities associated with it)’

We are at last equipped to compare social meaning to the different types of non-primary meanings outlined earlier: is it a presupposition, a conversational implicature, or a conventional implicature (CI)? The answer will be that it’s technically a CI under standard definitions, although the label itself is uninteresting because “CI” as a whole is quite a heterogeneous class. Social meaning is at the formal level much closer to a presupposition.

Social meaning is not a conversational implicature. This is also the position that Smith et al (2010) take. I agree with Smith et al.’s intuition that it seems conventional in that social meaning does not feel “calculated” (via Gricean means). Whatever the social meaning

is, it is certainly arbitrarily tied to a particular linguistic form. To be *conventional* entails that the meaning in question does not change from context to context, and to be *conversational* entails that it can. So the question is whether monophthongization always means ‘the speaker is southern (and possess qualities associated with it)’ across *all* contexts. For regionally indexing dialects like Southern English, it is fairly clear that the meaning association is conventional — at least the regional part is. Speakers of American English must learn that there is a conventional association between certain forms and southerness. Sociolinguistic studies show that speakers consistently associate southern features with southerness (Allbritten, 2011; Plichta and Preston, 2005). That’s conventional.

The part that varies from context to context is the set of higher order meanings associated with the variant. Anyone with some familiarity with the dialect that hears [la:f] will think the speaker is southern, but not everyone may associate it with uneducatedness, an (unfortunate) perception that is known to exist (Allbritten, 2011). Some will think it sounds friendly; some will not. In that way, yes, the social meaning “changes” from context to context.

However, I do not think that this is an argument against social meaning being conventional. The very nature of social meaning is hearer dependency, as emphasized by Burnett (2019). Informally, my analysis will that the social meaning of a monophthongized diphthong is ‘the speaker is southern and *possess qualities that the hearer associates with it*’, with the emphasized part being the higher order meaning. I am *not* saying that the monophthong lexically means ‘the speaker is southern and unintelligent’. It *can* mean that — but it doesn’t *have to* — because the higher order meaning is made context-dependent *within* the lexical entry. The meaning itself says ‘this depends on who the hearer is’. Put another way, the meaning itself involves a function that maps the first order meaning to that particular hearer’s knowledge about this first order meaning. So lexically, a monophthongized diphthong does conventionally mean one thing: ‘the speaker is southern and possess qualities that the hearer associates with it’. The higher order meaning “varies” because who we plug in as “the hearer” is different from context to context. It is not wildly different from the lexical entry of any word that inherently has a context dependency in their denotation: e.g., the degree modifier *very*. *Yao Ming is very tall* means one thing if the comparison class is adult basketball players, but the same sentence means something very different if Yao Ming is a 5 year old being compared to other 5 year olds. The lexical entry of *very* is roughly ‘the degree is much greater than *the standard in that particular context*’, and the standard of course changes from context to context. Because the standard varies, what counts as ‘very tall’ varies. But *very* still has a conventional (albeit context-dependent) meaning. Social meaning is the same way.

So social meaning being conversational implicatures can be crossed off the list. This leaves us with different types of secondary *entailments*. Presupposition can be eliminated as a possibility right away. If social meaning was a presupposition, then its falsity should lead to a truth value gap of the overall sentence. In other words, there should be a dependence between the social meaning and the at-issue meaning. The constructed example in (41) shows that this is *not* the case.

- (41) **Lucy Liu:** Two plus three is five [fa:v]

The point of (41) is that Lucy Liu is not a southerner; she is a New York native. So if the monophthongization means ‘I am a southerner (and possess qualities associated with it)’, then the social meaning is false. However, there is no detected truth value gap. Sure, she’s acting out of character, but we still judge *two plus three is five* to be true. The fact that

the truth value of the at-issue content does not depend on the truth of the social meaning suggests that social meaning is not a presupposition.

I will put a label on the facts so far as **Observation 4**, summarized below.

- (42) **OBSERVATION 4 (Non-at-issue):** Social meaning contributes non-at-issue meaning; it is independent of the primary entailment.

If it's non-at-issue and independent, then this naturally leads us to our last option: is social meaning a type of conventional implicature (CI)? CI's are also independent of the at-issue meaning (Potts, 2005, 2007). According to Potts, a CI is a speaker-oriented secondary entailment that is independent of the at-issue entailment. They are "speaker-oriented comments on a semantic core (at-issue entailments)" (Potts, 2005, p.11). Many things fall under this category, including supplements/appositives, honorifics/anti-honorifics, expressives, and epithets/slurs, to name the most prominent examples. To ask whether social meaning is a CI is actually a complicated question, because the answer is really that it descriptively behaves like a subclass of CI's but not all of them.

Potts (2007)¹¹ identifies six properties of expressives (a subtype of CI's): (i) Independence (= independent of at-issue meaning), (ii) Nondisplaceability (= cannot be used to comment on possibilities or past events), (iii) Perspective dependence (= has a judge-dependence, by default but not necessarily the speaker), (iv) Descriptive ineffability (= the meaning is hard to put into words), (v) Immediacy (= has impact as soon as it's uttered), and (vi) Repeatability (= repeating it leads to intensified meaning). Smith et al (2010) argue that social meaning also has these properties, and thus imply that social meaning is a type of expressive meaning, thus a CI.

Note that some of these properties have been subsequently contested (notably nondisplaceability, descriptive ineffability, and repeatability; cf., Geurts (2007); Gutzmann (2013)), meaning Smith and colleagues' conclusion may be a hasty one. For example, as noted by Geurts, descriptive ineffability is a notably weak basis of categorization of something as an expressive. There are countless at-issue meanings that are 'hard to put into words'. The meaning of functional words like *the* is a good example (Geurts, 2007). To be fair, I should also note that it is not clear that Potts meant his six properties to be a biconditional definition (i.e., α is expressive if it's ineffable, and *viceversa*) or a material implication (i.e., if α is expressive then it's ineffable (but other things can be ineffable too)). My reading of it is the latter, which makes this particular criticism of Geurts' a bit unwarranted, but it is nevertheless true that not all of Pott's six properties are useful for determining if something is an expressive.

Repeatability is of interest in this paper because social meaning has a unique behavior that pertains to it. As originally framed by Potts, the observation is the expressive meaning, unlike at-issue meaning, are not redundant when repeated. (43) is Potts (2007)'s original examples (p.182).

- (43) a. **Damn**, I left my **damn** keys in the **damn** car (expressive)
b. # **I'm angry!** I forgot my keys. **I'm angry!** They are in the car. **I'm angry!**
(at-issue)

For clarity of the judgement, I propose the **I Get It** test for redundancy. The effect of this test is that infelicity caused by redundancy warrants "(Ugh) I get it!" as a response.

¹¹This particular paper is about expressives and not CI's in general. He includes (anti-)honorifics and epithets within the scope of his analysis in this paper, but supplements and appositives are not included.

So in (44), we are pretending that Yoshi said (43), which causes Hanna to respond with “I get it!”.¹²

- (44) Yoshi: **I’m angry!** I forgot my keys. **I’m angry!** They are in the car. **I’m angry!**
(at-issue)
- Hanna: Ugh, I get it! You’re angry!

Importantly, Potts’ descriptive claim is that the repetition of an expressive leads to *strengthening* rather than redundancy. The intuition is that when *damn* is repeated, the speaker’s anger is intensified. With expressives specifically, I agree with the judgement. The same judgment does not hold for Japanese (anti-)honorifics, which he analyzes in the same way as expressives. (45) is my example.

- (45) Hiro: pikkura:-san -ga irasshaimashita. go-isho: -ni
 Pickler-HON NOM arrived.HON HON-outfit DAT
 okigaeninatteitadakimasu
 will.have.change.HON
 ‘Ms. Pickler has arrived. We will have her change into her stage outfit.
 (Pickler is honorified)’

There are various types of “honorification” in my example (cf., McCready, 2019), but it suffices to point to the two verbs: they both signal that Hiro honorifies Pickler. I should emphasize here that the speaker’s attitude for the subject does *not* strengthen upon repetition (contrary to what Potts implies with his analysis). (46) is a Japanese version of the I Get It test.

- (46) Hiro: pikkura:-san -ga irasshaimashita. go-isho: -ni okigaeninatteitadakimasu (=
 (45))
- Yoko: # hai hai, wakatta -tteba, kudoi -naa. Pikkura:-san
 yes yes understood TEBA repetitive.and.annoying NA Pickler-HON
 -o sonke:shiteru -n-desho?
 ACC respect right
 ‘Yeah yeah I get it, you’re being so repetitive and annoying. You respect Pickler, right?’

“I get it!” *not* being a felicitous response to the repeated honorifics suggests that it is not redundant. Rather, the intuition is that there is a set level of social/psychological distance assumed to be between the speaker and the subject, and this relationship stays constant throughout the discourse. In other words, in (45), the speaker is speaking as someone who respects someone would.

With honorifics being a kind of social meaning, it is unsurprising that monophthonization in Southern English behaves in the same way as it. In (47), the repetition of the monophthongization is not redundant (intuition first reported in Smith et al. 2010; diagnostics mine).

- (47) Kellie: That is the most incredible moment in my [ma:] life [la:f]
 Ellen: # Ugh I get it, you’re a southerner!

¹²This is “I get it” with a negative attitude attached to it, which the *ugh* is intended to bring out. It may help to imagine that the speaker is rolling their eyes while saying “I get it”.

Smith et al. acknowledge that social meaning is not redundant when repeated, but they report that it *does* strengthen the meaning¹³. I disagree with the second part: repeatedly monophthongizing your diphthongs does *not* make you sound “more southern”. Several native American English speakers I have consulted (including two Southern English speakers) agree with this judgement¹⁴: you don’t sound “more southern”, you’re just speaking as a southerner would. The speaker is just being consistent with their regional dialect.

I will call the facts thus far **Observation 5**, articulated below.

- (48) **OBSERVATION 5 (Non-redundancy):** The first-order meaning of a variant is not redundant even when the variant is repeated; it does not strengthen the meaning either.

So what can we conclude about social meaning for where it fits in the typology of meaning? (i) It’s non-at-issue, and (ii) It’s conventional. If we can check one more thing off the list, it’s a CI: does it “comment on” the at-issue content (Potts, 2005)? If it is a CI, then it needs to help with the interpretation of the at-issue proposition somehow. This depends on how loosely we interpret Pott’s words, but one way of looking at it is that social meaning *does* comment on the at-issue core. In my analysis, I will argue that the role of social meaning in the context is to help the hearer decide that the speaker is a trustworthy information source. This negotiation of epistemic reliability will be essential for deciding e.g., whether the hearer can believe the speaker and therefore should put their proposition in the CG. In that sense, yes, social meaning is absolutely relevant to the at-issue content.

So tentatively, my conclusion is shown in Figure 3.4, although this is open to debate.

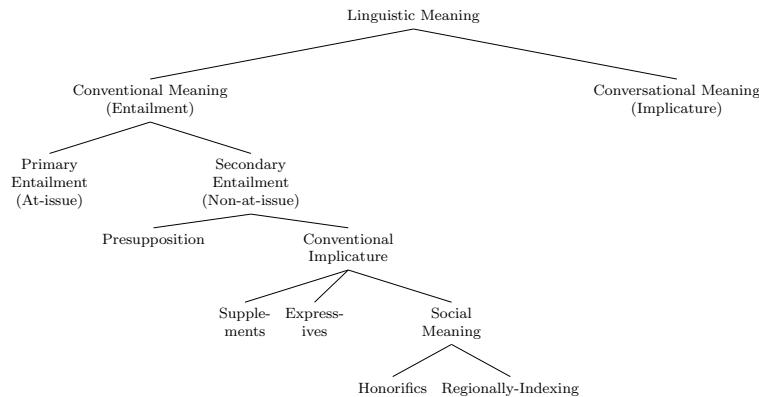


Figure 5: Typology of linguistic meaning, proposed

I conclude this section with a reflection of what redundancy even points to in a formal model, and what we generally are to do with a label like “conventional implicature” as formal theorists. The facts so far seem to suggest that at-issue-ness is what is responsible for redundancy, but this is actually not quite true. Supplements/appositives, a type of non-at-issue meaning and CI, is redundant when repeated.

¹³Although their exact wording is “strengthens the association” (p.147), which may or may not be synonymous with Potts’ “strengthening”.

¹⁴Acknowledgement omitted for anonymous review

- (49) # Kellie, **a country artist**, was interviewed by Ellen. They talked about music.
 Kellie, **a country artist**, said she doesn't listen to heavy metal. (**redundant**)

Supplements comment on the at-issue content, typically used to provide background information that may be helpful for interpreting the at-issue sentence (Potts, 2005). We might expect that (49) would be acceptable and non-redundant, considering that the second instance of the appositive *a country artist* in the example does in principle help background the at-issue content (i.e., The fact that she is a country artist may be an explanation for why she doesn't listen to heavy metal). But in reality, a duplicate appositive is redundant. This suggests that non-at-issue status does not necessarily make something immune to redundancy.

So the things that do cause redundancy are at-issue meaning and non-at-issue supplements. What exactly makes them a natural class? They have in common that they both have updating the CG as their objective. They do so in different ways — at-issue content proposes to update the CG while supplements directly update it (AnderBois et al, 2013) — but the underlying factor, as far as I can tell, is that they manipulate the CG in some way. Increasing the CG means to decrease the context set (Stalnaker, 1978), thereby bringing us closer to answering the ultimate QUD of “What kind of world do we live in?”. We can speculate that the redundancy comes from the fact that repeating something that is in the CG already doesn't help us reduce the context set in any way, thereby making it a rather unhelpful and anomalous discourse move.

So what does this tell us about something that does not cause redundancy like expressives or social meaning? I think there are at least three ways to formally cash out the effect: (i) It doesn't (propose to) update the CG; (ii) it does update the context, but differently each time; (iii) it's like a definite description. (i) is just another way of saying that these things are not at-issue nor a supplement, based on the discussion in the previous paragraph. In terms of what it *does* do, (ii) and (iii) are existing candidates in the literature. (ii) is essentially Potts (2007)'s analysis of expressives like *damn*. His proposal is that *damn* updates the part of the context that houses the speaker's attitude about some other individual (e.g., the keys), which is represented formally as an interval. The smaller the interval, the more you hate the thing. Every time *damn* is said, it updates and the interval shrinks. The descriptive effect that this produces is that every repeated utterance of *damn* strengthens the speaker's negative attitude. This line of analysis works for expressives, whose repetition is non-redundant but also intensificative. This doesn't work for something like social meaning, which doesn't strengthen when repeated. This brings us to (iii), which is a hat tip to Geurts (2007)'s observation that there is a category of non-expressive expressions that are also immune to redundancy: definite descriptions. (50) confirms this.

- (50) Ken: **My sister** and my mom went out to eat. **My sister** chose the restaurant.
 Brielle: # I get it, you have a sister!

Definite descriptions are presupposition triggers. *My sister* presupposes that the speaker has a sister. (50) shows that it's fine to repeat it; it's not redundant. This may on the surface seem unnoteworthy: of course it's not redundant, *my sister* and *my mom* were mentioned in the first sentence; it would cause ambiguity to say *she* instead of *my sister*. But I think this is noteworthy: it doesn't change the fact that the repetition is still *possible*. To contemplate this argument, consider (51), a minimal pair of (50). Here, *my mom* is replaced with *my dad*, thereby eliminating the dire need for the speaker to say *my sister* for the second time. The prediction is that the repetition of *my sister* should sound worse in such a context.

- (51) Ken: **My sister** and my dad went out to eat. **My sister** chose the restaurant.
 Brielle: ?I get it, you have a sister!

First of all, I don't think what Ken says in this example is particularly anomalous. The slight degradation of it compared to (50) I think comes from the competition between *my sister* and *she*: it wouldn't be ambiguous to say *she*, and it's shorter — so why didn't you just say it? The anomaly (if there is one) of a repeated definite description is not about redundancy really — it's about the violation of the manner maxim. So my point still stands that given a context you'd expect to repeat a definite description, it indeed is non-redundant.¹⁵ Recall in contrast that e.g., supplements *are* redundant even when you think may be able to repeat it (49).

So what is happening when you repeat *my sister* two times is that you've presupposed the same thing two times. And that is not redundant. The formal explanation of this is that a presupposition is not an *update* to the context — it's a *pre-condition* of it. That is, it doesn't make changes to the output context. Rather, it requires that the input context look a certain way before the utterance is made. For presuppositions in particular, the standard analysis is that the presupposed content is in the CG in the *input* context. This is different from e.g., a supplement which *updates* the CG in the *output* context. When you presuppose something, you are simply making sure that things look a certain way in the context before you say it. You're not informing anyone of anything. Therefore, a repeated presupposition causes no redundancy.

Recall that social meaning is not *exactly* like a presupposition in that the at-issue meaning of a sentence is fully independent of the social meaning. Meanwhile, the truth of the at-issue meaning is heavily intertwined with the truth of a presupposition. This dependency (from how I understand it) is reflected in the nature of the context set. Imagine that my sister's name is Anna and I said *My sister lives in Germany*. When I say this sentence, I am narrowing down the context set to just the worlds in which Anna lives in Germany, but *I cannot do so unless we are in a world in which Anna is my sister*. This is the dependency that the presupposition enforces. Bringing us back to social meaning, the point is that social meaning is *not* this because there is no dependency. In more formal terms, *my [ma:] life [la:f]* does not indicate that 'I am southern' is in the CG already.

We still learn something about social meaning from presuppositions, however. What we learn is that as long as something is about the *input* context, then we expect no redundancy because it's not an update. This in fact is the line analysis for Japanese (and Thai) honorifics in Potts and Kawahara (2004) and McCready (2014). The general idea of the approach is that for A to use an honorific form with B, a certain social hierarchical relation between A and B must have been established in the input context. Though the non-redundancy of honorifics is not mentioned in these works, the "context precondition" analysis does predict it. Going off of this idea, the formal analysis of regionally indexing social meaning will be that it in part poses a restriction on the input context. Of course, it will be slightly different from honorifics in that honorifics inherently involves the speaker plus someone else, while regional indices just point to the social categorization of the speaker alone. However, the fundamental component of the analysis is similar.

In summary, here are the five observations I have presented with respect to social meaning:

¹⁵There also exists languages like Japanese, in which the repetition of a full definite description is always felicitous.

- OBSERVATION 1 (**Style shifting**): Speakers style shift in discourse by switching between variants.
- OBSERVATION 2 (**Speak your own dialect**): It is infelicitous for a speaker to shift to a non-native dialect.
- OBSERVATION 3 (**Poser**): Social meaning requires acceptance by the hearer.
- OBSERVATION 4 (**Non-at-issue**): Social meaning contributes non-at-issue meaning; it is independent of the primary entailment.
- OBSERVATION 5 (**Non-redundancy**): The first-order meaning of a variant is not redundant even when the variant is repeated; it does not strengthen the meaning either.

The next section translate some concepts from the sociolinguistic literature into formal semantics. The section to follow that will situate those formal objects within dynamic semantics to account for the above five observations.

4 A semanticist's take on the indexical field and the Bush effect

4.1 First-order meanings and the Stored Persona

Variants have social meaning conventionally attached to them, and we exploit these meaning associations to portray ourselves in certain ways. As Burnett (2019) demonstrates, style shifting is convincing evidence for this rational use of linguistic style. However, Observation 2 (Speak your own dialect) showed that style shifting is limited: we are not entitled to switch between just any set of variants. An American English speaker switching from [m] to [n] to display ‘intelligence’ is allowed, but doing so by switching to British English is generally not.

I take this effect to be a manifestation of the fact that geographically indexing meaning like ‘I am British’ or ‘I am Southern’ is a non-transient persona. That is, it is a permanent property of the speaker, unlike things like ‘I currently am certain of what I’m saying’ or ‘I’m speaking in a confrontational way’, which are more temporary. Borrowing the term *stored* for ‘permanent’ from Ginzburg (1996), I call the set of non-transient social facts about a discourse participant **SP** (**Stored Persona**). In sociolinguistic terms, this is where the first-order meaning of the variant would be stored.

The SP needs to be relativized to discourse participants, considering who you believe yourself to be may not exactly be the same as who the hearer thinks you are. The importance of this move will be clearer in the discussion of the “Bush effect” in the section to follow shortly. For right now, what is important to note is that the relevant SP for social meaning is what the *listener* thinks of the *speaker*, which I will write as (52). It should be read as ‘the listener’s SP of the speaker’.

$$(52) \quad SP_{\langle L,S \rangle} \qquad \qquad \qquad (L = \text{listener}, S = \text{speaker})$$

The addition of the subscript is a typographically small move but it is quite crucial in capturing one of the most important properties of social meaning: social meaning is *hearer-oriented* (Burnett, 2019). No matter how much the speaker wants to come off a certain way

in terms of their persona, they ultimately don't have a say in this. The speaker's desire is independent of the actual results, which is determined by the hearer. For example, no matter how intelligent the speaker wants to sound to their audience by using [ɪŋ], if the hearer does not buy it, then that's that. Another intuition we may appeal to is the fact that a Southern English speaker surely does not "want" to sound 'uneducated'. It's the hearer that decides this. The hearer gets the final say in who you are in the conversation.

Hearer dependency points to an asymmetry in the discourse context between the speaker and the addressee: what I think is not necessarily what you think. One uncontroversial implementation of this intuition is in terms of discourse commitment sets. Proposed originally by Gunlogson (2004), the idea is that I have a set of propositions I have publicly committed to be true, and you have one too. Take the intersection of the two and that's the Common Ground (CG), our mutual public commitments. This allows for a kind of QUD resolution in which we "agree to disagree" (e.g., I add p to my commitment set and you add $\neg p$ to yours) instead of coming to a mutual agreement (e.g., we add p to the CG). Most modern dynamic theories of meaning have some version of individualized commitment sets in their model (e.g., Gunlogson, 2004; Farkas and Bruce, 2010; Ginzburg, 1997a; Krifka, 2017).

Ginzburg with his Discourse Gameboard model takes this to another level. Other theories often presuppose *the QUD* and *the CG*, meaning that all discourse participants act on a singular QUD and a singular CG. Ginzburg proposes a complete separation of the context between participants. That is, you have your commitments and I have my commitments, but you also have your own QUD and I have my own QUD. The individualization of QUD's suggests that sometimes, the speaker and the hearer have different questions to answer. One place in which this happens is the moment immediately after when the speaker makes an utterance. Let's say someone says *Kellie Pickler is loquacious*. Before the hearer responds with anything contentful in order to address this issue, there are minimally two things they must answer first: (i) What is the meaning of this sentence, and (ii) What is the goal of the speaker in uttering this?. In other words, before the hearer makes any discourse move, they must figure out what individual the name *Kellie Pickler* points to, what the word *loquacious* means, and infer why they're saying this. Importantly, these so-called "grounding" questions (Ginzburg, 1997a,b) are in the hearer's QUD only, and not in the speaker's QUD. Ginzburg (1997b) gives examples like (53) to support this asymmetry (p.60).

- (53) a. A: Where was your grandmother born? B: Why? ('Why are you asking this?')
- b. A: Where was your grandmother born? Why? ('Why was she born wherever she was born?'; canNOT mean: 'Why am I asking this?')

This data concerns what the *why* is asking about. It's different depending on who is asking. Coming from B, it is interpreted as 'Why are you asking this?', a question regarding A's goals. Coming from A, this interpretation is not available; the *why* in (53b) can only mean 'Why was she born there,' which is a subquestion of the original at-issue QUD ('Where was your grandmother born?'). B's *why* in (53a) on the other hand is a sub- (clarification) question of 'What is A's goal in asking this?', which is the grounding question in (ii) above. This contrast shows that this 'What is the speaker's goal?' is in the QUD of the *hearer* only. The entirety of Ginzburg's model is not needed for the present paper. My point in bringing up his approach is to highlight that social meaning is another place in which the asymmetry of discourse contexts is motivated.

4.2 The indexical field, hearer dependency, and the Bush effect

Social meaning is not just ‘this variant means X’. It has a constellation of meanings and depending on the context, various personas can be construed from these meanings (Eckert, 2008). One excellent example of this is the realization of /t/ in English as [t^h], (rather than the flapped variant [ɾ]). For example, *matter* /mæt^h.ɹ/ → [maet̪.ɹ], as opposed to [mær.ɹ]. The perception of [t^h] can range from ‘educated nerd girl’ (Bucholtz, 2001), to ‘prissy gay diva’ (Podesva, 2008), both likely stemming from the variable’s association with clear speech (Eckert, 2008).

In a Matched Guise Study, Podesva et al (2015) tested how [t^h] vs. [r] coming from the speech of politicians was perceived. They had 70 American participants rate the personal characteristics of six American Politicians based on their political speech: Barack Obama, John Edwards, Nancy Pelosi, George W. Bush, Hillary Clinton, and Condoleezza Rice. Each politician had two versions (guises) of their speech: one in which their underlying /t/’s were released as [t^h], and another in which they were flapped. Each participant heard one version of the speech per politician. For most politicians, the different guises produced different responses from the participants. For example, John Edwards was rated as more articulate in his unreleased guise compared to the flapped guise, and Barack Obama was perceived to be more passionate in the flapped version.

One peculiar result of this study came from George W. Bush and Hillary Clinton’s speeches. For these two politicians, they were not judged to sound significantly different in their two guises. The authors’ analysis of this effect is that the participants have such strong views of Bush and Clinton in the first place that this slight modification of their speech style did not affect their ratings. Taking Bush as an example, this means that the participants’ strong prior belief that he is inarticulate and unintelligent blocks the social meaning contributed by [t^h]/[r] from having any effect on his perceived persona. Put another way, it doesn’t matter if he says [maet̪.ɹ] or [maer.ɹ]; he’s going to come off as an inarticulate fool either way. To sum up this “Bush effect” (as I might call it): what the social meaning of a variant is perceived to be *depends on what the hearer thinks of the speaker in the first place*.

Here is a simple formalization of this observation. Let \mathcal{F}_{t^h} be the indexical field of the released [t^h] (cf., Eckert, 2008; Burnett, 2019):

$$(54) \quad \mathcal{F}_{t^h} = \{\lambda w. \mathbf{articulate}_w(s), \lambda w. \neg \mathbf{friendly}_w(s)\}$$

Let’s say that a competent American English speaker knows that [t^h] is conventionally associated with these properties. Again however, the catch is that just because someone says [t^h], it doesn’t mean that it always means $\{\lambda w. \mathbf{articulate}_w(s), \lambda w. \neg \mathbf{friendly}_w(s)\}$. We have to calculate in the hearer’s prior beliefs about the speaker’s persona. That would be SP from earlier, in particular $SP_{\langle L, S \rangle}$: the listener’s stored (i.e., permanent) persona of the speaker. This is what the listener assumes to be a permanent property of the speaker.

I will first exemplify a fairly neutral context in which the hearer does not have any strong beliefs about the speaker. In this case, [t^h] would convey exactly what it is supposed to convey. In (55), the only prior belief that the listener has about the speaker is that they are American (55b). In (55c), the fact that the listener’s prior beliefs affects what the variant is perceived to mean is represented simply by taking the union of \mathcal{F} and SP .

$$(55) \quad \begin{aligned} & \mathcal{F}_{t^h} \cup SP_{\langle L, S \rangle} \\ & \text{a. } \mathcal{F}_{t^h} = \{\lambda w. \mathbf{articulate}_w(s), \lambda w. \neg \mathbf{friendly}_w(s)\} \end{aligned}$$

- b. $SP_{\langle L,S \rangle} = \{\lambda w. \mathbf{american}_w(s)\}$
- c. $\mathcal{F}_{t^h} \cup SP_{\langle L,S \rangle} = \left\{ \begin{array}{l} \lambda w. \mathbf{articulate}_w(s), \lambda w. \neg \mathbf{friendly}_w(s), \\ \lambda w. \mathbf{american}_w(s) \end{array} \right\}$

If we take the union of all members of (55), we get (56). This gives us the speaker's overall perceived persona as a single proposition. Let us call $\bigcup(\mathcal{F} \cup SP)$ the **calculated persona**.

$$(56) \quad \bigcup(\mathcal{F}_{t^h} \cup SP_{\langle L,S \rangle}) = \lambda w. \mathbf{articulate}_w(s) \wedge \neg \mathbf{friendly}_w(s) \wedge \mathbf{american}_w(s)$$

In this case, the speaker will only be perceived as articulate and unfriendly (and American), which is a typical ‘serious and formal’ perception of this variant.

Now we turn to the Bush effect. Let us follow Burnett (2019) and assume that the hearer has the ‘arrogant asshole’ persona stored for Bush:

$\{\lambda w. \neg \mathbf{articulate}_w(s), \lambda w. \neg \mathbf{friendly}_w(s)\}$. This is in $SP_{\langle L,S \rangle}$, and what Bush conveys by saying [maet^h] is this *plus* \mathcal{F}_{t^h} . So as before, we take the union of these two sets:

- $$(57) \quad \mathcal{F}_{t^h} \cup SP_{\langle L,S \rangle}$$
- a. $\mathcal{F}_{t^h} = \{\lambda w. \mathbf{articulate}_w(s), \lambda w. \neg \mathbf{friendly}_w(s)\}$
 - b. $SP_{\langle L,S \rangle} = \{\lambda w. \neg \mathbf{articulate}_w(s), \lambda w. \neg \mathbf{friendly}_w(s)\}$
 - c. $\mathcal{F}_{t^h} \cup SP_{\langle L,S \rangle} = \left\{ \begin{array}{l} \lambda w. \mathbf{articulate}_w(s), \lambda w. \neg \mathbf{friendly}_w(s), \\ \lambda w. \neg \mathbf{articulate}_w(s), \lambda w. \neg \mathbf{friendly}_w(s) \end{array} \right\}$

Now we take the union of all of the members of the set in (57c), which should give us the calculated persona for Bush.

$$(58) \quad \begin{aligned} & \bigcup(\mathcal{F}_{t^h} \cup SP_{\langle L,S \rangle}) \\ &= \lambda w. \mathbf{articulate}_w(s) \wedge \neg \mathbf{friendly}_w(s) \wedge \neg \mathbf{articulate}_w(s) \wedge \neg \mathbf{friendly}_w(s) \\ &= \emptyset \end{aligned}$$

There is of course no set of worlds in which the speaker can be **articulate** and \neg **articulate** at the same time. So this set is the empty set: it is a *null persona*. This translates into Bush, an arrogant asshole, saying [maet^h] having no effect at all on the listener perception. He is forever an arrogant asshole. The full analysis of the “Bush effect” as situated in dynamic semantics will be provided in §6.

Now consider one of the alternate personas constructed from [t^h]: ‘the gay diva’. How does this come about? The speaker’s gay identity will be included in the SP and the overall social meaning will result as (59c); cf., (59a-b).

- $$(59) \quad \mathcal{F}_{t^h} \cup SP_{\langle L,S \rangle}$$
- a. $\mathcal{F}_{t^h} = \{\lambda w. \mathbf{articulate}_w(s), \lambda w. \neg \mathbf{friendly}_w(s)\}$
 - b. $SP_{\langle L,S \rangle} = \{\lambda w. \mathbf{gay}_w(s)\}$
 - c. $\mathcal{F}_{t^h} \cup SP_{\langle L,S \rangle} = \left\{ \begin{array}{l} \lambda w. \mathbf{articulate}_w(s), \lambda w. \neg \mathbf{friendly}_w(s), \\ \lambda w. \mathbf{gay}_w(s) \end{array} \right\}$
 - d. $\bigcup(\mathcal{F}_{t^h} \cup SP_{\langle L,S \rangle}) = \lambda w. \mathbf{articulate}_w(s) \neg \mathbf{friendly}_w(s) \wedge \mathbf{gay}_w(s)$
 $\rightsquigarrow \text{‘The gay diva’ persona}$

The present proposal successfully captures how one variant can invite the perception of various personas. In the next section, I argue for the dynamic component of social meaning, which is crucial for regionally-indexing variation.

5 Analysis: the context change potential of social meaning

So far, what I have established is what the context-situated social meaning of a variant is: e.g., what a variant like [t^h] or [a:] has as its social meaning, given the listener's prior beliefs about the speaker. Aside from the semantics-friendly, set-theoretic adaptation this is not an entirely novel proposal. Many sociolinguists already note the context-dependence of social meaning (cf., Eckert (2008) for an overview), and Burnett (2019) for instance has a much more sophisticated formal model for predicting this kind of effect.

The contribution of this work starts here. My interest lies in the *discourse effects* of social meaning. Let's assume the social meaning of the enunciated [mæt^h.l] is $\bigcup(\mathcal{F}_{t^h} \cup SP_{\langle L,S \rangle})$ as I've proposed. What do we *do* with this proposition in the context? Where does it go? Is it in the QUD? Is it in the CG? *Which part of the discourse structure is it interacting with?* The rest of this paper addresses these issues.

5.1 What social meaning is not

We can start by discussing what social meaning is *not* within dynamic semantics. Here I eliminate some possibilities for the formalization based on the descriptive observations about social meaning from §3.4. I repeat the conclusions from that section in Table 1 below.

Social meaning is...	Empirical support	cf.
1. Not at-issue meaning	Survives holes	(40)
2. Not a conversational implicature	Consistent (albeit lexically context-dependent) meaning	p.20
3. Not a presupposition	Does not cause truth value gap	(41)
4. Not like a supplement	Not redundant	(47)/(49)
5. Not like an expressive	Not intensificative	(47)/(43)
6. Closest to honorifics	Neither redundant nor intensificative	(47)/(45)

Table 1: Comparison of social meaning to other non-primary linguistic meanings

Not at-issue meaning. It is descriptively evident that social meaning is *not* at-issue meaning. At-issue content would formally be in the QUD (cf., Tonhauser, 2012; Farkas and Bruce, 2010; Roberts, 1996). Therefore, we cannot analyze social meaning as an issue in the QUD.

Not a conversational implicature. Like Smith et al. (2010), I take social meaning to be a type of conventional meaning. As argued in §3.4, social meaning is conventional to the extent that a particular linguistic expression carries the specific social meaning. We did see that social meaning can vary from context to context in Podesva et al (2015) study on $[t^h]$, but I showed in the previous section that this is because sociolinguistic variants conventionally make reference to the SP. Something like $[t^h]$ at the social level *does* have a single conventional meaning: $\bigcup(\mathcal{F}_{t^h} \cup SP_{\langle L,S \rangle})$. It just so happens that the content of SP can be different from context to context.

Not a presupposition. I argued in §3.4 that social meaning is not a presupposition in a strict sense, since a “false” social meaning does not lead to a truth value gap of the overall sentence. Formally speaking, a presupposition is a proposition in the CG in the *input* context. This means that social meaning is *not* analyzable as that.

Not like a supplement or an expressive. The elimination of conversational implicatures and presuppositions as possibilities puts us in the domain of conventional implicatures. What supplements and expressives have in common is that in dynamic semantics, they are *updates* to the context. In other words, they both have something to say about the *output* context. A supplement forces a CG update: the resulting CG in the output context is the CG from the input context plus the proposition from that supplement (AnderBois et al, 2013). This explains the redundancy of a repeated supplement: it’s redundant to put the same proposition in the CG twice. Expressives on the other hand updates the emotive stance of the speaker by narrowing the expressive attitude interval between them and another individual. This explains the intensification of expressive meaning when they’re repeated: this interval shrinks every time the expressive is used. Social meaning is neither redundant nor intensificative, so we cannot analyze it as a CG update or expressive attitude intervals.

Closest to honorifics. Potts and Kawahara (2004) (and McCready (2014), who models her analysis after them) analyze Japanese honorifics as a restriction on the input context. Honorific marking denotes an emotive definite description that requires the speaker and the honoree to be in a certain social relationship prior to the utterance. As discussed earlier, honorifics and regionally-indexing meaning have in common that they are both non-redundant and non-intensificative when repeated. As such, the social meaning of monophthongization will also be formally analyzed as a restriction on the input context.

5.2 The first-order social meaning is a restriction on the input context

For simplicity, let us assume in this section that the first-order meaning of a monophthongized diphthong is ‘the speaker is southern’ and the higher-order meaning is ‘the speaker is unintelligent’, based on perception studies (Allbritten, 2011). There is a difference we have encountered between these two types of social meaning: Kellie is allowed to be friendly at one moment and unfriendly at another, but she is not allowed to be “southern at one moment and not southern at another”. It is infelicitous for her to switch to a British dialect mid-way through a conversation, for example.

As we’ve seen already, the first order meaning being in the SP (stored persona) is what gives it that permanence. For example, (60) says that ‘the speaker (s) is southern’ is a part

of the listener (L)'s SP of the speaker. In other words, the listener considers southernness to be a true and permanent property of the speaker.

$$(60) \quad \{\lambda w.\mathbf{southern}_w(s)\} \in SP_{\langle L,S \rangle}$$

There are two possibilities for what we can do with (60) in the discourse context: update the *output* context with this information, or require that this information be in the *input* context of the utterance. Asked another way, does a monophthongized diphthong inform the listener 'I am southern' (=output), or does it require the speaker to be southern to say it (=input)?

I think the answer is *input* based on the descriptive observations thus far. If it were an *output* condition, then it must mean that *every* time a diphthong is monophthongized it informs the listener that the speaker is southern. If that were the case, we would expect the repetition of this first-order meaning to be redundant in discourse. However, we know from **Observation 5** that this is *not* the case. The intuition is that Kellie is simply speaking as a southerner would. On the other hand, if it were an *input* restriction it just requires the pre-utterance context to look a certain way every time it is said; no redundancy is predicted in this case. Therefore, I propose that (60) is a requirement of the *input* context, as shown in (61). Note that this only shows the social meaning of *life*, and not the at-issue meaning.

$$(61) \quad [\![la:f]\!] = \lambda C \lambda C' \left[\lambda w.\mathbf{southern}_w(s) \in SP_{\langle L,S \rangle}^C \right] \quad (\text{to be revised})$$

'The speaker is southern is in $SP_{\langle L,S \rangle}$ in the input context'

This operates similarly to honorifics: in order for the speaker to felicitously use the monophthongized diphthong, they must have established in the discourse leading up to it that they are a southerner.

Like a presupposition, I assume that the first-order social meaning of a variant is often *accommodated*. For example, if you meet Kellie and hear her speak for the very first time, strictly speaking she hasn't "established" that she is a southerner with you upon her initial utterance. I think that the hearer accommodates her regional background.

5.3 The calculated social meaning goes in the Persona Under Consideration (PUC)

Recall the non-redundancy of first-order meanings in (47), reproduced below as (62). The previous section argued that this motivates the first order meaning to be in the input context, rather than the output context.

- (62) A: That is the most incredible moment in my [ma:] life [la:f]
- B: # Ugh I get it, you're a southerner!

What about higher-order meanings like 'the speaker is unintelligent'? The first thing to check is whether this piece of meaning is redundant or not when repeated. (63) shows that the repeated monophthongs do not invite the 'I get it' effect with respect to the higher order meaning (thus potentially behaving similarly to first-order meanings), but there is a problem with this example.

- (63) Kellie: There's my [ma:] husband, and then there's Clint right [rəx?] there.
Riiight [rəx:?] there.

Ellen: ?? I get it, you're dumb!

The issue is that under normal circumstances, it is probably the case that no one *wants* to sound unintelligent. The “I get it” makes it sound as if the speaker intended to sound that way. There are felicitous reactions that are more neutral with respect to intent and potentially diagnose redundancy (e.g., *Whoa, you're coming off really dumb right now!*), but it is hard to tell if this is really diagnosing redundancy, since they serve as felicitous reactions to a *high magnitude* of a property as well. Consider (64). The felicitousness of Kali's response suggests that there is some markedness about Andrew's utterance coming from *mamaw*,¹⁶ but this clearly isn't an issue of redundancy since Andrew says it only once.

- (64) Andrew: Mamaw!
‘Mom!’

Kali: Whoa, you're coming off really southern right now!

So then, an alternate way to test higher-order social meanings for redundancy is to keep the “I get it” and test a variant with more desirable traits associated with them. We can first test the standard diphthong variant, which potentially has ‘educatedness’ or similar as the higher order meaning. In (65), imagine that Kellie used the standard diphthong twice in a row.

- (65) Kellie: We have great friends and great people in our lives [laivz]. And it was
like [laik], television needs this.

Ellen: I get it, you want to sound smart!

The repetition of the diphthong by Kellie does invite an “I get it!” response, but it is hasty to make generalizations about higher-order social meaning from this example. First, it is *not* actually clear that the regionally standard variant generally has ‘educatedness’ as its higher order meaning. If a non-southern American English speaker like Ellen said what Kellie said in (65) instead, I don't think we would react to it with “I get it, you want to sound smart!”. Social meaning only arises from contrast. It is only because Kellie has access to both [ai] and [a:] in her dialect that we assign different meanings for each variant. For non-southern English speakers like Ellen, because her only realization of /ai/ is [ai], her diphthongs do not carry any salient social meaning. In this paper I stay agnostic with respect to the formal explication of this contrast. It is possible that Kellie's [ai] and Ellen's [ai] are completely different creatures with different context change potentials. Alternatively, they are the same thing but some parameter of markedness must be specified in the formal pragmatic system I am using. I think this is an interesting question for future papers, but all it does right now is complicate our picture of social meaning vs. redundancy.

I therefore turn to a much less complicated example to show whose repetition causes redundancy with respect to its social meaning. The effect is simply that of people using “big words” to sound smart. (66), where Josh's choice of abtruse/low frequency lexical items (**bolded**) is accompanied by ‘the speaker is intelligent’ as a social meaning each time.¹⁷

- (66) Josh: Yes, your **countenance vouchsafes attestation** of the fact that you are
all **agog** about your trip!
‘Yes, your face reveals that you are excited about your trip!’

¹⁶Acknowledgement omitted for anonymous review.

¹⁷Acknowledgement omitted for anonymous review.

Alan: I get it, you're smart!

There is no doubt here that the social meaning carried by the abtruse terms causes redundancy. The descriptive conclusion then is that higher-order social meaning *does* cause redundancy. This leads to the formal analysis that higher-order indices are *updates* to the context — a specification about the *output* context — not a restriction on the input context. The redundancy occurs because each time the speaker uses the variant, they update the context with the same, already-proposed information.

The intuition is that when Kellie Pickler monophthongizes, she sounds *unintelligent* — at least, *at that particular moment*. Similarly, when she uses a diphthong, she sounds *intelligent* — again, *at that particular moment*. Unlike the first-order meaning of southernness, higher order social meanings are registered as “what the speaker sounds like *right now*”. Given that this type of meaning is transient/temporary, at the formal level it is natural to for it to occupy a portion of the discourse structure that is inherently transient. The QUD, a stack of at-issue questions, is of course a fairly transient and dynamic discourse part: as questions are resolved and others are raised, (sets of) propositions leave and enter this set continuously. Unlike other discourse parts (e.g., CG, commitment sets) it is unmarked for (sets of) propositions to leave the QUD. Additionally, the empirical evidence that social meaning is a *proposal* of a persona (Observation 6) makes the QUD an enticing candidate as the relevant discourse object.

But as previously established, it cannot be that social meaning is in the QUD; it's not at-issue (Observation 1). So what we need is something like a non-at-issue version of the QUD. I will call it the PUC, or **Persona Under Consideration**. It is a stack of propositions about a discourse participant, with the top-most one being the “current” proposed persona of that person (I'll call this the **immediate PUC**). When Kellie monophthongizes, the immediate PUC would be ‘Kellie is a friendly and unintelligent Southerner’. The idea would be that the immediate PUC updates every time a socially indexing expression is used. When we react with “Poser!” to a socially-indexing expression, it is our rejection of a persona in the PUC.

With this in mind, (67) is the first draft of the complete CCP of a monophthongized diphthong. The first line is imported from the previous section; the second conjunct is the additional context effect introduced here. (68) is a glossary of some of the formalism in (67), for convenience. (69) gives a concrete example to help visualize what (67) means. To make the effect of the formalism a bit clearer, let us assume that the listener has a prior belief that this southern speaker is generally a talkative individual (69b).

$$(67) \quad \llbracket a: \rrbracket = \lambda C \lambda C' \left[\begin{array}{l} \lambda w. \mathbf{southern}_w(s) \in SP_{\langle L, S \rangle}^C \wedge \\ \mathbf{top}(PUC_{\langle L, S \rangle}^{C'}) = \bigcup (\mathcal{F}_{a:} \cup SP_{\langle L, S \rangle}^C) \end{array} \right] \quad (\text{to be revised})$$

- (68)
 - a. L = listener, S = speaker
 - b. C = input context, C' = output context
 - c. **top**: returns the topmost member of a stack
 - d. $PUC_{\langle L, S \rangle}$: the listener's PUC of the speaker (to be understood as ‘the speaker’s potential persona, under consideration by the listener’)
 - e. $\mathbf{top}(PUC)$: immediate PUC (i.e., persona currently under consideration)
- (69)
 - a. $\mathcal{F}_{a:} = \{ \lambda w. \neg \mathbf{intelligent}_w(s), \lambda w. \mathbf{friendly}_w(s) \}$
 - b. $SP_{\langle L, S \rangle}^C = \{ \lambda w. \mathbf{southern}(s), \lambda w. \mathbf{talkative}_w(s) \}$

- c. $\mathcal{F}_{\text{a:}} \cup SP_{\langle L,S \rangle}^C = \left\{ \begin{array}{l} \lambda w. \neg \mathbf{intelligent}_w(s), \lambda w. \mathbf{friendly}_w(s), \\ \lambda w. \mathbf{southern}_w(s), \lambda w. \mathbf{talkative}_w(s) \end{array} \right\}$
- d. $\bigcup(\mathcal{F}_{\text{a:}} \cup SP_{\langle L,S \rangle}^C) =$
 $\lambda w. \neg \mathbf{intelligent}_w(s) \wedge \mathbf{friendly}_w(s) \wedge \mathbf{southern}_w(s) \wedge \mathbf{talkative}_w(s)$
 $\leadsto \text{'the zany southerner' persona}$

Some clarification is in order. I am treating the “field” \mathcal{F} of a variant (cf., (69)b) as just the higher order meanings, which is not unlike how Eckert (2008) illustrates her indexical fields.¹⁸ Additionally, the discussion leading to the formal proposal has been that of higher order meanings, but note that the immediate PUC in (67) actually is not just \mathcal{F} (the higher order meaning); it is the full calculated persona, $\bigcup(\mathcal{F}_{\text{a:}} \cup SP_{\langle L,S \rangle}^C)$. There are a couple of motivations for this. One, if the PUC is the person’s current persona, you cannot really divorce their permanent property from it. If you are forever southern then of course the proposed persona will include it. Two, this is needed to explain how the hearer’s prior beliefs about the speaker affects what the “proposed persona” is. It is only with the inclusion of the preconceived personas in SP that we can derive the Bush effect.

So then, what happens when Kellie says e.g., *life* [la:f] is that she claims that she meets the precondition that she is southern, and winds up proposing ‘I am a zany southerner’ as her immediate persona. I deliberately say “winds up proposing” and not “proposing”, because Kellie ultimately does not have control over what persona she communicates: it all depends on the listener’s SP of her.

When we think more long-term in terms of how the discourse will unfold, what I have so far in (67) is not sufficient. If social meaning is a proposal, then like all proposals, it gets accepted or rejected. Like at-issue proposals (to update the CG), I assume acceptance is the default move for social meaning too. Unless someone contests a proposed persona with “Poser!” or the like, I think it is reasonable to think that the hearer has endorsed the persona. Here is the remaining issue: what happens to the calculated persona in the PUC once it’s accepted? If it’s rejected, we can imagine that it will either simply get downdated from the PUC or some sort of overt negotiation of the persona will take place until the interlocutors can agree on an accurate persona (e.g., “I’m not a poser!”). But what happens when, for example, Ellen accepts that Kellie is indeed a zany southerner?

To answer this question, it is helpful to consider why we incorporate social meaning in our speech in the first place. Why *do* we stylize our speech? The short answer of course is that we are constructing our identity (Eckert, 2008; Ochs, 1992), but why *do that*? After all, social meaning is independent of the at-issue content: ‘I’m a southerner’ and ‘I’m friendly’ have nothing to do with the truth condition of the at-issue proposition. Because of this we don’t tend to think of social meaning as being particularly helpful for the game of discourse, which has as its ultimate objective increasing the CG with facts and figuring out which of the possible worlds is our world.

Social meaning does have a role in the game, though. It doesn’t affect the truth condition of the at-issue content, but it does affect whether you actually think the proposition is true or not. Constructing one’s identity has to do with situating yourself in society — putting yourself and others in a particular social category (Eckert, 2008). Social meaning is about which group you are in, what attitudes you hold, and performing and perceiving these

¹⁸Although, if the first-order meaning was included, the overall computation would still be the same. It just seems redundant to encode the first-order meaning in two places in the formal representation of social meaning.

things affects how you steer the discourse. You can, for example, make inferences about the speaker's reliability as the information source based on the persona they are putting on.

So social meaning *doesn't* have nothing to do with the at-issue content. It has everything to do with it, at least pragmatically. The social information that the hearer extracts from the speaker's speech style is a factor in their decision of accepting or rejecting a CG update proposal. Maybe a presidential candidate who uses the velar variant of *-ing* more during a debate sounds more convincing. Maybe Kellie Pickler telling you how to prepare the fries [fɪəz] in your poutine makes you want to double check that she knows what she's talking about. We are social creatures that constantly compare a speaker's content of the utterance to their identity.¹⁹

So here is the formal connection I am proposing: The PUC is intimately tied to the QUD. Social meaning is something that helps a hearer plan the QUD: perhaps the hearer sounds too lazy to be trustworthy so you reject an issue in the QUD, or maybe because they sound Canadian you bring certain issues about Canada up. I am proposing that the purpose of proposing a persona is to help the hearer make a decision about the at-issue content it came with (e.g., Do they accept it or reject it?). Formally, this requires just a small adjustment to the CCP of social meaning proposed thus far: the PUC set should have *ordered pairs* as members, not just propositions (the personas). This will be an ordered pair of the persona (a proposition) and the at-issue content (a set of proposition(s)) raised in the QUD. In other words, if sentence ϕ_1 raised the issue $\{q_1\}$ and carried m_1 as the social meaning, the PUC updates with $\langle m_1, \{q_1\} \rangle$. (70) is the final draft of the proposal which reflects this change. Q is whatever the at-issue content is.

$$(70) \quad [\![a:\!]] = \lambda C \lambda C' \left[\begin{array}{l} \lambda w. \mathbf{southern}_w(s) \in SP_{\langle L, S \rangle}^C \\ \mathbf{top}(PUC_{\langle L, S \rangle}^{C'}) = \langle \bigcup(\mathcal{F}_{a:} \cup SP_{\langle L, S \rangle}^C), Q^{C'} \rangle \end{array} \right]$$

This proposal will be tested out in the next section, where I provide an explicit explanation of Observations 1 through 5.

6 Testing the model out

This section provides a formal account of the descriptive observations from earlier. The observations are repeated below, with the “Bush effect” added as a supplemental observation to account for in more detail.

- **OBSERVATION 1 (Style shifting):** Speakers style shift in discourse by switching between variants.
- **OBSERVATION 2 (Speak your own dialect):** It is infelicitous for a speaker to shift to a non-native dialect.
- **OBSERVATION 3 (Poser):** Social meaning requires acceptance by the hearer.

¹⁹To avoid any confusion, I am *not* endorsing group-based generalizations and stereotypes. The examples I am speaking of are dangerously close to — if not the same mechanism as — a white person hiring someone with a white name as opposed to someone with a black or Asian name because of prejudiced and incorrect inferences they are making. That is *not* ok. My only statement is that as social creatures we do exploit social information in our decision-making process. Descriptively, it happens. Whether we should be doing this in certain ways at certain times is a completely different question, not within the scope of theoretical linguistics.

- **OBSERVATION 4 (Non-at-issue):** Social meaning contributes non-at-issue meaning; it is independent of the primary entailment.
- **OBSERVATION 5 (Non-redundancy):** The first-order meaning of a variant is not redundant even when the variant is repeated; it does not strengthen the meaning either.
- **ADDITIONAL OBSERVATION (Bush effect):** Strong prior beliefs about an individual can override their proposed persona.

6.1 Observation 1: Style shifting

The first observation is that speakers readily shift between any pair of variants. For example, Kellie Pickler switches between the diphthong [ai] and the monophthongized [a:] in the discourse that we have seen. I will begin by illustrating what happens in the context when Kellie monophthongizes, and then show how her using a diphthong in a succeeding context is predicted to be perfectly felicitous by the model. (76) repeats the CCP of a monophthongized diphthong. We will continue to assume that the hearer has prior beliefs (SP) that the speaker is southern and talkative.

$$(71) \quad [\![\text{a}:\!]\!] = \lambda C \lambda C' \left[\begin{array}{l} \lambda w. \mathbf{southern}(s) \in SP_{\langle L, s \rangle}^C \\ \mathbf{top}(PUC_{\langle L, s \rangle}^{C'}) = \langle \bigcup(\mathcal{F}_{a:} \cup SP_{\langle L, s \rangle}^C), Q^{C'} \rangle \end{array} \right]$$

a. $\mathcal{F}_{a:} = \{\lambda w. \neg \mathbf{intelligent}_w(s), \lambda w. \mathbf{friendly}_w(s)\}$
b. $SP_{\langle L, s \rangle}^C = \{\lambda w. \mathbf{southern}_w(s), \lambda w. \mathbf{talkative}_w(s)\}$
c. $\bigcup(\mathcal{F}_{a:} \cup SP_{\langle L, s \rangle}^C) = \lambda w. \neg \mathbf{intelligent}_w(s) \wedge \mathbf{friendly}_w(s)$
 $\quad \quad \quad \wedge \mathbf{southern}_w(s) \wedge \mathbf{talkative}_w(s)$
 $\quad \quad \quad \sim \text{the ‘zany southerner’ persona}$

Whenever a socially stylized utterance is made, the social meaning is not the only CCP that the sentence carries. It also has the CCP of an assertion (or a question, if an interrogative sentence) too. The formal technicalities of how the two CCP’s combine will be discussed in §7 in the final discussion. The only point that matters for immediate purposes is that there are two things that contribute changes to a context: illocutionary meaning and social meaning. A *simplified* CCP of an assertion is shown below in (13). All it says is that an assertion of p raises $\{p\}$ as an issue in the QUD, thereby proposing to update the CG with it. Although parts irrelevant to the current point (e.g., the speaker’s commitment set and the “projected set” (anticipated future CG) (Farkas and Bruce, 2010)) have been omitted for readability, we can assume that they would work in exactly the way that Farkas and Bruce (2010) propose.

$$(72) \quad [\![\text{ASSERT}]\!](p) = \lambda C \lambda C' [\mathbf{top}(QUD^{C'}) = \{p\}]$$

(73) on the next page is a sample step-by-step illustration of how the context updates in discourse. C_0 , C_1 , etc. refer to the different contexts; e.g., C_1 is the context we obtain after Kellie says *That is the most incredible moment in my life*, and so on. \circlearrowleft indicates the parts of the context affected by the discourse move. Note that there is no \circlearrowleft next to the SP ever in the example, since the proposal is that social meaning specifies the state of affairs in the SP in the *input* context; it’s not an update. C_2 is shown in two steps because a PUC

downdate must follow a QUD downdate (i.e., the PUC downdates only after the QUD is resolved).

(73) $I = \text{intelligent}$, $F = \text{friendly}$
 $S = \text{southern}$, $T = \text{talkative}$

K = Kellie
E = Ellen

	Discourse	Context	What's happening
C0	[pre-discourse context]	QUD: { } CG: { } PUC $_{\langle e,k \rangle}$: { } SP $_{\langle e,k \rangle}$: { $\lambda w.S_w(k), \lambda w.T_w(k)$ }	← E's prior beliefs about K
C1	K: That is the most incredible moment in my life [la:f] (= q1)	\cup QUD: { {q1} } CG: { } \cup PUC $_{\langle e,k \rangle}$: { $\langle \lambda w.\neg I_w(k) \wedge F_w(k) \wedge S_w(k) \wedge T_w(k), \{q1\} \rangle$ } SP $_{\langle e,k \rangle}$: { $\lambda w.S_w(k), \lambda w.T_w(k)$ }	← update by ASSERT
C2a	E: Yeah	\cup QUD: { } \cup CG: {q1} PUC $_{\langle e,k \rangle}$: { $\langle \lambda w.\neg I_w(k) \wedge F_w(k) \wedge S_w(k) \wedge T_w(k), \{q1\} \rangle$ } SP $_{\langle e,k \rangle}$: { $\lambda w.S_w(k), \lambda w.T_w(k)$ }	← QUD resolved ← mutual agreement that q1 is true
— C2b —	—	— QUD: { } — CG: {q1} — \cup PUC $_{\langle e,k \rangle}$: { } SP $_{\langle e,k \rangle}$: { $\lambda w.S_w(k), \lambda w.T_w(k)$ }	— PUC downdated b/c {q1} resolved —

The proposal works well so far. Kellie's proposed persona helped Ellen decide that she is trustworthy enough (e.g., because she is friendly) to move the content she proposed to the CG. The proposed persona subsequently disappears from the PUC because its job is done.

Now what we must account for is Kellie's shift to the diphthong in the context that comes after this. (74) is my proposed CCP for a standard diphthong. It has one crucial feature: the standard variant does not have a first order meaning attached to it. In other words, [ai] does not require that the speaker be from any particular place before they use it. This is in line with the perceptual observation that English speakers do not readily associate unmarked variants with any geographical information. It does still carry the prestige of standard variants as its higher order meaning, which I simply gloss as **intelligent**.

$$(74) [\text{ai}] = \lambda C \lambda C' \left[\text{top}(PUC_{\langle L,S \rangle}^{C'}) = \langle \bigcup(\mathcal{F}_{\text{ai}} \cup SP_{\langle L,S \rangle}^C), Q^{C'} \rangle \right]$$

- a. $\mathcal{F}_{\text{ai}} = \{\lambda w.\text{intelligent}_w(s)\}$
- b. $SP_{\langle L,S \rangle}^C = \{\lambda w.\text{southern}_w(s), \lambda w.\text{talkative}_w(s)\}$
- c. $\bigcup(\mathcal{F}_{\text{ai}} \cup SP_{\langle L,S \rangle}^C) = \lambda w.\text{intelligent}_w(s) \wedge \text{southern}_w(s) \wedge \text{talkative}_w(s)$
 \rightsquigarrow the ‘articulate southerner’ persona

(75) is an illustration of what happens when Kellie uses the diphthong variant. We can see that the CCP of the diphthong is not in confound with Ellen’s SP of her, because the standard variant does not make any assumptions about what the permanent properties of the user should be.

		$I = \text{intelligent},$ $S = \text{southern}, T = \text{talkative}$	K = Kellie E = Ellen
		Discourse Context	What's happening
C3	K: We have great people in our lives [laivz] (= q ₂)	$\bigcirc QUD: \{ \{q_2\} \}$ $\text{CG: } \{ \}$ $\bigcirc PUC_{\langle e,k \rangle}: \left\{ \begin{array}{l} \langle \lambda w.I_w(k) \wedge \\ S_w(k) \wedge T_w(k), \{q_2\} \rangle \end{array} \right\}$ $SP_{\langle e,k \rangle}: \{ \lambda w.S_w(k), \lambda w.T_w(k) \}$	\leftarrow update by ASSERT \leftarrow update by [ai] \leftarrow [ai] felicitous b/c no first order meaning

The next section shows the converse of this, where Kellie tries to use another variant that does have input SP specifications.

6.2 Observation 2: Speak your own dialect

Observation 2 is simply that you can’t mix multiple regional dialects in a single discourse. In fact, you are not permitted to use a dialect you’re not a native speaker of at all. Based on sociolinguistic perception studies (Ladegaard, 1998), I speculate that an average American associates any RP British English expression α with the higher order meaning of ‘intelligent’.²⁰ The speaker is still Kellie here.

- $$(76) \llbracket \alpha_{\text{BRE}} \rrbracket = \lambda C \lambda C' \left[\begin{array}{l} \lambda w.\text{british}(s) \in SP_{\langle L,S \rangle}^C \\ \text{top}(PUC_{\langle L,S \rangle}^{C'}) = \langle \bigcup(\mathcal{F}_{\text{BRE}} \cup SP_{\langle L,S \rangle}^C), Q^{C'} \rangle \end{array} \right]$$
- a. $\mathcal{F}_{\text{BRE}} = \{\lambda w.\text{intelligent}_w(s)\}$
 - b. $SP_{\langle L,S \rangle}^C = \{\lambda w.\text{southern}_w(s), \lambda w.\text{talkative}_w(s)\}$
 - c. $\bigcup(\mathcal{F}_{\text{BRE}} \cup SP_{\langle L,S \rangle}^C) = \lambda w.\text{intelligent}_w(s) \wedge \text{southern}_w(s) \wedge \text{talkative}_w(s)$

²⁰It should be noted that the perception study I am citing had Danish participants. However, there are many anecdotal observations that Americans also find British English to sound intelligent. Source: <https://www.psychologytoday.com/us/blog/modern-minds/201609/why-do-british-accents-sound-intelligent-americans>

- (77) $S = \text{southern}$, $T = \text{talkative}$
 $B = \text{british}$, $I = \text{intelligent}$

K = Kellie
E = Ellen

	Discourse	Context	What's happening
C0	[pre-discourse context]	QUD: {} CG: {} PUC $\langle e, k \rangle$: {} SP $\langle e, k \rangle$: $\{\lambda w. S_w(k), \lambda w. T_w(k)\}$	← E's prior beliefs about K
C1	K: We have [hav] great people in our [a:] lives [laivz] (= q ₃)	QUD: { {q ₃ } } CG: {} \cup PUC $\langle e, k \rangle$: $\left\{ \begin{array}{l} \langle \lambda w. I_w(k) \wedge \\ S_w(k) \wedge T_w(k), q_3 \rangle \end{array} \right\}$ Δ SP $\langle e, k \rangle$: $\{\lambda w. S_w(k), \lambda w. T_w(k)\}$	← update by ASSERT ← update by [hav] etc. ← BrE infelicitous b/c $\lambda w. B_w(k)$ not in SP already

The infelicitousness of Kellie switching to a British dialect is similar to a presupposition failure: she has failed to meet the context precondition specified by that British variant.

Recall the potential counterexample to this, which was the “Harry Potter marathon” context. The situation in sum was that two Americans who are both aware of their nationality can switch to British English if the topic at hand is somehow related to England (e.g., Harry Potter). I think this is simply a flouting of Grice’s maxim of quality to create some effect of comedy (or the like). You are using a variant whose SP specifications you very obviously do not meet, so you must be implying something. I would analyze it as a sarcastic use of a non-native dialect.

6.3 Observation 3: Poser

Observation 3 is that social meaning is a persona *proposal*. It can be overly rejected by “Poser!” or similar responses. Formally, this is straight-forwardly accounted for by having the calculated persona of the speaker in the PUC.

6.4 Observations 4 and 5: Non-at-issue-ness and non-redundancy

Observations 4 (non-at-issue) and Observation 5 (non-redundancy) have more or less been accounted for already, but it is worthwhile to spell it out in detail here. Social meaning is non-at-issue because its content is not in the QUD. It does “comment upon” the at-issue content in the sense that it helps with the resolution of the at-issue content it came attached to, at least at the discourse level.

Non-redundancy of the first order meaning of a variant is due to its status as a non-update. The CCP of social meaning requires that the speaker establish the proper first order property *prior* to the utterance. Because a monophthong doesn’t “inform” the hearer that the speaker is southern every time it is said, we expect no redundancy from it.

Looking at the illustration in (78), there is another prediction from this account of (non-)redundancy.

(78)

	Discourse	Context	What's happening
C1	K: That is the most incredible moment in my life [la:f] (= q1)	$\cup \text{QUD}: \{ \{q_1\} \}$ $\cup \text{CG}: \{ \}$ $\cup \text{PUC}_{\langle e, k \rangle}: \left\{ \begin{array}{l} \langle \lambda w. \neg I_w(k) \wedge F_w(k) \wedge \\ \underline{S_w(k)} \wedge \underline{T_w(k)}, q_1 \rangle \end{array} \right\}$ $\text{SP}_{\langle e, k \rangle}: \{ \underline{\lambda w. S_w(k)}, \underline{\lambda w. T_w(k)} \}$	\leftarrow update by ASSERT \leftarrow update by [a:] \leftarrow [a:] felicitous b/c $\lambda w. S_w(k)$ in SP already

K = Kellie
E = Ellen

Looking at the PUC in C1 in (78), we can see that Kellie's southernness and talkativeness is a part of the calculated persona by virtue of being a part of the SP (the properties are underlined). The underlined portion therefore is the part we don't expect redundancy from; these are the properties Ellen assumes Kellie will always exhibit. The non-underlined properties in the PUC, which come from $\mathcal{F}_{a:}$, however, is proposed rather than assumed every time Kellie monophthongizes. So the other prediction is that the more times that Kellie monophthongizes, the more overwhelming the proposed unintelligence and friendliness should become. I am not quite sure how one would go about testing this prediction considering the earlier confound we had with the "I get it" test for redundancy with negative perception. As an anecdotal observation, some people do experience annoyance after a prolonged exposure to certain dialects. In fact, Kellie Pickler's ditzy ($\approx \neg \text{intelligent} \wedge \text{friendly}$) persona is sometimes characterized as "annoying".²¹ It is possible that this is some version of the "I get it" effect. Jaclyn Poole, a model known for her appearance on *America's Next Top Model* is another American known for her prominent and persistent southern accent. She is described as giving hearers a "tooth ache" after speaking to her,²² which may be another manifestation of this effect (i.e., the redundancy of her repeated friendliness).

Where speakers more consciously exploit the higher order meaning of a variant to more actively propose a persona, the proposed analysis correctly predicts redundancy. The "big words to sound smart" example from earlier is a good example of this (below is a modified version of the earlier example). (79) is what the CCP of an abtruse term α may look like: it proposes that the speaker is smart, and it is shown in action in (80). I have changed the speaker from Kellie Pickler to Professor Farnsworth to make the persona more fitting.

$$(79) \quad [\![\alpha_{abtruse}]\!] = \lambda C \lambda C' \left[\text{top}(PUC_{\langle L, S \rangle}^{C'}) = \langle \bigcup(\mathcal{F}_{abtruse} \cup SP_{\langle L, S \rangle}^C), Q^{C'} \rangle \right]$$

- a. $\mathcal{F}_{abtruse} = \{ \lambda w. \text{intelligent}_w(s) \}$
- b. $SP_{\langle L, S \rangle}^C = \{ \lambda w. \text{old}_w(s) \}$

²¹Source: <https://www.facebook.com/FamilyFeud/posts/kellie-pickler-incredibly-annoying-going-way-over-the-top-to-be-cute> 1089288561150113/

²²Source: <https://latimesblogs.latimes.com/showtracker/2011/04/americas-next-top-model-jaclyn-i-might-be-sweet-but-i.html>

c. $\bigcup(\mathcal{F}_{abtruse} \cup SP_{\langle L,S \rangle}^C) = \lambda w.\mathbf{intelligent}_w(s) \wedge \mathbf{old}_w(s)$
 \rightsquigarrow the ‘wise professor’ persona

(80) $I = \mathbf{intelligent}$ $P = \text{Professor Farnsworth}$
 $O = \mathbf{old}$ $F = \text{Fry}$

Discourse		Context	What's happening
C1	P: Your countenance annoys me. ($= q_4$)	$\bigcup \text{QUD}: \{ \{q_4\} \}$ $\text{CG}: \{ \}$ $\bigcup \text{PUC}_{\langle f,p \rangle}: \{ \langle \lambda w.I_w(f), \{q_4\} \rangle \}$ $\text{SP}_{\langle f,p \rangle}: \{ \lambda w.O_w(p) \}$	\leftarrow update by ASSERT \leftarrow update by <i>countenance</i> \leftarrow Prior belief that P is old
:		(F accepts this, q_4 is added to CG, PUC downdated)	
C3	P: It vouchsafes excitement. (= q_5)	$\bigcup \text{QUD}: \{ \{q_5\} \}$ $\text{CG}: \{ \}$ $\bigcup \text{PUC}_{\langle f,p \rangle}: \{ \langle \lambda w.I_w(f), \{q_5\} \rangle \}$ $\text{SP}_{\langle f,p \rangle}: \{ \lambda w.O_w(p) \}$	\leftarrow update by ASSERT \leftarrow update by <i>vouchsafes</i> , redundant

(80) shows that in C1, the ‘I am intelligent’ proposal is made via the word *countenance*, and then again in C3 via *vouchsafes*. This certainly invites an “I get it” sort of response.

6.5 The Bush effect

Finally, the “Bush effect” was that when the hearer has a very strong prior belief about the speaker, it is possible for the social meaning of the variant they use have no effect on how they are perceived. Consider the CCP of a released $[t^h]$ below in (81), where the higher order meaning is simplified to be just **intelligent**. If someone’s SP of Bush includes that he is *not* unintelligent, then his calculated persona winds up being the empty set.

(81) $\llbracket t^h \rrbracket = \lambda C \lambda C' \left[\text{top}(PUC_{\langle L,S \rangle}^{C'}) = \langle \bigcup(\mathcal{F}_{t^h} \cup SP_{\langle L,S \rangle}^C), Q^{C'} \rangle \right]$

- a. $\mathcal{F}_{t^h} = \{ \lambda w.\mathbf{intelligent}_w(s) \}$
- b. $SP_{\langle L,S \rangle}^C = \{ \lambda w.\neg\mathbf{intelligent}_w(s) \}$
- c. $\bigcup(\mathcal{F}_{t^h} \cup SP_{\langle L,S \rangle}^C) = \emptyset$

(82) is how this would play out in the actual context of a discourse.

(82)

B = Bush
P = Pelosi

Discourse	Context	What's happening
C0 [pre-discourse context]	QUD: { } CG: { } PUC _(p,b) : { } SP _(p,b) : { $\lambda w. \neg I_w(b)$ }	← P's prior beliefs about B
C1 B: Bipartisan is more than minding our matters [mæt ^h .t _z]. (= q ₆)	○ QUD: { {q ₆ } } CG: { } ○ PUC _(p,b) : { ⟨∅, {q ₆ } ⟩ } SP _(p,b) : { $\lambda w. \neg I_w(b)$ }	← update by ASSERT ← update by [t ^h] ← The only “surviving” persona

We can see that there is a trivial update of the PUC with the null persona: there is no persona being proposed. The only persona that is present in C1 is the one in the hearer’s SP of Bush, which is that he is unintelligent. This captures the effect that any time Bush uses a variant with **intelligent** as a higher-order meaning, a hearer who already thinks he is unintelligent is never going to perceive him as that.

7 Discussion

The purpose of this paper is to account for some basic descriptive effects of social meaning in discourse. Because social meaning in formal pragmatic theory is a new endeavor, I by no means intend to conquer everything here. I do, however, wish to encourage this new direction of research and hope that more questions will be asked and answered in future works. In this section, I start with some yet-to-be-tested issues of my proposal, and end with some provocative implications that this project has at the broader level.

7.1 Technical predictions

Social meaning and other illocutionary acts. One move I made in my proposed analysis of social meaning was that the object in the PUC is an ordered pair: the calculated social meaning paired with the at-issue content it came along with. A natural question then is: what if the social meaning comes in an illocutionary act that doesn’t have an issue in the QUD? For example, what if Kellie Pickler monophthongizes while giving a command (e.g., *Stop right [ja:?] there!*)? I think in this case, the proposal can be weakened to say that the calculated social meaning is paired with whatever the primary illocutionary force of the sentence that housed it is. So if e.g., your analysis of an imperative is that it updates the hearer’s To-Do List (Portner, 2004, 2018), then the social meaning would be paired with some aspect of that. I don’t think this would be a huge formal adjustment, and it would still be in line with the overall intuition that social meaning helps the hearer decide on future moves in discourse (e.g., whether to add something to their To-Do List in this case).

A more difficult question to answer is what happens if the carrier of social meaning is purely expressive. For example, Kellie could exclaim *Oh my [ma:]!* to express surprise.

With the interjection itself being non-truth-conditional, it is not immediately clear what the social meaning is supposed to help with here. I leave this for future research.

CCP modification. Another formal consideration is how the CCP of social meaning interacts with other CCP's present in the same sentence. For example, the force of an assertion has a CCP as well. As I have it now, when Kellie says *This is the most incredible moment in my life [la:f]*, ASSERT relates the input/output contexts and so does [a:]. But nothing says that ASSERT and [a:] are both referring to the same input context and the same output context. There must be a rule of composition that unifies the two CCP's.

Figure 6 is one speculation of how a sentence with multiple CCP's could look like (the sentence has been simplified to *It's my life*). The Potts-inspired bullet separates the at-issue meaning of *life* ($\lambda x \lambda w. \text{life}_w(x)$) and the social meaning of it when monophthongized (its CCP).

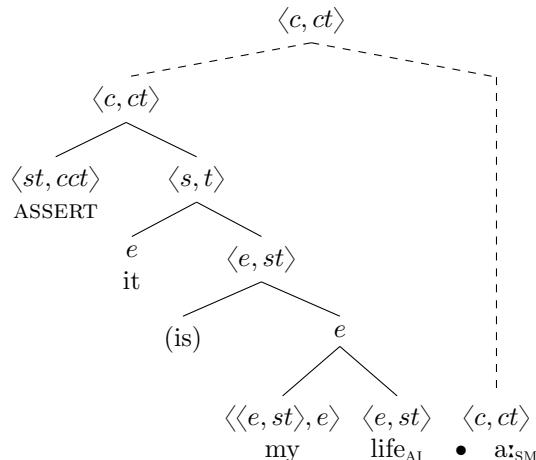


Figure 6: Parsetree of [『ASSERT it is my life [la:f]』 (AI = ‘at-issue’, SM = ‘social meaning’)]

From here, we would need a modification rule that unifies the two CCP's:

- (83) CCP MODIFICATION (inspired by Heim and Kratzer (1998)'s Predicate Modification rule)
 If a branching node α has as its daughter β and γ , and $\llbracket \beta \rrbracket$ and $\llbracket \gamma \rrbracket$ are both of type $\langle c, ct \rangle$, then $\llbracket \alpha \rrbracket = \lambda C \lambda C' [\llbracket \beta \rrbracket(C)(C') \wedge \llbracket \gamma \rrbracket(C)(C')]$

(83) would essentially create one giant CCP from the two CCP's: one that includes both the contextual contribution of ASSERT and the monophthong. This is certainly not the only way to resolve the issue, but making it a modification rule has a favorable prediction that you can have infinitely as many CCP's in a sentence. For example, if *my* was also monophthongized in the above sentence, it too could contribute a social meaning and modify the existing CCP via a re-application of the CCP Modification rule. I trust that a more thorough investigation of the compositionality of social meaning would confirm or refute this hypothesis.

Southerner to southerner. A non-southerner like Ellen de Genes listening to a southerner like Kellie Pickler would of course perceive things from her dialect. Because she is not a part of the same speech community as Kellie, the “outsider” Ellen surely has perceptions about the dialect that is not hers. This is the case that my proposal accounts for. However something that I have not explained is what happens when a southerner speaks to a southerner. If Kellie returns home to Albemarle, North Carolina, it is not clear that her fellow southerners would perceive her to be ‘unintelligent’ and vice versa. My intuition is probably not.

The current proposal does not predict this sort of effect because I have been assuming a unique set of higher order meanings of [a:]. If $\neg\text{intelligent}$ is always in \mathcal{F} then we would expect this perception to persist across all contexts. I don’t think this is quite right. One quick formal fix would be to relativize \mathcal{F} to the hearer as well, like the PUC. In other words, instead of just \mathcal{F} we would have \mathcal{F}_L : this is what the hearer takes to be the higher-order meaning of a variant. Then, we could assume that Ellen would have $\neg\text{intelligent}$ in *her* \mathcal{F} , but Kellie’s family in Albemarle would not, explaining the difference in perception. I leave this for future research.

Accommodation. Another indisputable sociolinguistic phenomenon that I have been tactfully leaving out of the discussion thus far is accommodation. This is roughly the phenomenon of a speaker starting to sound like their neighbors, given conditions like how positively they feel about the speech community (cf., Trudgill, 1986; Giles, 1979). An American living in Canada may start to gradually raise their diphthongs, and a non-southern waitress in Atlanta may start monophthongizing to create rapport with her customers. Accommodation is potentially problematic to my current analysis of the first order meaning of a variant being something as simple as **southern**. In the examples I just gave, it is hard to argue that the American is saying that they are literally Canadian or that the waitress, literally from the South. I assume that what I have glossed as **southern** actually needs to be decomposed to actually reflect what the first order meaning really is. This is not a surprising next step, considering social meaning like honorific marking in Japanese has been argued to be more complex than just ‘X respects Y’ (McCready, 2014). Without going into the formal details, honorific usage is analyzed to be some weighted average of a number of factors like the psychological distance between X and Y, social relation between X and Y, and the formality of the context. We can imagine that regionally indexing social meaning would similarly have different dimensions that would have to be considered, such as whether the speaker psychologically feels Canadian, likes Canada, or physically is in Canada at the time of utterance. Since the purpose of this paper was *not* to figure out what we mean by **southern** and such I did not explore these possibilities, but given the tools that we have from the honorifics literature, I think this would be an interesting next step in this project.

7.2 Application to other domains of language

One peculiar descriptive observation that we had earlier in the paper was that subjective meaning behaves similarly to social meaning. When you say things like *I like country music*, that too seems to be some proposal about the speaker’s persona. I am willing to entertain the idea that subjective meaning is an overt update to the PUC, perhaps with the objective of updating the hearer’s SP of the speaker. This could potentially explain why it is odd to react to *I like country music* with “That’s not true!”. The hearer does not get to decide whether it is true or false since this is merely the speaker’s opinion, but they can decide

to not believe it. That you can say “Poser!” to such subjective propositions suggests that subjective meaning is less about truth conditions and more about who you are making yourself out to be. I don’t think something like the PUC and the SP need to be discourse parts invented just for what we canonically think of as social meaning. I am optimistic that there are various places in which these formal notions could be useful.

7.3 Implication for the typology of meaning

Earlier in the paper I spent some time trying to place social meaning in the typology of meaning, asking questions like “Is social meaning a conventional implicature (CI)?”. I tentatively answered yes, but I wonder if the question is even an interesting one in the first place. This is because “conventional implicature” as a group is quite heterogenous, with drastically different formal analyses proposed for things under this label. (Anti-)honorifics are emotive definite descriptions that require that the input context look a certain way (Potts and Kawahara, 2004; McCready, 2014). Appositives impose an update to the CG (AnderBois et al, 2013). Expressives shrink the relevant expressive index in the output context (Potts, 2007). So to say that something is a CI isn’t immediately formally informative.

Independence is really the only property that all CI’s have in common, which makes Gutzmann (2013)’s renaming of them as *Conventional Non-truth-conditional Items* a rightful one. It is simply that expressives, honorifics, appositives, and slurs are all independent of the at-issue meaning, but still carry conventional meaning. Formally, this commonality reduces to these things merely having the same semantic type: a non-at-issue type (Potts, 2005). However, based on McCready (2010)’s observations (see also Gutzmann (2013)), even this may not be accurate. She notes that there are at least two different types of CI expressions: one type contributes *only* CI meaning (e.g., expressives like *damn*), and another contributes both at-issue *and* CI meaning (e.g., honorifics in Japanese). The latter, which she calls mixed-content expressions, are proposed to need a different non-at-issue semantic type in addition to the one that was originally proposed by Potts.

Seen from an alternate perspective, there is a way to unify the semantic type of all CI’s. Implicit in all existing analyses of CI’s is that the non-at-issue contribution of it affects the discourse *context* in some way, whether it be updating the CG or some other discourse part. This means that all CI’s are context change potentials (CCP’s), which is the route I have taken in my present analysis.

But returning to my original issue, just saying that CI’s denote a CCP is still not interesting. We *know* that CI’s affect the context — the more interesting question is *how* it does so. Social meaning is conventional and non-truth-conditional, so it also denotes a CCP. In that way, yes, it is a CI too. But under this perspective, a presupposition is a CCP too since it dictates how the CG should look like in the input context, an idea I am not opposed to. However, as established already, this is not to propose that presuppositions and what Potts calls CI’s have all the same behavior. They don’t. My question here rather is about where we draw the circle to group different non-at-issue phenomena together. Do we keep presuppositions and CI’s separate as we traditionally have done because of their difference in (in)dependence, or do we group presuppositions and honorifics (a subtype of CI’s) together because they have in common that they manipulate the input context?

Different researchers have different questions and therefore different ways of organizing meaning types will be useful to different people. But if one happens to have questions like “what is the ontology of discourse?” and “what is the context comprised of?” (as is the case with this paper), I wonder if a typology like the one in Figure 7 is a more useful one.

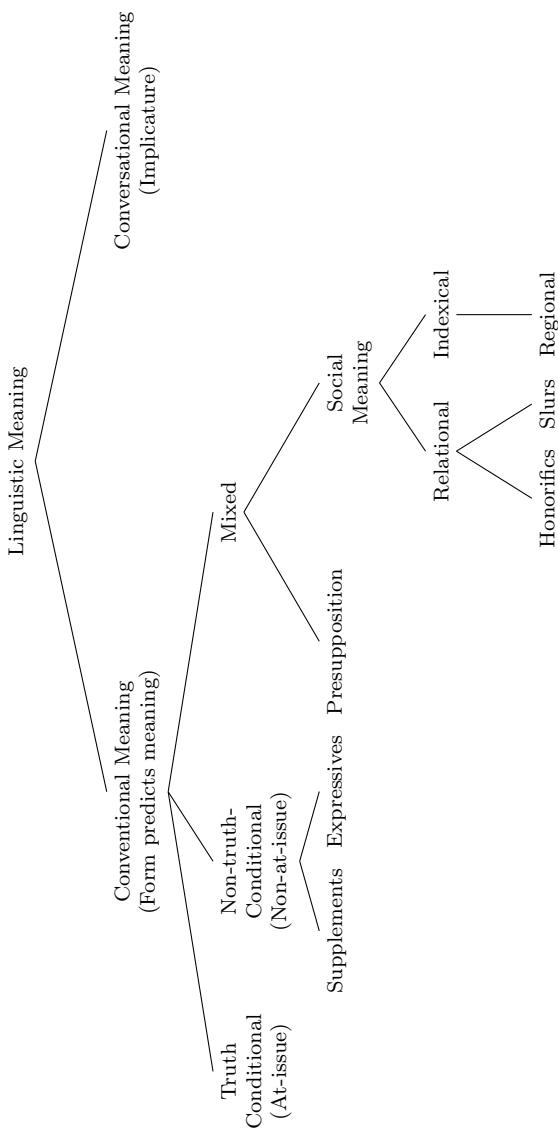


Figure 7: Alternate typology of meaning, proposed

I am calling presuppositions and social meaning *mixed* (following McCready (2010)) because they have both at-issue and non-at-issue meaning. I am not sure if this is an accident, but grouping them together this way makes the *mixed* class have a formal commonality: the non-at-issue part of them imposes a restriction on the input context. I think by investigating a wider variety of non-at-issue meaning and situating them in natural classes from various perspectives, we potentially learn much more about what sorts of components language attends to. With hopefulness, I leave this for future work.

8 Conclusion

In this paper, I examined sociolinguistic variation from a formal semantic/ pragmatic perspective. Using tools from dynamic semantics, I argued that the non-at-issue content of regionally-indexing variants can be analyzed as context change potentials. The first-order meaning of a regional variant (like ‘The speaker is southern’) is a restriction on the input context, requiring that the speaker have established with the hearer that they are from that region prior to the utterance. The higher-order meaning (like ‘The speaker is friendly’) was argued to be a part of a persona proposal in the output context: the speaker essentially says ‘please use this persona to help you decide on future discourse moves’. Examining social meaning within the scope of formal linguistic theory is fruitful in the investigation of lexical competence. Strictly linguistic phenomena like subjective predicates behave like sociolinguistic variants, suggesting that figuring out what social meaning does may be helpful for figuring out the pragmatic properties of other peculiar domains of language as well. This paper opens up new prospects and directions for research in human cognition, sociolinguistics, and formal semantic theory.

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