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THE AFFECTIVE PRACTICES OF HEALTH POLICY IMPLEMENTATION:
RURAL, ELDERLY HEALTH POLICY IN THE FACE OF THE OPIOID EPIDEMIC

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ABSTRACT

This dissertation addresses social aspects of elderly health policy implementation in rural Pennsylvania, as it turns to face the opioid epidemic. Between June of 2017 and July of 2019, the researcher conducted ethnographic interviews with elderly health services administrators, with the goal of learning about the rural, elderly experience of aging. These agents directed the interviews toward the effects of the opioid epidemic in their populations. Official policies portrayed aging and elderly health needs in one way, through one channel of *how* and *why policy gets done*. And yet, these agents seemingly represented different positions, or different beliefs, about those same *how* and *why* questions for their populations. This observation led to the question, how do values, goals, and cultural beliefs interact between rural, elderly health services and official policy documents, as they confront the ravages of the opioid epidemic?

To answer these questions, this dissertation attends to the stance-taking events present in these policies and interviews by utilizing corpus-assisted discourse analysis. Data come from a multi-modal corpus of text ($n = 100$; 571, 481 words), in the form of official policies, brochures, and outreach materials from elderly health agencies, and talk, in the form of bi-monthly ethnographic interviews ($n = 29$; 171,492 words) with 6 director-level agency administrators and 5 of their protective services case workers. Texts are compared with interviews by extracting frequent keywords and collocations from both, and then qualitatively analyzing their semantic properties in the form of semantic preference and semantic prosody. Stance-taking is then explored within single interactive events in the interviews using qualitatively based discourse analytic procedures.

Through these processes, the role of evaluative language to establish beliefs in the official policies and the interviews becomes highly visible. A contemporary theory of emotion called psychological construction is used to better understand evaluative aspects of language. Evaluative contours of the language are tracked across both existent texts, and in fine-grained interactive contexts, and ultimately finding that patterns of evaluation are core aspects of health policy beliefs, how they are understood, and thus what makes it into the how and why of health policy implementation at different sites and infrastructural levels.

Results show that (1) health policy implementation in rural, elderly settings is often as much about culturally situated social beliefs as it is about official mandates; (2) stance-taking can be tracked across multiple levels of discourse in consistent ways; (3) evaluative language is used by both policy documents, and directors and their caseworkers, in consistent ways that expose their experiences, expectations, and their values through the social activity that is implementation. The significance of these findings for the study of health policy implementation as a subject, and for discourse analysis as a methodology, are discussed.

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Chapter 1

Introduction

1. The Context

In the summers of 2017 and 2018, I conducted initial one-on-one conversations with several directors of rural, elderly health services agencies to learn about the experiences of rural people as they enter the later stages of their lives. However, what began as an ethnographic study about aging in rural contexts quickly turned to the issue of opioids in those contexts. Directors, independently, focused on the ravages of opioids in their population, and the unique challenges they experienced as they pivoted to face an unexpected and rampant health crisis. I would subsequently learn that while overdoses were certainly an issue in their communities overall, from the perspectives of these directors, the sociocultural effects of the opioid epidemic were the major figure of opioids in rural, elderly lives. Crucial to this dissertation, the directors underscored that the influence of opioids on their populations remains under-addressed or misunderstood by the current slate of elderly services policies. For instance, elderly people are common sources of opioids to family because of over-prescription. This issue alone, to say nothing of other phenomena, has deleterious effects on family bonds via drug diversion, and leads to emotional and bodily abuse, neither of which are immediately apparent. These behaviors are in addition to dramatically increased financial exploitation, another more visible issue. Further, current policies did not adequately take into account the modern realities of protective services investigations, such as substantial changes in financial institutions regarding obtaining records, dramatic increases in caseloads, and physical, emotional, and social abuse – all of which present difficulties for the timeframes set out

in the protective services code. The misalignment between the current policies and claims by these agents represented evidence of policy implementation breakdown.

The devastation of opioid-related overdoses looms large in public consciousness, and in few places larger than Pennsylvania. According to the National Institute on Drug Abuse, in Pennsylvania in 2016 there were 2,235 opioid-related overdose deaths, or 18.5 deaths per 100,000 persons (*Pennsylvania Opioid Summary*, 2018). The national average was 13.5. Between 2015 and 2016, rural counties saw a 42% increase in overdoses, compared to 34% for urban counties, representing a disproportionate increase of 25% (*Analysis of Overdose Deaths in Pennsylvania, 2016, 2017*). Health interventions have focused on Naloxone prescription, resulting in emergency services administering 3,705 doses statewide in 2017, of which only 422 doses were in rural counties (*The Pennsylvania Opioid Data Dashboard*, n.d.). Making naloxone readily available is an essential tactic in the strategy against the damaging effects of opioids, and cannot be discounted. Yet, rural individuals often face additional challenges in access and social services (e.g., fewer services, greater distances, less reliable roadways). Crucially, for the elderly there is also loss of physical ability, reduced social visibility, and reliance on kin or close friends for security. Hence, the opioid crisis affects the rural elderly in different ways than even young or middle-aged individuals in rural areas, and of course policy should be strategically responsive to the specific needs of different populations. As an example, the Pennsylvania Department of Aging's 2016-2017 report on older adult protective services reported increasing financial exploitation and abuse as key parts of the opioid epidemic. Ideally then, at successive levels of implementation, policy language should convince and motivate administrators of rural, elderly services agencies and their

protective services case managers to address specific dimensions of local needs (Majone, 1989) – in this case, the ways in which the opioid crisis tears the social fabric of intergenerational relations in rural society, and policy.

1.1 Summary Overview of the Dissertation

Through these conversations and an initial review of current policies, it became immediately apparent to me that there was a socially grounded inconsistency in the implementation pathway. Official policies portrayed aging and elderly health needs in one way, through one channel of *how* and *why policy gets done*. And yet, these agents seemingly represented different positions, or different beliefs, about those same *how* and *why* questions for their populations. This observation led me to the question, how do values, goals, and cultural beliefs interact between rural, elderly health services and official policy documents, as they confront the ravages of the opioid epidemic?

To answer these questions, I collected a multi-modal corpus of text ($n = 100$; 571,481 words), in the form of official policies, brochures, and outreach materials from elderly health agencies, and talk, in the form of bi-monthly ethnographic interviews ($n = 29$; 171,492 words) with 6 director-level agency administrators and 5 of their protective services case workers. In this dissertation, I focus on the stance-taking events present in these policies and interviews by utilizing corpus-assisted discourse analysis (Partington et al., 2013). I compare texts with interviews by extracting frequent keywords and collocations from both, and then qualitatively analyzing their semantic properties in the form of semantic preference and semantic prosody (Sinclair, 2004). I then explore stance-

taking within single interactive events in the interviews using qualitatively based discourse analytic procedures (Du Bois, 2007).

Through these processes, the role of evaluative language to establish beliefs in the official policies and the interviews becomes highly visible. To better understand evaluative aspects of language, I draw on a contemporary theory of emotion called psychological construction which brings together psychological and sociocultural elements of emotional experience (Russell, 2003). I then track evaluative contours of the language used in this corpus across both existent texts, and in fine-grained interactive contexts, and ultimately find that patterns of evaluation are core aspects of health policy beliefs, how they are understood, and thus what makes it into the how and why of health policy implementation at different sites and infrastructural levels.

2. Health Policy Implementation

Policy implementation is commonly studied as phenomena of policy transmission and compliance (Alexander, 1985; Bauer et al., 2015; Bowen & Zwi, 2005; Sallis et al., 1998; Watt et al., 2005). For example, Brownson et al. (1997) define policies as “those laws, regulations, formal and informal rules and understandings that are adopted on a collective basis to guide individual and collective behavior,” citing Schmid et al. (1995). They further define interventions as “measures that alter or control ... the environment” (p. 735). Policies are then objects, and interventions the activities meant to alter an environment to which policy will be applied. A methodological approach informed by this notion would view sites of health services as simple interventional spaces, and the people recipients of a composite item called a policy. This would mean that health policy

is not a social-interactive, distributed activity. In the area of health policy implementation (HPI) research, research that focuses directly on the social aspects of implementation is sparse. At least, such research is sparse by comparison to work that takes implementation to be a process by which mandates, documents, and procedures etcetera are transmitted to sites of implementation to be carried out.

I understand frameworks of these types as forming “policy as object” models. Much research in HPI that takes this model focuses particularly on clinical decisions behind policy creation (e.g., Trostle et al., 1999) and the dissemination phase of implementation (e.g., Greenhalgh et al., 2004; Minkler, 2010; Proctor et al., 2009; Walt et al., 2008). The dissemination phase of policy implementation encompasses the intentional transmission of policy language from the creators of policy to the sites of policy intervention. In this way, researchers frequently treat interventions as packaged activities that conform or do not conform to policy, rather than enacted interventions in collaborative, socially dynamic places.

Many frameworks of policy implementation research nonetheless refer to the impact of individual beliefs, organizational culture, and interpersonal relationships (Damschroder et al., 2009; Sabatier, 1988). Some research has dealt more directly with interactions and interpersonal relationships. Kaplan et al. (1995), Redelmeier et al. (1993), and Solomon et al. (2013) all utilized methods to better understand how relationships between patients and providers influenced policy uptake. Yet, in these cases, sources still seem to adhere to a belief in policy as object. They attempt to integrate, rather than adopt, an interactive social perspective. Their focus is how participants orient to policies as an influence in health policy enactment or rejection. In

contrast to previous scholarship, some authors have utilized ethnographic approaches and longitudinal studies of health policy agencies (Kreindler, 2016; Wimmelmann, 2019). With the help of qualitative data, authors have found that policy documents, and otherwise static objects, are often ideologically reorganized and repurposed to suit situational needs. Perhaps most importantly, those situational needs were defined and chosen by the health policy professionals. To wit, policies are not merely objects, but activities that are shaped and reshaped by the individuals in-context.

2.1 Health Policy & Beliefs

Despite the predominance of linear, policy-as-object models of implementation (Bowen & Zwi, 2005), health policies are not merely monolithic textual objects and activity modules distributed by governmental organizations. Rather, they are conceptually diverse operations acted on and enacted by people (Russell et al., 2008; Sabatier, 1986). People face myriad dilemmas embedded in those operations between themselves, official policy, and the populations to whom they provide service (Lipsky, 2010). Where policies and service provision meet, people must manage their life experiences, professional expectations, political obligations, and so on, in present social environments. To wit, providers have beliefs that undergird their respective decisions.

One framework, the Advocacy Coalition Framework (ACF) introduced by Paul Sabatier (Sabatier, 1988; Sabatier & Weible, 2007; Weible et al., 2009), positions policies as beliefs held by different actors in the policy implementation process. At the broadest level, coalitions are collections of people, organizations, interest groups, and so on, who share a particular policy domain. For example, a coalition exists to further

policies for community health services that includes departments of health, health and human services, private interest and advocacy groups, and so on. Subsystems are defined by their functional dimension or area of concern within coalitions (e.g., elderly health services), and their territorial zone (e.g., rural counties in Pennsylvania). Subsystems include not just organizations, but the people that compose those organizations, such as the directors, caseworkers, and other agents that carry out subsystem activities.

According to the ACF, coalitions and their subsystems come together based on beliefs about their policy issues, and how to address them. Those beliefs fall into hierarchically structured categories in descending scope: (1) core beliefs, (2) policy beliefs, and (3) secondary beliefs. Core beliefs are deeply held, normative beliefs. Core beliefs are structured by things such as religion, cultural practices etcetera, and undergird the value systems that form coalitions' identities. Because of their pre-existing and value-laden nature, core beliefs are extremely difficult to change. Policy beliefs are smaller in scope, and focused on policy preferences and decision-making. Policy beliefs are generally subsystem-wide, and highly salient. They shape the applicable form that core values take in health policies. At the most local, secondary beliefs are not subsystem-wide and tend to focus on things such as budgetary considerations, staffing decisions, and so on.

The three belief types intersect in the implementation process. Normative values influence the ways that agents understand the purposes of their coalitions and subsystems, and thus what the purpose of policies should be. Conversely, policy values shape the applicable form that core values take in the policies, what their goals and ends can feasibly be, and how to achieve them. And, in the end, we can expect to find

secondary beliefs having logistical and infrastructural effects on the manner of implementation, such as which individuals or subsystems are activated and in what capacity.

Importantly, the ACF assigns a particular value to “shock events” that accelerate changes in beliefs for subsystems. In essence, members of a subsystem may hold certain beliefs about their subject area, and who and what should be done about it, which sets it apart from differing subsystems. But a sudden, high-impact event (or series of events) may occur that forces subsystems to recalibrate, and presents opportunities for subsystem actors to find new areas of understanding, or deteriorate further. The elderly health system in Pennsylvania maintains boundaries between subsystems and coalitions, which arguably did not avail itself of the issues of opioid overdosing as widespread phenomena. Yet the opioid epidemic, a wide-spread shock event across health and social services, caused those beliefs held in those subsystems to change. Claims and stances made by people in the subsystems and coalitions of elderly health services surely had some domain-general mismatching between them, as any subsystems would, and that would be detectable through sustained analysis. But the shock of the opioid epidemic not only emphasized existing institutional boundaries, but introduces new areas of potential misalignment that may be pronounced because of the unexpected and otherwise new experiences in the administration of elderly health services.

Though the ACF frames values as belonging to coalitions and subsystems, they are nonetheless properties of people and their lived experiences. Such beliefs must surface in the discourses produced during the course of policy implementation, including official policy documentation, meetings, memoranda, everyday conversation, and

everywhere in between. To communicate their values, individuals project those values via the linguistic and paralinguistic resources available, through select strategies, registering them to respective interlocutors. In these discursive events, administrators make their private and public ideologies known.

Thus, the problem this dissertation sets out to address can be summarized as, since HPI is concomitantly a social process and the domain of beliefs held by different subsystem operators, how can we best understand those core aspects of implementation across the many sites and individuals implicated in such a process? In a simpler sense, what are the actual beliefs and social practices of the many actors in HPI in their own words?

3. Stance-taking: Capturing the Expression of Beliefs

Discursive events are often central to the activities that structure human relationships, social roles, and the organizational constraints that guide our everyday lives. Using socioculturally pertinent language is arguably the indispensable means of enacting social relations among the people that constitute organizations (Silverstein, 1993, p. 34). It is through discursive events that individuals construct, contest, and manage cultural identities and their subjective interpretations of a mutually experienced world. To accomplish these discourses, individuals draw on a variety of linguistic and paralinguistic semiotic resources (e.g., lexicon, prosody, honorifics, gestures), and strategies (e.g., stance-taking, staying on topic).

Discourse, as a universal human function for making sense in the world (Ochs, 1996; Silverstein, 1976), is presumably under way wherever humans engage in social

activity. So, wherever people are asked to participate in culturally valorized decision-making processes, we should seek the processes by which those people seem to “construct satisfactory lives and a coherent sense of self” (Ochs, 1993, p. 299). Further, when social contexts ask of them to inhabit competing identities (Silverstein, 2004), it is imperative to understand the practices people select to publicly establish their cultural sensibilities in those fluid social moments. HPI is just the sort of high-stakes, possibly conflicted social activity that necessitates such understanding.

3.1 Semiotics & Socialization

One crucial aspect of discourse is semiotics, the study of signs and sign systems (Silverstein, 1993, 2003, 2004). For a sign to be a sign, it requires the interpretation or representation of a thing, by some mind attending to or attributing a quality (Peirce, 1991, p. 141). Sign forms can represent images, feelings, sounds, acts, objects, essentially any thing that has some quality by which it can be known. Interpretation forms the semiotic distinction between the object and the sign. The object stands, in a material sense, as itself. The object has an impression in the mind of the individual, by which it is understood as certain qualities. Minds become conditioned over time to recognize qualities of objects. Those impressions become recognizable signs to the mind, which stand for the material objects in the mental spaces of the individual. Different entailments that are associated with a sign rise to an individual’s attention based on salient social and material stimulation in the environment.

In Charles Sanders Peirce’s tripartite semiotics, sign interpretation occurs in three fundamental qualities, or grounds (1991, p. 30). The first and most sign-object unified

ground is that of the icon. Iconic signs resemble the object of their origin. The third, and most abstract, ground is the symbol. A symbol is a sign that must be interpreted via abstract knowledge, usually through other signs. The second ground is the index. Indexes are signs related to an object by reference. Indexes are known by material experience, rather than similarity to the object itself. Peirce (1867) offers a weathercock as a canonical index. A weathercock indexes the presence and direction of gusts of wind, to someone who understands something about weathercocks. The weathercock does not resemble the wind either in likeness or quality. It is neither air, nor propulsion by air. The weathercock indexes wind to an interpreter who has learned that its function is to be pushed by wind, thus showing its direction and intensity.

By extension of this principle, we can find word meanings in their indexical properties. People learn word-meaning by recurrent exposure to words' use, in consistent patterns, in socially structured contexts (Ochs, 1996, p. 408). Recurrent exposure leads to convention, combining activity, location, and cultural knowledge. Sites of conventional social activity anchor social formations, and hold the power to warrant particular ideological and linguistic expressions. This process of recurrent exposure, uptake, and performance of norms is the core of socialization (Ochs, 1996). Indexicality is thus one of the core concepts in tracing the cultural and historical grounds of discourse to the specific stances, statements, and language use being scrutinized. People construe their identities in interaction through indexicality, as they communicate ideologies, beliefs, and accounts of experiences in their lives. Crucially, indexicality has the function of bringing outside information, such as prior experiences, into the discourse at hand, a process of entextualization (Silverstein, 2004; Sinclair, 2004, p. 52-53).

In this dissertation, indexicality is the focal semiotic aspect, particularly during interviews. There, we will see that the project of HPI is intertwined with beliefs and values that cross personal life with professional mandates. Through the fine-grained, sequential analysis of interviews, it will become clear that health agents express varying levels of comfort and conflict with their appointed service mandates. They express many personal stories and rationales for alternatives, and what sorts of attendant health issues they face when opioids interrupt their normal routines. The social activity of HPI, then, is as much about the personal beliefs of agent-directors in their reports and accounts, as it is about *per se* the intended means and ends of any prescribed intervention.

3.2 Stance-taking

The position taken in this dissertation is that people have culturally socialized values, and social identities, which are a matter of expression rather than enduring, essential properties. The social identity of an individual is a fluid, conceptual cluster arising in variable social activities. The primary form of expression for these identities is taking stances on subjects and objects of discourse. Stance-taking events occur through overt, communicative acts, where communicators stake out positions for subjects, evaluate discursive objects, and align with the prior stances, in a present stance field (Biber & Finegan, 1989; Du Bois, 2007; Jaffe, 2009; Kärkkäinen, 2006; Kockelman, 2004). Much like the social identities that they express, stances are fluid, emerging across time in shifting interactive space (Ochs, 1996). Further, stances can be charted as aspects of interactive (e.g., during conversation) and autonomous (e.g., existing texts) levels of communication (Sinclair, 2004, p. 49-54).

Stances occur in three parts: position, evaluation, and alignment (Du Bois, 2007). The three parts adhere to distinct portions of linguistic expressions, and accordingly have different discursive functions. Taking positions (positioning) concerns subjectivity. For example, *I am so glad* is the positioning of the subject *I*. Whether one is speaking about their personal view or accounting for another subject's qualities, the crucial element to positioning is the public communication of a subject-centered claim. The distinct activity of openly positioning subjects has a pragmatic function very different from evaluating the objects of discussion.

In contrast to positioning, evaluations are about the objects of discourse. The stance-taker orients to some object, and then ascribes to it some quality or characteristic. For example, *he threw a horrible pitch* is not evaluating *he* as in positioning, but the *pitch*. Critically, objects are often the propositional content interactors are encouraged to discuss. Thus, though positions and evaluations may involve similar semantic categories or domains, the pragmatic formalism associated with each type sanctions form or focus of the stance itself.

Alignment, the third part, is a structural feature that conjoins prior discursive events in the attention of participants. Though often described rather strictly as a structural feature of discourse to continue an interactional project (Stivers, 2008), alignment can also be seen as a form of topic selection. Dialogically, it refers back to or continues some specific content or proposition as relevant to the topic-at-hand. We might consider alignment to be calibration between two stance takers (Du Bois, 2007, p. 144). By analyzing alignment, we may recover some of those non-referential or pragmatic features coalescing in discourse, such as social values. People select prior topics or

stances in order to voice their perspectives with or against them. So, even though positions or evaluations are constituents of alignment, the alignment is in fact a corollary valorization of the intersubjective project under way.

On the interactive level, I will attend to the stances that are built up, turn-by-turn during interviews. As topics are discussed, their subjects, objects, and evaluations will be charted out for the relations that are built up over time during the interactive situation. On the autonomous level, I will utilize John Sinclair's Extended Lexical Unit (ELU) (Sinclair, 2004, p. 141-142; Stubbs, 2009) to coordinate official policy texts with interviews with directors and caseworkers. The ELU is derived from (1) collocation, (2) colligation, (3) semantic preference, and (4) semantic prosody, of which (1), (3), and (4) will be relevant to this dissertation.

3.2.1 Stance at the Interactive Level

All interaction occurs as a dynamic field of sequential utterances and social actions. Because the interactional field is dynamic, it must be self-regulating to some degree. One way that people regulate and structure interaction is through dialogic correspondence. The sequence of utterances (Sacks, 1992; Sacks et al., 1974) leads to intradialogue reference, in what Du Bois (2007, 2014) called dialogic syntax. This dialogic syntax occurs whereby speakers restate content from preceding turns to align with topics, subjects, and objects of discourse. Though outside information may be entextualized through some indexicals, stances are taken in the here and now, in a particular discursive context. That context depends on interactors collaborating. People take stances toward something as dialogic action, not rigidly designated types (Du Bois,

2007). That dialogic object must be present in the discourse, constrained by recognition and ratification by coparticipants, lest the intended meaning of the stance be irretrievable to participants.

The heart of the preceding discussions turns on the concept of intersubjectivity. Kärkkäinen (2006) and Ochs (1993, 1996) propose that all discursive events are interactional achievements. Discursive events, from this perspective, are interactional sites where collaborators co-construct the propositional content of any claim or index, rather than discrete events merely woven together in an analytical manner. We might say that entextualization, the admission of external information to the discourse space, is one marker of interaction. This process is recognizable in the uptake of participants, through reproduction of information and dialogue, through alignment, and by sharing topics at hand, built turn-by-turn on prior statements.

3.2.2 Stance at the Autonomous Level

I will attend to stance events at the autonomous level most directly through (1) collocation and (3) semantic preference from Sinclair's Extended Lexical Unit. Collocations are the consistent, systematic co-occurrence of two or more words (Firth, 1957; Sinclair, 1991), within a certain span of word sequence, identified usually by statistical means such as mutual information (MI) score within some corpus of language use (Cheng et al., 2006; Church & Hanks, 1990; Stubbs, 1995b; Xiao & McEnery, 2006). As words occur together, they produce meaning that is different than individual words simply adding up in an additive, consecutive manner. That is, collocations form phrases with an internal meaning that may not have anything to do with the individual words.

Frequently occurring collocations indicate topics of a corpus, or what that corpus might be about. In signaling this *aboutness*, the topics of stance can be ascertained for further examination. That is, the quantitative and automatic identification of collocations serves as a first step in the analyses of language use at the autonomous level.

Examining the local contexts in which collocations appear provides insight into the meanings behind collocations as units. The habit of communicators to use collocations with certain subjects in their co-text gives rise to their semantic preference (Bednarek, 2008; Stubbs, 2009). Certain forms of collocations, with specific words and syntagmatic constructions, will occur in certain semantic fields and subjects of discourse. Thus, the collocation, as a single unit, carries semantic information that can be recovered by examining the language use around it. This requires a mixed form of qualitative analysis based on the quantitatively derived, significant, frequent collocations in a corpus.

A prime example of collocations and semantic preference is *white wine* (Sinclair, 2004, p. 135-136). White, the color, and wine, the alcoholic substance typically made from grapes, have specific meanings unto themselves (a color, an alcoholic substance). Yet *white wine* comes in a range of colors, from a golden hue to light green shades, to sometimes nearly colorless, and more. Therefore, the meaning of white wine cannot, in fact, be confined to white (color) + wine (alcoholic substance) meaning a specific color of wine. Rather white, when followed by wine represents a specie of wine, as a single collocation.

Researchers have undertaken similar approaches in studies of policy, especially in critical discourse analysis and corpus-assisted approaches to language policy & planning. This is particularly true in that I take an approach to keywords, collocations, and mixed

methods analysis, which has been similarly described for critical discourse analysis by Baker et al. (2008), and again by Baker (2012). The same methods used here have also been deployed for the analysis of large-scale corpora, running into millions of words of text, to capture how ideologies about language become embedded in policies (Diaz & Hall, 2020; Fitzsimmons-Doolan, 2014; McEntee-Atalianis & Vessey, 2021; Vessey, 2017).

Despite the shared methodological territory, researchers in critical discourse analysis and language ideology are intrinsically interested in relations of power, and the exertion of those relations on subjects through institutional channels. In this dissertation, for better or worse, I am not asking about those aspects of health policy implementation. There are complementary approaches to the one I take in this dissertation that may well be situated to address those questions through the notion of stance. I briefly discuss one such complementary approach below. I, instead, am engaging with health policy implementation as a distributed social activity, by members of certain subsystems and coalitions, and investigating the borders of their beliefs about themselves and what they are doing together, through the attitudes they express during stances. Power may have a role to play in their decisions, but I leave questions about relations of power to future avenues of analysis.

4. Evaluations & Attitudes

One of the core aspects of stance-taking is, as introduced above, evaluation. The nature of attitude and evaluation in social activity is also deeply rooted in the study of affect, and emotion (Caffi & Janney, 1994; Edwards, 1999; Ochs & Schieffelin, 1989;

Prior, 2019). Nonetheless, scholars in language use and discourse analysis have sometimes been hesitant to discuss emotion in social activity, due in large part to a strict separation of cognition from the social (see e.g., Deppermann, 2012, Prior, 2019, for exploration of the history of this distinction). Yet, Du Bois & Kärkkäinen (2012) and Wetherell (2012) both called for a reorientation to emotion in discourse studies, citing emotion as present in any important, socially expressed event. Just as importantly, both Du Bois & Kärkkäinen (2012) and Wetherell (2012) make strong claims that the expression of emotion goes beyond simple verbal communication. Accordingly, discourse analysts should be aware of the manifold embodied experiences, social co-constructions, and shared social realities that occur through the feeling, perception, and expression of what can be considered emotional phenomena.

In light of the foregoing discussion of stance-taking events, Ochs and Schieffelin (1989) make a strong case for affect as central to linguistic communication. The authors argued that the main vehicle of affect is stance, and its goal the expression of social identity (Ochs, 1993). From Ochs' position, social identity is rooted in the interactional production of stances (Ochs, 1993, p. 298), where affect plays a unique role in those stances because of its potential to express evaluation across a number of linguistic resources. Ochs & Schieffelin (1989) offer some examples of such linguistic resources that carry affective information, though their list is not limited to these, such as pronoun selections, tense/aspect, voice quality and intonation, and lexical variation. To ascertain a picture of affect, its quality, and pragmatic function in health policy communication, this dissertation focuses on lexical and semantic variation of the evaluative dimensions of affect. Importantly, I will focus on both interactive and autonomous levels, drawing them

together through the evaluative dimension of affect using a contemporary approach to the study of emotional phenomena, and the semantic prosody of the ELU.

4.1 Affect as Indexical

In the context of semiotics, stance serves as a theater of affective indexicality. Stance and indexicality provide an analytical frame to recognize social practices used by actors to instantiate identities through affective dimensions (Du Bois & Kärkkäinen, 2012, p. 435; Wetherell, 2012). Thus, my argument furthers the point that affect is itself a semiotic resource, not simply a contour of other linguistic resources.

Ochs & Schieffelin (1989) helpfully substantiated affect as an index as one of the earliest signs humans recognize, in a practice called social referencing (p. 8). Social referencing refers to the act of a child looking to a caregiver's face when introduced to a new entity. The caregiver's face, often a parent, will index a positive or negative position toward that entity. The child then orients reflexively to that entity, reflecting the evaluation of the caregiver. Social referencing is important here both for its early demonstration by human babies, and its near universality as a focal point (Russell, 1991). The act of signaling valence by the caregiver provides a basis for the indexicality of affect as a triangulation of social environment, a mind that interprets it, and a cultural norm or regulation that centrally structures the intersubjective space.

It stands to reason that, if affective practices can be seen as having referential characteristics (indexicality) in the case of social referencing, then they can reference other objects of discourse whether in the here-and-now (interactive) or not (autonomous). Seeking affect in discursive events can join together practices such as accounting,

attribution, and narrative events in discourse. In essence, the goal is not to nail down a physiological emotional state that is being pointed to, but the use of dimensions of affect to achieve a pragmatically occasioned claim (Edwards, 1999). That is, people purposefully express their affect through their stances, without reference to specific emotions (Caffi & Janney, 1994). We ought to consider those stances to be authentic since they are adopted by people to convey their perspective or experience. Central to this construal of affect, again, is its emergence over time in the form of affective stances, built on preceding discourse. This dissertation will focus on one avenue that affect takes in the dynamic semiosis of discursive activity.

4.2 Evaluative Affect

In brief, research in emotion, especially in the field of psychology, has tended to conceptualize emotions along either basic categories (Ekman, 1994, 1999), or cognitive appraisals (Lazarus, 1991; Scherer, 2005; Smith & Ellsworth, 1985). In the former, emotions are discrete kinds, composed of distinct neuropsychological states prompted by the environment. These states fall into a small, core set numbering between 5 and 7. The emotions captured in this model tend to include anger, joy, sadness, fear, and disgust. More complex emotions are understood as being amalgams of those states. Moreover, these basic emotions are considered universal across human cultures. In contrast to basic emotions, cognitive appraisal theories of emotion are dimension-based. What we call emotions, in this model, are the result of a number of commonly cited dimensions, including but not limited to positive-negative valence, activation, and control. As people experience different environmental stimuli, they *appraise* those stimuli through cognitive

processes, arriving at complex emotional responses. Such responses can be categorized based on the combinations of such dimensions, e.g., positive and low effort (joy), negative and high effort (anger).

The approach taken in this dissertation opts for a third path, called the psychological construction approach (Barrett, 1998, 2006a; Russell, 2003, 2009). In a similar vein to cognitive appraisals, psychological construction sees emotional experiences as constituted by affective dimensions. Whereas basic emotions are ill-attested across cultures, and cognitive appraisals are less attentive to the sociocultural influences on *how* appraisals become appraisals (Russell, 1991; Wierzbicka, 1992), scholars in this model have found two affective dimensions that are common to emotional experience, valence and arousal. Valence is the evaluative dimension of affect, understood as a spectrum between positive and negative evaluations of an event (Barrett, 1998; Moors, 2014). Arousal describes the level of activation that an event induces in the subject (Osgood et al., 1957). These dimensions, and their neurophysiological states, form *core affect*. Core affect, defined by James A. Russell (2003), is “accessible as the simplest raw (nonreflective) feelings evident in moods and emotions” (p. 148). Core affect is not object-oriented, but is an internal feeling accessible by a subject. Sociocultural norms partly shape core affect into emotional episodes. Influenced by those norms, we know more complex emotional episodes, which we categorize into e.g., anger or sadness, and beyond. Complex emotional categories are, in a sense, scripts for understanding the phenomena that are human experience. Moreover, as work in discursive psychology has shown (Edwards, 1994, 1998), it is through these scripts that

people understand the motives and actions of others, and construct the shared reality of which they are a part.

The complex, on-going process that is *emotional experience* is thus a site of introspection and bodily states, but also the expression of cultural knowledge, and the imprinting of core affect on our outward behaviors. The symbolic and cultural content of emotion in the construction model implicates language in both internal and external aspects of the process. On the one hand, language is one of the main streams of acquiring cultural knowledge and norms, and thus how one participates in cultural activity (Vygotsky, 1962, 1994). Thus, language mediates the realization of emotional episodes (Barrett et al., 2007; Lindquist, 2017). Further, core affect is sensible through linguistic choices that subjects produce. On the one hand, this is accountable for bald assertions of emotional states (*I am angry!*). Critically, on the other hand, this dissertation takes the position that dimensions of core affect are imprinted on linguistic performance, without explicit reference to complex emotional episodes. That is to say, they are potentially expressive in addition to emotive (Caffi & Janney, 1994).

Through the expressive aspect of affective practices, affective qualities tinge seemingly factual statements, and thus this role of affect in language use can be recovered. Barrett (2006) asserted that valence is “an invariant property of emotional life that can be found in virtually every form of emotional responding” (p. 46). Given its centrality to emotional life, and its core aspect being evaluation, valence serves as the most direct candidate on which to base an investigation of evaluative affect in stance-taking events at the interactive level. Agents’ accounts of their cultural backgrounds, values, and goals can then be understood as expressing evaluative content. Thus, stance-

taking events are platforms where core affect and prior experiences come together to evaluate the objects of discourse.

4.3 Semantic prosody

In the Extended Lexical Unit, semantic prosody refers to the discourse function of a collocational pattern, or the way that it *colors* the meaning of the local linguistic event as a whole (Hunston, 2007; Louw, 1993; Sinclair, 2000, 2004). Like semantic preference, semantic prosody is established by analyzing frequently occurring collocations in their local textual usage. Two primary treatments of prosody have persisted in the literature. Scholars in one tradition have commonly treated prosody as positive-negative or pleasant-unpleasant evaluations (Bednarek, 2008; Partington, 2004; Xiao & McEnery, 2006). In this account, semantic prosody is a feature of the collocation itself. That is, a collocation and its words are per se pleasant or unpleasant. This mode of seeing semantic prosody fits neatly into an evaluative aspect for autonomous discourse. It allows the neat analysis of collocations for evaluative characteristics, and thus a comparison of collocations that are shared between existing texts, interviews, and so on.

In contrast, a more expansive approach to semantic prosody sees it as a semantic *feel* that includes not just the collocation, but patterns in surrounding text and subjects that tend to accompany the collocations (Hunston, 2007; Sinclair, 2000). In this model, semantic preference is a necessary component in understanding the purpose behind a particular collocation being used. The importance of a collocation is thus not merely its positive or negative character, but the way that it impresses an intention of the writer or speaker into the language use. To wit, a collocational form will be used when discussing

certain subjects, tending toward pleasant or unpleasant contexts, and so selecting a collocation reflects the surrounding text pattern. Moreover, the specific collocational variant, based on what other words might tend to be present, different lexicogrammatical forms, and so on, will influence the tendency of a collocation's meaning within local text. Thus, rather than prosody being a description of a collocation itself, it describes a tendency of collocation in a preferred semantic environment, and thus the attitudinal function of the overall unit.

An alternative framework that includes evaluative aspects of language use is the Appraisal Framework (Martin & White, 2005). In brief, the Appraisal Framework (henceforth AF) consists of 3 subsystems (Martin, 2000, p. 142-143): (1) affect, the expression of emotion, (2) judgment, moral assessments of behavior, and (3) appreciation, aesthetic or social appreciation. These subsystems couple with additional aspects of meaning-making such as engagement, the degree of commitment, to capture a wide variety of purposeful uses of evaluative language. Scholars using the AF have been frequently motivated by the ways that meaning develops over a series of texts, through the use of different aspects of evaluation, moral judgment, and appreciation (Coffin & O'Halloran, 2006; Hommerberg & Don, 2015; Oteíza, 2017).

Appraisal captures complex emotional phenomena, which are realized in lexical choices, by combining social judgment, aesthetic preferences, and amplification (Martin, 2000; White, 2003). I would agree with this general orientation, wherein emotions are mobilized for morally oriented judgments, especially in explicit cases of expression. These aspects of the AF, however, depart from the ELU and the valence dimension of core affect. Because the AF uses complex, socially situated emotional phenomena to

account for linguistic meaning, and the focus of this dissertation is on the evaluative dimension, I have chosen to stay within the confines of semantic prosody in the ELU, multi-word sequences, and lexical units of this kind, which appraisal does not focus on.

Though I will focus on semantic prosody's role in the ELU in this dissertation, it bears mentioning that appraisal and semantic prosody do have possible, exciting complementarity (Coffin & O'Halloran, 2006, p. 91; Martin & White, 2005, p. 260). While semantic prosody is based on larger corpora, the AF does not necessarily require large data sets. In fact, the two were combined by Coffin & O'Halloran (2006) when they used semantic prosody analysis of a larger corpus to complement their work. One strength of the AF is its power to expose the intra-textual and inter-textual build-up of categories and functions. In this dissertation, I utilize interactional stance analysis for a similar purpose. One area of overlap here is an interest in covert evaluation, which is realized in this dissertation as expressive valence. Appraisal may offer some ways to categorize expressive valence through social judgment, as more complex emotional episodes, which would be beneficial. Nonetheless, based on the framework described above, the role of valence must come before the construal of moral judgments and complex emotional phenomena, because those complex emotional phenomena are extensions of core affect.

5. Summary & Specific Questions

HPI is ultimately a social activity carried out by people spread across many sites and infrastructural levels. Being that people carry out the implementation process, their normative values, priorities, and organizational norms will have effects on not just what

they do, but why and how they accomplish their goals. Different coalitions and their subsystems thus hold different beliefs that inform their implementation processes, how they relate to each other, and also how they enact their own policies vis-a-vis official health policy mandates.

People communicate their beliefs, such as they are, in the stances they take. This dissertation will analyze evaluative aspects of stance at the autonomous level, in policy documentation, and at the interactive level, during ethnographic interviews, in order to understand how health policies are construed as beliefs. By collecting the claims, statements, and other language use at both discourse levels, the beliefs of different subsystems can be compared to better understand where beliefs are aligned or misaligned during the implementation process.

Finally, the approach to affect taken in this dissertation is distinctly constructionist in thinking. The interrelation of interactive expressions of affect, and subsystem-wide beliefs about official policies requires the inclusion of sociocultural influences on evaluation. It cannot rely on basic emotions. There are frequently no basic emotion states expressed across interactive or autonomous levels to be readily retrieved. Nor can it rely on cognitive appraisal theory. While there could be an argument for the valence dimension being retrievable using an appraisal theory position, the reality is that the evaluative aspect of stance-taking is about what people communicate and thus how the dimension is expressed in the language use. The dimension is not about a psychophysiological or cognitive process in the sense meant by appraisal theory. In fact, a reliance on basic emotions and cognitive appraisal theories has contributed to prior issues in discourse analysis, by cognizing affect, and restricting the discursive realms to

which affect was thought to apply. That fact is, perhaps, reason enough to avoid their invocation for this discourse analytic project. But more importantly, the context of language use, the personal histories of directors and caseworkers, and the rural values they exhibit, are necessary components to understand their evaluations. These aspects require the decentered, process-oriented approach offered by the psychological construction theory of emotion.

In order to understand how the elderly health policies in rural Pennsylvania become implemented in the face of the opioid epidemic, and what beliefs, stances, and affective practices occur during such implementation, this dissertation asks:

- (1) What are the apparent goals, values, and views in rural health policy of aging and opioids as a function of the discourse chosen by claimants?
- (2) As such, how does health policy enactment treat of rural experience, and how do policy enactors position themselves and their policy decisions?
- (3) What role, if any, does positive and negative affect play as a feature of discourse found while investigating questions 1 and 2?

6. Connections Between the Chapters

This dissertation follows a 3-article format, with one additional analysis chapter. Because of this format, each chapter represents an independent production targeted at individual research questions, or methods to answer those research questions. Chapter 2, “Corpus linguistic methodology as a variation of conversation strategies in mixed methods, social science research,” is under review as a methodological article, and serves the function of a methodology chapter. Chapter 3, “Finding social (mis)alignment in elderly

and opioid health policy implementation with corpus-assisted discourse analysis,” is under review as a research article, and is the first results chapter that compares and analyzes frequent keywords and collocations across the corpus. Chapter 4, “Discourses at work in elderly, health policy communication: Uncovering aspects of semantic preference and prosody in the rural opioid epidemic,” is intended to be a book chapter exploring the semantic preference and semantic prosody in the corpus based on the frequent collocations of Chapter 3. Chapter 5, “Evaluative affect in the social practice of institutional identity: Making a case for connotative inversion,” is a published article at *Language & Communication*, that reports findings of a particular type of evaluative lexical variation in interactive stance-taking. It should be noted that the article in Chapter 5 includes analyses of a separate data set dealing with second language writer identity, which are unrelated to the broader topic and discussion of this dissertation, but which cannot be extricated from the core discussion of that article itself. I conclude the dissertation with a discussion of findings from the three analysis chapters, which finds that (1) policy implementation is, indeed, a matter of beliefs held by people, and thus a social activity rather than the simple execution of particular policy interventions; (2) there is a continuous model of stance-taking available through the combination of semiotics and the ELU; (3) evaluative aspects of language use have verifiable patterns within the corpus, with implications for how HPI subsystems and their beliefs become instantiated in the enacting of health policies.

6.1 Chapter 2: Conversion Mixed Methods

Conversion mixed methodology will serve to coordinate data and analysis across subsystems, sites, and institutional levels. In mixed methods research, a conversion strategy is one that takes either qualitative or quantitative data, and analyzes the same data through the opposite method. So, in this dissertation, text (qualitative data) is analyzed for its qualitative features, but also by quantitative means such as frequency and mutual information (quantitative). Additionally, the conversion in this dissertation takes a corpus-driven approach, deriving keywords from each subcorpus, rather than selecting keywords from outside the data, such as from ethnographic work or from literature review. This methodology will meet several key assumptions shared by (a) the ELU, (b) interactional stance analysis, and (c) the need for evidence-based evaluations of the policy implementation space. Firstly, it will make use of natural- and naturalistic, empirical data which is necessary for all assumptions. Secondly, it uses a single data type, qualitatively based language use, to bridge multiple subsystem sites and policy levels, connecting texts (a) to interviews (b), giving a coherent account of the policy implementation process (c). Finally, I discuss tools in corpus-assisted discourse studies (CADS) (Partington et al., 2013) to show their ready availability to the non-expert, and thus utility to social science researchers outside applied linguistics.

6.2 Chapter 3: Keywords and Collocations, the Topics of Discourse

Chapter 3 establishes keywords and frequent collocations between the texts and the interviews, indicating important topics and issues that are present for both each corpus individually and the corpus as a whole. These keywords form the basis for collocation analysis, where frequent keywords are used as the searched term for

collocations. By approaching the topics of discourse this way, the beliefs expressed in official policy documents and by agents come from their own words.

Though these keywords and collocations come from a small sample of language use, they are consistent and patterned uses of language. Since keywords and collocations represent patterns in language, durable norms can be verified by the accumulation of expressions. As frequent uses begin to pile up, they are compared between the subcorpora. Some words and phrases will be used by official policies, and not used by agents. Conversely, some issues that agents face will go unmentioned in the official policies. In cases of both shared and unshared patterns, beliefs about the policies can then be uncovered, and their meanings analyzed.

6.3 Chapters 4-5: Semantic Preference and the Subjects-Objects in Discourse

Chapter 4 covers autonomous stance-taking analysis through semantic preference, while Chapter 5 takes on interactional stance. These chapters both focus particularly on the objects of discourse, such as opioids and the opioid epidemic, elderly people, protective services, and so on. Semantic preference and the subjects-objects of interactional stance come as variants of the wider linguistic norms, and canonical forms, from which they are drawn. At base, semantic preference is derived from the grouped collocations and the meaning categories they seem to co-select around. Subjects-objects of discourse draw on the interactional norms of the contexts in which they appear, and thus the stance format guides their use. Any of the particular uses of a collocation or subject-object relation thus contributes to potential meaning, while drawing on vaguer

notions of the canonical form's conventional meaning. These chapters provide the foundation for bridging semantic prosody and evaluative affect, respectively.

6.4 Chapters 4-5: Semantic Prosody and Evaluative Affect in Discourse

Chapters 4 and 5 then lay out the socially occasioned attitudes of policy beliefs, and how they can be woven together over multiple subsystems. Semantic prosody, in its aggregate form, reflects discourse functions of a collocation. Importantly, Chapter 4 links up Sinclair's broad discourse function with other interpretations, thus exploring the relation between aggregate and specific, variant uses of collocations (Hunston, 2007; Partington, 2004). Chapter 5 explores affective indexicals, and demonstrates the role of evaluative affect in micro-level, interactional contexts. The chapter further presents a particular affective practice, connotative inversion, wherein the same subjects and objects endure, but the evaluations change through lexical variation. In both semantic prosody and evaluative affect, it is their influence on pragmatic aspects of discourse that defines their function.

Chapters 4 and 5 combine to show that subsystem-wide policies display aggregate discourse effects through their semantic prosody, but that they also have unique variations depending on the specific text or context in which they appear. Further, health agency directors and caseworkers employ evaluative affect during interaction to communicate the varied ways they relate to official policies. Comparing the discourse of these agents with official policies form a locus of action between upper and lower subsystems, and ultimately a theater of beliefs about health policies.

6.5 Chapter 6: Conclusion

Chapter 6 is the concluding chapter in which I bring together the intricate relation between core beliefs, policy beliefs, and the processes of elderly health policy implementation in rural Pennsylvania, in light of the many stances and evaluations uncovered throughout the analyses. I begin by summarizing the findings on the opioid epidemic, laying out how, and where, different policy beliefs seem to be at play across the different subsystems, through features of language use at the interactional and autonomous levels. This summary focuses on findings from both Chapter 3 and Chapter 5.

I then discuss the significance of the methodology for stance analysis more broadly. I report that stance-taking can, by combining semiotics and the extended lexical unit, align the macro-level patterns of multi-subsystem texts with micro-level sequential analysis of interactions to reveal consistent objects of discourse and the stances that people take toward them. The significance of this finding comes from a synthesis of chapters 2-5.

I conclude by outlining the role of the discourse function of affect in HPI. By using evaluation as the unit of analysis in both chapters 4 and 5, the semantic prosody of autonomous texts can be coordinated with the interactions of individual health agents. Evaluation, at both levels, falls into patterned uses that express beliefs, attitudes, and are used to animate the variety of experience that subsystems face. Thus, the borders between subsystems and their beliefs can be seen and charted out. I ultimately conclude the dissertation with a discussion of the limitations as to both its subject focus, its scope, and its practicality for wider contexts.

Chapter 2

Corpus Linguistic Methodology as a Variation of Conversion Strategies in Mixed Methods, Social Science Research

1. Introduction

This article explores corpus linguistic methodologies in the context of wider mixed methods, social science research, contending that any social science research that utilizes linguistically mediated data in its work can utilize corpus linguistic tools to derive further insights. On the one hand, corpus linguistics is itself a rich space for mixed methodology, representing an inherently mixed approach to data, and prime territory for understanding how method mixing can be conceptualized and reported. At a more practical level, the disciplinary tools of corpus linguistics are readily available for use by social science researchers, making further inquiries accessible with or without more formal linguistics training. In order to explore both these areas, this article begins by sketching a background for corpus linguistics and mixed methods research. I then give a brief overview of a mixed methods study that utilizes corpus linguistics, describe procedures, and demonstrate how researchers might utilize them. The article concludes with a discussion of corpus linguistics as an elegant mixed methods approach that fits neatly as a variant of the conversion strategy, and explores how researchers outside of corpus- and applied linguistics might readily employ these tools, including for data that they may have already collected.

2. Background

2.1 Conceptualizing Data: Collocations, Semantic Preference, & Semantic Prosody.

Discovering what people mean when they use language can be a deep and complex process that often goes beyond the surface of the statements themselves. One avenue of investigation is semantics, which focuses on the ways in which language signals its symbolic value. Work in semantics often includes lexical analysis, and the occurrence of words in use. Pure frequency and keyword analyses, both quantitative in nature, can produce insights into what people are saying in their communication. However, work focused on collocations has uncovered a complex relationship between co-occurring words, and the meanings delivered by those combinations along both semantic and social-interactive dimensions. In short, collocation can be defined as the consistent, systematic appearance of certain words with others (Firth, 1957; Sinclair, 1991), as identified by statistical methods, e.g., mutual information (MI) score (Cheng et al., 2006; Church & Hanks, 1990; Stubbs, 1995b; Xiao & McEnery, 2006).

While investigating how meaning is achieved in language, John M. Sinclair (2004) proposed the *extended lexical unit* in which linguistic meaning is a nexus of several facets: collocation, colligation, semantic preference, and semantic prosody. For Sinclair, investigating meaning necessarily required empirical methods, naturalistic sources, and repeated rather than idiosyncratic observations. Collocations are the starting point for analysis because searching for collocations is, in a sense, a filtering out process of the general universe of possible lexical selections, down to repeated, consistent uses of words together. Repeated, consistent use of multiple words together represents something durable in a system with near-infinite capacity for variation, and thus contains discoverable information. Collocation is defined through statistical means, thus being primarily quantitative, and according to Sinclair is typically only the first stage of the

semantic analysis (p. 28). At its heart, collocation is the starting point by virtue of its significance in and among the possibilities of word selection, but does not in and of itself convey much semantic information, because as I will discuss further in section 2.2, collocations are not discrete, invariant items but flexible patterns presenting just one element of the entire extended lexical unit.

In contrast to the purely quantitative report of collocation, identifying semantic preference is a process of qualitatively analyzing collocations for unifying semantic qualities found across their usage. Semantic preference analysis effectively peels back the veneer of individual words as nominal, independent conveyors of meaning. Preference analysis begins with the quantitative (most common collocations of a certain sort), then uses qualitative means to uncover the commonly held attributes of collocations reflected in the local texts in which they occur. An example of this is the case of the word *budge*, given by Stubbs (2009). *Budge* may collocate highly with certain negating modifiers in the left position, for example *don't budge*, or *won't budge*. When the larger corpus is examined, we might find that this set (e.g., *won't budge*) commonly occurs with sturdy objects, such as doors, or locks. This semantic quality of *budge* shows a preference, and within a small subset of words confers a preferred meaning on the surrounding text (p. 124).

Like preference, semantic prosody requires a mixed approach using qualitative and quantitative means, but unlike semantic preference it describes sociocultural or pragmatic meaning that is associated with a collocation, beyond the denotational (i.e., “dictionary”) meanings of the words. The concept has been construed differently by different scholars, primarily following the seminal work of Bill Louw (1993). At its

broadest, semantic prosody has been seen as a feature of social attitude, and broad cultural profiles or *colorings* inherent to collocational patterns (see Hunston, 2007; Sinclair, 2000, p. 198-199). More practically, semantic prosody has frequently been utilized to characterize the evaluative contour of collocations, especially as variations of positive, negative, or neutral affect (Partington, 2004; Stubbs, 1995b; Xiao & McEnery, 2006). A simple example of semantic prosody is the collocation *break out*. Stubbs (1995b, p. 2-3) found that *break out*, in different verbal forms, tended to appear in primarily negative text: *violence broke out; riots broke out; a storm of protest broke out*. The broader social attitudes embedded in language-based data may reveal underlying information that can inform certain quantitative analyses, e.g., ideologies or experiences of participants. A more localized, evaluative application of semantic prosody can uncover dimensions of data sets for more complementary or triangulation purposes.

Collocations, semantic preference, and semantic prosody can be thought of as properties of stance-taking in human communication. In broad strokes, stance-taking is a communicative event where communicators (speakers, writers, etcetera) take socially recognizable positions (through e.g., statements, gestures, etcetera) toward something they are talking or writing about (Biber & Finegan, 1989; Du Bois, 2007; Jaffe, 2009; Kockelman, 2004). Stance-taking occurs when communicators pay attention to a certain object, and make attitudinal or evaluative claims on that object. For example, according to Du Bois' (2007) stance triangle, a stance is taken by Speaker A when they state publicly something like, "I threw a bad pitch," to Speaker B. This particular stance could be considered a *subject*, the speaker, taking a *stance* evaluating the *object*, the pitch.

These stance-taking events are a core activity in communication, establishing the various who, what, when, why, and how that make up the fabric of our social realities.

In sum, collations, semantic preference, and semantic prosody comprise a basic corpus toolkit for analyzing texts of almost any kind. Examples and applications will be found in section three of this article.

2.2 Mixed Methods in Applied Linguistics.

Scholars in applied linguistics have recently taken up mixed methods as an explicit methodological topic (Hashemi, 2012; Hashemi & Babaii, 2013). In applied linguistics, methods often involve both qualitative and quantitative analysis of language use, effectively a ‘conversion design’ (see below, Section 2.3) whether they are discussed as such or not. For example, scholars in Languages for Specific Purposes (LSP) have been taking on the mixed methods terminology to describe their research. Languages for Specific Purposes is a broad subfield that, generally, focuses on specific patterns of language use in different contexts, for example, giving physics lectures, or writing professional memos (Gollin-Kies et al., 2016). Scholars in LSP tend to ask questions such as, what are the ways that language is fitted to contexts, e.g., specific vocabularies, grammatical usages, and identifiable genre conventions?

Many works in LSP demonstrate that a corpus linguistics-based approach can be conceived of as mixed methods by nature. Some recent examples of mixed methods in this area include Omidian et al. (2018), and Yoon & Casal (2020). Omidian et al. (2018) constructed a corpus of 5,910 abstracts taken from 6 different disciplines to identify rhetorical functions in academic writing. The authors drew on the notion of lexical

bundles as units of analysis for quantification. Lexical bundles “are defined simply as the most frequently occurring lexical sequences in a register” (Biber et al., 2004, p. 376). Lexical bundles are a rather fixed kind of collocation that are specific words in exactly the same sequence, and rely on frequency-based analysis. It is through their frequency that the salience of a particular sequence is assessed. They then qualitatively analyzed the rhetorical function of those bundles via qualitative coding of the local text. In related work by Yoon & Casal (2020), the authors utilized a corpus-based approach, but differed in that they identified phrase frames (Cheng et al., 2006) rather than lexical bundles. Where lexical bundles are purely frequency-based, and rigid in their word sequence, phrase frames are variants of n-grams. For example, Cheng et al. (2009) give examples of the PLAY/ROLE collocation, with variations such as *play a minor role* in contrast to *play a passive role*.

2.3 Design Classification

As is well known, there are many ways of classifying mixed methods designs. Perhaps the most prolific of these has been typological classification, which has focused on a number of criteria including but not limited to: (1) number of methods, number of strands or phases and their dominance, and stage of integration (Creswell et al., 2003; Johnson & Onwuegbuzie, 2004; Teddlie & Tashakkori, 2006); (2) rationales, including paradigms and their mixing (Feilzer, 2010; Greene, 2006; Greene & Caracelli, 2003; Harrits, 2011; Johnson & Onwuegbuzie, 2004; Morgan, 2007); (3) practical concerns such as design guidance, common language, disciplinary structure, legitimacy, and pedagogical clarity (Teddlie & Tashakkori, 2006). Further, there has been considerable

discussion about whether the designation *mixed methods* applies to a single study, or if it may also apply more broadly to methodology or design for an entire research project that might involve multiple component studies (Guest, 2013; Johnson et al., 2007; Plano Clark et al., 2015; Yin, 2006).

Conversion-type strategies involve the collection of one type of data that is then analyzed or somehow converted into another type, e.g., qualitative to quantitative. A corpus linguistics-based conversion is *inherently mixed*, because such studies maximize the strength of integrating the different data types, and bring different levels of analysis (e.g., micro, macro; within-strand, cross-strand comparison) closer together (Bazeley, 2012, p. 823; Teddlie & Tashakkori, 2009, p. 273). The project presented in this article is inherently mixed in this way, leading me to rely on a more fluid framework focused on methodological points of interface between data, as proposed by Guest (2013). Guest (2013) argued that using typological terms tends to take whole projects as their unit of reference, e.g., *exploratory sequential, partially mixed concurrent* designs (p. 146). So, to better describe corpus linguistics as a variant of conversion strategies, I will elaborate on interfaces between methods as they are applied to the data, with specific attention to the *timing* and *purpose* of the integration (p. 147).

2.4 The Promise of Corpus Linguistics in Mixed Methods Research

A corpus linguistics-based approach to the conversion strategy is mixed in ways that traditionally conceived conversion strategies may not be. When utilized in a mixed methodology, language-based data in the form of interviews, narratives, open-ended survey questions, etcetera, offer an opportunity to uncover patterns within the language

itself that have informative value. Collocations provide immediate signposts for researchers to begin to investigate their data. Preference and prosody are indicators of topic and motivation respectively (Stubbs, 2009, p. 125), which provide a subjective, inside view of the communicators through their own language use. Combined, these semantic foci reveal frequent usage which is common to the user, topics that are common and significant in the context, and attitudes that reflect the social realities in which participants are situated.

This article outlines the unique methodological terrain of corpus linguistics' position as it fits into a data conversion strategy. In the following sections, I will detail the internally mixed strand of a study that involves multiple texts, by multiple authors, from different genres and contexts, and different media. Because the data are diverse, there are many interfaces between qualitative and quantitative aspects of the study, from conceptualization to interpretation. Each strand in the project contains several stages. Finally, after within-strand analyses, the strands are compared in a complementary fashion, relating findings across strands. I will especially attempt to convey the issue that focused language analysis, in whatever form or scale it takes, represents data with its own informative aspects available in nearly any study.

3. Methodological Description

3.1 Description of data

3.1.1 Data Context & Collection

The study centered on elderly health services providers in rural Pennsylvania who face the uncertainties of the opioid epidemic. Data for the study were collected in two

forms: (1) ethnographic, semi-structured interviews, (2) publicly available health policy documents. I initially contacted agency administrators of elderly health in July of 2017 and visited agency offices. These initial conversations and visits started a process of ethnographic study (Spradley, 1979): getting to know the informants, how their work was motivated, how the offices looked and sounded, and so on. Beginning in July of 2018, I began more focused interviews and narrowed in on the issue of opioids. Agents independently, and repeatedly invoked its presence and the extent of its effect in their populations, making it difficult to ignore. By undertaking the ethnographic process with these agents and establishing quasi-familiarity with their day-to-day experiences, I had discovered an issue that continues to be rather hidden from the normal purview of elderly health services. The insistence on the subject by the agents, and their emotionally charged reports, became the driving focus of the project overall.

Between December 2018, and June 2019, I conducted bi-monthly, video-recorded interviews with director-level administrators and protective services case-managers at each agency. I engaged the agents in semi-structured interviews spread over approximately 45 minutes to 1 hour per visit. Initially, my questions focused on their opinions and narrative reports, their backgrounds, and so on. Over time, my questions became more procedural and inquired about specificities of their statutes and operations. Each conversation was loosely structured so that informants had the liberty to add detail or include perspectives and stories.

In order to gain a view of the more formal, official policy side of their operations, as well as examples of the “policy language” of their environments, I also collected policy *texts*. My first method was to collect any physical brochures available at each

agency relating to health, legal, protective, or aging services. This particular avenue allowed me to gain some idea of the difference between what consumers in their population could get their hands on, compared to the agents' own descriptions. Secondly, during the interviews, whenever an agent would cite or specify any policy that directly influenced them (e.g., laws, legislation, departmental reports), I would attempt to obtain a copy of that policy, whether physical or digital. This gave me a direct link between top-level policy creation and the mid-level policy implementers that deliver policies. Thirdly, and more distanced from the agencies themselves, I sought any official documentation published by a state- or federal-level agency that directly invoked opioids or aging in some dimension, and that I could directly trace to Pennsylvania.

3.1.2 Samples

The policy documents sample (Subcorpus 1) included 100 documents in total, in 9 text types, with publication dates ranging from 1972 at the earliest to 2020 at the latest. Documents represent a variety of governmental bodies, quasi-governmental coalitions, and non-governmental agencies, with the unifying element that each document in some way is directly related to the delivery of elderly health services in rural Pennsylvania. Overall, this sample includes a total of 571,481 words.

The interview sample (Subcorpus 2) included 29 interviews with 6 director-level administrators and 5 case managers. I used reputational case sampling (Teddlie & Yu, 2007) to identify qualified case managers in elderly protective services sectors of AAAs. Administrators were solicited to identify case managers that may be interested in participating. I transcribed interviews using verbatim techniques (Powers, 2005), in order

to focus on the content of the interviews rather than interactional phenomena. Overall, this produced a total of 171,492 words of text. The two subcorpora combined resulted in a 742,973-word corpus.

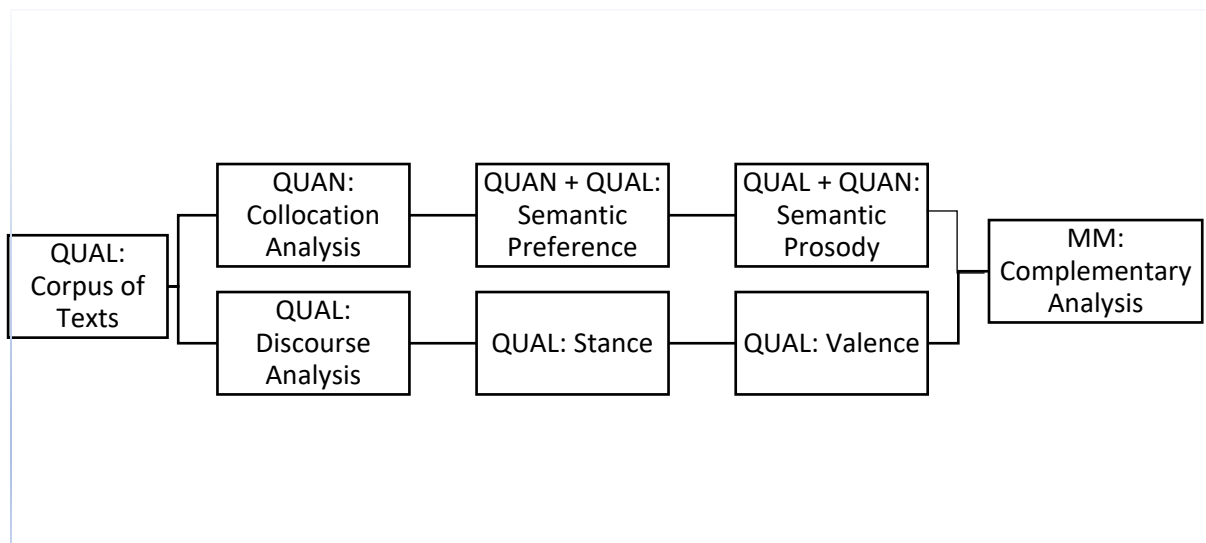


Figure 1: Multi-strand, mixed method research with multiple points of interface.

3.1.3 Methodological Structure

In typological terms, the overall project described in this article could be considered multi-strand, mixed methods research with a mixed strand (corpus analysis, Figure 1, top row), and a qualitative strand (discourse analysis; Figure 1, bottom row) with methods interfacing at the conceptual, experiential, and inferential stages. I conceived of the research project overall as having mixed characteristics, with the intention of splitting the qualitative corpus into qualitatively and quantitatively based strands, with multiple points of interface (see Figure 1). The qualitative strand focused on analyzing interview transcripts, using discourse analytic methods. In the quantitatively based, mixed strand, qualitative data was converted, with multiple stages that are also individually mixed. Mixing followed data collection, after all texts and interviews had been transcribed and formatted, when that textual data was analyzed for quantitative

characteristics. The study concludes in a final, mixed method stage that interfaces with findings in both strands. A simple schematic of this research project metaphorically resembles something like a zipper, with two, single-stage ends and several inter-locking stages holding it together. I utilize Morse's (2003) notation to describe the methods and interfaces in subsequent sections.

This article focuses on the inherently mixed corpus strand throughout the rest of this discussion (Figure 2). This article will not detail the discourse analytic strand of the overall project primarily due to space constraints, but also because the focus of the article is to show corpus analysis as a type of inherently mixed, conversion strategy. In brief, for the qualitative strand, I segregated interview transcripts. This sub-corpus of interviews constituted a multiple case study (Ivankova et al., 2006). I treated the interviews, field notes, videos, and the informants in those interviews, as parts of contextually bound, closed cases. Each case, and its associated context, was to be studied to provide rich details about the environment, participants, and their language use. Each informant was analyzable as a case, and then also situated in cross-case comparisons, e.g., administrators in different areas, administrators to their case managers, and so on. Finally, these multiple case studies formed the basis for comparative work between semantic preference and stance-taking events, and semantic prosody and valence analyses, respectively. Valence describes the positive-negative character of affect (Barrett, 1998; Osgood et al., 1957), trackable as a discursive phenomenon via stances taken by speakers (Caffi & Janney, 1994).

3.2 Methods & Procedures

3.2.1 QUAL Text → QUAN Collocation Frequencies

Timing. Following data collection and corpus structuring, the first phase in the inherently mixed strand is to identify the frequency of collocations within the corpus. The text itself is the data, rather than the content or themes of that text. Collocation analysis must take place as the first stage of this strand. Logically speaking, this mixing takes place at the conceptual and analytical stages of this phase. There is not much in the way of mixing at the inference phase in this stage, as there is no triangulation or complementarity to the two forms of data post conversion here.

Method. Log-likelihood is a frequently used method of extracting keywords (Paquot & Bestgen, 2009; Pojanapunya & Watson, 2018). I used AntConc software (Anthony, 2020) to automatically identify keywords by Log-likelihood (4-term), with a p value < 0.0001 (+Bonferroni), %DIFF to measure effect size, and selected from the Top 100 keywords. I used those keywords to then conduct collocation analyses by searching for collocates of each of the top 50 keywords for each subcorpus. I followed methods by (Ackermann & Chen, 2013) by defining a collocation as two or more words co-occurring with a Mutual Information + Log-likelihood score of > 3.0 , within ± 4 spaces of the referent keyword (span), with a frequency of greater than 3 for the documents subcorpus, and 2 for the interview subcorpus.

3.2.2 QUAN Collocation Frequencies → QUAN + QUAL Semantic Preferences

Timing. QUAN and QUAL interface at conceptual, analytical, and inferential stages. First, conceptually, semantic preference is inherently mixed as it is defined by taking frequent occurrences, and matching them with local text. Secondly, at an

analytical stage, preference is assessed by first identifying the most frequent, highly salient collocations (QUAN), then analyzing the local texts in which they occur (QUAL). Finally, at the inferential stage, the assignment of preference and its applicability to language use is an inference produced by reflection on frequency, statistical analyses, and shared features of the collocates themselves.

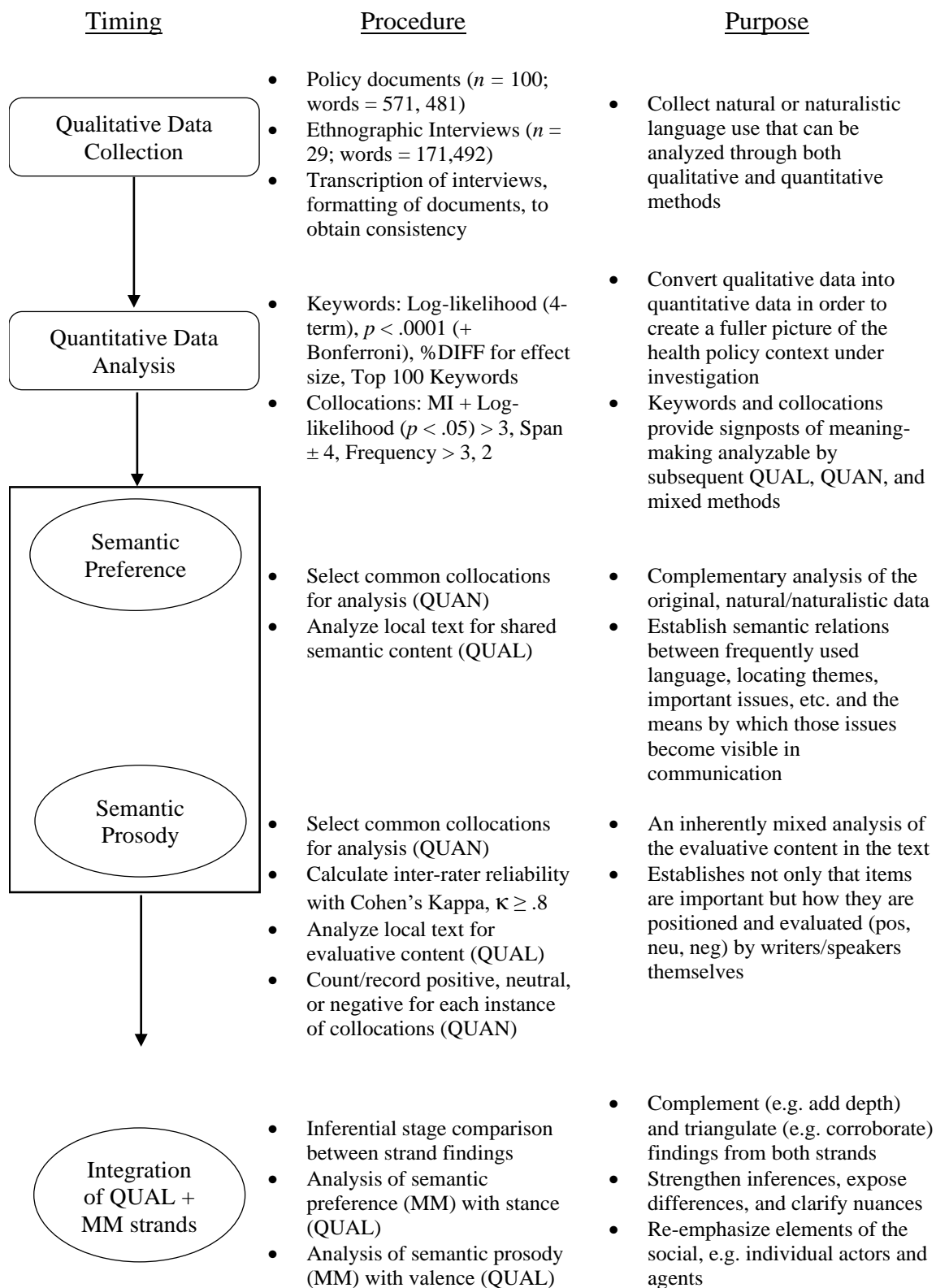


Figure 2: Example conversion mixed methods strand using corpus linguistics

Method. Using AntConc, I searched for selected collocations. AntConc collates segments of text containing those uses, called a concordance (Figure 3). I qualitatively analyzed salient collocations by reading their use in local text via concordance lines, locating the shared semantics that the collocations tend to express. Using the concordance lines allows multiple instances to be seen together, stacked atop one another, so that patterns (in this case, semantic properties) can be readily identified.

o hit in that form, because we have a protective services investigation tool. And I know wh
 nvolved with everybody. For me, as a protective services worker, it's that case where mayb
 ecutive summary, but it was all about protective services of older adults. Yeah. Yeah. I have
 thing, get the journal in. It was about protective services. Yeah. I've only ever read the ex
 d a lot of the problems in older adult protective services, and protective services which to
 I'm there and that I'm with adult protective services. And I always start off with, I've
 ay not pick up the phone to call adult protective services, but they kind of circle the wagon
 ea about the office of aging, the adult protective services. He had no idea there was anythi
 A. HIPAA is wonderful, but in an adult protective services investigation especially into opio
 re impeding the progress of an adult protective services investigation." Sometimes that be
 times where we get the calls in adult protective services. Medications start to look a little f
 emergency OAPS order. Older adult protective services order. That's where I can remove
 erved, it is an intrusion. If elder adult protective services shows up at my door, or children
 sometimes I know if they hear adult protective services, that's going to start the wrong to

Figure 3: Example of concordance lines

Purpose. Collocations, on their own, do not reveal semantic information, nor necessarily tell us about the content of the data they represent. Semantic preference, on the other hand, begins with the quantitative information (collocations), and then looks at the environment in which they occur to uncover how those habitual co-occurrences constitute meaning. If a collocation is infrequent (QUAN), analyzing semantic properties is of limited stability. However, as collocations are more frequent and identified as significant, their information-bearing attributes coalesce within similar surrounding texts (QUAL). These features not only inform the researcher of good 'starting points' for

understanding the topics at hand but reveal important language use information about the ways in which participants communicate.

3.2.3 *QUAN Collocation Frequencies* → *QUAL + QUAN Semantic Prosodies*

Timing. QUAL and QUAN mix during semantic prosody analysis, again at the conceptual, analytical, and inferential stages similarly to preference. In this case, semantic prosodies are derived by evaluation of local text containing frequent collocations first, and then those evaluations are counted.

Method. Two raters first evaluated a subset of collocations from each corpus as negative, positive, or neutral. We calculated inter-rater reliability using Cohen's Kappa (κ) (Loewen & Plonsky, 2015). We repeated this calibration twice, with one round of review and discussion, with results of $\kappa = .8$, and $\kappa = .88$, indicating reliability of judgments between raters. The same collocational frequencies from the semantic preference selection (QUAN) were then judged by surrounding text (QUAL) to identify their attitudinal character, e.g., positive-negative. In semantic prosody, overall attitudinal assessments are based on frequency. First, collocations are identified. Then, concordance lines containing collocations are analyzed for their attitudinal character. Each instance and its character are tabulated. Finally, each collocation's positive, neutral, or negative occurrences are summed, and revealing the dominant 'attitude' character of the collocation.

Purpose. Like semantic preference, analyzing semantic prosody is the mixing of qualitative and quantitative data. In one sense, analyzing semantic prosody is mechanically similar to counting thematic codes. Beginning with salient (in this case,

highly frequent) collocations, their prosodies are assessed via the local text, as positive, neutral, or negative, and then counted. By assigning a count of the evaluations, the researcher can characterize quantitatively the polarity of that collocation, and therefore know not only that it is common but that the user displays attitudinal features through its use. Importantly, prosody has a particular purpose in that it also communicates something about aspects of the language use itself, underwritten by the coding of content.

3.2.4 *QUAL + MM Cross-strand Comparisons*

Timing. Methods and data interface across strands in complementary fashion. At the conceptual stage, semantic preference involves QUAN and QUAL data analysis, and interfaces with QUAL stance analysis to identify salient discursive events. Similarly, semantic prosody involves QUAL and QUAN then interfaces with QUAL valence analysis. Finally, these cross-strand comparisons interface in inference for the entire project, weaving together the two distinct strands within the overall design.

Method. The final stage in the overall project is to compare findings between the discourse and corpus linguistic analyses. Stance-taking and semantic preference findings are compared for the topics that each subcorpus included. This consists of the analyst looking at statements and their content in stance-taking, and the topics and associated meanings in semantic preference, and locating similar language used, themes, and semantic relations. A similar process is conducted between valence and semantic prosody analyses. Findings from both are compared, with the purpose of locating positive, neutral, or negative evaluations within the two strands.

Purpose. These interfacing analyses serve both complementarity and triangulation. There is a conceptual relation between the qualitative and mixed strands in that stance analysis (QUAL) interrogates instances of subjects during talk, and the ways that speakers negotiate meaning around those subjects, while semantic preference (QUAN + QUAL) reveals subjects and meaning-conveying linguistic structure. Similarly, valence analysis (QUAL) utilizes qualitative techniques to track down the positive-negative dimensions of stances taken, while semantic prosody (QUAL + QUAN) addresses the aggregate data, and assigns prosody to collocations. On the one hand, there might be overlap between findings in the different strands that lends credence to the comparison (triangulation). But there also is a chance to find differences, and locate means and preferred communicative modes that convey information differently, and this can reveal nuances between aggregate data and local, personal communication (complementarity).

4. Discussions

4.1 Corpus Linguistic Approach as a Variant of the Conversion Strategy

A traditional typological conceptualization of mixed methods designs is enhanced by the corpus linguistics variant of conversion mixed methods research, by introducing inherently mixed strands alongside more discrete qualitative and quantitative strands found in more traditional typologies. The reality is that there is a flow of sorts between the stances one takes on such questions, and where one can end up in their methodological understanding of corpus linguistics as a mixed methods approach. Nonetheless, corpus-aided discourse analysis encourages the researcher to be especially

aware of interfacing between qualitative and quantitative data from the very beginning of their work. Corpus linguistics can be seen as a variant because although there is *conversion*, the original data is still queried directly, and retains its own standing as qualitative data, with unique characteristics, and informative nuances. The data has not simply been changed to some other form for analysis, but is in fact still capable of being the object of analysis. One can look back at the local text and follow signposts from quantitative analysis, without having to de-convert the analyzed information. The collocation that is counted is still valuable data of its own accord, rather than a factor or variable which has been *converted* into quantified features.

This means that from the earliest stage, data should be seen as interfacing, integrally available to cross-strand comparison. Seeing the data from this angle drives not only method selection, but ontological status for the language that is data on its own. Text, as the medium of data that contains sought information, can be seen to *convert* to quantitative measures such as theme counting, or providing information about participants that will be used in quantitative procedures. Text, as the target data itself, can be measured quantitatively when it is queried for features such as keywords and collocation as covered here, or for other measures such as syntactic complexity. These considerations provide immense descriptive power, while providing great additive utility to any study. Corpus linguistics-based conversion is a way of seeing interdependence between two methods, and a conceptual space in which there is not just triangulation or complementarity, but an on-going interface between them. Micro-level events such as words and stance-taking events can be interrogated within strands, and immediately

checked or exported across strands, linking up different orders of patterns in comparative work.

This leads to the issue of how whole strands can interface during summative inferences in the project as a whole, metaphorically zipped up, in a final stage. In the study presented here, a final interface draws together the quantitative, inherently mixed, and qualitative work. Each strand works as a stage in the project overall, and captures facets of the story. When interfaced, they reveal multiple levels of information at work in a single, master corpus. The final products are inferences about what health agents report (qualitative), what language is used in the administration of health policy (quantitative), and how those two come together to produce rich, distinct insights that are potentially inaccessible to the individual strands. When corpus linguistics operates as the conversion strategy, which is possible whenever a study already involves language, there is an opportunity to involve further strands of analysis using the very same data, thus ratcheting up possible explanatory power for the phenomena under study.

4.2 The Contribution of Corpus Linguistics to Mixed Methods Research

Taking into consideration that many studies using mixed methods will employ some form of linguistically mediated, qualitative data, it stands to reason that having tools that are uniquely suited to analyzing language is valuable. At its core, collocational analysis, and its semantic derivatives of preference and prosody, create a space in which there is *more data in the data*. These analyses reveal patterns inherent to the data (language use), rather than more commonly discussed quantizing strategies such as counting themes, which are interpretive processes based on observations of data. Having

more data in the data can be critical for locating details in real world contexts that are always complicated, layered, and distributed across time, space, and actors. As discussed above, locating details are the result of both intra-strand analysis but also complementary and triangulation work, unlocking additional dimensions of information in data sets that a researcher likely already has in their possession.

The context of this study was elderly health services in rural Pennsylvania, and the ways that the opioid epidemic has impacted the delivery of those services. This ultimately included high-level policy texts, including federal laws, local brochures, agent stories, procedural reports, and more, from no less than 4 infrastructural service levels, and 6 different local agency locations. Corpus linguistics functioned as a linchpin, unifying data from all sites, agents, and infrastructural levels, and was suited to connect the large scope issue of health policy planning with the microscope level of individual experience, through the naturalistic expressions of agents on the ground. By unifying the data through corpus linguistics, connections were visible between those sites as they were pushed closer together in a single corpus, and could be seen on a continuum of scope and locale, with unique linguistic patterns and expressions that set them apart naturally. This makes interfacing data an easier proposition, and facilitates emerging cross-data sensibilities by exposing patterns and relations shared between them. The benefit of having this on-going, interpolating process means that its application to the subject or context can begin much earlier.

From a more pragmatic vantage point, the tools of corpus linguistics are available to the non-expert (for introductions see e.g., Baker, 2006; Bednarek & Carr, 2020; Wynne, 2005). A number of corpus linguistic tools, including those with graphic user

interfaces (GUIs) exist¹, and can be learned in relatively short spans of time. As shown with concordance lines, corpus linguistic tools align numerous disparate spates of text, thus capturing behavioral data which can be “studied at leisure” (Mauranen, 2004, p. 103, cited in Stubbs, 2009), which Stubbs (2009) compares to the invention of the camera. This ability to almost casually reveal deep patterns of language use allows their export across paradigmatic, disciplinary, and contextual boundaries, depending on the goals of researchers. Much like learning to use a camera, once a researcher has learned the process of capturing and refining the data, manipulating that data in such programs becomes a matter of habit. Most of these programs allow the user to select their target construct (e.g., keyword, collocation), with a set of criteria, and then automatically produce results for further analysis in concordance lines. If we consider semantic prosody, the process is one of rating text that contains the collocations, aligned by the program as concordance lines, recording those ratings, and then analyzing the results. The process itself can help highlight themes in the data (for further qualitative work), and lend a sense for what attitudes are dominant in the data (further quantitative work). Results can be applied to naturalistic language in subsequent stages or strands, for example the creation of survey items, or corroboration of independent survey results.

For a corpus linguist, findings on semantic profiles and attitudes signaled by a collocation, vis-à-vis a corpus of general use, has meaning for semantics as a sub-discipline. But for a mixed methods researcher investigating specific phenomena in a particular setting, e.g., opioids in elderly health services in rural Pennsylvania, the utility is in uncovering patterns produced by the participants and stakeholders of that context,

¹ Some examples include AntConc, LancsBox, WordSmith.

and interfacing those patterns with other findings within the study. Corpus tools make systematically locating linguistic patterns available, which are often hidden to normal qualitative methods, but neither implies nor necessitates ramifications for the wider fields of language analysis. The promise of corpus linguistic tools is, ultimately, a promise of a pragmatic set of tools that are readily available, sensitive to mixed forms of data analysis, and applicable to a wide array of settings that can utilize language as a form of data.

5. Conclusion

In this article, I have demonstrated that corpus linguistics methods are a unique variant of the conversion strategy. This variant maximizes the interplay between methods that attend to fine-grained details in text or speech, with larger-scale patterns and scales, such as regional health policy. Researchers are then able to bring together, or *zip up*, their studies into coherent, cross-strand comparative works, where findings are representative of both specific, local details, and their role in the larger social situations in which they occur. Critically, as a variant of the conversion strategy, I argued that the methods of corpus linguistics do not necessitate expert, insider knowledge but can be operationalized pragmatically by researchers using freely available tools, to be used looking back as much as forward. Much as inter-strand integration can happen during a single study, it can conceptually link multiple studies, cohering them for cross-study comparison. Multiple studies might then be understood as mixed methodology, bound together as in the zipper metaphor. If the variant is chosen, a sophisticated apparatus is in place to reveal *more data in the data* that the researcher may already possess.

Chapter 3

Finding Social (Mis)Alignment in Elderly and Opioid Health Policy

Implementation with Corpus-Assisted Discourse Analysis

1. Introduction

This study presents health service priorities drawn directly from policies and actors tasked with implementing policies, in *their own words*, representing an attempt to locate social indicators of misaligned policy priorities. Though health policy implementation has been described as a social process (Damschroder et al., 2009; Majone, 1989; Russell et al., 2008), the question, *what do health policies and agents actually say*, is in contrast to many studies' focused attention on interventions. By comparison, much research on health policy implementation focuses on clinical decisions behind policy creation (Trostle et al., 1999), and dispersion, dissemination, and evaluation phases (Greenhalgh et al., 2004; Minkler, 2010; Proctor et al., 2009; Walt et al., 2008). The goal of this study is to document some social dimensions of implementation at the intersection of the opioid epidemic and elderly health services in rural Pennsylvania, and thus make an attempt to gauge the situation via statements made by people who are ultimately tasked with the interventions to be evaluated. In essence, this study attempts to capture what people *do*, or at least *say* they do in the activity of providing policy-recommended health services. Rather than seeking to account for interventions, to echo Sara A. Kreindler (2016), I will use techniques from the field of Applied Linguistics to make the socially occasioned language of policy implementation the *figure* to be studied rather than the *ground*.

1.1 Health policy implementation

1.1.1 Health Policy Implementation as a Subject

Health policy implementation, as a field of study, has developed distinctions within implementation, as well as within the study of implementation. The study of health policy implementation, in its various stages and definitions, is characterized by focus on interventions, and the pathways from evidence and research to the creation of policy mandates, down to delivery and evaluation of efficacy. Yet, in that conceptualization of pathways, there is little coverage of the people and their practices. Rather, policy delivery tends to be objectified. With regards to policy implementation, Bauer et al. (2015) distinguish between an intervention and strategy. Where an implementation intervention is “a single method or technique to facilitate change,” an implementation strategy is a larger compilation of interventions selected to “address specific identified barriers to implementation success” (p. 4). Using this distinction, health policy implementation can be seen from two analytical perspectives. On one hand, there is generally an over-arching approach represented by the deployment of multiple interventions outlined by a unifying strategy targeted toward one *per se* health outcome. Then, there are the specific intervention projects developed toward that outcome. Policy is the kernel of strategy that drives interventions. In cases where behaviors are considered, it is their measurable change that matters, rather than the behavior itself.

Similarly, policy is often treated as an object of inquiry of science and research. Again, according to Bauer et al. (2015), implementation science is, “the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness

of health services” (p. 3). Peters et al. (2013) take a broader approach, calling implementation research “the scientific inquiry into questions concerning implementation—the act of carrying an intention into effect, which in health research can be policies, programmes, or individual practices (collectively called interventions)” (p. 1). Peters et al. (2013) invoke “individual practices” in their conceptualization, but it is ultimately reduced to evaluation of variables and modeling. In this way, policy is an inert object shuttled from a high level down to the ground level. Once present, effects are meant to be neatly measured. But this leads us to the question, if health policy is a social activity, where is the social in these conceptions of implementation? Implementation, whether considered as a single intervention or a constellation of them, and indeed the study of implementation, are activities carried out by people. Effectively, not only is implementation the delivery of policies to sites of service, e.g., standard operating procedures, documentation etcetera, but it is composed of many beliefs and behaviors that contextualize the implementation process. Social contours of health policy implementation mold, from inception to delivery, how policies become service.

1.1.2 The Advocacy Coalition Framework

The Advocacy Coalition Framework, or ACF, is an approach to policy change developed initially by Paul Sabatier (1988). The framework has changed and been developed considerably over the last 30 years. Perhaps just as importantly, it has been validated and tested in numerous geopolitical, domain, and regional contexts (see Sabatier & Weible (2007) for a review). Central assumptions made by the ACF are,

“(i) a central role of scientific and technical information in policy processes; (ii) a time perspective of 10 years or more to understand policy change; (iii) policy subsystems as the primary unit of analysis; (iv) a broad set of subsystem actors that not only include more than the traditional iron triangles' members but also officials from all levels of government, consultants, scientists, and members of the media; and (v) a perspective that policies and programs are best thought of as translations of beliefs.” (Sabatier & Jenkins-Smith, 1999, cited in Weible et al., 2009, p. 122)

A fundamental element of the ACF not stated in these assumptions is to consider the “substantive and geographic scope” of subsystems in which interactions occur (Sabatier & Weible, 2007, p. 193). Altogether, the ACF coordinates conceptual interest in the social and ideological aspects of policy implementation, with locality, and shocks to belief systems, and thus frames relations between actors (coalitions) and implementational stages (subsystems) for this study.

In particular, given this study’s emphasis on missing social aspects of health policy implementation, assumption (v) in the ACF critically links not just official policies, but the claims and stated goals, thoughts, beliefs, and attitudes of both (official) policy creators and (actual) policy implementers. Bergeron & Kopp (2002), in reviewing health policies to treat heroin addiction in France, noted that though two aims may be complementary, a “hierarchy” of beliefs about policies has real consequences in implementation (p. 39). The authors’ findings reverberate through modern policy actions targeting the elderly and opioids covered in this study, especially in what the authors called curative versus preventative or palliative action, which was related to the social

visibility of sufferers (p. 45). Given the potential differences in delivery, it is then critical to locate where institutionally situated policy beliefs are legitimized between different subsystems in implementation, as they may outline respective conceptualizations of policies. As noted earlier, Kreindler (2016) found that poor communication was a major barrier to successful implementation, especially if procedural content was not clear or messaging was mixed across subsystems (p. 215). One take-away from combining Bergeron & Kopp (2002) and Kreindler (2016) is that, in an on-going fashion, natural communication of different actors should be captured and analyzed. Emerging policy stances then become critical points for analysis, providing parallel evidence of differing core, policy, and secondary beliefs (Sabatier & Weible, 2007, p. 194-196) within different subsystems.

1.1.3 Locating the Social

In asserting that social processes are a core component of health policy implementation, I have accepted that implementation is distributed over multiple coalitions and subsystems. This study connects perspectives located in top-down and bottom-up points of implementation (Sabatier, 1986) through the language used commonly and respectively. Sabatier's (1986, p. 22-23) four features of a top-down approach follow a "policy decision by governmental officials," and include (1) the extent of consistency between actions taken by implementers and target groups and the policy decision, (2) how were objectives attained over time, (3) what were the principal factors in policy outputs and impacts, and (4) how was the policy reformulated over time based on experience? Clearly, a top-down approach falls rather cleanly into the object-

transmission model common to health policy implementation. In contrast to the top-down, bottom-up analyses (p. 32-33) instead focus on “strategic interactions between networks of actors,” including (1) local actors in service delivery, (2) mapping social networks between actors, and (3) evaluating relevant features of policy in the implementation process. A bottom-up approach is effective in connecting street-level bureaucrats (Lipsky, 2010) with the government officials that create and disseminate policy strategy.

Diffusion and dissemination, two stages discussed by Greenhalgh et al. (2004), will be important for this study. Both concepts are related to the spread of information and the communication of ideas as transmitted during implementation. Diffusion captures passive spread of information. Dissemination on the other hand is the active, effortful spread of information, usually by planning. Diffusion and dissemination ideally influence the awareness of different actors, in the hopes that awareness will lead to uptake and thus implementational efficacy. In essence, this study will rely on an assumption that during implementation, priorities are communicated across subsystems, representing policy beliefs. Greenhalgh et al. (2004) found strong evidence that an innovation compatible with an adopter’s norms or beliefs are “more readily adopted” (p. 596). Elements of implementation strategies will appear at sites partially as a function of diffusion and dispersion. Yet, because official policies commingle with local agent beliefs and priorities, the space between information spread and local implementation needs to be investigated in addition to the fact that the official policy or mandate is present. Without attention to such commingling, as Sabatier (1986) has noted, exclusively top-down approaches have issues with their tractability (p. 23). So, parallel or contemporaneous

capture of top-down and bottom-up forces is chiefly important. The data collected in this study contain both official policies, paraphernalia, and documents more generally, along with local agent interviews in an attempt to triangulate consistent *messages* and *priorities* from infrastructurally differentiable subsystems in the implementation process, but not as a unidirectional or linear process.

In fact, both Kreindler (2016) and Wimmelmann (2019) found that agents on the ground, e.g., interveners, nominally supported the initiatives and interventions created by top-down operations. Yet, it turned out that their real support for, or departure from, interventions was more closely tied to their beliefs about what happened on the ground. Agents' feelings about intervention were tied to their personal experiences, as much as the initiative itself. When agents felt an intervention to be unnecessary, or to disrupt their own process, support failed. Failure in this case had the downstream effect of appearing to be support for the initiative, but that true adoption disappeared. These ideological breakages were not easily recovered by coarse analysis such as general survey, or a binary record of deployment of the intervention, and required fine-grained analysis to uncover, such as interview and observation in Wimmelmann's cases. The problem then is not nominal adoption of interventions, or the research and rationales supporting them. Rather, there is a social reality that may not adhere to the interventions in practice, and in which agents deploy different interactional positions rather than those alleged by the mandate or policy activity itself. These different modes of what counts as legitimate policy and applicable interventions are informed by different forms of knowledge in policy implementation (Freeman & Sturdy, 2014). These findings being true, identifying the priorities, experiences, and beliefs of agents in subsystems tasked with

implementation on the ground level would be a necessary component to effective implementation.

The ACF holds that modifying pre-existing beliefs is extremely difficult (Sabatier & Weible, 2007), and so targeting policy beliefs in particular can be a path toward efficient reconciliation. That is, through familiarity with the policy beliefs of interested parties, there is an opportunity that the likelihood of resistance (or misapplication) can be potentially reduced, and thus implementation efficacy improved. This motivates us to identify beliefs and ways of understanding policy through the language deployed during implementation, and therefore locate ways to better align those sensibilities between institutional subsystems. The goal then, following the work of Bergeron & Kopp (2002), Greenhalgh et al. (2004), Kreindler (2016), Weible et al. (2009), and Wimmelmann (2019), is to capture real language used in health policy as a system or process from inception to service, including some elements from multiple subsystems, within a topically and geographically contained coalition or subsystems. Or, as Russell et al. (2008) may propose – to study the policy process ‘as is,’ to find out what stakeholders in the implementation process talk about in the face of topics and subjects related to health policy propositions.

1.2 Corpus Linguistics

1.2.1 Overview

Corpus linguistics will provide the main methodology for this study. In brief, it is the use of collections of natural or real language use (e.g., not produced *for* analysis), selected to interrogate some features of language. We might call this communication ‘as is.’ When linguists use specific criteria to achieve, usually, (1) representativeness of a

target language community, (2) balance, (3) a certain size, and (4) focal characteristics in a collection, that collection can be called a corpus (Sinclair, 2005). In selecting for any corpus, a linguist generally has in mind a specific question, or linguistic feature, or general observation, for which they will use the corpus. Studies in corpus linguistics have found that people's communication tends toward patterned regularity. These communicative patterns have been found to be quasi-intuitive in some ways, such as in the grammatical regularity of language use, e.g., syntax, morphology. On the other hand, research in empirical linguistics has demonstrated that indeed lexis, words, and semantics have patterns all their own that construct meaning in ways that are difficult to identify through qualitative, everyday experience or expectations (see e.g., Biber & Finegan, 1989; Hoey, 2005; Sinclair, 1991; Stubbs, 1995a). They require concerted attention, and rigorous methods to identify them. Further, these findings are sometimes at odds with intuitions about language use. These findings are quite important because, in addition to grammatical structure, they demonstrate that it is often through semantic associations that meaning is conveyed, demonstrating the beliefs, cultural norms, and stances people take in conducting their everyday lives.

1.2.2 Keywords

Locating keywords within a corpus reveals topics, matters, and subjects that authors (whether speakers or writers) have taken up using the communicative resources available. Keywords can be thought of as one kind of indicator of the *aboutness* of a corpus. A keyword can be defined as a word that appears with a significantly different frequency in comparison to a reference corpus (Gabrielatos & Marchi, 2011; Scott,

1997). A reference corpus tends to be a corpus of more general use, but restricted to be similar in relevant characteristics such as e.g., topic, time, medium, language variety, and so on (Gabrielatos, 2018). The goal of a reference corpus is to provide a baseline of usage. Since keywords are those words that have a different frequency, relative to their reference corpus, the corpora must be similar enough that words which appear in similar frequencies can be rejected as key. To derive keywords, a word count of each word within the first corpus is produced. The procedure is replicated for the reference corpus. The respective word counts are compared using a statistical measure (in this study, Log-likelihood). Words are said to be *key* when they achieve a *p value* lower than or equal to the threshold set by the researcher (Scott, 1997, p. 237).

1.2.3 Collocation

Identifying keywords develops signposts for a researcher about the sorts of issues that respective authors and speakers find important. However, keywords are only one lexical aspect of the language used at various stages of dissemination, dispersion, implementation, etcetera. It has been argued by a number of linguists going back to the mid-20th century (Firth, 1957; Sinclair, 1991, 1996; Stubbs, 2009) that meaning is driven not by individual words and their connotation, but by the habitual appearance of multiple words together called collocations, collectively addressed by the sub-discipline of phraseology (Granger & Meunier, 2008). Each word in a collocation is a collocate. Habitual is technically identified as frequent co-occurrence of two or more words, occurring within a particular span or window of spaces between words, usually over some range of texts within the corpus, and by a statistical measure of probability. When

collocates are contiguous, a collocation can be called an *n-gram*, though contiguity is not a necessary feature of collocations (Cheng et al., 2009). Whereas keyword analysis provides frequent individual words compared against another text, collocations are located *within* a corpus. That is, because of their attributes and defining features, they are more likely features of the language itself, rather than of the text.

A researcher selects each attribute (e.g., span, statistical measure score) as part of defining an analyzable collocation. For example, collocations are often defined in light of the total word count of the corpus they are drawn from, thus setting a minimum frequency for the collocations. A general corpus of 100 million words requires a different threshold than a specialized corpus of 500,000 words. Similarly, range represents the number of files or documents that any collocations appear in. The fact that a collocation occurs 12 times may be important. Yet, if it occurs in only 2 files out of 1,000, it is unlikely to be a durable feature of the language, and more likely to be idiomatic.

1.2.4 Applicability to Health Policy Implementation Research

Keywords can be used initiate the search for collocations, and therefore the structured language use unique to each corpus which is revealed more keenly through collocational analysis. Reliable patterns of widespread collocations, when analyzed qualitatively, can be used to better understand the semantic structure of language. Semantics in this case represents what is going on under the hood of language used by creators and implementers of health policy.

Findings on linguistic performance from corpus linguistics provide an under-utilized, empirical avenue for examining the social dimensions of health policy and its

implementation. The language used in policies is natural, and the language used by service agents is naturalistic. That is, they are not fabricated for analysis. This is a critical assumption for corpus linguistics, and thus delivers empirically grounded results derived from ecologically sound data. Furthermore, corpus linguistic foundations are meant to help illuminate not just text or policies-as-objects, but in fact reveals structures and patterns of language use itself, and therefore the structures of meaning that suffuse the implementation environment, traversed as it is from the top to the ground level. Thus, keywords shared or unshared between health policy subcorpora reveal essential aspects of health policy beliefs as expressed by two connected subsystems in implementation, while collocations further expose the contours of language that actors within those sites use to convey their perspectives. In concert, these two corpus linguistic approaches can tell us (1) what health policy seems to be *about* at different levels, and (2) how core concepts of delivery are communicated through linguistic choices.

2. Data & Methods

Methodologically, this study is a mixed methods conversion design that utilizes qualitative data to drive quantitative- and mixed forms of analysis (Guest, 2013; Teddlie & Tashakkori, 2006). Typologically, methods interface at the conceptual, experiential, and inferential stages of the study. The purpose of mixing at the first stage was to use CADS methods to reveal patterns within each subcorpus, to prompt mixed forms of comparative analyses.

2.1 Data

I collected two forms of data to create two subcorpora: policy documents and ethnographic interviews. Text-based data consists of publicly available policy materials (e.g., legislation, reports, memos, public releases). Publicly available policy materials only include official material from federal, state, and county governmental bodies with a direct relationship to policy provision, e.g., that they were mentioned by agents in interviews, brochures present at their offices, etcetera. Policy texts were additionally restricted to those addressing opioids, aging health programs, or major departmental communication. The policies sample contains 100 texts (571,481 words).

I conducted bi-monthly ethnographic interviews (Spradley, 1979) with agents of rural, elderly health services. Participants were selected by location, where each agency covers a rural area of Pennsylvania, as defined by census data. I contacted the director-level agents first, to recruit them as interview participants. I conducted preliminary interviews with directors between June 2017 and July 2018 to build initial sensibilities about the agency environments, their populations, service conditions, and so on. Subsequently, I recruited protective services case workers through a basic form of reputational case sampling (Teddlie & Yu, 2007). I began transcribing interviews into verbatim transcripts in an on-going fashion as I continued to conduct interviews, and to engage in preliminary qualitative analysis. Final interview data includes a total of 29 transcripts (171,492 words) with directors of rural, elderly health agencies ($n = 6$) and protective services case managers ($n = 5$), collected over 6 months between January and July 2019. All participants provided written and verbal consent to be interviewed in accordance with the internal review board procedures of the host institution, assigned pseudonyms, and any identifying data was removed to the best extent possible.

2.2 Analytical Procedures

2.2.1 Keyness

Technically, a keyword is a term present in a corpus at a frequency that is statistically differentiated from a comparable reference corpus. The reference corpus used to derive these keywords was collected from the Corpus of Contemporary American English (Davies, 2008), and included 1.7 million running words, over 5 genres/media: academic, fiction, magazine, news, and spoken. When retrieving keywords for the Documents subcorpus, files from the spoken subset of the reference corpus were excluded. Log-likelihood is a frequently used method of extracting keywords (Paquot & Bestgen, 2009; Pojanapunya & Watson, 2018). I used the Anthony Concordancer (Anthony, 2020) to measure keyness by Log-likelihood (4-term), with a p value < 0.0001 (+Bonferroni), %DIFF for effect size, and selected from the Top 100 keywords.

2.2.2 Collocations

Following keyword identification, I used keywords as referent words to identify collocations. For this study, collocation refers to two or more words that occur together in regular, patterned ways as assessed by statistical likelihood. Mutual information (MI) score has been identified as a reliable method of identifying collocations in text, especially when coupled with Log-likelihood (Ackermann & Chen, 2013; Church & Hanks, 1990; Kilgarriff, 2001; Xiao & McEnery, 2006). A higher MI Score represents that a sequence has a meaning that is unique to the collocated words. MI score effectively separates common collocations from those specific to the corpora. I again used the

Anthony Concordancer (Anthony, 2020) to carry out procedures. Co-occurring words were considered a collocation using the following criteria:

1. Span +/- 4 words from a node word
2. MI + Log-likelihood score ($p < .05$) > 3.0
3. Frequency > 3 times in Documents, > 2 in Interviews

3. Results

3.1 Keywords

In keeping with Gabrielatos (2018), keywords in this study are meant to reveal not only differences between the corpora, but also similarity and absence. I analyzed the top 50 keywords, ranked by Keyness score, from the two subcorpora of Policy Documents and Agent Interviews. The resulting analysis produced 19 shared keywords, and 62 unshared keywords. It must be said before further discussion that the contexts of the two corpora, one of distributed documentation and one of pointed interviews, can have noticeable effects on word selection. As the analyses show, potentials for difference are attenuated by the topics and shared *aboutness* of the subject matter. This broad initial observation is evidence of the applicability of linguistic analyses to implementation research.

3.1.1 Shared Keywords

The subcorpora share keywords that immediately reveal policy alignments between the collected policies and the implementing agents (Table 1). Several words are shared between both corpora in their top 20 as ranked by keyness, but there are also fairly

large rank differences between some shared words. Shared keywords can be considered in two groups representing relative alignment or misalignment. One group shows a similar rank (within 10 ranks): *services, older, care, aging, opioid, drug, and department*. The second group are those with a very dissimilar rank where one word is high in rank for one group, but low rank for the other: *health, abuse, state, report, county, and area*. I will focus on several words from both groups to capture a notion of the linguistic features of implementation.

Of the top 10 ranked keywords in the policy documents subcorpus, 4 are highly ranked for the agents as well. The word *older* is ranked 3 and 1 respectively, showing very close alignment in topical importance. These highly ranked shared words show a closely-knit relationship between the policy documents and the agents that are meant to implement them. The words that share close rankings seem to have both functional and semantic content in common. For example, *services* is likely to be used in a variety of contexts for both corpora, and is closely related to what it is that they are doing: providing services. The same extends to *aging*, which is both the population that they serve, and the names of departments, agencies and so on, which is centrally related to the policy priorities and methods available to speakers and authors of both groups.

Table 1: Shared frequent keywords between Documents and Interviews subcorpora

Word	Rank	Documents		Rank	Interviews	
		Freq.	Keyness		Freq.	Keyness
<i>services</i>	1	5038	11505.83	8	244	580.45
<i>health</i>	2	3590	6861.57	20	222	302.39
<i>older</i>	3	2803	6082.73	1	319	917.21
<i>care</i>	5	3018	5533.44	13	271	441.07
<i>abuse</i>	7	1846	4201.12	48	60	112.61
<i>aging</i>	10	1566	3719.48	4	196	725.75
<i>state</i>	11	2606	3267.3	35	276	194.81
<i>program</i>	12	1882	3256.57	23	187	282.91

<i>agency</i>	13	1541	3210.75	32	75	208.08
<i>report</i>	18	1370	2426.65	41	108	142.99
<i>opioid</i>	20	926	2409.06	11	100	477.6
<i>drug</i>	21	1273	2403.47	17	155	332.2
<i>department</i>	23	1365	2318.65	31	144	218.58
<i>protective</i>	24	942	2313.54	5	172	724.88
<i>overdose</i>	27	856	2212.01	42	30	134.62
<i>community</i>	34	1176	1707.52	50	111	99.61
<i>adult</i>	37	967	1645.3	19	129	310.22
<i>county</i>	38	851	1626.32	6	222	674.28
<i>area</i>	42	1060	1508.45	12	234	441.45

Both corpora share *health* in their keywords, but its rank difference between them is notable. That *health* is ranked 2 in the Documents, but 20 in Interviews shows its central relevance to policy documents, and lesser focus in the day-to-day language of agents. It may be that *health* in policy documents has a different function, such as being part of a department title (e.g., Department of *Health*), that causes it to rise significantly in its keyness compared to everyday usage, setting it apart as an important lexeme in the crafting of health policy documents. But it may also occur as referring to health, as in bodily health. In this way, *health* may have a number of aspects present in the subcorpus that are obscured by its representation as one word. It is clearly still an important keyword for the agents, but likely has a more restricted function or topical range, leaving it a smaller role.

Another pair with noticeably different rankings, *county* and *area*, demonstrates a difference between the scope or focus of the subsystems. Though the policy documents include *county* and *area*, their ranks are much lower than they are in the agent interviews. The frequency rates for both words are relatively high in the interview group considering its specialized, and thus relatively small, nature. This kind of difference lays out a priority

or topical area that is measurably different between the macro-level policy documents and the implementing arm of those policies. Though documents do address *county* and *area*, they are much lower in the order of issues than they are for the people in *counties*, that are part of the *areas*.

Shared keywords show that priorities are often distributed, clustering around some central themes (*services* etc.), but also with some differences that demonstrate real segmentation along what it is that policies are for. In both groups, there is a wide distribution of rankings for unshared words, with some clear differences revealed in the language used. Unshared Keywords (Table 2) analyses capture the extent of separation or difference between topics and subjects captured in respective policy priorities.

3.1.2 Unshared Keywords

Of the top-50-ranked, unshared keywords for the Documents subcorpus many are formulaic and often internally referential to the textual elements of creating policies: *section, act, secretary, subsection, paragraph*, and so on. Many of the items are parts of repeated formulaic sequences, which will become clear later in collocation analyses. Some of these include *substance use disorder*, and *older adults protective services act*. Less textually constrained keywords remain abstract, and procedural, such as *assistance, service, fiscal, guardianship, medical* etc. Despite the 9th-ranked keyword, *individuals*, there are no specific individuals, but rather classes or subjects to which something can be applied. Essentially, the policies are not applied to people, but decontextualized *individuals*.

Table 2: Unshared frequent keywords between Documents and Interviews subcorpora

Word	Documents			Word	Interviews		
	Rank	Keyness	Freq.		Rank	Keyness	Freq.
<i>section</i>	4	5634.6	2538	<i>think</i>	2	813.02	850
<i>act</i>	6	4416.48	2251	<i>people</i>	3	727.79	889
<i>substance</i>	8	3947.07	1607	<i>know</i>	7	633.91	815
<i>individuals</i>	9	3761	1836	<i>person</i>	9	541.57	308
<i>secretary</i>	14	2769.83	1397	<i>need</i>	10	530.58	394
<i>use</i>	15	2656.72	2066	<i>nursing</i>	14	401.36	115
<i>subsection</i>	16	2502.76	962	<i>opioids</i>	15	386.84	81
<i>mental</i>	17	2437.65	1160	<i>seniors</i>	16	375.83	91
<i>elder</i>	19	2414.53	975	<i>staff</i>	18	321.63	142
<i>treatment</i>	22	2401.44	1253	<i>pain</i>	21	299.16	147
<i>information</i>	25	2291.16	1452	<i>medications</i>	22	286.99	75
<i>assistance</i>	26	2257.62	1042	<i>grandparents</i>	24	277.77	76
<i>service</i>	28	2141.8	1288	<i>exploitation</i>	25	257.38	65
<i>provide</i>	29	2077.05	1227	<i>help</i>	26	247.46	268
<i>paragraph</i>	30	1864.64	773	<i>rural</i>	27	240.51	72
<i>agencies</i>	31	1788.17	812	<i>alcohol</i>	28	237.51	77
<i>inserting</i>	32	1784.48	704	<i>cases</i>	29	229.68	118
<i>fiscal</i>	33	1736.9	763	<i>folks</i>	30	224.74	83
<i>guardianship</i>	35	1679.7	674	<i>centers</i>	33	197.02	84
<i>disorder</i>	36	1666.53	744	<i>caregiver</i>	35	194.06	44
<i>prevention</i>	39	1621.76	686	<i>pills</i>	36	170.23	47
<i>term</i>	40	1583	1029	<i>home</i>	37	143.62	260
<i>eligible</i>	41	1516.86	626	<i>Narcan</i>	38	143.27	30
<i>appropriate</i>	43	1499.82	780	<i>prescription</i>	39	142.99	45
<i>court</i>	44	1487.62	1079	<i>call</i>	41	141.7	174
<i>amended</i>	45	1467.7	574	<i>doctor</i>	43	119.84	81
<i>grant</i>	46	1360.4	664	<i>family</i>	44	118.83	196
<i>medical</i>	47	1315.4	862	<i>funding</i>	45	114.9	47
<i>striking</i>	48	1282.23	604	<i>provider</i>	46	113.09	31
<i>aaa</i>	49	1244.34	514	<i>addiction</i>	47	113.02	36
<i>title</i>	50	1189.6	711	<i>dementia</i>	50	97.03	22

In contrast to the Documents, keywords for the Interviews are more specific (*opioids, medications, pills, Narcan* etc.), and also oriented to people (*people, person, seniors, grandparents, folks* etc.). One linguistically-centered difference is that verbs are highly ranked, such as *think* and *know*. This language difference is likely better seen as

one of the context-related differences between the corpora, rather than a topical or subject difference. Critical take-aways in the Interviews would be, like in *counties* and *area* above, that there is a difference in scope revealed by the specific populations, challenges, and roles they will play. The agents in these interviews, when asked about their policies, focus on their roles with people (*nurses, caregivers, staff, cases, family* etc.), places (*rural, centers, home*, etc.), and the challenges they face (*need, opioid, pain, medication, alcohol, addiction, dementia*, etc.), limiting the extent to which the topics and rationales present in policy documents have influence.

3.2 Collocations

With salient keywords identified, and again holding the principles of similarity and difference, I conducted collocation analyses on 3 shared keywords: *older*, *opioid*, and *protective*. These referent words were selected from the available keywords because (1) they are shared between both subcorpora, and (2) these keywords integrally related to the heart of this study, given that the subject is an elderly population, opioids, and protective services provision. With regards to (1), their sharedness served as a corpus-driven (Baker, 2012; Baker et al., 2008; Rayson, 2008) purpose of deriving potentially shared semantic information between the corpora. Similarly, with (2), these words captured salient relevant semantic information around which to base further analyses: *older* as a category of people or population, *protective services* as the core service under scrutiny, and *opioid*, the class of narcotics which had been named both in widespread social and cultural arenas, and by the participants of this study. Their combined sharedness and intuitive salience signals that the semantic content is likely shared internally to some degree, and

that the externally chosen subjects appears to be significant as a feature of the text. Freq. columns represent frequency of collocation. Total Freq. columns represent total frequency of the collocate in the subcorpus.

Table 3: Frequent Collocates with OLDER in both corpora

Collocate	<u>Documents</u>			<u>Interviews</u>			
	MI	Freq.	Total Freq.	Collocate	MI	Freq.	Total Freq.
<i>individuals</i>	6.64	810	1829	<i>adult</i>	8.77	105	129
<i>adult</i>	7.20	566	867	<i>adults</i>	9.07	83	83
<i>act</i>	5.79	554	2251	<i>folks</i>	8.01	40	83
<i>adults</i>	7.54	532	647	<i>people</i>	3.79	23	890
<i>services</i>	3.80	312	5032	<i>act</i>	8.35	14	23
<i>age</i>	6.06	169	572	<i>think</i>	3.03	13	850
<i>enacted</i>	7.54	160	194	<i>person</i>	4.50	13	308
<i>protective</i>	4.92	127	942	<i>americans</i>	8.95	12	13
<i>income</i>	5.72	116	496	<i>population</i>	6.13	9	69
<i>need</i>	5.09	112	743	<i>help</i>	4.03	8	263

3.2.1 Collocations of OLDER

OLDER as a node word tends to have a number of shared collocates between the two subcorpora (Table 3). [*older*] *adult* and [*older*] *adults* appear in the top 5 most frequent collocations for both subcorpora, giving the initial appearance of shared semantic content. When *older* appears in a pre-position with the collocate, e.g., *older* with *adult*, it tends to colligate as a modifier of people in some way. The particular usage of the *older* with any synonym of people is quite different between the subcorpora, showing different purposes, and thus lower alignment between the corpora vis-à-vis the use of *older*.

Use of the node *older adult* or *adults* is highly consistent in the Documents group, specifying subjects of service provisions, and to invoke specific n-grams in the form of service programs and policies e.g., *OLDER ADULTS PROTECTIVE SERVICES ACT*.

This one sequence includes 4 of the top 10 collocates, in 16 documents, occurring 35 times. Otherwise, *older adult* and *older adults* sets out targets of service provision in a variety of genres (e.g., legislation, brochures), in both intertextual and intratextual reference. One aspect of this result is that this is a textual feature of the particular documents selected for the corpus. Many documents, including the eponymous acts themselves, use the n-grams as bases for creating policies and deriving legitimacy, such as invoking a title to justify a mandate. Therefore, the content of these self-referential collocations tends to be infrastructural in nature, with a lesser emphasis on specific people or the populations to which they will apply.

When the Documents are specifying grounds for service provision to subjects, this is accomplished prevalently with [*older individuals*]. In contrast to *older adults* which creates a non-specific class, *individuals* tends to be used as a nucleus for specification, e.g., *low-income, with disabilities*. One ground that stands out as a collocate is *income*. This designation is overwhelmingly about *low-income minority* [*older individuals*], and synonymous with another common sequence, [*older individuals*] *with greatest social* (or) *economic need*.

The Interviews subcorpus has its own formulaic sequence that comes up as a referent for policy programs and provision, *OLDER AMERICANS ACT*, which is a U.S. law. In this case, the act is always referred to as the major source of the area agencies on aging themselves, policy mandates, and funding origins. Though the Interviews subcorpus includes both directors and their protective case workers, the *OLDER AMERICANS ACT* does not appear at all in the caseworker group of interviews. For the protective case workers, *OLDER ADULT PROTECTIVE ACT* only appears once. So,

although these *acts* form important bases for policy programs, the closer to service delivery the participant (or text), the less frequent their use.

Of the top 10 most-frequent collocations of *OLDER* in the Interviews, it is telling that 7 of 10 collocates are in some way about people. In contrast to the Documents, administrators and their caseworkers overwhelmingly attach *older* to the people around them, and with whom they deal directly. The biggest difference in using *older* between the corpora is that [*older*] people are objects and designations for grounds for service in the Documents, but have agency, or are very active subjects in the Interviews. Interviewees use *older* people to convey actions, thoughts, feelings, and rich experiences. Other collocates provide further evidence of this, where active verbs (*think, help*) make them grammatically identifiable agents. This conceptualization process is a core element of how the agents on the ground see the world views, beliefs, and positions of their populations, and thus their grounds for being objects in health policies.

This distinction between the language of *older* in the subcorpora demonstrates a clear misalignment. Documents of policy take *older* people as classes to which policies apply, or their criteria for that application. In contrast, agents on the ground use *older* people to convey their world views and experiences, which are grounds for perception of policies. That is, those agents understand health policy as a function of the populations they are meant to serve, rather than policies targeting populations. Thus, the conceptualization process is reversed.

3.2.2 Collocations of OPIOID

OPIOID has a strong semantic grouping, especially in (1) the n-gram *OPIOID USE DISORDER*, and (2) its use as a classification of drug type (Table 4). Opioids in Document policies are consistently identified as a class of medication, which has two features that create conditions for ways of understanding them. On the one hand, medications have guidelines, proper use, administration by a medical professional and so on. There are supporting, related collocates such as *medication* and *prescription* that bolster this semantic category. This association organizes *opioid* along legitimate use in policy provision. In the contrary case, legitimacy lays the ground for the *use disorder*. It is into this subset that *reversal* becomes necessary. Within the corpus, *reversal* is the key identification of a class of drugs all its own, *opioid overdose reversal drugs*. Namely, this collocation is used to technically name branded drugs such as Narcan and Naloxone, and propose their deployment as policies.

Table 4: Frequent collocates with OPIOID in both corpora

Collocate	<u>Documents</u>			Collocate	<u>Interviews</u>		
	MI	Freq.	Total Freq.		MI	Freq.	Total Freq.
<i>overdose</i>	7.70	217	840	<i>crisis</i>	9.31	15	42
<i>use</i>	5.99	161	2056	<i>use</i>	7.35	10	109
<i>disorder</i>	6.40	76	739	<i>addiction</i>	8.80	9	36
<i>drug</i>	5.62	67	1112	<i>issue</i>	7.28	9	103
<i>reversal</i>	9.51	56	62	<i>disorder</i>	10.61	7	8
<i>crisis</i>	7.99	55	178	<i>issues</i>	6.96	6	86
<i>treatment</i>	4.73	40	1230	<i>epidemic</i>	10.80	4	4
<i>disorders</i>	6.09	39	462	<i>prescription</i>	7.31	4	45
<i>medication</i>	6.88	38	261	<i>abuse</i>	6.89	4	60
<i>prescription</i>	6.23	38	404	<i>coalition</i>	8.80	3	12

In these regards, *OPIOID* collocations are aligned between the Document policies and the Interviews with agents. The n-gram, *OPIOID USE DISORDER*, seems to deliver a powerful social tool in both policy conception and policy delivery. It serves both

justificatory and descriptive purposes for the creation of policies, and a core semantic item that undergirds the call for e.g., *opioid overdose reversal medication, treatment* and so on. For agents, it is a touchstone of opioids in their populations, related to the frequent topic of *over-prescription*, and the experiences of their populations. That is to say, it provides an explanatory etiology unique to this *crisis* that fits with the everyday experiences of their population, for whom *opioid* is a familiar piece of their health management. Thus, the conception of *OPIOID* appears in similar uses within policy documentation, and then again in the sense-making practices of agents on the ground.

3.2.3 Collocations of *PROTECTIVE*

In the collocations for *PROTECTIVE* (Table 5) there is textual overlap with *OLDER* in the Documents corpus due to the repeat of the *OLDER ADULTS PROTECTIVE SERVICES ACT*. But there is an important semantic separation in the Interviews that is borne out by the fact that *older adult protective services* refer to programs on the ground, rather than the act. *Act* appears as a highly frequent collocate in the Documents group, while agents and caseworkers stop short at *services*. The latter is a functional, programmatic result of the former. This apparent service level distinction shows communicable topical priorities that have been transmitted from the creation of policy, down to the sense-making practices of caseworker activities, with common programmatic nuclei made explicit through the frequent collocate *need*.

Table 5: Frequent collocates with *PROTECTIVE* in both corpora

Collocate	<u>Documents</u>			Collocate	<u>Interviews</u>		
	MI	Freq.	Total Freq.		MI	Freq.	Total Freq.
<i>services</i>	6.97	897	4913	<i>services</i>	8.82	115	243
<i>adult</i>	7.17	167	796	<i>service</i>	8.47	35	94
<i>need</i>	7.20	158	733	<i>workers</i>	8.49	23	58

<i>older</i>	5.05	127	2620	<i>adult</i>	6.85	15	124
<i>adults</i>	6.64	92	633	<i>call</i>	5.28	7	172
<i>act</i>	4.00	52	2221	<i>older</i>	4.38	7	319
<i>training</i>	5.23	48	874	<i>institute</i>	9.31	6	9
<i>agency</i>	4.41	45	1446	<i>staff</i>	5.35	6	140
<i>service</i>	4.65	44	1198	<i>need</i>	3.66	5	394
<i>report</i>	4.37	40	1318	<i>time</i>	3.66	4	314

A focus on the policy versus a focus on provision can be seen further in the frequent use of agent-focused collocations in Interviews. In the creation of policies, e.g., Documents, *services* are created, the criteria for them are laid out, populations identified (*older adults*). Agents though are more likely, in discussions involving *PROTECTIVE*, to include talking about *workers*, and *staff*. That is, they are talking about specific classes and the administrators of policies. These results are further evidence of the chosen subjects expressed by the linguistic choices between policy documents and policy implementers begun in the keyword analysis. Policy creation is about texts, about classes and criteria. Policy implementation is about people, their human experiences, and the service agents that deliver policies.

There is a major distinction between the semantically related collocates *training* and *institute* with *PROTECTIVE*, where the positive-negative evaluations in the collocation are switched. In fact, this switch on the subject of training indicates one explicit misalignment between the Documents and Interviews, as a form of professional push-back, or criticism of policy by agents. As is often the case, uses of *training* in the Documents sets out requirements for curriculum, basic or minimum training, and the conditions that meet the standards of training. The use of *training* here tends toward positive, projective policy creation. In contrast, when *institute* comes up, it is specifically about a program at Temple University, and the negative light in which protective services

had been cast by a recent major report. So, there is a matter-of-fact element to the semantic category of education into which both collocates fall, but it appears to be contested or complicated for the agents, rather than a clean and successful implementation.

4. Discussion

There is a danger in not capturing the everyday concepts of policy that various coalitions or subsystems hold. The goal of this study was to locate points in which beliefs about policy provision, in the form of the subjects and stances proffered by actors, may be mismatched. Evidence shows that agents on the ground, when they communicate about policy practices, are far more concerned about the populations they serve, who they are and so on. Agents' focus on their populations is an interesting distinction when considering that patient-centered services and care have grown to be a major point in theories of implementation (see Damshroder et al. (2009), CFIR concept discussion of Outer Setting). If, according to CFIR, patient-centeredness has a positive relationship to successful implementation, then crafting policies to better reflect concepts of who populations are, and their needs, would be distinctly beneficial. Evidence presented here demonstrates that, in fact, there is a significant gap between policy mandate documentation, and the agents' policy conceptualization along these lines. Policies in the form of memoranda, legislation, reports, etcetera tend not to focus on people at all. They are, at best, idealized categories that serve as descriptive bases that serve as targets for mandates. In contrast, agents demonstrate a sensitivity to the populations they serve, the

ways in which they must interpret and apply those mandates to the best of their ability, and not always with positive or well-aligned results.

According to the ACF, sudden shocks to subsystems, such as an epidemic of opioid overdoses, move policy decisions along between coalitions and their subsystems. If beliefs and shock points are necessary to the learning process and changes in policy implementation, then the policy activities meant to align different coalitions across different subsystems must have commonalities that they can recognize in each other's policy beliefs. To the points raised around rhetoric in health policy implementation by Russell et al. (2008), the naming of specific people and experiences is the whom to which the policies will apply. Yet the official policies as assembled, with their various justificatory and descriptive components, seem to be about nothing so material. Health policy creation (a stage of implementation) then would be not about people or their experiences, and thus are different than the policies that agents are applying in their implementation practices. The misalignment can be seen, at least potentially, as an area in which the traditional subject of health policies (elderly health services) has undergone a shock event (opioid epidemic), wherein priorities and mandates are shifting in respective subsystems, without proper recognition to ameliorate those changing priorities at the point of delivery. This notion is borne out by the analyses assembled here. There was considerable overlap in the subjects and topics presented, which echoes Kreindler (2016, p. 210) in that official policy language has been *transferred* into the language of local agents, yet communication in interviews often raises different objects of attention, and even criticism such as between *training* and *institute* above.

This divergence brings to light a critical element of health policy implementation that an object-transmission model of implementation cannot capture: that policies are in fact not just official documents, but better understood as creatively assembled by people in the *act* of service provision. Traditional conceptions of policy intervention, e.g., instructional material, justifications, and standard operating procedures, in this way put the cart before the horse. Instead, it seems that what people are implementing is not official policy, but rather their policy. Their policy is of course shaped by instructions and justifications of official conceptualizations, but delivery is far more about the agents' own stances and beliefs in health services as social activities. The agents in this study would rarely describe the official policies or their instructions, occasionally invoking their titles or sources of authority. Rather, their work is about people, and the people's needs, that they encounter every day. According to the stances they take, in evidence through their linguistic habits, they conceive of policies as organic responses to needs that are often not addressed by official policies. Interventions, in the form of various services, are a give-and-take process, where agents are facilitators that fit policies to the individuals of their populations, based on those populations' needs. Such a process ought to be considered when accounting successful implementation on the ground, and thus in the revision of policy at the top-level, as per the ACF.

5. Conclusion

Findings presented in this study show that there is a distinct difference between the implementational targets of two public health levels, and that necessary social translations are undertaken by implementers in order to create services. The way to see

this must be that targets from mandates must be interpreted, relying on underlying beliefs to make sense of policy applications. It is up to coalition agents to interpret both their means and their targets. This creates uncertainty in delivery, and is not well accounted-for in the *mandates object* model. Targets specified in the Documents do not necessarily resemble the concerns, means, and needs of local agencies, which may lead to inefficiencies in application. Furthermore, in terms of assessment, the re-uptake of results, it is then difficult to pin-point where the implementation went wrong because the social aspects of implementation are often overlooked. Yet, by analyzing the socially mediated beliefs and priorities of agents as presented here, we can locate policy misalignments for adjustment that more harmoniously meets the needs of respective coalition and subsystem health policy needs and goals.

Chapter 4

Discourses at Work in Elderly, Health Policy Communication: Uncovering Aspects of Semantic Preference and Prosody in the Rural Opioid Epidemic

1. Comparative Semantic Analysis in Brief

As Chapter 3 demonstrated, there are a number of shared subject areas between the two corpora evident in their collocations. What is not obvious from the analysis of chapter 3, though, is just how those different subjects become meaningful in their local context. It bears clarifying that this analysis is comparative across subcorpora, but is firstly about what is within each corpus. The similarities and differences are meant to reveal aspects of meaning related to those that produce it, to understand the borders between the different subsystems they represent. This is why the exact collocations are not necessarily the same, and further why these analyses are meant to explore the specific uses and contexts in which they obtain meaning. In essence, this is a question about the language used for the specific purpose of health policy implementation, in the rural, elderly context of Pennsylvania facing the opioid crisis. The claim that invites comparison is, from a health policy perspective, two subsystems, or two state- and local levels, are intertwined and expressed to be part of a single coalition. Thus, the questions are, how *do* they communicate, and what *do* they mean? Once this can be squared away, only then can we see how that claim holds together.

In this section, I will first report my semantic preference and semantic prosody findings. I then discuss the meaning categories that organize the language of opioids in elderly health services, revealed by comparing semantic preferences at the core of each subcorpus. I then discuss the role of evaluative affect as a larger discourse pattern,

bridging the concepts of valence and attitudinal aspects of semantic prosody (e.g., Partington, 2004), in an attempt to give further substance to the “consistent aura” that a form seems to have, as Louw (1993) called it.

Because of the highly formulaic and generic format of the policy documents, I only selected candidate collocations from the most frequent collocates as reported in Chapter 3, that were whole sequences (e.g., *OLDER ADULT PROTECTIVE SERVICES ACT*), collocates shared between the two subcorpora, synonyms, or all of the above. Many collocations within subcorpora have important uses and semantic properties, such as citing major legislation, but are not suitable for comparison between subcorpora. For one example, I excluded sequences that had either purely or overwhelmingly genre-constrained use, such as *ENACTED* which is only used in a legalistic sense in the Documents subcorpus, e.g., “is thus enacted.” Yet, there are still many collocations between the two subcorpora that reveal important distinctions between the values and meaning invoked by official policy documents, and the agents implementing those policies.

Chapter 2 laid out the criteria and methods for prosody analysis, and suggested inter-rater reliability following (Loewen & Plonsky, 2015, p. 90, 93), so I will only briefly recount it here. Two raters first evaluated (negative, positive, neutral) a subset of collocations from each corpus. We calculated inter-rater reliability using Cohen’s Kappa (κ) twice, with one round of review and discussion. I then constrained maximum samples of collocations so that some very high frequency collocations did not overwhelm the prosody results from other collocations, some of which were mere fractions of more predominant sequences. To do this, I sorted all concordance results by sequence, showing

every n^{th} instance to produce up to 100 instances of each collocate. This had the effect of retaining the numerical presence of high frequency collocations, while also including other forms. Without first sorting, then applying the n^{th} filter, the distribution of collocations would have been less reliable, giving the misleading appearance that, say, only one collocation or set of collocates was analyzed. So, if *older americans* were my collocation, and it had 1000 instances, and *act* appeared 50 times with that collocation, the sort would stack all lines including that collocation, then by words to the immediate left and right of that collocation, such as *act* to the right, and thus grouping all instances of *older americans act*. In order to produce a maximum of 100 collocations for evaluation, n would then be 10. This would still show approximately 5 concordance lines of *older americans act*, whereas it may otherwise have been excluded by other sorting methods. For collocations with 100 or fewer lines, I evaluated all collocations. As Louw (1993) demonstrates, subsets of collocations, sorted by n^{th} , deliver insights about collocational behaviors in the sampled language.

I will use Xiao & McEnery's (2006) typographic classification system to display and discuss results here. All items will be italicized, but items with a negative prosody are also underlined (*bad*), positive are also **bolded** (*good*), and referent words and neutral uses are only italicized (*neutral*). A referent word will be said to have negative, positive, or neutral tendency after accounting the overall ratio of the three evaluations of all collocations, in the form of negative:positive:neutral. So, if a collocate e.g., *opioid* has a total of 16 negative instances, 6 positive, and 2 neutral, it would have a ratio of 8:3:1, and be considered to have an overall negative prosody in the corpus.

2. Opioid

2.1 Preference

Opioid as a referent word tends to appear with a rather tight semantic pattern in the corpus overall. Collocates for *opioid* in the Documents subcorpus tend to come in the context of either diagnoses (*OPIOID USE DISORDER*), overdosing, or impacts of the opioid situation in the U.S. In the Interviews, *opioid* as a collocate follows a similar semantic pattern around use, and the extent of the phenomenon. Interestingly, the interviews include several words which extend the grouping, offering alternative lexemes aligned around the same semantic content: *crisis* but also *issue* and *epidemic*; *use* but also *addiction* and *abuse*.

Opioid crisis appears when agencies change their activities, including naming different kinds of exploitation and needs, and changing state level priorities. In the Documents subcorpus, the collocation appears in 14 documents describing the context that leads to policy change, both as a threat and to describe the challenges communities are working to face. In the Interviews, *opioid crisis* is used by 4 directors and 1 protective service worker. The agents also use close synonyms *issue*, *issues*, and *epidemic* in related ways. Each synonym appears with certain boundaries that guide their use. *Epidemic* has a similar sense to *crisis*, showing up when the agents are focused on ways in which opioids are affecting their services, especially appearing with intensifying items such as *afflicted* and *increasing*, and *every aspect of life*.

By extension, *opioid issue*, in the singular form, appears related to the accompanying grammatical article. When *the opioid issue* appears, it is in the context of the health services community attending to or addressing opioids as a health problem. By

contrast, *an opioid issue* is more local, and about the people and communities in which it occurs. It could be supposed that *the opioid issue* is representative of a public health subject to be addressed, while *an opioid issue* is something people have, or that particular communities experience. Further exploration of the term in a larger corpus would be needed to discover the durability of the article as the defining semantic feature of *opioid issue*.

Prescription in the Documents subcorpus is used consistently in two ways with *opioid*, either as an adjective modifier, or as a noun modified by *opioid*. Each case has specific meaning associated with its syntagmatic organization. Adjectival *prescription* appears frequently in descriptions of the *opioid crisis*. The frequency of this grouping shows at least some convention in which the opioid crisis is a prescription opioid crisis. Further, adjectival *prescription* appears with explanations and reports of the problem, for example: *increases in use, misuse*, and statistical reports. *Prescription opioids* are a major element to the crisis and, importantly, because it is a specific type of opioid, the documents use its identification to provide solutions. That is, by identifying *prescription opioid* with certain concrete problems, there are public health deliverables available.

When *opioid* modifies *prescription*, it appears consistently in guidelines for medical professionals. This pattern typically coincides with technical explanations of dosage, and prescribing guidance. This pattern is tightly constrained around its semantics not just in this way, but also in that it contributes further to the collocation of *opioid* and *prescription* as being centrally connected to providing concrete information that can lead to public health deliverables. Medical professionals can be given different treatment, dosage, medication guidelines etcetera which target reducing *opioid* use.

It is worth noting that *overdose* collocates with *opioid* in significant frequency in the Documents subcorpus but not in the Interviews. This is a critical distinction between the corpora, because intuitively this *opioid crisis* is about overdosing. Yet the *opioid overdose* problem is cited primarily by official policy, and not by the agents on the ground. This could mean that overdoses are not as visible an issue for the agents, that they do not accompany *opioid* so often as a cause, that *overdoses* are seen as related to some other semantic content, or some combination thereof. Any of these being true, the exclusion of *opioid* and *overdose* as a leading collocation shows that the respective meaning and experiences of *opioid* for these two infrastructural levels is quite different.

2.2 Prosody

As might be expected, *opioid* is negative for both the Documents and the agents' Interviews (Table 6). With the exception of *drug* in the Documents corpus, collocations for *opioid* will nearly always occur in predominantly negative contexts, with an overall ratio of 88:26:13.

Table 6: Collocations and semantic prosody for opioid

Collocate	<u>Documents</u>			Collocate	<u>Interviews</u>		
	NEG	POS	NEU		NEG	POS	NEU
<i>overdose</i>	54	22	12	<i>crisis</i>	12	3	0
<i>use</i>	85	15	0	<i>use</i>	8	1	0
<i>drug</i>	16	23	26	<i>issue</i>	9	0	0
<i>crisis</i>	32	3	1	<i>addiction</i>	8	1	0
<i>prescription</i>	23	4	0	<i>issues</i>	6	1	0
				<i>prescription</i>	4	0	0
				<i>epidemic</i>	4	0	0
				<i>abuse</i>	1	3	0
				<i>think</i>	2	2	0
Total	210	67	39	Total	54	11	0

Despite *opioid* having a negative character, *drug* modifies its use in several distinct positive and neutral environments, with an overall tendency toward positive or neutral uses. The reason for this is that when *opioid* and *drug* occur together, it is most frequently with *overdose reversal*, especially the sequence *opioid overdose reversal drug*. This sequence appears positive, when it is reported as a solution to the *crisis*, and neutrally when policies are created policing and regulating the distribution of these *reversal drugs*. When the sequence is *opioid drug* it tends more toward negative contours describing misuse, over-prescription, and other features or causes of the opioid epidemic. Although there are more collocates that are not, for example, formulaic sequences or parts of larger sequences, in the interviews, there seems to be a much tighter prosody around the word for these agents than in the documents.

3. Protective

3.1 Preference

Protective provided an interesting case especially around two collocates: *services* and *service*. *Protective services* are a designated program, with target populations, criteria for access, and descriptors of what that program is meant to do. *Protective services* predominantly appears in documents to create or regulate programs, and its neutrality comes from this procedural usage. This programmatic usage extends to the agent interviews. *Services* only appears when describing the programs and procedural aspects of carrying out those programs, usually in a decontextualized manner. One important aspect of *protective services* is that it also modifies *staff* and *worker* in both subcorpora, though they did not collocate as closely with *protective* in the Documents. This is one of

the few indicators that, even in its programmatic or procedural sense, *services* are sometimes associated with provision by agents and workers, as the ones that will follow the criteria and implement the programs.

Service, in contrast, is something exclusively carried out by agents. In the Documents corpus, *service* is restricted to an adjective for agencies, activities, cases, and clients. The one exception here is that annual reports treat *service* as a noun (e.g., provided service). Yet for the agents, *protective service* operates as a modifier specifying disciplinary or specialization for workers and cases. They predominantly use *protective service* with *workers*, *staff*, and to a lesser extent, apparent from concordance analysis, *investigators*. *Protective service workers* is commonly used in the context of describing the concrete events and procedures of providing service, such as how many workers go, how many are currently employed at the agency, and the effects of current agent counts.

One senses from the subtle differences in semantics here that there is a feeling of ownership or materiality to *protective service* compared to *services*, which are more abstract. While *protective services* are an aspect, or a key program, of elder services, *protective service* is a category describing people and activities.

Table 7: Collocations and semantic prosody for protective

	<u>Documents</u>				<u>Interviews</u>		
Collocate	NEG	POS	NEU	Collocate	NEG	POS	NEU
<i>services</i>	22	14	64	<i>services</i>	74	17	9
<i>need</i>	76	0	12	<i>service</i>	18	15	2
<i>service</i>	20	2	2	<i>workers</i>	5	16	2
				<i>staff</i>	4	2	1
Total	118	16	78	Total	101	50	14

3.2 Prosody

Protective is used primarily in negative ways in both subcorpora (Table 7). It could be argued that *protective* is intuitively positive. Protecting others from harm, or against harm, for example, would be thought of as positive. The use of collocations, and the local context in which they occur, reveals that for elderly services, *protective* is often an issue related to negative situations, rather than a sort of intervening, positive influence. There are two specific cases in which this negative prosody does not obtain, *services* which is predominately neutral in the Documents, and with *workers* in the Interviews. Overall, *protective* tends to be negative with a ratio of 219:66:92.

Protective services, used in highly programmatic sense in both corpora, nonetheless shows up differently in each subcorpus. It is used to create programs and services in the Documents corpus, and so ultimately appears frequently in formulaic and neutral contexts, as *adult protective services*. When it appears in this neutral way, it is often decontextualized, relying on prior co-text to establish its need, but its local use is procedural. Occurrences where *services* are negative are more closely bundled with reasons for its creation, and criteria for their use. There is an interesting contrast with the Interviews, because *protective services* is overwhelmingly negative. Though the programmatic semantics of this collocation persists, it is often more closely attached to the environment of abuse or need as an explanation for its existence. Additionally, agents often report dissatisfaction with the state of *protective services*, and a general antipathy or mistrust of *protective services* from their populations.

While in the policy documents, *service* remains overwhelmingly negative, for agents, *protective service* is something associated closely with the agents and *workers*, and thus has a more balanced negative-positive ratio, and is very positive when explicitly

referring to *protective service workers*. In that light, there is a very close split between the negative versus positive or neutral usage. Although the contexts in which service workers find themselves are negative, the workers and the work they do are positioned positively. They represent the good reasons and the hard work of rural health service provision. There are distinct indications of, and explicit use of the term “pride” related to *protective service* as both an activity that workers carry out, and meeting the needs of their populations. When the collocation is with *staff*, a synonym with *worker* that is arguably a more abstracted category, there is more negativity associated with *protective*. In most cases this again is related to shortages and fulfillment at the procedural and infrastructural level.

4. Older

4.1 Preference

Older tends to appear with collocates that involve people for both subcorpora. However, the use of synonyms for people tends to be quite different between them. In the case of both *individuals* and *adult* in the Documents subcorpus, *older* is always a modifier that sets criteria for services. All instances of *older* with *adult* are a general class of qualified recipients. When the documents invoke this class, it tends to accompany the grounds of inclusion, such as being victims of financial exploitation, or neglect. By extension, this collocation *older adult* also frequently occurs with *report of need*, or its acronym RON, or with *need*. In combination, *older adult* with *need* reinforces the generic subject-class to which policies can be applied, and the specific causes for those services.

Individuals, while still appearing as a class for service provision, tends to appear in a different context. *Older individuals* appears with *income* (specifically *low income*). In contrast with *adult*, which tends to address specific phenomena or causes for services, *individuals* is more associated with the conditions in which those people live. Conditions, as such, are still broadly about the reasons for services being created, but do not usually address things such as exploitation. Rather, they invoke social determinants. It is worth noting that ironically, *individuals* is still not about particular people or concrete examples. In this sense, the plural form is necessary to establish the class or group in need of service, rather than any individual member.

In contrast to the documents, agents' interviews use *older* in both group-type reference and to express unique, concrete experiences that their populations face. On one hand, agents' use of *older* with *adults*, *folks*, *people*, and *population* describe groups to which their services apply. The difference occurs, for example, in that when agents use *older folks*, they are used in active constructions of the experience rather than the passive, and are grammatical subjects as often as objects. This has a strong effect on the perspective one has in understanding perhaps why, or how, services are necessary. This contracts the space between services, and the people and conditions that give rise to them. This contraction, as a semantic feature, reinforces the relationship between the agency and real people that they serve, rather than simple classification.

Table 8: Collocations and semantic prosody for older

Collocate	<u>Documents</u>			Collocate	<u>Interviews</u>		
	NEG	POS	NEU		NEG	POS	NEU
<i>individuals</i>	57	30	13	<i>adult</i>	75	25	1
<i>adult</i>	97	0	3	<i>adults</i>	65	12	1
<i>adults</i>	53	24	23	<i>folks</i>	31	4	1
<i>income</i>	72	11	2	<i>people</i>	11	5	2
<i>need</i>	78	7	19	<i>think</i>	9	2	0

				<i>person</i>	10	3	0
				<i>population</i>	7	2	0
				<i>help</i>	2	5	0
Total	357	72	60	Total	210	58	5

4.2 Prosody

Older comes across quite negatively with a ratio of 567:130:65 (Table 8). This overall negativity is related to the propensity of *older* to appear as a characteristic of certain groups that are in need. The only exception is *help* in the Interviews, which is positive except for two instances. *Help* appears in its infinitive verb form in 5 of 7 instances. It is only in its verbal form that *help* is positive. When it appears as a noun, *help* with *older* is in fact negative: people cannot get help, or are in need of help. The noun form of *help* reflects the larger trend in collocations of *older* that some class or category is the target of services or, *help*. Thus, *older* as a modifier functions with predominant negativity as it manages the people, populations, adults, and so on, that have attracted the attention of health policy creators and implementers.

5. Discussion: Semantic Preference

The Documents subcorpus has rather tightly constrained semantic patterns in regard to *opioid*, *protective*, and *older*, likely owing much to the formulaic genre conventions from which many of the documents are drawn. I attempted to avoid some of the pressure exerted by these conventions, e.g., the forced repetition of some patterns due to titles, specific acts being invoked, etcetera, by sorting and then selecting from a subset of the possible concordance lines. I also ignored redundant counts of bundles that only appeared in certain sequences, such as the *OLDER ADULT PROTECTIVE SERVICES*

ACT mentioned above, which contained *older, adult, protective, services, and act* all at once. Such redundant collocates could appear as a collocation for each and every item. Still, while some over-occurrence must be present, to some extent this is valuable information in that any instance is still a conveyor of meaning. Nonetheless, the findings in this analysis bear fruit in the distinct similarities and differences in which shared collocations do occur between documents, and between documents and agents, and in which synonyms or closely linked meaning could be established.

Opioids are about the communities and people that agents serve. At a pragmatic level, it could be arguable that official health policy documents, which are often meant to serve broader communities and contexts, cannot be about real individuals and specific experiences. Thus, the meaning categories are formed and constrained by broad groupings, populations, and thus depict *opioid, protective, and older* through those optics. Agents, in contrast, refract their needs for policy provision through the people they meet every day, reports by their agents, and the pressures felt in administering services. Pressures, though, are multi-sited. Administrators talk about what populations need, and they connect the material experiences of abuse and exploitation to opioids. But they are also reflective of agency administration, procedural restriction, and oversight. When administrators face the opioid epidemic, they make sense of policies and what the policies demand of them. Just as well, they face the needs of a vulnerable population that change by day, by call, and by report. In this way, agency directors form a linchpin between the documented policies, case managers, and populations. Agents on the ground, both the directors and case managers, thus frequently share categories or descriptions of their populations with the policy documents, yet they attach other synonyms to each

category. They have an arguably fuller, or at least more varied, repertoire of ways to talk about the opioid epidemic. As a result, they produce different prosodic dimensions in their interviews, especially in their self-reflective accounts of how they are perceived in the field, and their specific, evocative depictions of people in need.

Directors and case managers frequently have disagreements with the policy mandates and decisions they are tasked with. In fact, agents rely comparatively little on directly referencing the mandates and legal texts that give them authority. Only in the context of *protective* did we see collocations that had distinct, technical use behind them that mirrored the documents. Even in this case, collocates extended to *workers* and *staff*, underscoring the material activities of *protective service*, rather than only the prescribed procedures.

The departure in what *opioid* is about, and by extension the means to address *opioid*, is perhaps best captured in the over-presence of *overdose* collocations in the Documents, and their absence in the Interviews. This is a critical distinction between the corpora, because intuitively this *opioid crisis* is about overdosing. Yet the *opioid overdose* problem is cited primarily by official policy, and not by the agents on the ground. This could mean that *overdose* is not as visible an issue for the agents, that it does not accompany *opioid* so often as a cause, that overdoses are seen as related to some other semantic content, or some combination thereof. Any of these being true, the exclusion of *opioid* and *overdose* as a leading collocation shows that the respective meaning *opioid* for these two infrastructural levels can be quite different.

As it impacts implementation, it is clear that there is a need for a fuller vocabulary of sorts in order to adequately address the needs of the rural, elderly population with

regards to *opioids* than clinical and biomedical intervention. If policy mandates can be said to layout the criteria, intentions, and programs for confronting the opioid epidemic, then the language that is used to accomplish that ought to be understood as *saying what it means to say*. Taking this as a reasonable assumption, (1) *opioid* is a social-community issue for elderly folks and their agency directors, with many dimensions of experience rather than only preventing overdose-related deaths; (2) *protective services* and *protective service* are read differently between policy, caseworkers, and the populations that receive that service, and thus impacts construal of being a health services worker, staff, investigator etcetera; (3) *older* as a referent word is somewhat adrift between corpora, where in documents *older* collocations are categorical criteria, and for agents they are touchstones of concrete experiences, and real people that may, or may not, admit to prescribed categories.

6. Discussion: Semantic Prosody

The semantic prosody of *protective*, together with its collocates, demonstrates the need to look deeper at the situated language use, and thus the function of affect in discourse that extends beyond single-word connotation. During interviews with agents, there is a distinction between the perceptions of the agents and the perceptions of the population. This has some effect on the perspective-taking that occurs. When asked about the procedures of protective service, agents would often produce accounts of their populations being afraid of, or suspicious of, case workers. Yet the agents would often take these accounts as wedge points, where they would outline the approaches they take and reasons for being there. These different accounts illustrate yet another infrastructural

departure: agents from their population. Agents perceive their roles and activities positively. The population, at least as reported by agents, is more likely to ascribe negative stances toward the agents' duties. Different evaluations in the third person accounts are perceptible in the prosody of *protective*.

Sinclair, as Hunston suggested, might discuss this as a wider discourse function of the prosody, represented in the local, interactive plane of discourse. The evaluative content of *protective* is read interactively, first person, by the caseworkers for themselves. It is simultaneously related to prior experiences, autonomous experiences, of different evaluations of *protective* by people that are not present. Taking Sinclair's notion of wider discourse function, we cannot see each instance as isolated or detached from other planes of discourse. Instead, it is semantically related to other uses, triggered by the particulars of discourse at hand. What I mean is, the case workers are pivoting their evaluations (positive, negative) of aspects of *protective* between perspective-taking: theirs compared to their populations. Furthermore, each referent word does not itself retain a particular prosody, but instead hooks up with collocates, falling into patterned uses that overall have a prosody, a function in discourse. For example, the meaning and so-called aura of *protective* was intimately bound up with (1) whether it appeared with the plural *services* or the singular *service*, and further still (2) how that collocation was linked to *workers* or *staff*, or neither. These different collocations are necessary constituents at the local level, the specific use of them during interaction, but also ties them into larger discourses that are autonomously used by multiple parties, texts, and regimes.

The semantic prosody presented here gets at discrete uses of the collocations. This is one way of seeing the prosody as isolated, in a sense an indexical use of the prosody

'rule' at a semiotic level. Language, being constrained as a symbolic system of patterns and norms, is mainly understood through its uses and material exemplars. Comparing a number of uses of any given collocation allows the examination of specific norms, via the qualities that are common to those uses. Each *older protective service worker* is a single object composed of a number of functional pieces. What is most relevant for this analysis, is that when a caseworker uses this collocation, in the context of a positive evaluation of the job or conditions of enacting a policy, they are in fact displaying the prosodic rule of that language use. In order to signal positive aspects of the job, they draw on certain specific cases and collocations that have been associated precisely with *protective* and *service*, and hearken back to the manners of speaking that this particular collocation represents. In this same regard, the agents use these rules to report on other speakers' experience, through reports of consumer perspectives, which entextualizes the viewpoints and experiences of purported people outside the local, interactional event.

The semiotic process conjoins the interactive, connotational, and lexeme-level with the autonomous, prosodic, and collocation levels. Each specific use has certain characteristics on its own, which are by-and-large unique to the event. Yet, they also carry with them indelible marks of the governing rules and norms that are recognizable to others, and conveyed by others in discursive past. In essence, they are both-and, not either-or. Specific uses are ultimately objects of attention during interaction, the semantics of which are formed in relation to larger symbolic patterns recognizable by other members of that language community. In the next chapter, I will drill down to the evaluative features of semantic prosody as evaluative affect, or valence, as it is used by a health agent to pivot their own identity around particular discursive topics. In essence, the

Sinclairian notion of *prosody* can be located in isolated evaluative descriptors as presented above, but also as a *function* that provides space to speakers to negotiate just who they are, and what they mean, at different times in the course of an interactive event.

Chapter 5

Evaluative Affect in the Social Practice of Institutional Identity: Making a Case for Connotative Inversion

1. Introduction

Discourse is a social activity that takes place across time and in multiple events. This historical relationship between distributed events is uniquely important to discourse's pragmatic function in cohering social ephemera present within otherwise disjointed places, individuals, communities, and societies. This pragmatic function seems to serve as the principal resource for people to develop and display their identities through recognizable social means. Identity may be constructed through claimed perspectives in a single episode of interaction, or over multiple interactions, reified through ongoing, contingent stances. In either case, discourse is necessarily an interactive endeavor, as it is founded on the joint attention of participants (Goffman, 1981; Kärkkäinen, 2006). Interactions draw on, reproduce, and reframe stances that have occurred. Though each discursive event is locally unique, the communicative frameworks that structure our interactions are not reinvented at each turn.

In this article, we explore two fundamental discursive resources: stance and indexicality. We then follow the claim that certain aspects of affect may appear as indexically-grounded social practices (Ochs & Schieffelin, 1989; Wetherell, 2012) by using the valence dimension of affect as our specific unit of analysis. To substantiate that affect is a reliable semiotic subject for discourse analysis, we pursue it in two different institutionally grounded contexts, with individuals at different stages of their careers. We introduce and analyze a previously undefined discursive practice called *connotative*

inversion.² Connotative inversion describes the changing evaluation of some topic (e.g., positive to negative), which occurs over the course of multiple stance-taking events. This article tracks one way in which affective practices serve a pragmatic function by signaling speaker identity, and bringing that identity into the discourse space infused with overt social acts such as stance-taking.

2. Discourse, Stance-taking, and Semiotics

Discourse is a semiotically-mediated, interactional project of joint attention by multiple parties. It can occur in various media and structural levels, depending on one's particular disciplinary flavor. For this article's purposes, discourse is the communicational project under way during ethnographic interviews. In this sense, discourse is not a conversation as some scholars would understand it, such as in conversation analysis (Sacks et al., 1974; Sidnell & Stivers, 2012). Yet we maintain two important positions for according these interviews a place as authentic discourse: (1) they involve multiple participants, providing intersubjectivity and interaction, and (2) they are with institutionally situated informants that represent experiences and cultures relevant for finding discursive consistencies and contrasts in specific sociocultural contexts. As such, individuals develop their institutional positions and social histories in the form of stances. According to Du Bois (2007), a stance-taking event is a public social action, usually accomplished via linguistic means, taken by a subject toward a specific, dialogic target (p. 140-141). Stance-taking canonically involves a subject evaluating some object of discourse, and aligning with locally discursive variables, such as other interlocutors or

² This term appears in Misek (2010, p. 187) in a different context, and with a different purpose.

overhearers. Furthermore, any stance event requires shared means of stance-taking, and the expectation that collaborators will be able to recognize those stance events as such (Ochs, 1996). Stance-taking events unfold as speakers align with discursive figures, comment on them, and dialogically co-construct meaning for those figures.

Relatively stable identities emerge out of these stances as enactors construe who they are, and with whom they are interacting. However, identities are not static pieces of an individual's life. Instead, what we intuitively might call identities are performed through an emerging process of stances that one takes, based on subjective experiences that may not be explicit in the discourse. This processual fashioning of identity can be seen through the lens of what Du Bois and Kärkkäinen (2012) call the stance field: stances reveal identities as subjects deal with themselves (their claims, their stances) in an immediate exchange, but also as one accretes stances across discursive events and spaces, such as when one develops their professional identity over weeks, months, and years. Projecting and recognizing identity is an intersubjective activity with certain boundaries and expectations. Identities emerge in processual fashion, eventually coalescing into something associated with a speaker. While individual speakers develop identities in the course of their interaction, identities are not ultimately only personal constructs but are based on a socially "recognizable coherence" tied to "a constellation of attitudes, beliefs and values" (Lemke, 2002, p. 72).

Equally important to address is the issue of whether we consider identity a real phenomenon that exists in the world, or a certain lexical term guiding the study. While surrounded by a "romantic folk language," identities are semiotic expressions of a "person's evaluative stance toward interactions" (Lemke, 2000, p. 283). As Lemke notes,

these evaluative stances may include what people do, believe, prefer, desire and so forth. Defined this way, the notion of identity has a core reality, the different dimensions of which come to prominence at different times, in different sociocultural contexts (Pelkey, 2019). Intentional work and historical circumstances determine which aspects of identity become semiotically charged (Goodwin, 2013, p. 8).

We take socialization to be the primary process of attending to and assigning salient signs to phenomenal figures or objects (Ochs, 1993, 2000), including aspects of identity referred to above. Socialization gradually adapts people into certain institutional identities and ideologies through repeated exposure to historical contexts. Historical, material experiences, such as office meetings, personal interviews, classroom interactions, etcetera, shape subjective potential through warrants on ideologies, social conventions, and social identities (Duff, 2002; Silverstein, 1976, 1993). Material experiences in turn become signs, recognizable by those that have shared conventional practices, in a process called semiosis (Peirce, 1991, 1867). Repeated exposure to activities of an institution gives rise to the delicately constrained configuration of signs that are appropriate to expressions of belonging by both speakers and hearers, or their indexicality.

Signs have been dealt with differently by different scholars. Our work continues in a mostly Peircean tradition, rather than Saussurean. In contrast to Peirce, Saussure's semiology holds that the relation between sign and signifier is: dual, analytical in nature, and arbitrary (Chandler, 2007). This is contrary to our position, which holds that signs and semiosis are materially based in the experience of people, thus comprising three parts: the object, the sign or representamen, and the mind or interpretant. Signs are

tripartite, materially-grounded, and not arbitrary in this sense. Moreover, material contexts may be shared and their salient features negotiated by people, making semiosis an on-going process of attention. Signs, then, are not stable nor metaphysically independent (nominal) from the conditions that give rise to them. Scholars, such as Freedman (1986) and Jakobson (1965), have discussed ways that Peircean and Saussurean systems interface, but at the very least for this study, we have restricted ourselves to the Peircean model as it provides a sound framework on its own that meets the materially-focused assumptions necessary for our approach.

In Charles Sanders Peirce's tripartite semiotics, semiosis obtains in three fundamental grounds, the icon, index, and symbol, and the interpretants or semiotic associations necessary to signify them (Peirce, 1991, p. 30; Savan, 1976). The most object-sign unified ground is the icon. Iconic signs directly resemble their object. A symbol is a sign that is known through some other sign, principle, or convention, such as language (Savan, 1976). Indexical signs relate to their object as a material fact which has been interpreted, rather than resemblance to the object itself, or by strict convention. Historical contexts create the material experiences that lead to indexical grounds people are socialized to recognize, and in turn signal themselves. It bears repeating that from our perspective, signs do not exist independently or continuously, nor are signs then shared multiply between the interactors. The intersubjective process of interpretation, in this sense, results in a Peircean interpretant (Savan, 1976). We hold that: (1) signs are a result of materially-socially ingrained practice (interpretants); (2) it is the material conditions that may be shared, not the signs themselves as ontological objects; (3) signs are *shared*

only in-as-much they are communicative figures intersubjectively aligned-to the stance field.

To clarify how we will utilize Peircean semiotics, it is critical to understand that objects and their signs can be interpreted as multiple grounds at once, for example being both an icon and an indexical, or a symbol and an icon. Which ground is salient is a matter of the interpretant that recognizes them at any given attentional moment. To get at this, we can use the word *outrage* as an example. Consider that the word *outrage* is itself not the physiological state of outrage. An individual feels a physiological state that is recognized, which is to say signified, in a way which resembles prior bodily states. Due to that resemblance, such a physiological state produces a sign that could be said to be iconic (Champagne, 2018). However, the word form does not resemble that state. So, the word form is not an icon. In contrast to the iconic bodily state, the word form *outrage* is symbolic. The utterance, or the text, that the subject produces is a symbol, bound up as the conventionalized lexical form *outrage*. That lexical form stands for a bodily state, which conventionally expresses certain qualities, e.g., anger, indignation, and so on, within the local English-variant expression. So, from this angle, the linguistic expression *outrage* (symbol) is understood (interpreted) via convention to denote e.g., anger, indignation (object).

Further, the word *outrage* can be indexical. An index is known by a fact of relation, such as material experience, rather than convention or resemblance. We may have expressed something like *outrage* ourselves, or perhaps we deal with *outraged* people in our professional life. So, in addition to its symbolism, *outrage* is constrained by particular facts or experiences that may be more salient from one's own history. In some

contextualized histories, such as if one is familiar with political speeches, hearing *outrage* might be attended to as a politically loaded term that calls out a transgression. On another account, if one were a psychiatrist experienced with expressions of outrage as a stress response, an utterance of *outrage* may be primarily understood as a person making sense of a stressful event. Local variables drive the indexicality of *outrage*. Thus, we navigate discourse through indexicals, acquired by material experiences relevant to the stance field.

Through this integration of stance-taking, socialization, and semiotics, we hope to further develop evidence for the question posed by Kiesling (2015): “can we talk about different language communities or cultures as having different stance repertoires or expectations” (p. 11)? From our perspective, indexicals become constitutive, discursive elements that speakers draw on in negotiating social occasions, both respecting and transcending cultural-historical conventions. Indexicality is thus a functional pattern within stance-taking repertoires that enacts cultural experiences, and ways of life. An enactor recognizes certain social norms, and operates within them to establish important beliefs that they hold, in a processual construction of who they are, their goals, and their values. People draw on possible indexical signals, some of which are overt references, while others are pragmatic and work alongside content to establish identities in the discursive field.

3. Affective Practices

Though affect and emotion have been construed through a number of semiotic lenses, there remains work to be done on the situated use of affect as a discursive practice

that outlines identity in both specific exchanges, as well as across events. As Wetherell (2012) has eloquently stated, affective practices create tiny worlds. We take it that stances are the staging grounds of those tiny worlds, committing speakers to possibility and causality, supposition and consequences. We can see this idea specified in Kockelman (2004), who synthesized Goffman (1981) with Jakobson (1990) by stating that a stance event is “a commitment event to a narrative event relative to a speech event” (p. 131). Affective practices accomplish interactional work beyond the expression of emotion-laden referential semantics. There is a greater ground to them than simple statement of a categorical type of feeling, e.g., anger, fear, sadness. Though its presence may be recognized as references to emotional states, it may also be detected as underlying connotative features that augment stances a speaker holds (cf. emotional-emotive communication distinction in Caffi and Janney, 1994, p. 328). We will focus on indexical aspects of affect in institutionally-situated discourse, although affect broadly construed has been considered by some scholars to be a critical dimension of any linguistically-mediated activity (Besnier, 1990; Caffi & Janney, 1994; Du Bois & Kärkkäinen, 2012; Ochs & Schieffelin, 1989). Inasmuch as affect has a variety of forms available to a speaker, we will scrutinize how it manifests linguistically to create rhetorical impact, and assembles clusters of stances into identities (Davies & Harré, 1990; Edwards, 1999; Ochs, 1996).

Our focus on situated uses of affect seeks to provide evidence of a particular type or practice of affective stance, meeting calls for attention by Du Bois and Kärkkäinen (2012), Poynton & Lee (2011), and Wetherell (2012). We will argue in this article specifically that evaluative affect sometimes operates as a social phenomenon that calls

forth aspects of identity, without direct reference to an identity (Silverstein, 2003). Because there is not a direct reference, our work is intended to extend observation of identity work to a discursive practice or behavioral pattern rather than linguistic forms, e.g., deictic, pro- or nominal forms, morphosyntax, or phonology as in much work on stance-taking (Cook, 2011, p. 297). Further, we contribute to contemporary models of emotion from the discipline of Psychology. More recent models of affect have been under-utilized in conceptualizations of affective stance (Poynton & Lee, 2011), despite their promise to enrich explanations of the workings of stance-taking events. We integrate a dimension-based approach to evaluative speech that addresses several issues in modern discourse analysis. Specifically, we investigate the evaluative dimension of affect called valence. At a minimum, focusing on valence helps navigate issues of authenticity (Du Bois and Kärkkäinen, 2012, p. 437), because valence is not a categorical claim to an emotional state, but allows the recovery of spaces of emotion-laden communication. Critically, we will demonstrate that evaluative affect can be operationalized within current discourse analytic procedures to illuminate structural features of stance-taking.

Because of the great scholarly and popular history of emotion, a deeper review is beyond the scope of this discussion. Our work is situated in a line of affective science called psychological construction (Barrett, 2009, 2017; Russell, 2009). Proponents of psychological construction assert affect to be an active stream that engages numerous bodily and neurological processes, which include the cognitive *knowing* of the emotional experience at hand. This model stands apart from basic emotions theories that take emotional categories, usually between 5 and 7, to be discrete, and composed by

psychobiological primitives shared across humankind (Ekman, 1994, 1999). Scholars in the construction camp reject claims asserting basic emotions on several grounds, not least due to a lack of empirical findings to substantiate them, and inconsistency in a theory claimed to be basic and universal (see Wetherell, 2012, and Barrett 2006, for further discussion). In contrast, they have found two affective dimensions, valence and arousal, to be both reliable and consistent across cultural boundaries and geographic regions (Barrett, 1998; Russell, 1991). Valence attends to the evaluation of any figure or object e.g., positive-negative assessments, while arousal captures levels of attention (Osgood et al., 1957). These two dimensions serve to organize bodily experiences across time, creating the grounds for experiences to construct core affect (Russell, 2003; Russell & Barrett, 1999) into culturally and contextually mediated *emotional episodes*. Evaluative affect, specified as it is in the construction model, has thus far been understudied as a specifically indexical resource. Though it is not exclusively indexical, as in the discussion of *outrage* above, the material facts of affective experience in constructed emotions create a potential indexical ground for analysis. Thus, we propose the valence dimension of core affect and related bodily experience as an *affective indexical*.

As we will show in our analyses, the construction model of emotion brings utility to any line of inquiry in the social display of affect. Firstly, valence and arousal are dimensions, rather than categories. Dimensions are active constituents that interact in the cognitive processes relating different bodily states, linguistic choices, semantic differentiation, and other multimodal conditions. Thus, they extend to different means and modes for analysis, helpfully creating a space for social semiotic analysis of the manifold affective practices people employ in discourse. Secondly, and critically for

linguistically or discourse-based inquiry, both Barrett et al. (2007) and Lindquist (2017) found language to be a necessary component in the production and perception of emotion. This is intuitive from an expressive perspective, in that humans are wont to make sense of their experiences by communicating with others. Less obvious is that language is a necessary condition of emotional experience because it is the primary medium through which humans acquire, order, and develop their symbolic thought, which later mediates subjective processes (Holodynski, 2013; Vygotsky, 1962). That is, since emotions are a *synthesis* of core affect's interaction with current experience, symbols ferry notions of particular emotion categories into our stream of consciousness, scaffolding our understanding of relations between phenomenal objects. Our approach forges a relationship between the semiosis of culture, signs, and socialization with the constructed theory of emotion, and provides a coherent indexical role for dimensional affect, bridging embodied action, dimensions of affect, and rhetorical expression in discourse.

To explore this relationship, we introduce an affective practice we call *connotative inversion*: a switch in evaluative affect by a single speaker, on the same discursive object, over time. As a construct, connotative inversion draws together the emergence of a speaker's identity via their valenced stances. A speaker takes valenced stances, providing indexical signs of their identity, which are directly contradicted by subsequent valenced stances on the same discursive object. Such stances index some other aspect of their identity, meanwhile aligning with prior stances the stance field. The stances taken represent affective indexicals. Connotative inversion lends itself to investigating the material basis of indexicality because we find speech that entextualizes

aspects of a speaker's history that are central to their identity in the here-and-now. We expect that if we can locate consistent patterns of connotative inversion, we will be able to demonstrate an avenue of intersubjective identity performativity unique to evaluative affect and its associated indexicality.

From a certain vantage point, institutional contexts are perceived to restrict variability of affective practices. Rather than restricting expression, we see affective practices as playing a role in socially constructing and ratifying institutional identities vis-à-vis the ritualized topics, subjects, and knowledges afforded by the institutional environment. In essence, affect is a necessary contour of institutional discourse in managing cultural scripts and one's place in that institution (Edwards, 1994; Russell, 1991). To assess the rhetorical impact of affect, our analysis will focus on the ways in which utterances may invoke a positive or negative affective stance, or the ways in which discourse can be said to be *valenced*. With this in mind, we proceed to ask two questions:

1. What stance-taking strategies do institutional figures in this study employ to manage their social identities?
2. How, and where, does connotative inversion appear to strengthen or attenuate those strategies?

4. Data and Methods

The aim of this study was to explore the ways in which affective indexicality manifests consistently in discourse. This led us to two possible routes: a larger number of interviews from one institutional setting, or a smaller number from multiple settings. If the former, there may be more consistency within the set on which to base our claims. If

the latter, we would be able to focus on reliability across multiple settings or contexts. Our intention to focus on rather micro-level, sequentially-grounded data influenced us toward the latter option. We inferred that if we could find reliable patterns between institutional settings, with individuals at different stages of their career, we would have a stronger case for continued investigation. Thus, we chose data for this investigation from semi-structured interviews in two settings, with one senior-level participant, and one just beginning their career.

One set of transcripts details one interview with a health agency director (Clark, CLK) who is also a life-long resident of rural areas. Clark is in his mid-fifties, and holds a Master's degree in business management. The interviewers (Brad, BRD; William, WIL) met Clark approximately one year prior to this interview during an initial phase of the research project. The interview took place in the administrator's office, lasted just over an hour, and was audio-video recorded. After the interview, audio was transcribed into verbatim transcripts. The structural regiments of an interview are such that speakers, Clark in particular, are given latitude to retain the floor without interruption or contest. Thus, each turn at talk appears in a relatively clear, textual format attending to content of speech. This format retains utterance sequence but not paralinguistic features such as prosody, or gestures.

The second data set features seven interviews conducted as part of a study of graduate student writing and socialization. The interviewer (Naseh, NAS) met the interviewee (Reza, REZ) five months prior to the study. The seven interviews ranged in duration from 30 to 95 minutes. Interview audios were transcribed and later analyzed through juxtaposition with Reza's developing texts. Similar to the health administration

interview, the interviewer attempted to have Reza hold the floor with minimal interruption in response to questions. Paralinguistic features are not transcribed.

Transcript data represents a record of the stances that speakers take during the interview. This makes our analyses speaker-centered, rather than hearer-centered. Stances appear as accurately to their original sequence as possible given the verbatim formatting. Retaining sequential properties is necessary to establish intersubjectivity on stance objects. To accomplish an analysis of these stances, we implement two approaches. Firstly, we will analyze direct excerpts from the interview that demonstrate salient aspects of social identity and entailed indexicals claimed to establish it. To clarify stance-taking events, we then employ a diagraph (Du Bois, 2007) to specify line number (sequence), subjects, objects, stance predicates, and affective valence (see example). By organizing stances into the diagraph, the social identities and values that underlie interaction can be neatly laid out and detailed.

Example Diagraph				
#	Subject	Position or Evaluation	Object	Valence
Line	I	threw a horrible	pitch	Negative

The second approach will be to identify affective valence present in the discourse of the participants, as a dimension of stance-taking strategies. A major difference with the diagraph features found in Du Bois (2007) is that valence is recorded in place of alignment. Alignment refers to the relationship between utterances, where some portion of an utterance couples with another whether through morphosyntax, reference to a stance object, or other discourse markers. Although alignment is a crucial element of intersubjectivity, the interview format mediates a portion of discourse normally served by alignment. On the other hand, valence is central to this analysis and is not mediated by

the text format itself, and thus is in need of attention. So, although alignment is also a necessary component in connotative inversion, valence commands more attention in diagraph real estate so to speak. If a sequence of utterances is connected by a subject or object that has been elided in the interview context, that item is bracketed within the diagraph for clarity.

Both authors read and analyzed the interviews for valenced stances. We first marked out stance-taking events that staked out identities in the conversation. We would then mark affectively charged excerpts for their affective indexicality, and independently classify their positive or negative valence for comparison. Both analyses resulted in agreement on evaluative polarity, with the exception of one excerpt which is presented in Table 14 below. In this excerpt, we negotiated our evaluations and agreed on the *neutral* class for those cases. In the end, this neutrality formed a critical link in the developing identity of Reza over time, while maintaining the object of the discourse.

An excerpt of each interview will be first presented for discursive context. Then, salient stance events will be organized into a diagraph showing the stance predicates and relation between utterances. Using the diagraph, the analysis will focus on the social identities constructed, and the affective indexicals present with those constructions. Our analysis begins with a director-level health agency administrator, Clark, and how disparate identities are communicated within a single interview.

5. Analysis

5.1 Being Rural

The initial question fielded in the interview asks for an autobiographical report. Clark (CLK) constructs himself as rural early and often. He claims this identity through a

variety of discursive genres such as large narratives and reported events, and matter-of-fact single claims. According to Clark, familial heritage and community are the hallmarks of rural culture. Two recurrent themes that Clark claims to be central rural values are the proximity of elders, and multigenerational histories. Clark uses his personal proximity to his grandparents to claim personally rich knowledge centered on his family that sets him apart even from his own cousins and siblings:

- (1) 25 *CLK: And that's what they did in my case. Heh heh heh. I was staying with
 26 my grandfather and grandmother. He was born in 1892 in Oklahoman
 27 Indian territory. From that experience, I learned many family
 28 traditions and stories, what my heritage was like way beyond my
 29 cousins and my siblings. I was, I believe at this point, fortunate
 30 to have had that experience. So, I thought at that point, "hey this
 31 is just life. This is just how people live. You do what you have to
 32 do to get through college." And so I stayed with my grandparents,
 33 and it was great. It turned out to be a fantastic experience.
 ...
 76 *CLK: Yeah. Yeah, there's... What I have learned is the mindset of the
 77 elderly generation, their values, and their sense of dignity and
 78 purpose, and meaning in life, and context.
 79 *BRD: And this comes from living with your grandparents?
 80 *CLK: Living with my grandparents

Table 9: Diagraph of excerpt 1

#	Subject	Pos/Eval	Object	Valence
28	my heritage	was like way beyond	my cousins and siblings	Positive
29	I	was fortunate to have had	that experience	Positive
32	I	it was great	stayed with my grandparents	Positive
33	It	was a fantastic	Experience	Positive
77	Their	sense of	dignity and purpose	Positive

In excerpt 1, line 28, Clark lays the groundwork for a claim that closeness and insight into multigenerational knowledge brings one closer to rural values. He then highlights his familial proximity with the apparently positive term *fortunate*. Looking to lines 76 to 80, Clark elaborates on the qualities of his elderly generation. He describes their values through a *sense of dignity* and *purpose*, which both connote a positive attitude. Further, when prompted by Brad, Clark again reiterates that it was time spent living with his grandparents that allowed him to acquire this cultural sense (lines 79-80).

Clark claims it was *necessary* to his development that he was with his grandparents during a troubled time in his past. He uses the metaphor *salvaged* for himself (Excerpt 2, line 313), and attributes living with his grandparents as saving him. It was their values that he learned that ordered his life and led him straight to being a nursing home administrator (Excerpt 3):

- (2) 313 *CLK: it was necessary that I'd be salvaged through that junior college
314 experience.
316 In order to actually enter into academia at all. There's still
317 people where I came from that are just amazed that I did anything
318 but... When I say I'm living around Penn State, "oh you mean state
319 pen."
(3) 332 *BRD: What are some of those values? What are some of those things that
333 you picked up?
334 *CLK: Well, I'll give you a story that illustrates the point.
335 *BRD: Okay.
336 *CLK: My grandparents. At the time I didn't realize how profound this
337 story was but looking back I realized my grandfather and my
338 grandmother raised my mom and her four sisters and one brother
339 during the dustbowl era of West Texas, East New Mexico. So, a rough,
340 rough situation.
341 *BRD: Right.
342 *CLK: Somebody asked my grandfather during a family gathering one time,
343 "well, you know, you had three girls during the depression," which
344 was my mom and two of her sisters, "that needed glasses. What did
345 you do?" He kind of looks around and, "oh, well, you know... There
346 was only really two things you could do. First thing I could do is
347 trust God. The second thing I had to do is know next time I get
348 married to marry a woman with better eyes."
349 *MUL: Heh heh heh.
350 *CLK: And my grandmother, "Oh well! His eyes are worse than mine! I don't
351 know why he said that. That's ridiculous." And I'm thinking, "oh
352 that's a funny story." Now that I look back on it, we're reflected
353 through that whole generation. He who raised those kids during the
354 depression, and those kids who were raised during that depression,
355 is, maintain a sense of dignity. Don't get despondent over problems.
356 Deal with life the way it is. Don't demand that life be perfect.
357 Maintain your face, maintain a sense of humor. Persevere. That's
358 what that story taught me. I saw it over and over, and over. I've
359 seen it over and over. When I first started in Nebraska being a
360 nursing home administrator, that generation's oldest of the old,
361 were born in the 1880s and came to Nebraska in covered wagons.

Table 10: Diagraph of excerpt 3

#	Subject	Pos/Eval	Object	Valence
339	dustbowl era of West Texas	a rough, rough	Situation	Negative
354	those kids	maintain	a sense of dignity	Positive

355	[the story taught]	don't get despondent	over problems	Positive
356	[the story taught]	don't demand	that life be perfect	Positive
357	[the story taught]	Maintain	your face	Positive
357	[the story taught]	Maintain	a sense of humor	Positive
357	[the story taught]	Persevere		Positive
358	that's	taught me	the story	Positive

Clark recognizes historical hardships as negative (*a rough, rough situation*). Yet, out of that negative frame comes the source of cherished values and character. Clark begins with the descriptive *maintain a sense of dignity* about children raised by that generation, and builds turn by turn on this image of wry determination. Where something may be negative (*get despondent over problems; demand that life be perfect*), Clark utilizes linguistic negation (*don't*) to turn them into frames of strength. He then returns to positives (line 357). Finally, he places the coda to his account, seeing it as a learning experience (line 358). In this light, the hardships of the historical United States expansion gave meaning to rural residents and communities. Though they were negative experiences originally, they bred into the people a culture that is unmistakably positive in Clark's affective registration.

Clark's collection of positively valenced stances about rural life form two critical bases for connotative inversion. His upbringing has been explicitly linked to his identity as a health service provider, making it a discursive figure that will be challenged in subsequent turns. Additionally, as we shall see, rural values of independence and family relations that have been positive thus far will become contentious in Clark's discourse as a care professional. These elements invite connotative inversion as an analytical frame because they (1) are wrapped up in valenced language, (2) occur early in the interview, and (3) are linked explicitly to Clark's conception of himself both as a rural person and as an administrator.

5.2 Role as Administrator

The preceding, detailed construction of rural folk as a cluster of values inherited from their communal history serves as a center point for Clark's self as an administrator. Up to this point in the interview, Clark's identity as an administrator and his identity as a rural person are harmonious and mutually reinforcing. However, it will quickly become clear that there is tension between Clark the rural community member and Clark the agency administrator. He weaves historical entailments into his perspectives (e.g., farms, family, ownership) that come into conflict with health services, complicating service provision, access, and efficacy (Excerpt 4).

- (4) 449 *CLK: So, it's all multigenerational, hard blood sweat and tears to make
 450 it happen. What we're seeing now is the farms are getting smaller
 451 and smaller, smaller and smaller. The reason being is they stayed
 452 here, nobody bought more land, and so it went to that generation and
 453 the place didn't get bigger. Now that there are more kids that are
 454 trying to divide that place up between more and more kids, and that
 455 makes a 75 acre farm now 3 25 acre farms. And now how do you make a
 456 living on 3 25 acre farms? Nobody wants to give up the house. Nobody
 457 wants to get assistance from our offices, because if they do that,
 458 then the state can come back and take the place under what they call
 459 a state recovery. So, they're resistant, and hesitant to accept
 460 help. That's what's creating pressure on the next generation. It's
 461 usually daughters or some female family member that's helping
 462 grandpa or dad, or whatever, to stay at home because they don't want
 463 to lose the place. So, this daughter's got kids of her own, she's
 464 got a husband, she's working. And she's taking care of dad who's got
 465 Alzheimer's disease that really needs constant, constant, constant
 466 attention. The pressure is just huge. They're calling and crying, a
 467 lot of family breakdown over that.

Line 449 begins the re-invocation of rural settlement as multigenerational, full of culture-defining strain, and the ardent mindsets of rural people. However, where before stances on those traits exhibited positive evaluation, now it is a source of degeneration in quality of life. This segment of the interview is a turning point in the stance field. This culturally-grounded degenerative effect stifles Clark's agency in its mission to provide

health services. Through connotative inversion, Clark inflects his discourse with who he is as an administrator.

Table 11: Diagraph of excerpt 4

#	Subject	Pos/Eval	Object	Valence
456	Nobody	wants to give up	the house	Negative
457	Nobody	wants to get	assistance from our offices	Negative
458	the state	can come take	the place, state recovery	Negative
459	They're	resistant, hesitant	to accept help	Negative
460	That's what's	creating pressure	on the next generation	Negative
466	The pressure	is just huge		Negative
466	Family	Breakdown	over that	Negative

Clark establishes that there is a historically informed fear of *state recovery* (line 458) inhibiting the call for assistance. Independence, self-reliance, and a focus on preserving generational heritage are potentially obstacles to familial survival. The terror of losing important heritage sites informs and is informed by the values Clark described earlier. When he constructed himself as rural, we saw only positive stances (Tables 9-10). When he forefronts his identity as an administrator though, those same propositions and values become hindrances to service provision (Table 11). He evaluates this conflict with negative descriptions, and invokes emotional speech in lines 456-467: *give up the house; creating pressure; the pressure is just huge; they're calling and crying; family breakdown.*

According to Clark, when family homes, sites of familial foundation, begin to break down, monetary income is unreliable, and when there's nothing left, services become crucial. His claims regarding services are predominantly positive:

- (5) 782 *CLK: They're pooling resources and so forth.
 783 *BRD: There's some support system somewhere there.
 784 *CLK: There's some kind of support of not money but each other. Helping
 785 each other out. That's what used to be out there. There's a heritage
 786 of that, where if that's gone and now all you've got is the house
 787 with the tin roof, the out house, the car up on blocks, and no one
 788 else is living there except grandma who's the last one there, and

789 the grandson's dealing drugs out of the house, that's a whole
 790 different complexion. That grandmother's going to notice the huge
 791 difference, of what it used to be and what it is today.
 792 *WIL: Yeah in one sense you go from living in a house to being trapped in
 793 a house.
 794 *CLK: Yeah. And that's what they are. They're trapped in that house.
 795 *BRD: And of course that's not just for drug issues. That's like you were
 796 saying before about the husband's died or whatever, and the daughter
 797 can't come back. It's just them.
 798 *CLK: Yeah. That's a huge issue we're grappling with. Isolation,
 799 loneliness.
 800 *BRD: And these are strengths going into it. Living in these restraints,
 801 wanting to be independent..
 802 *CLK: Yeah. Now it's independence, but it leads to increased isolation.
 803 We'll go into a house and virtually there's nothing in that house
 804 for food. Nothing. Some salt and pepper maybe, and a few spices. But
 805 there's no food. Nothing. So our home-delivered meals are 7000 meals
 806 per month. Which is wonderful. It's wonderful to have a program like
 807 that. It's wonderful to offer it.

Table 12: Diagraph of excerpt 5

#	Subject	Pos/Eval	Object	Valence
784	Some kind of	Support	not money but each other	Positive
785	That's what	used to be	out there	Negative
788	Grandma	is the last one	There	Negative
789	grandmother's	going to notice	what it used to be, what it is today	Negative
798	That's	a huge issue	we're grappling with	Negative
798	[we're grappling with]		Isolation	Negative
799	[we're grappling with]		Loneliness	Negative
802	It's		Independence	Positive
892	It	leads to increased	Isolation	Negative
803	There's	virtually nothing	in that house	Negative
805	7000 home-delivered meals	is wonderful		Positive
806	a program like that	is wonderful		Positive
807	[a program like that]	Wonderful	to offer it	Positive

Between lines 782 and 785 there is initially a positive positioning (*pooling resources*), indexing family-centered culture. But this turns immediately again to the negative side of this issue: that support is no longer reliable (*used to be*). Where the familial home was once a site of in-built support, a cultural icon of unity, it's *grandma who's the last one there* (line 788). As the exchanges in excerpt 5 and table 12 show, for older generations with a strong sense of cultural value enshrined in the home, there is a positive valence toward being alone (*independence*). Yet through Clark's logistical,

administrative lens, those strengths are positioned as damaging (*loneliness; isolation; virtually nothing*). Clark directly indexes an identity as part of the agency that consists in *grappling* with these negatives via the inclusive pronoun *we* (line 798). When Clark discusses the agency's program it is *wonderful*.

By the end of the interview, Clark has completed an evaluative shift of the discursive figures such as family, independence from government, and more introduced earlier in his accounts. He constructed his identity as an administrator in light of his other identity as a rural person via his choice of valenced stances. Clark rarely entextualizes himself explicitly as a figure, nor claims emotional status or states to himself. Importantly, the sequential necessity of connotative inversion does not mean that discursive figures are explicitly referenced as prior topics, but build contingently within the stance field. Each stance Clark takes, as they invert prior evaluative polarity, stretches the stance field to accommodate new aspects of his experience.

5.3 L2 Writer

The next three excerpts present similar findings in a different setting. Unlike the previous excerpts, these come from three interviews conducted over 14 months, in chronological order. Together, the interviews track the developing identity of the interviewee, Reza, vis-à-vis academic writing. Reza (REZ), a graduate student, was a novice second language academic writer, having just begun working on a collaborative research article with his adviser. The first excerpt documents his early impression of his project, emphasizing the demands of academic writing in a second language.

- (6) 1 REZ: Oh you can't imagine what it's like. Unbelievable. Not at all something
 2 I was prepared for. I thought I knew English well before this. I'll
 3 tell you I'm losing my confidence in my English abilities.

- 4 NAS: What happened?
 5 REZ: I don't know yet but I think my writing is leaving this impression on
 6 my adviser. It may be the kind of things I use the connotations they
 7 have that I'm not aware of. I thought I am writing well. I will have to
 8 discover what connotations my words produce that my adviser is confused
 9 or doesn't like.
 10 NAS: Oh.
 11 REZ: It's been a rough ride the past few days

Translated from Persian by the second author

Excerpt 6 comes from an interview conducted early on in the study. Reza had just begun collaborating on a research article writing project which involved receiving a great deal of feedback from his adviser. As can be seen in the excerpt, he was overwhelmed by the kinds of comments he was getting, finding them *unbelievable* (line 1). There is a sense in the excerpt that Reza is not sure why this is happening, because he used to think that he knew English well, as shown in lines 2 and 7 (*I thought I knew English well before this; I thought I'm writing well*). In lines 7-8 there is also a hint at his emotional disposition given such epistemic uncertainty (*I will have to discover*). The interviewer's contributions (*what happened?, Oh.*) align with the sense of shock, which is essentially the major negative affective tone Reza displays in the excerpt. Reza then brings the interaction to a close by summing up its thrust: *It's been a rough ride the past few days* (line 11). Peppered through the excerpt are negatively charged lexical items such as *unbelievable, confused, doesn't like, and rough ride*, all adding up to the sense of incredulity conveyed in the excerpt by the combined force of the language used. The negative valence in accompanying stances is catalogued in the following diagraph (Table 13).

Table 13: Diagraph of excerpt 6

#	Subject	Pos/Eval	Object	Valence
1	you	can't imagine	what it is like	Negative
1		Unbelievable		Negative
3	I	am losing	my confidence	Negative
5	my writing	is leaving	this impression	Negative

8-9	my adviser	doesn't like	the words and connotation	Negative
11	It	has been	A rough ride	Negative

Given the affective tone of Reza's account, his description can reasonably be read as a complaint about the unexpected nature of his adviser's commentary. This complaint is constructed around a contrast between a previously-held opinion of his own writing as "good" and an unsettling realization dismantling that view. This realization finds expression twice in the excerpt in lines 2 (*I thought I knew English well before this*) and 7 (*I thought I'm writing well*). The negative affect suffusing Reza's account, in such phrases as "doesn't like" and "rough ride," portrays him in a particular light: beleaguered and uncomfortable. Through these moments, Reza uses valence to construe an identity as struggling with writing. It is significant that this projection of identity occurs chiefly through affect-laden language.

5.4 Technical Writer

The second interview, conducted almost two months after the first, presents a different picture of Reza:

- (7) 1 REZ: Technical writing is defined by conciseness, you say something and then
 2 move to the next point. It's not important that your words are elegant.
 3 On various occasions it happened not only in my writing but also
 4 presentations that my adviser said this is not how technical writing
 5 works.
 6 NAS: I see

Translated from Persian by the second author

In Excerpt 7 Reza provides a description of technical writing in lines 1-2. He then moves to an account of his adviser's reproach regarding the features of technical writing (*on various occasions ...*). There is only one utterance by the second author. Throughout the excerpt, affective language surfaces, this time in ways that are less evaluative, and thus require some unpacking. The term *elegant*, for example, has a history in the

intersubjective realm between the interviewer and Reza. Part of this history is captured in a prior interview, presented in following excerpt (8):

- (8) 1 REZ: It is writing that gives a serious impression. I should use formal
 2 words and support my claims with evidence and examples, evidence from
 3 my experimental work. I think formal register and elegant writing if
 4 you ask me now.

Translated from Persian by the second author

Excerpt 8 presents Reza's response to the second author's question about academic writing. Here, Reza complements *formal register* with *elegant writing* to paint a picture of academic writing. The term *elegant* carries positive valence here as something Reza should accommodate to. In excerpt 7, however, elegance as a feature of academic writing is questioned, its valence no longer unequivocally positive. At a minimum, it can be argued that elegance is beginning to become irrelevant for Reza as he grapples with academic writing.

Given this shift in the valence of the term *elegant*, the emotional tone of Reza's discourse can be said to have shifted between interviews. While there are traces of a trajectory from the past when his adviser reminded him of what technical writing is like, the emotional quality of excerpt 6 is absent in excerpt 7. The account reads as much less affect-laden. Indeed, it unfolds as a matter-of-fact, emotionally flat reflection on his collaborative writing project, as evidenced by the shift that occurred in the valence of *elegant*. As such, Reza appears to enact a different identity than the previous excerpt. He is no longer depicted as an agitated individual, disturbed by the barrage of criticism directed at his writing. The excerpt presents a sense of him having taken it in stride. The diagram below (Table 14) classifies the stance objects, evaluations, and affect associated with excerpt 7.

Table 14: Diagraph of excerpt 7

#	Subject	Pos/Eval	Object	Valence
1	conciseness	is defined	technical writing	Neutral
2	your words are elegant	not important		Neutral
4-5	My advisor	not how it works	technical writing	Neutral

Once again, there is no overt identification of self in the excerpt. Nonetheless, the less affect-laden language used presents Reza's identity as in control, capable of reflecting on a difficult situation. While in excerpt 6 it was the intensity of affect and its valence that functioned indexically to identify Reza, in this excerpt the relative absence of affect serves to discursively redefine Reza's identity. It should, however, be noted that the absence of obvious affect via the neutrality on display are a performance by Reza in his attempt to assert his control over writing. In all these excerpts, Reza is performing his identity discursively in relation to his interlocutor. In other words, the excerpts display a certain locally-occasioned performance that may say little about Reza's bodily-affective state, or any objective "identity," due to its contextual specificity, and the attendant social action accomplished therein.

Excerpt 9 from the latest interview brings out this contextual effect more clearly as the interviewer begins with a question premised on an assumption that the writing course Reza took was beneficial. The question is rooted in a history of involvement with Reza as a research participant, with an understanding of the course's role in Reza's developmental trajectory as a writer.

- (9)
- 1 NAS: I want you to think about the advantages of the course for you like
 - 2 what did you learn that you would not have otherwise I mean what did it
 - 3 add that you did not get from your RA writing?
 - 4 REZ: The advantage of the course for me was that it gave me a checklist to
 - 5 watch when reading or when writing myself, a set of instructions about
 - 6 what to look for.
 - 7 NAS: Can you explain what you mean by a checklist?
 - 8 REZ: I mean now thanks to the course I think of papers as having a structure
 - 9 according to IMRD introduction, method, research and discussion. Each
 - 10 has to have certain criteria. One of the things now I look for is move

- 11 one, two and three in the introduction that's been very helpful.
 12 NAS: Yes yes like find a gap
 13 REZ: Yes find a gap, establish a niche and occupy a niche. I didn't use to
 14 think of papers this way now I follow a formula a checklist where
 15 certain things have to be present.
 16 NAS: Is that useful
 17 REZ: Yes very useful. It was a wonderful opportunity.

Translated from Persian by the second author

The account is framed as a reflection with Naseh asking Reza to cast his mind back to the course and speak to its advantages. The term *advantage* sets up the interaction as centered on something favorable. This positive affect is also reflected in the rest of the question over lines 2-3. Aligning with this positive framing, Reza begins his answer by taking up *the advantage*. He describes the course as *useful*, and providing *a set of instructions*. In response to the probe, he goes on to list in detail the ways in which the course has helped him (lines 7-10). This excerpt abounds with positive affect, exemplified by such terms as *useful*, *helpful*, and *wonderful* (Table 15). These positively valenced stances bring about connotative inversion in relation to Reza's identity as an academic writer. In the previous excerpt 6, his position was distinctly negative, conveying trouble and instability. In contrast, Reza's emerging identity is performed through positively-valenced stances about the formal writing process in his L2, English.

Table 15: Diagraph of excerpt 9

#	Subject	Pos/Eval	Object	Valence
1	I	the advantages	the course	Positive
4	[The course]	advantage	gave me	Positive
10	[Rhetorical moves]	very helpful		Positive
16	[a checklist]	very useful		Positive
16	[The class] was	a wonderful	opportunity	Positive

Prominent in this excerpt is the role of the interviewer in shaping the affective tone of the interaction. He uses the terms *useful*, prompting Reza to elaborate that the

course was not only useful but a *wonderful opportunity*. This underscores the intersubjective fabric of affect and valence in interaction.

As with the other excerpts, there is no overt mention of an identity in the reflection. All Reza does through the account is mention in what ways the course helped his writing practices. The affect indexing positive valence terms, however, hint at an identity rooted in material experiences. The account helps discursively constitute Reza as an expert who authoritatively speaks about the different sections of a research article and how one can make sure to adhere to the standard format.

In all three excerpts on writer identity, there is little in the accounts beyond the expressions of affect and their valence that gives a sense of the characters involved in the interactions. In other words, affect-related expressions index the identities of the interacting parties. Crucially for this analysis, the shifting of Reza's identity is not explicitly articulated but performed through the orchestration of complex connotative inversions. At first, evaluative stances in excerpt 6 were all negative, attesting to an uneasy identity vis-à-vis academic writing. However, they became neutral and positive respectively as time progressed, marking out a different identity in response to interaction with the interviewer. In this sense, affective practices function within these diachronic interviews similarly to the excerpts from a single interview event with Clark.

6. Discussion

We began this study by seeking to examine the discursive strategies members of institutional communities utilized to manage their social identities. Focusing on Clark's interview, analyses showed that he constructed himself through specific stance strategies,

especially around positioning different value systems. His specific strategies included personal accounts, narratives, and hypothetical situations to outline rural people, their values, and their histories, indexing a position of cultural attunement and membership. He then extended these same discourse strategies to emphasize his health agency administrator identity. He engaged in extensive interactional work, such as proffering topics and laughing exuberantly to weave his account of rural life and values. Working with the sequence of questions and interaction from the interviewers, Clark strategically created a context-sensitive logic of his subjective, rural life.

Reza's discourse attended to events more concretely, or as matters-of-fact. In contrast to Clark, Reza's strategies developed over time, and related to numerous particular activities and experiences across more than one year of interaction with the interviewer. In this way, his strategies were snapshots of an in-process, developing discursive practice and associated institutional identity, with identifiable specific causes, and rationales. Over time, many of Reza's stance-taking events centered on positioning himself as a subject in relation to either his advisor specifically, or his epistemic authority as a writer. The stance objects in Reza's world were things such as the dissonance between his beliefs about his writing before arriving at a new institution, and being told his work was unsatisfactory. In subsequent interviews, this same situation was topical, but shifted to new information through reported speech of his advisor, and ultimately different assessments of value in those events. In this sense, the objects of his stances remained the same, yet over time we observed a different position emerge.

We will now turn to how affective practices strengthen or attenuate competing identities in discourse, our second question. We focused on examples of evaluation as an

aspect of affective stance-taking. Evaluation is one of the chief expressions of valence, and happens in everyday communication and deeply emotional scenarios alike. The evaluative affect recorded in our stance analyses did not take the form of bodily states or references to specific emotional phenomena, as we might expect in discrete emotion models. In this respect, we also discovered that as a stance-taking practice, affective practices in our data rarely took either iconic or symbolic grounds. Instead, and of crucial importance, our dimensional analysis exposed the affective nature of the stances as structurally related to the discourse space, interacting with it rather than announcing *that* affect was present. That is, valenced stances occur *by someone toward something within the discourse*. This dynamical relationship, insofar as it appears in discourse, lends evaluative affect a weighty role in indexicality.

On this account, the inclusion of valence via the construction model of emotion has great utility for unpacking stance-taking in identity performativity. It can assist in tracking down “who” is speaking, about what, and what entailments are salient between the two. This follows from the position adhered to earlier in this article that identity, a dynamic and contextually situated agglomeration of stances, is a semiotic, intersubjective process. Given that it is semiotic in nature, a variety of signs and grounds are available to subjects within that process. While affect cannot, and should not, be said to be unique to any semiotic ground, its utilization as a discursive practice highlights features of materially-based experience worth exploring further. The material bases apply to both the *qualities* of any evaluation (positive, negative, neutral), as well as the discursive objects that arise within the stance field e.g., L2 professional writing, rural values, health administrators, rhetorical moves etcetera.

In several key exchanges, evaluations became inverted as speaker identities developed. This connotative inversion afforded the speaker a space to dynamically reconfigure their position in response to the discourse co-authored with their interlocutor. An initial evaluative stance would be taken, built up over interactive turns, then subsequently contradicted or modified in some direct sense, thereby construing aspects of identity within the stance field. In connotative inversion we find one of the indexical aspects of affective practices. Its indexicality relies on the experience of the speaker, and their material history. The inversion interacts with the topics and statements of the stance field which are not conventionally defined, but situationally co-managed. Critically, we found this pattern to occur in both participants' identity work, crossing institutional, chronological, and interactional contexts.

Clark's stances on elderly folks and cultural beliefs are a vivid example of connotative inversion, because they lead to antipodal evaluations of either *independence* or *isolation* depending on when they are discussed. In other words, the evaluation depends on which part of Clark's history is salient. His affective practice to claim this dynamic identity involved first evaluating rural values as positives, but then assessing them as an administrator using negative stances. In so doing, he repositioned himself. Evaluative affect, in the form of connotative inversion, grounded Clark's different positions as a services administrator versus a rural person. This switch in positioning himself is crucially important to his identity display. It cannot be simply that he cherishes rural values at home or as a member of that community, but does not cherish them as an administrator. Conversely, it is not that he promotes the agency's work and purview as right, and rural residents and their values as backwards or retrograde. The truth is that he

both cherishes rural history, culture, and values, and yet also sees opportunities to assist and help his community, even when those values complicate service provision. Where Clark the perennial rural citizen identified rural culture as independent and self-sufficient, both of which are positive, Clark the administrator saw isolation and reticent attitudes toward assistance. Clark's valenced stances assemble his membership as informed by culturally distributed values. When *independence* becomes *isolation*, a lexical switch has occurred, but the functional switch is social reference to his identity. Clark's connotative inversion incipiently entextualizes his personal expertise as a rural person, and also his expertise as a health administrator in strategically selected spaces. Rhetorically speaking, Clark uses valenced speech to strengthen his identity, adhering to scripts in his cultural knowledge, and reinstates his right to speak as a subject. This strategy further grants him rites of judgment by making clear that he is culturally vested in both perspectives. Clark uses these strategies to concoct a multifaceted identity embellished by personal narratives, corresponding values, and compatible goals, astride apparently conflicted sociocultural spaces.

7. Conclusions

Given the consistency of connotative inversion between our two research participants, Clark and Reza, we conclude that the positive-negative dimensional continuum of valence has a durable, pragmatic function as an indexical. A person's historical experience, cultural or social goals, and the local discourse at hand, modulate the referential value of selected words. We found that an affect-laden word allows the individual to stake out a perspective on the stance object, without overt reference to an

identity. Thus, an affective indexical instead entextualizes a latent, metapragmatically sensitive stance. Valence, not the isolated lexicosemantic word form, is the vehicle of this entextualization. It highlights socioculturally relevant information underlying the social event, establishing specific figures amongst a variety of potential figures available in the stance field.

We set out to describe discursive resources that two institutional actors utilized to claim social identities, and the extent to which affect played a role in those discursive resources. We discovered that valence accompanied stance-taking utterances in two major ways: as specific affect-laden stances or claims, and as connotative inversion of previously voiced evaluations. Scholars such as Wetherell have called for a broadening of questions, concepts, and means with regard to the nature of affect in the richness of human experience. Toward this call, this article has demonstrated: (1) that the construction model of emotions is a viable foundation to investigate the role of affect in research on semiotics and stance, contributing to a conceptual space for the investigation of emotion that includes discourse analysis within affective science more broadly; (2) that affect has specific manifestations within discourse germane to (a) methodological innovation, such as utilizing modified diagraphs to track valenced stances, and (b) theoretical questions, such as the roles emotion may play in discursive phenomena.

Chapter 6

Conclusion

This dissertation set out with the over-arching goal to better understand social aspects of rural, elderly health services implementation confronting the ravages of the opioid epidemic. This dissertation ultimately asked:

- (1) What are the apparent goals, values, and views in rural health policy of aging and opioids as a function of the discourse chosen by claimants?
- (2) As such, how does health policy enactment treat of rural experience, and how do policy enactors position themselves and their policy decisions?
- (3) What role, if any, does positive and negative affect play as a feature of discourse found while investigating questions 1 and 2?

1. Summary of Findings on the Opioid Epidemic in Rural, Elderly Health Services

Studies in health policy implementation often posit the activity of implementation to be a linear, if complex, process. Implementation, in this framework, is a single inter-discursive activity shuttling policy mandates into the lives of needful populations, frequently in a quasi- or entirely linear direction (Bowen & Zwi, 2005). A health need occurs in some population or community, which leads experts and policymakers to study that need, and design an intervention or program in response. Health service professionals then employ said interventions and programs to meet the need. Experts and researchers then undertake evaluation and assessment to guide next steps. However, despite frequent reference by researchers to the complexity and social nature of this process, little of that

process seems to take actual account of the beliefs, particular activities or perspectives of individual implementers, or the rhetorical and persuasive issues underlying that process.

In contrast to this linear model of implementation, this dissertation took up elements of the Advocacy Coalition Framework (ACF) introduced by Sabatier (1988). To briefly review, the ACF focuses on coalitions, which are broad-scale policy advocates and organizations, and their subsystems, which are the people and agencies that carry out policies, large and small, e.g., state-level departments, regional agencies, committees, experts, case workers and so on. The ACF lays out a hierarchy of policy implementation-related beliefs in three categories: *core beliefs*, *policy beliefs*, and *secondary beliefs*. Core beliefs represent normative social beliefs and fundamental values, such as religious beliefs for example, which are deeply held and very difficult to change. Policy beliefs encompass things like what a policy ought to be, to whom it applies, causes of the issue needing to be addressed, and so on. Policy beliefs are typically subsystem-wide, representative of say, a belief about what the Department of Aging is meant to do. Finally, secondary beliefs are more specific, and tend not to be subsystem wide. Secondary beliefs might be budgetary, such as what specific programs need to operate, or infrastructural, like what team should administer a particular program. A key assumption made by the ACF is that policies are best understood as the translation of such beliefs (Weible et al., 2009), and that that they may not always correspond or line up harmoniously together between coalitions, or between subsystems.

Several works in health policy implementation and health services cited in this dissertation found that service personnel, from case managers to directors of agencies, make their decisions based on personally held policy beliefs, and their understanding of

whether or not the policies fit their needs (see e.g., Kreindler, 2016; Wimmelmann, 2019). The ACF's coalition- and subsystem-wide beliefs framework suited a comparative, multi-leveled analysis of elderly health policy in rural Pennsylvania, as policy subsystems underwent social-environmental shocks in the form of the opioid epidemic. To carry out this comparative analysis, I utilized mixed methods to focus on interfaces between policies and programs in an official, document-based capacity, and the talk of people from the agencies on the ground level. Through this approach, language and social acts were the figure rather than merely the ground of health policy implementation.

Documents and official policies are, in a sense, stable. Being published, official policy documents have a sort of durability, or autonomy, that represents particular positions, particular values, and particular places-in-time. They have definitive reference points, and can themselves be referenced directly, such as in quotation. Moreover, referenced materials always include the same text, and so are unchanging, short of new versions which are essentially new texts. Policy texts combine potentially many different discourses, and configure them collectively into what could be considered a single, if complex, stance-taking arena, with various reasons and justifications, that can be drawn on in further discursive environs.

In contrast to text, agents' interpersonally expressed beliefs about policies are less stable, and rely on repeated and interrelated expressions to understand fully. Their positions and evaluations can change from interaction to interaction, or sometimes from moment to moment. On some level, for any one agent, there is a corpus of stances that makes up a general identity associated with that person. In this case, a health agent's

given, repeated attitudes and evaluations eventually cluster into referential aspects of who they are, what they believe, and how they are likely to enact their policies. Nonetheless, what is clear in this dissertation is that the organization of that self-in-interaction relies on objects of discourse, providing the ground for modulation of perspectives about policies. In essence, agent policy beliefs are occasioned by the prompts that agents are given in day-to-day life. How agents understand their work, and what they ought to do, will at various times be consistent with prior stances or contradict them, thus constituting a complex web of who one must be to get things done in an elderly health service role.

The results of this dissertation showed that the discourse around health policy implementation concerning elderly adults in rural Pennsylvania is nuanced by situationally negotiated, and sometimes contested, beliefs. Policy beliefs, such as whom policies target and what they are meant to do, express varying levels of social (mis)alignment between the macro-level of policy mandates, and the micro-interactional stances taken by agency workers. At times there are portions of official policy to be found in the many perspectives that agents take, and at others there are gulfs between the two. Yet, official and personally held policy beliefs verifiably overlap in language use, where topics, subjects, and objects in discourse are shared. Comparative findings between subsystems in official documents and agent interviews reveal that the implementation process, thus, is more distributed than linear, and less coherent than officially intended.

I found that, on the specific topic of opioids, there were considerable incompatibilities between subsystem policies in understanding just what the opioid epidemic is about, and thus what sort of response would be needed. During initial, ethnographic work, I spoke with directors of Area Agencies on Aging. Several directors

mentioned the issue of opioids in their population, which I had not initiated. Their takes frequently focused on the way in which the opioid epidemic was an issue of deteriorating family bonds, a central assumption in older generations' models of support systems, and thus potential sites of disruption to service delivery. This ethnographic work prompted the question, what are the stances of related subsystems with regard to the opioid epidemic? Further, how do they position, and relate to the issue of opioids in elderly health services?

In Chapter 5, Clark's accounts of health services and rural culture serve as an exemplar of his fellow administrators' concerns. His characterization of the opioid epidemic was rife with personal stories of rural cultural and rural community history across the United States. Given his stances in the interview, we could conclude that his core beliefs and formative experiences were the touchstones of his policy beliefs about the opioid epidemic. These touchstones echoed other directors. From his position, the fabric of rural life is being worn away by several factors: socioeconomic precarity, thinner social support at the family level, and ultimately, the increased burden of grandparents and elderly people to care for younger generations when they are most in need of care themselves. Further, Clark was evidently frustrated by the confluence of rural cultural values such as independence, and health needs which were suddenly only addressable by the intervention of services from his agency. This intersection can be conceived-of as a locale in which core beliefs about rural life, resilience, and so on, are in conflict with policy beliefs. Within a single interview, Clark demonstrated that he had cherished memories and normative values as a rural person himself, with the insights imparted by them. Those same values were frequently bound up in rural, elderly persons

refusing state services, and even outright skepticism about the presence of the state in their daily lives at all. Yet also, Clark's policy beliefs shaped his approach as a health agent, and his personal activities as a director. Clark's experience of the opioid epidemic, intersected by his personal life and professional identity, made for a stark environment in which the contingency of core and policy beliefs could be compared.

For Clark, the lived reality of elderly health stressors deepened tremendously due to the opioid epidemic. As the opioid epidemic ate away at the social bonds of rural culture, the precariousness of the elderly population increased, even though older people were not necessarily the ones abusing opioids directly. And so, they need increased access to services, in ways that would be amenable to their cultural sensibilities. Their needs center on better protections and supports because their families are less and less able to provide or manage them. Unfortunately, from Clark's vantage point, the slow-moving wheels of policy change were not turning quickly enough, nor quite hitting the mark on, for example, supporting the members of his population that are now raising their grandchildren as a result of opioid addiction. Thus, while opioids garnered much attention as a cause of death, there was an underserved need to provide family services to elderly folks in particular as a direct effect of the opioid epidemic.

My findings in Chapter 3 further showed that policy beliefs about opioids can be understood through a variety of linguistic patterns used by agency workers and the official policies that guide their services. These beliefs were perhaps best captured in collocations of OPIOID itself. Collocations in the corpus showed considerable overlap in the semantic categories of OPIOID, but there were nonetheless misalignments of meaning within those categories between corpora. In the documents, OPIOID frequently

accompanied pharmacological terms. These uses tended to be about legitimate drug types, classification, and as a medication, or alternatively in unintended use, and OPIOID USE DISORDER. In this regard, the agents also used OPIOID related to prescription drugs, and abuse. The two corpora, though, showed a difference of understanding in the pharmacological aspects of OPIOID, which was revealed through the semantic preference analysis carried out in Chapter 4. The documents frequently portrayed the medicinal component of opioids in a clinical way. That is, opioid medications have legitimate uses, prescription practices, and guidelines that are recognized as authorized. This established, orderly use of OPIOID created the grounds for its illegitimate form, OPIOID USE DISORDER, founded on the assumption that there is proper use and improper use.

Administrators and caseworkers in health agencies, however, preferred to position the pharmaceutical ramifications of OPIOID as having to do with over-prescription to the people of their populations, and motivating the exploitation and abuse of elderly people by family members and caregivers. In contrast to the legitimate, pharmaceutical use of opioids being the grounds for OPIOID USE DISORDER, agents saw OPIOID USE DISORDER as the grounds that drove people to hurt and exploit the elderly under their supervision. OPIOID USE DISORDER was the cause of the exploitation, rather than the result of medicinal misadventure. At its core, the collocation OPIOID USE DISORDER clustered around pharmacological terms, but in fact prompted two, separate attendant policy needs: one infrastructural and clinical, the other social and interpersonal.

In another case, OVERDOSE frequently co-occurred with OPIOID in the documents, and in fact was the most frequent collocater. However, OVERDOSE was

absent in the top collocations for the interviews. OVERDOSE appeared frequently as the n-gram OVERDOSE REVERSAL DRUG in the documents. This specific sequence formed a link between the pharmacological norm of opioid use with a pharmacological solution, and was a public health intervention that the state-level subsystems focused on. OVERDOSE REVERSAL DRUG, specifically the narcotic Naloxone, was a class of drug that could be administered to counteract overdosing, meeting the health need of deaths caused directly by opioid misuse. Because such a drug could be registered as a legitimate medical treatment, it could be fitted with guidelines, regulations, and formats for distribution through targeted outlets and professionals. So, again, pharmacological means were both a form of identifying and solving the OVERDOSE problem in the documents.

Despite this strong semantic core of OPIOID, the legitimate or illegitimate use, and overdosing as the main health need, agents did not attend to the opioid epidemic as much through these categories. In fact, OVERDOSE was not a major collocate for OPIOID. During interviews, I intentionally posed the issue of opioid overdoses, or the need for medical intervention in the day-to-day procedures of protective services. That is to say, had they wanted to, the occasion to take linguistically similar stances on opioid-related overdoses was there. Most frequently, the administrators and caseworkers alike seemed concerned that overdose reversal drugs were the main route of treatment. This specific topic was visible in keyword analysis, where Narcan, a brand name for Naloxone, was a frequent, unshared keyword. In a number of responses, in fact, they felt uncomfortable with administering the drug, or asking their caseworkers to be prepared to do so. Even if they had emergency services training, their protocol for such emergency

situations would have been to call paramedics, not treat the person. From their perspective, elderly people are prone to a number of possible health events that could be misidentified as an overdose, such as complications from dementia, stroke, and seizure. Further, the agents admitted that they felt they did not have adequate medical training to administer such drugs, even if could they be confident of an overdose event. They would often mention that many of these caseworkers are social workers, not nurses. Rather, people in their sphere of services are more likely to be subject to financial exploitation, or to be targeted as a source of opioid drugs, rather than victims of an overdose. Narcan met neither of those needs, nor did it make them more confident in intervening if an overdose was the need.

Writers in subsystems at the state and governmental level, then, seem to believe overdoses to be the main health need, and the appropriate intervention to be clinical and pharmaceutical. It is undeniable that overdosing is a public health crisis that is duly served by the adoption of emergency overdose reversal drugs. Nonetheless, administrators and caseworkers in subsystems at the local agency, consumer-facing level have strong, consistent reservations about both the fit and application of such drugs for their elderly population. In the case of rural, elderly health and opioids, there is strong evidence that both the core policy beliefs and secondary beliefs are misaligned between subsystems.

Ultimately, the programs created to address different health needs look different to differently positioned stakeholders, whose prominence waxes and wanes in the implementation process. Actors in subsystems distributed across the implementation process perceive health policy needs with unique socioenvironmental influences on their

attention, which directly impacts the outcomes in mind. The findings in this dissertation show that even where there is overlap in stated policy beliefs, identified through simple keywords or collocations, the meaning behind those beliefs is often subtly misaligned in meaning, their semantic preference, prosody, and interactional stances. Thus, the specifics of agent reports on everyday service delivery are just as important as what the relevant mandates might enjoin agents to do. In order to understand the enactment of health policies, implementation researchers must capture the interfaces between the official, textual policies, and the personal beliefs and stances of the people on the ground.

2. Significance of the Methodology for Stance Analysis

In this dissertation I used a multi-faceted stance analysis to produce evidence of (mis)alignments (Figure 4). Stance events, in a broad sense, are social actions where enactors take positions evaluating specific objects in discourse (Biber & Finegan, 1989; Du Bois, 2007; Jaffe, 2009; Kockelman, 2004). Conducting stance analysis required that I establish alignment between enactors on particular objects of discourse, and also the evaluations they make. This stance analysis linked micro-level qualitative analysis of individual, interactive events (e.g., Du Bois' (2007) stance triangle) with macro-level extended lexical units (Sinclair, 2004) of health policy documents. Taking stance as the functional unit of analysis was a natural fit for connecting subsystems, individuals, and the topics shared between them, while further contributing to the conceptual landscape by forging linkages between previously under-synthesized approaches.

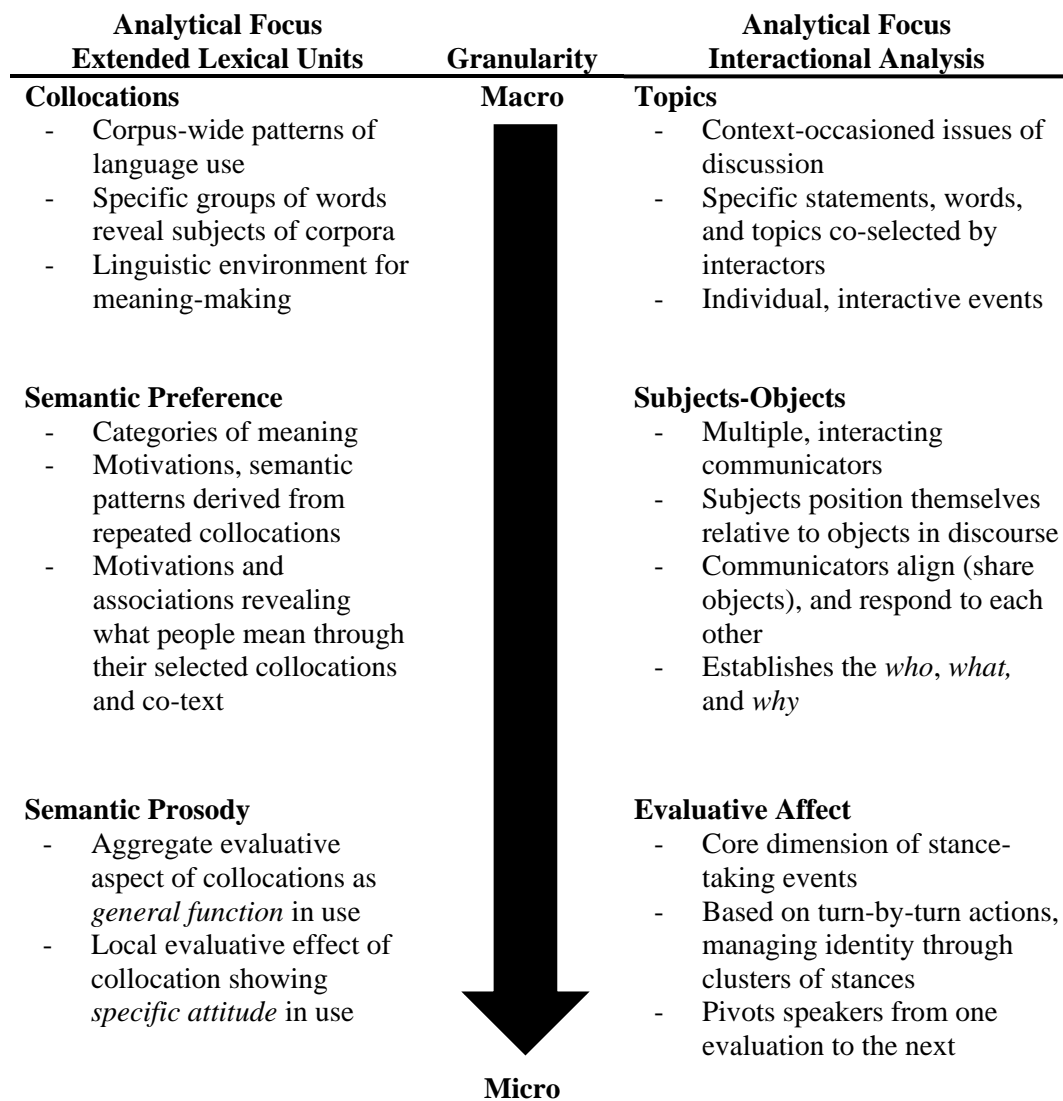


Figure 4: A continuous model of stance-taking

Alignment can be seen as the joint attention of communicators to a specific object. This joint attention was discernible as topics of discourse that appeared in multiple documents, and multiple interviews. Discourse objects were recoverable through discourse analysis of interview data during the transcription and coding process. In Chapter 3, I identified frequent keywords and collocations, providing a sense of aggregate topics in the subsystems, and an initial *aboutness* indicator of the corpus.

Semantic preference analysis undertaken in Chapter 4 then showed alignment more fully through the categories of meaning underlying topic selection (Stubbs, 2009, p. 125), while I addressed alignment in interactional contexts in Chapter 5. My focus on the relation between interpersonal stances and stances in the health policy documents allowed for direct selection and comparison of object attention. These two conceptual spaces, qualitative discourse analysis and corpus-assisted semantic analysis, thus proved to be part-and-parcel of confirming multi-stage, multi-site alignment.

Because stance analysis requires both alignment and evaluation, the next stage of work was to establish the evaluative contours of stance-taking in a way that could bring together multi-site events (e.g., official documentation) with instances of interpersonal evaluative stance. In Chapter 4, I analyzed evaluative stance through semantic prosody. Some scholars have understood semantic prosody in a discourse functional role, where particular collocations are constituents of larger patterns that are best understood as parts of the attitude and meaning of the surrounding language used (Hunston, 2007; Louw, 1993; Sinclair, 2004). In this tradition, the focus of the semantic prosody is the patterned, evaluative interplay of a lexical unit with its immediate co-text. In contrast, other scholars have approached collocations as having specific, evaluative contours to themselves, often discussed directly as positive-negative or favorable-unfavorable (Partington, 2004; Xiao & McEnery, 2006). According to Hunston (2007), the latter interpretation of semantic prosody attends to the co-presence of individual words, and understands the prosody of that specific co-selection as an attribute of the word(s).

In effect, my approach to semantic prosody took both interpretations as parts of a comprehensive depiction of the discourse function of evaluative affect. I followed a

notion that different interpretations of semantic prosody could be integrated to reveal aspects of cross-subsystem patterns of language use, collocational variants with their co-text, as well as aspects of semantic prosody thought of as the evaluative aspects inherent to a collocation. At the sentence- and context level, analysis could describe a *feel* to the lexical units that take account not only of the collocations, but the patterns of co-text, including variations in form. At the word level, connotative aspects of collocations can be recovered from their embedding in interactive discourse and within local spaces of text. The two interpretations could be coordinated through stance-taking and evaluative affect because there would be a third step to corroborate the influence of evaluative affect as the linking element. At the interactional level in Chapter 5, I linked evaluative affect to interpersonal use in the form of connotative inversion. In connotative inversion, I found that although the same subjects and objects endured over several turns of interaction, as opposed to between texts or subsystems, the evidence of evaluative affect was lexical variation.

There has been a considerable amount of scholarship addressing evaluative aspects of emotions in interactional discourse (Caffi & Janney, 1994; Prior, 2019). Most work on emotion in discourse falls into one of two categories: cognitive models or social models. Frequently used cognitive models are further differentiable into either basic emotions categories, which take emotions to be a small, universal set of emotional states (Ekman, 1994, 1999), or appraisals, wherein people attend to their environment through several cognitive dimensions (Scherer, 2005; Smith & Ellsworth, 1985). Social models take emotion to more resemble a cultural activity, fundamentally construed with aspects of power, and Discourse (Ahmed, 2004; Gee, 1999; Wetherell, 2012). These two foci of

emotion place its locus in very different realms, with varying levels of opposition where scholars discount the other.

One contemporary model of emotion, the constructed theory of emotion, takes emotional experience to be composed of dimensional aspects in a concept called core affect, stimulated by the unique environment at hand, and recognized through cultural and experiential frames (Barrett, 2017; Russell, 2003). The constructed theory of emotion combines sociocultural, cognitive, and interactional elements of emotional experience in a dynamic process, which is frequently mediated by language use (Barrett et al., 2007; Lindquist, 2017). Of critical importance is the interrelation between the internal experience and the environment, perception, and expression of emotion. This approach decenters emotion from either the strictly cognitive or the strictly social. Doing so avoids criticism lodged by some scholars that emotions are beyond the purview of linguistic analyses because they are inherently internal (Deppermann, 2012; Du Bois & Kärkkäinen, 2012), and integrates the complex interplay of biological, cultural, and interactional factors (Wierzbicka, 1992).

Nonetheless, the constructed theory of emotion has not been widely implemented in discourse analysis. In this dissertation, using the theory provided a clear analytical frame to deal with specific, interactional instances of evaluation, and to compare them against other stances. Because evaluative affect is operationalized dimensionally through the performance of language use, I could identify it with the evaluative aspects of any stance, rather than needing to connect the stance with some internal, cognitive state. As a result, the individual utterer or writer was not at issue because they, strictly speaking, are not the object of analysis. Whether they are ostensibly experiencing any categorical

emotion is irrelevant to this analytical work, as would be the need for a specific, explicit claim to such a bodily experience. This particular aspect of the analysis was key for avoiding the issue of authenticity, and also the need to restrict stances to the same speaker or writer.

Furthermore, because the focus is on stance-taking rather than stance taker, I could directly compare the context (or co-text) of each stance for the role of evaluative affect. This particular point was invaluable in unlocking connotative inversion. Clark would use the context of the interview and the specific topics on offer to take stances, imparting different valence to the stance. So, as presented in Chapter 5, the issue was the context-occasioned topic of elder folks living alone, and the consistent sociocultural elements that were shared from stance to stance. I understood Clark's indexicality through these stances, and thus was able to develop a sense for the complexities of his identity. On the one hand, Clark claimed certain cultural knowledge, personal experiences, and core beliefs, which he drew on to make *independence* the lexically situated evaluation of his population living alone. A short time later, given the same topical occasion, Clark claimed organizational knowledge, administrative experience, and policy beliefs to switch the evaluative stance to *isolation*. The keys to these stances were not any cognitive state, but the affect he impressed on his lexical choices, to interactively construct elderly health services. Thus, by using the dimensional and dynamic approach of the constructed theory of emotion, the stance triangle could be maintained, with a consistent object for alignment, and analysis of the evaluations taking place.

Though there has been recent work by scholars on evaluative aspects of semantic prosody in language acquisition (Ellis et al., 2009; Omidian & Siyanova-Chanturia,

2020), construction grammar (Stempel, 2019), and social psychology (Hauser & Schwarz, 2016, 2018), synthesizing contemporary models of affect and semantic prosody as related constituents of stance has not been explicitly undertaken. My approach in this dissertation combined turn-by-turn discourse analysis with semantic preference analysis, and valence analysis and semantic prosody, to show an important cohering function in evaluative affect that brings the people and their discourse during health policy implementation into view. To wit, subsystem-wide policies display aggregate discourse effects through their semantic prosody, but also have unique variations depending on the specific text or context in which they appear. Further, *agents* employ evaluative affect during interaction to communicate the varied ways they relate to policies, forming a locus of action between upper and lower subsystems, and ultimately consumer populations.

There is a force in the language people use to convey their perspectives about health services, and it is discoverable through the total fact of stance analysis. Subsystems show stances in their official public health policies, as do individual agents in accounting for their daily duties, reflecting and refracting each other through linked, specifically used collocations and topics of discourse. Stance-taking analyses performed here confirm that indeed policies are best understood as the enactment of beliefs. People attend to their world through the beliefs and ideologies they hold, which are known through the discursive activities in which they participate, such as administering health services (Davies & Harré, 1990; Potter, 1996). This way of seeing implementation represents a continuous, distributed way to see policies as activities, responding to specific stimuli and needs. Conceptualizations of implementation as linear, e.g., material transmission, do not adequately capture the policy process. Rather, implementation is a

social activity distributed between multiple subsystems that coordinates potentially wide-ranging understandings of each policy to be implemented. Ultimately, stance analysis reveals social alignment as well as attitude, providing comprehensive evidence for the social substance of health policy implementation, and thus is an avenue to capture and evaluate the implementation process.

3. Significance: Discourse Function of Affect for Health Policy Implementation Research

As Hunston (2007) outlined, the role of semantic prosody in Sinclair's extended lexical unit is a more subtle, nuanced phenomenon of language that is recognized via the local, linguistic context, and also the repeated use of a given sequence of words, with canonical and variant forms. Authors in the tradition of Alan Partington (2004) have treated semantic prosody in a more valence-like fashion, focused specifically on the collocational element of the ELU. I found that the two could be woven together with valence analysis to be understood more fully as functional types of evaluative affect. Seen this way, the discourse function of evaluative affect is multifaceted, complementary, and semiotically multi-directional. To explain this more fully, I will focus on the resonance between the Extended Lexical Unit (ELU) of John Sinclair, and the semiotics of stance in the works of Michael Silverstein and Paul Kockelman. These two lines of scholarship correspond even down to the word these authors chose to describe this function: *shift*.

According to Cheng et al. (2009), Sinclair refined the idea of co-selection and collocation to be something he called a "meaning shift unit" (MSU). Technically, any

MSU has a canonical form. A canonical form would be PROTECTIVE SERVICE, with specific form differences between canonical singular form, and a plural form PROTECTIVE SERVICE[S], where the bracketed plural [s] creates a variant. When some part of that form changes, whether by morphology, position of words, or additional words, the associated meaning then shifts. The MSU concept refocuses the import of a collocation from the simple co-presence of words to variant combinations that cause a “shift in ambient meaning” (Cheng et al., 2009). Variations of a collocation, the MSU, have direct impacts on semantic preference analysis, and the meaning categories that agglomerate by the repeated, consistent use of the collocating words. Though Sinclair meant the MSU to replace or redirect the notion of collocation, I believe it can be used to develop the notion of the discourse function of semantic prosody as a type of evaluative stance. If true, an ELU’s semantic prosody would represent a potential pragmatic, or discourse functional shift that occurs via the presence of an MSU.

Michael Silverstein in his 1976 work, “Shifters, linguistic categories, and cultural description,” wrote that communicative behaviors signal meaning, and are, “purposive, ... in the sense of accomplishing (or failing to accomplish) certain ends of communication” (p. 12). He stated that one functional type is that of *shifters* or *indexes*, which necessarily involve the context in which the communication occurs (p. 11). Silverstein defined the function of a shifter as pragmatic, shifting the referential value of the content in a speech event, rather than changing the linguistic form itself. A shifter, then, describes the function of a form that anchors potential (linguistic) meanings or references to the context-at-hand. That is, the shift is pragmatic, wherein a speaker

commits their subjective position to the on-going discourse through the speech event, with the goal of communicating a particular intention or evaluation of the target object.

Sinclair's semantic prosody-focused MSU, and Silverstein's shifters, whether by wit or by fate, seem intrinsically related through the arena of stance-taking. Conducting semantic prosody analysis attends the use of particular collocational forms and variations of them, and the shifting of an author's position in that particular context. Identifying shifters, in the form of valence in interactional analysis, tracks potential meanings by making pragmatic factors more visible in the stance event. Crucially for the purposes of this dissertation, these constructs share the function of communicating meaning through evaluative aspects of language people use. The key difference between the constructs and why they are both necessary, at least for this dissertation, is that they are operationalized in different levels of discourse. That is to say, they can be used to align and compare the expression of different subsystem beliefs. Thus, MSUs and shifters are brought together by stance analysis, which can then signal sites of alignment, evaluation, and expressions of health policy beliefs.

In Chapters 3 and 4, I presented several items that exhibited shifting qualities depending on the variant form or context of use. In one instance, detailed in Chapter 4, a shift occurred based on PROTECTIVE SERVICE unit variants. The meaning of PROTECTIVE SERVICE would shift depending on whether singular SERVICE or plural SERVICES was marked grammatically by communicators, and then further depending on the word-variant used to describe the people that carry out the service(s): STAFF versus **WORKER** or **WORKERS**. The plural form PROTECTIVE SERVICES was nearly always found in contexts of program creation and description. So, the overarching lexical

unit constituted a specific semantic core, the program or service that is created, implemented, and so on, seemingly across subsystems.

The singular form PROTECTIVE SERVICE, however, was an activity that seemingly always involved a grammatical agent, and in fact was relatively rare in the documents subcorpus in comparison to the Interviews. When PROTECTIVE SERVICE did appear in documents, it was accompanied by agencies, cases, clients, etcetera. In contrast, at the agency level, it would sometimes appear to distinguish professional disciplines. An agent is responsible for protective service programs by title and training, as opposed to being a social worker, for example.

A word-level variation occurred whether STAFF or **WORKER(S)** was co-selected, which also shifted the meaning of the unit. In contrast to PROTECTIVE above, **WORKER** plurality did not have an identified effect on its use. This may be the result of limited data, but that is uncertain. STAFF would accompany PROTECTIVE SERVICE if the topic was disciplinary, as indicated above. In this way, STAFF loaded onto the more abstract category, and fit the overall health services program topic. By contrast, **WORKER(S)** would accompany concrete, real experiences associated with carrying out a PROTECTIVE SERVICE. The collocation PROTECTIVE SERVICE **WORKER(S)** would appear especially in reports of events, narratives, and personal experiences of the agents. How many **WORKERS** were sent out to investigate reports of need, or how many **WORKERS** were at each agency, are some examples.

Finally, that shift was not only at the word-level but at the prosodic or evaluative level. This evaluative aspect reveals that there is a different meaning, and appropriate context-occasioned form associated with the more negative STAFF or more positive

WORKER(S). In the aggregate, **WORKER(S)** was overwhelmingly positive for the agents. It is possible, in light of specific interactive stances taken, that **WORKER(S)** was associated with personal experiences, and real people that the agents worked with. Those real experiences and real people, known by the context of the talk, influenced their evaluative stances toward PROTECTIVE SERVICE. In contrast, STAFF was more likely to be used when talking about programs and training. These more abstract notions engendered less positive evaluation, though it was not exclusively negative. It is telling, from the interactional data, that STAFF was used when discussing training mandates for agents, which often appeared in contested or negative reports of policy mandates. The problem was often not that there was training. To the contrary, training was understood to be good, with professional development being desirable. Yet, the agents and administrators would often use PROTECTIVE SERVICE STAFF in the context of raising questions of motivation, content, and other issues around training or education.

Via MSUs, different facets of the health policy implementation environment were made visible, depending on the context they are found in, and variant they take. Shifts were associated with the specific variant of PROTECTIVE SERVICE, and triangulated with grammatical, lexical, and evaluative aspects. These shifts occur through the variant tokens, that can be known as shifts because of the core pattern types. Each variant token is sensible because of the type to which it belongs, contributing to the sense of the canonical form, while staking out a particular meaning to its variant.

The brief description of MSUs presented above reveals that the discourse prosody of any topic can be thought as a flexible social occasion for communicators to manage subtleties in position and meaning. An exclusive analysis of the aggregate, and even the

individual expressions in the abstract, however, misses out on the interactional play available through the mechanism of evaluative affect, as presented in Chapter 5. Analysis of the affective practice connotative inversion showed that any given object of discourse can be evaluated differently, from different positions, within a single sequence of interaction, but that those differing evaluations must be seen as threads in the fabric of that interaction as a whole.

In Chapter 5, Clark utilized affective indexicality to shift prominent aspects of his identity in discourse, bringing his experience as a rural person into his evaluations of service provision as an administrator. His modulation between *independence* as a positive evaluation of older people living out their lives, and *isolation* as he understood their situations in need of services, was a lexical change in valence, responding to objects in discourse. In the case of connotative inversion, and the analysis of this dissertation, what can be said to shift through this indexicality was Clark's identity. The stance format afforded Clark the opportunity to make evaluations, while bringing first-person reports of formative experiences into the text of the conversation under way. Later in the interview, Clark staked new positions which rested on established contours of who he is as a person, then in light of his work as an administrator of an elderly health services agency. Complicated aspects of his identity, and the resultant motives behind health policy decisions, are thus brought into a complex whole, aligned through his on-the-record evaluative calls.

Expressions of Clark's shifting identity fit not so much a linguistic form but a social behavior, or pragmatic practice. Evaluative affect, valence, thus finds footing in stance-taking as an interactional phenomenon (Goffman, 1981). Valence analysis

resembles connotatively focused, fine-grained semantic prosody (Morley & Partington, 2009; Partington, 2004) in its attention to the evaluative contours of the lexical switch. But perhaps more importantly, it helps to align the broader discourse function of an extended lexical unit with a shifter function in the semiotics of stance. Though the particular tokens of evaluation are important, evaluative affect is more powerfully seen as a thread that bring elements together in a stance-taking *type* with varying *forms* or *tokens* of its use in human communication. In the ELU, that type is in the durable forms into which variations fall, allowing shifting positions to be staked out, that can be tracked over many subsystems, contexts, and social regimes. At the interactive level, evaluative affect appears in the connotative inversion individuals use to knit identities together, using moment-to-moment evaluations that are materially related through the stance field. Ultimately, I have shown evaluative affect to be a means by which communicators shift their accounts of the complex social activity that is implementing health policy. Thus, evaluative affect provides a reliable function in stance-taking for researchers to investigate that activity.

4. Future Directions

In this dissertation, I presented an approach to evaluative language that brought together semantic prosody, a constructionist model of emotions, and interactive stance-taking. In this regard, I intentionally took a rather restricted, focused route to understanding evaluation. Given that approach, and the findings discussed above, the next steps are to expand the different modules of the framework in several ways. There are complementary approaches to semantic prosody, such as the appraisal model, and

additional dimensions in complex emotional phenomena, such as arousal, that can be utilized in a harmonious fashion to provide further evidence of beliefs and values.

This line of further research would follow up on Coffin & O'Halloran (2006), Martin & White (2005), and others who have suggested that semantic prosody and the appraisal framework be combined to strengthen each other. In particular, the corpus-driven keyword and collocation analyses here could prompt further analyses of moral judgments in both subcorpora. This would utilize the affect and judgment subsystems to take a next step from the discourse functional aspects of semantic prosody presented above. Such an investigation would enhance the power to explain evaluative language in health policy implementation through systematic, categorical analysis. In addition, this combined approach would make for parsimonious capture of explicit belief and value claims in the data, by first identifying evaluative contours, then the associated moral or social judgment, and then a semantic categorization of those tokens for discussion.

Using the methods outlined to find connotative inversion, and the associated principle of affective indexicality, one could investigate the arousal dimension of core affect. Rather than restricting diagraphs to evaluation, the arousal dimension could be added, creating a fuller picture of what people seem to be experiencing as they establish their positions on given, socially important topics. By capturing both valence and arousal, more complex emotional phenomena could be described, and related to specific expressions and constructions of experience. As in connotative inversion, this expanded approach would capture how individuals portray themselves through their affected language, over time, during aligned and at-odds stances alike. Thus, the expressive nature

of language use might be more fully explained, while also contextualizing emotive uses, or explicit claims to complex emotional states.

It is exciting to note, again, that the above-described future directions can be combined with the model offered here. Each sub-area presents unique strengths, which develop insights from the others. To wit, a corpus-driven keyword and collocation analysis provides grounds for semantic preference and semantic prosody in autonomous data, which researchers can then explore using the appraisal framework for social judgments and value categories, as texts and interactions build on each other. Furthermore, the connotative inversion format can be expanded to include arousal, and provide for more complex emotional phenomena in interactive stance-taking events. Complex emotional phenomena can then be categorized through the appraisal framework, to account for explicit belief claims animated by affected language use. Altogether, such a future endeavor seems promising for health policy implementation, such as in this dissertation, and beyond in new regions, contexts, and discourse areas.

5. Implications & Limitations for Health Policy Implementation

Based on findings in this dissertation, it seems true that health policies are in fact not just official documents, but better understood as creatively assembled activities of people in the act of service provision. Perhaps the most direct, applied implication of this dissertation is to confirm the ACF's premise that coalitions, their subsystems, and their agents, often have conflicting *core beliefs*, *policy beliefs*, and *secondary beliefs* in mind as they craft, transmit, and implement health policies. In fact, the grounds for policies can sometimes be reversed depending on the context, the individual, or even the particular

moment in time in which one is asked. Especially where agents are concerned, beliefs about enacting services are primarily conceptualized by personal experiences with their populations, their material conditions, and personal struggles. From a top-down, or linear vantage point, this represents an end-state rationale, but clearly this is the “whole story” for many of the caseworkers and even directors taking care of everyday service provision.

In order to gain a better understanding of the interrelated positions taken by different subsystems, evaluations should take into account both the between- and within-subsystem communication that emerges over time. Though this dissertation focused on the ways in which affect influenced different stances in health policy implementation, it is by no means the only possible angle to take. On top of the methods and foci of this dissertation, one fact of this dissertation is that its agents are lucid about their personal experiences and accounts, and the effects on services. It would be valuable for policy creators, and ultimately coalition leaders, to conduct forms of regular qualitatively based data collection, analysis, and review. By taking advantage of street-level insights, and claims about policy taken from the very contexts in which they will be realized, mandates could be made more sensible to administrators and agents as they are created in a forward-looking manner. From a conceptual vantage point, this would change the evaluation and reformulation aspects of a top-down approach to be more integral, and more responsive, rather than separate and retrospective.

It could be argued that this on-going feedback loop would be unreasonable to manage, or potentially too varied in result. After all, this dissertation rests on the eager collection of documents, and interviews in an on-going bi-monthly schedule with numerous caseworkers and directors, restricted to rural Pennsylvania. Yet, this

dissertation has shown evidence that utilizing a qualitatively driven, mixed methods approach can create the foundation of data to answer a diverse set of questions and frameworks. One possibility would be to utilize more quantitatively oriented data collection methods, such as survey instruments, to collect a mix of traditional close-ended feedback, along with open-ended responses that can be aligned by stance-informed collocational analysis. As in the foregoing discussion, collocations and keywords show the policy beliefs and structuration of policy implementation vis-à-vis those beliefs, and thus the stance events that shape implementation. Such an approach could be evaluated relatively quickly, and woven into on-going policy creation. Findings could then be used to develop subsequent instruments to improve precision of questions, and sensitivity to areas of concern, infrastructural, environmental, and beliefs alike.

Realizing these implications also evokes some of the limitations of the findings of this dissertation. Firstly, this dissertation is based on linguistic and communication models of social activity, and thus attends to concepts and aspects of import to those models. Though it covers many reports, statements, claims, and so on, of people and documents, it does not deal with the sociopolitical intricacies of developing intervention instruments, for example. It does not take on epidemiological foundations of interventions, or the clinical assessment of patients. Though discourse and interaction are involved in all these portions of health policy implementation, this dissertation says nothing about these other areas directly.

Secondly, one-on-one conversations held with directors of Area Agencies on Aging prompted this dissertation. Those directors personally elected to address the opioid epidemic. Through that ethnographic process, I uncovered a problem felt by one

community, which it turned out was felt by several, then many, and at numerous levels of elderly health care. As valuable as this organic process was, the conclusions reached in this dissertation come from a small sample of the universe of health policy implementation. I only included rural counties, which by their nature are sparser in population and subject to unique cultural influences compared to their urban counterparts. Further, these counties were all in Pennsylvania, which is but one state in the United States. The ray of light here is that despite this dissertation being limited in scope, its methods can be exported to new contexts, and the corpus of documents and interviews can be expanded.

5.2 A Role in Policy Development for Different Stakeholders

These methods and findings could be applicable to a range of stakeholders. Beyond the policy makers, agency administrators, and others in the institutional pathway, the ACF also includes technical advisors, lobbying and advocacy groups, grassroots organizations, and other stakeholders in its formulation of a subsystem. But, because any subsystem can include an array of stakeholders, interests, and beliefs, there are ethical implications for the use of this model in policy development and implementation.

On one account, this work is an act of social amelioration. Comparing language used by local agents and official policy documentation presents an opportunity to more carefully craft policy to meet health needs for elderly population, by bringing underlying beliefs and experiences into alignment. When agents, caseworkers, and populations, see their experiences described and addressed in language that is familiar to them, they feel enfranchised in the policy process and better able to participate. And yet, on another

account, such re-alignment could potentially be thought of as, and indeed used for, manipulation. Identifying people's expressions of beliefs and aligning policy to be more consonant with such expressions could have the power to lull people into trusting policy by virtue of that familiarity. They could be made to hear what they want to hear.

Different stakeholders might avail themselves of these concerns in different ways, and with eye to use the methods to match their intentions. Research groups and consortia for example, whose interests are academic with a goal to furnish information, may see these findings as facts ready to be discovered and disseminated. Their technical expertise provides value to subsystems in that they are a platform for better capacity building, knowledge generation, and opportunities for collaboration between coalitions. Building capacity, and providing runway for changes to policy is beneficial, responsive, and may help mend cleavages in policy beliefs. In contrast, some groups, such as oft-maligned professional lobbyists, might use such findings to formulate clever strategies for political purposes, tapping into the beliefs of those in need of services and support. This kind of motivation would, arguably, be harmful, coercive, and increase cleavages in core policy beliefs.

As with any social scientific endeavor, care must be taken when employing the methods and findings in this dissertation. Yet, regardless of where these findings are used, if any, and for what purposes, if any, the ethics of using them will need to be examined at that time. I believe that there is ample opportunity to instrumentalize what people say, and how they say it, to improve the process of health policy for consumers and the people implement policies every day. Their well-being and enfranchisement are

at the forefront of considerations in this dissertation, and will remain so in future directions, when working with subsequent subsystems.

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Publications

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