INTRODUCTION

With the development of computer software such as the Linguistic Inquiry and Word Count (LIWC; LIWC2015, Pennebaker, Boyd, Jordan, & Blackburn), text-analysis has become a more prominent method of psychological research. For example, emotional expression has been measured with the LIWC using both written accounts of autobiographical memories and verbalized accounts in response to film clips (Kahn, Tobin, Massey, & Anderson, 2007). Results showed that the percentage of words relating to emotions as calculated by the LIWC consistently reflected emotional expression in both written and verbal accounts. In addition, the percentage of words relating to emotion regulation as calculated by the LIWC have been associated with physiological markers of emotion regulation processing (Monin, Schulz, Lemay, & Cook, 2012). Monin and colleagues audiotaped spousal caregivers while privately disclosing an instance of partner suffering as well as having typical partner interaction such as sharing a meal together. It was found that emotion regulation language defined as positive emotion, negative emotion, cognitive processing, insight, and causal words were related to blood pressure and heart rate. Using more positive emotion words was associated with lower heart rate reactivity, suggesting more emotion regulation processing. Also, using fewer cognitive processing words was associated with higher heart rate reactivity, suggesting less emotion regulation processing. Another study by Lord, Sheng, Imel, Bear, and Atkins (2015) measured language style synchrony with the LIWC through calculating the similarity of particular types of word use in a dialogue between therapists and patients engaging in motivational interviewing at a substance abuse facility. Results showed that language style synchrony correlated with therapist empathy- ratings. All these studies utilizing test-analysis software demonstrate an association between language use and emotion. However, this conclusion requires the assumption that the participants are telling the truth about their conscious experience. In *Indeterminacy, Empiricism, and the First Person*, prominent philosopher of language John Searle (1987) states that confronting an epistemic gap between what is meant by the speaker and what is interpreted by the listener is unavoidable when conversing with another speaker. In other words, in a conversation, the listener is guaranteed to fully understand what the speaker means. The only condition in which there is no indeterminacy is the first-person condition, where "I know what I mean." If Searle is correct, then delivering effective psychotherapy is impossible, as therapists will never be able to access their patients' experiences in the first-person. There is an epistemic gap between what the therapist thinks the patient means and what the patient actually means, and no bridge can close the gap. This is one instance of a possible source of skepticism about the ability for the therapist to successfully interpret the patient's state of mind.

Such an epistemic gap poses a formidable challenge to psychotherapy and communication in general, as research has shown that humans devote 30 to 40% of speech output solely to informing others of their own subjective experiences (Tamir & Mitchell, 2012). Disclosing information

about the self has also shown to be so intrinsically rewarding to the extent that individuals are willing to forgo money to communicate to others thoughts about themselves. Given that so much of our speech is devoted to self-disclosure of subjective experiences, it is important to investigate whether or not language accurately reflects conscious experience, and what the answer to this question means for psychotherapy process. Searle has raised an important epistemic concern that is directly applicable to psychotherapy, but he takes an extreme stance that is unjustified.

In this thesis, I will argue three points. First, I argue that although such an epistemic gap exists, there are ways for therapists to narrow the gap, namely by understanding the narrative sense of the self and building empathetic resonance with patients. To investigate this issue, I will introduce autobiographical past-directed (APD) emotions and the role of psychological connections in personal survival. Second, I argue that text-analysis should be grounded in unconscious physiological processing in order to increase its validity. I point to studies on cognitive dissonance that have established neural markers of this unconscious process, and suggest that psychotherapy research utilizing text-analysis follow a similar approach. Third, I argue that there are issues with a normative model of rationality given cultural differences in emotional expression and cognitive dissonance. I suggest that diversity is needed in clinical research and practice to combat these issues.