Toward an Integrated Understanding of Language Use in Health Communication: Discourse-analytic and Message Design Approaches

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Applied linguists and Communication scholars have mainly adopted different yet complementary approaches to research on language and health communication. Using discourse-analytic (DA) approaches such as conversation analysis and corpus analysis, applied linguists tend to focus on describing and explicating health messaging techniques in naturally occurring interactions. In contrast, communication scholars favour message design (MD) approaches that compare the effects of different message features on participants' perceptions, attitudes, and behavioural intentions. Drawing on examples from interpersonal medical consultation and public health campaign, I demonstrate that an integration of these two paradigms is beneficial for creating a holistic understanding of research on language and health communication. Specifically, the DA paradigm offers rich descriptions of social actions in terms of their organizational structures and linguistic realizations, whereas the MD paradigm quantitatively assess the impact of particular messaging strategies. The challenges and opportunities of this integration are also discussed.

1. INTRODUCTION

Applied linguists and Communication scholars have shared interests in exploring language use (e.g. patient-centred messages, metaphoric framing) in health communicative contexts such as medical consultations about various illnesses (Pounds 2018; Jenkins *et al.* 2021; Pino *et al.* 2022) and warning messages about extreme weathers (Ma *et al.* 2021; Tang 2022) and viral infections (McGlone *et al.* 2013; Ma and Miller 2021). Researchers in these two disciplines mainly adopt different yet complementary approaches to health issues. Using discourse-analytic (DA) approaches such as conversation analysis and corpus analysis, applied linguists tend to focus on describing and explicating health messaging techniques in naturally occurring interactions. In contrast, communication scholars favour message design (MD) approaches that compare the effects of different message features on participants' perceptions, attitudes, and behavioural intentions. In this paper, I demonstrate that an integration of these

two paradigms is beneficial for creating a holistic understanding of research on language and health communication.

2. INTERACTIONAL SEQUENCE IN MEDICAL CONSULTATION

Using conversation analysis, scholars have identified several key interactional sequences between patients and medical professionals during healthcare visits. One major move is inquiry and assessment of the illness condition. For example, Bloch and Antaki (2019) analysed how nurses in a health helpline service communicated with callers who were seeking advice on Parkinson's health-related questions. Their findings reveal that due to the limitations of their epistemic status and conversational affordances, nurses actively shaped the callers' various physical and emotional problems to the ones that they can answer. Based on video recordings in a UK hospice, Jenkins *et al.* (2021) found that repeating patients' answers with mirrored prosodic features facilitated doctors' pain assessment of their patients. Another key move is providing emotional support to the patients. For example, Pounds (2018) analysed the emphatic communication acts used by online clinicians on Ask-the-Expert healthcare websites. Her results showed that although the communicative norm in this forum was more informative than empathic, expressions such as acknowledging feelings, endorsing views, and being acceptive are widely used by medical experts, which constituted about 30 per cent of their total textual responses. These studies suggest that problem presentation and emotional support are essential components in health consultation episodes.

While sharing the same premise that successful advice is predicated on proper sequential development, communication researchers are more interested in experimentally testing how the sequential placement of advice moves shapes advisees' perceptions of the advice and their behavioural intentions (Feng 2009, 2014). For example, based on findings from previous observational research, Feng (2009, 2014) delineated three major supportive moves in advice-giving: emotional support (E), problem inquiry and analysis (P), and advice (A). These moves generated 11 possible advice sequences (i.e. EPA, EAP, PAE, PEA, AEP, APE, EA, AE, PA, AP, and A). Each participant was then randomly assigned to one of the experimental conditions that were created based on these 11 sequences. Results from Chinese and American college students generally showed that offering emotional support and conducting problem analysis before giving advice led to more positive evaluations of the advice and higher intentions to follow the advice than offering them after the advice or not offering them at all (Feng 2009, 2014). These studies also found that the EPA sequence received the most positive ratings from the participants. Taken together, both paradigms demonstrate the desired outcomes of employing problem inquiry and emotional support in medical consultations, supporting the necessity of adopting a patient-centred approach in health communication (Pounds 2018).

3. FRAMING IN HEALTH MESSAGING

Another research agenda is to explore linguistic framing in health messaging. Using corpus linguistic methods, recent applied linguistic scholarship has identified various framing strategies reported by health professionals and patients. For example, Semino *et al.* (2018) found that violence-related conceptual metaphors of cancer narratives often convey different attitudes such as indexing patients' higher agency (e.g. *I fight cancer*) or lower agency (e.g. *cancer is a killer*) relative to their illnesses. This variation in attitudes suggests that health professionals should communicate more sensitively with their patients. Similarly, Tang (2022) explored the framing strategies in warning messages about heatwaves and cold spells from news reports. His corpus analysis identified a collocational pattern in which *temperature* functions as the agent of its motion verb, for example, '**temperatures** are set *to plummet* to below zero in London' (Tang 2022: 237; author's emphasis). This metaphoric use of motion verbs highlighted the abnormality of the present temperature compared to previous records, serving as an attention catching device for its readers. This potential effect was also corroborated by the subsequent focus group study.

Using experimental methods, scholars in the MD paradigm are interested in understanding the perceived communicative effects of a linguistic framing strategy when compared to its alternatives. For example, researchers have examined the effects of linguistic agency assignment, which refers to the ascription of action or change to different entities in an event (McGlone *et al.* 2013). Its theoretical basis stems from the implicit hierarchy of thematic roles which implies that prototypical agents communicate a stronger volitional involvement, causality, and sentience than prototypical patients (Dowty 1991). For example, while *people contract HPV* emphasizes humans' active experience of HPV infection, *HPV infects people* highlights the severity of the virus by metaphorically treating it as a sentient being that seeks to prey on humans. Experimental findings have shown that compared to human agency assignment, assigning agency to the pathogen often leads to higher perceived severity and susceptibility of the virus and higher intentions to follow the recommendations (McGlone *et al.* 2013; Bell *et al.* 2014; Ma *et al.* 2021). Nevertheless, agency assignment is likely to encounter a ceiling effect if the audience has already recognized the gravity of the health issue, such as the severe consequences of colon cancer (Chen *et al.* 2015) and COVID-19 (Ma and Miller 2021). These findings point to the contextual constraints of framing strategies. In summary, findings from the two paradigms consistently suggest that subtle language differences have the potential to alter the attitudes of their audience. Therefore, health communicators need to be cognizant about their language use and design messages that best serve the interest of their patients.

4. DISCUSSION AND CONCLUSION

In conclusion, the above comparisons demonstrate that the DA and the MD paradigms hold different yet complementary research objectives and methods.

The strength of the DA approach lies in its rich descriptions of social actions in terms of their organizational structures and linguistic realizations, providing empirical evidence to underscore the salience of language use in health communication. This approach, however, cannot make causal inferences about the effects of a particular language feature on their audience. Moreover, scholars can only assess participants' explicit change of actions but not their implicit change of perceptions. When adopting a particular message strategy (e.g. offering unsolicited medical advice), health practitioners are unable to quantitatively weigh its benefits (e.g. potentially improving the health of the patient) and harms (e.g. invoking psychological reactance from the patient).

The MD paradigm addresses these gaps by using validated scales to experimentally test participants' changes in attitudes and behavioural intentions. Scholars can evaluate the utility of a messaging strategy by assessing its effects on several variables of interest simultaneously (e.g. perceived severity of a disease, intentions to take actions). As a result, messages that exert the most benefits and the least harms are more likely to be adopted by medical professionals. Moreover, the replicable research design in the MD paradigm enables researchers to conduct meta-analysis by statistically synthesizing findings across studies. For example, a recent meta-analysis of 30 MD strategies across 1,149 studies shows that many classic framing strategies (e.g. gain-loss framing, language intensity) did not induce statistically significant differences or had very small effect sizes (median r = 0.10) across studies (O'Keefe and Hoeken 2021). These findings offer some more realistic estimates of the impact of language variables.

Nevertheless, an integration of the two paradigms also faces challenges, especially regarding how to transform DA findings to experimentally testable conditions in the MD paradigm. For example, to experimentally test the generalizations observed in conversation analysis, MD scholars need to design concise and replicable test materials that are distilled from long and rich dialogues in naturally occurring interactions. Moreover, the experimental vignettes may appear to be unrealistic to some participants and consequently influence their answers. One solution is to add a scenario realism item in the survey and treat it as a potential moderator. Some MD scholars also use videos, audios, or interactive user interfaces to improve the realism of the experiment.

In this essay, I demonstrate the complementarity of DA and MD paradigms in research on language and health and point to their potential integrations. In fact, these combinations are already happening. In applied linguistic research, for example, Hendricks *et al.* (2018) experiment found that people are more likely to make peace with their cancer situation when it is metaphorically framed as a 'journey' than a 'battle'. The purpose of this paper, however, is to introduce these approaches to a wider range of audience and encourage more scholars to ground their experimental designs in DA findings and use experiments to triangulate hypothesized effects identified from naturally occurring discourses. It is hoped that these integrations would lead to a more comprehensive understanding of language and health communication in theory and in practice.

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