

# Investigating inter-individual variation in register from social networks perspective

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## 1 Introduction

Language users use different varieties of a language according to the social norms and conventions of the particular situation they are involved in. These varieties of language associated with a specific situation of use are referred to as registers of a language (Biber & Conrad, 2019; Halliday et al., 1964; Ure & Ellis, 1977) which are learnt over “processes of socialization that continue throughout the life span” (Agha, 2005). As the process of socialization is different for each individual language speaker, the range of registers one acquires in a language is different. Accordingly, every speaker, based on his prior language experience and involvement in social practices possesses a range of registers and “chooses between them at different times” (Hasan, 2014).

Analyzing the content and structure of one’s social network and the social activities they are routinely involved in gives us valuable insights into the register range and the choices they make in different communicative situations. Structural features of the social network such as size, heterogeneity, and multiplexity can affect the variety of settings one finds himself in in his daily activities and hence the range of registers he actively uses.

## 2 Method

We used the Persian sub-corpus of Lang\*Reg corpus of spoken language which contains spontaneous spoken and written text in 6 different registers in three languages of German, Persian, and Yucatec Mayan. The data collection and annotation of this corpus was done in A06 sub-project of CRC1412 register. The Persian data contains the speech of 20 participants who were recorded in 6 different situational contexts of telling a story in the form of a monologue, conversations with a friend, with an unacquainted person, with a taxi driver, with a professor, and a letter written to a friend telling the same story which was told in the monologue. The current study focuses only on the dialogical texts of the Persian corpus.

Besides, a social survey and social network questionnaire were answered by the same 20 participants in which they were asked about the social characteristics and linguistic background of themselves and the people around them as well as the situational contexts they are routinely involved in.

Three measures of syntactic complexity (Subordination ratio, subordinates without conjunction, T-Unit length) were used to evaluate syntactic variation across registers.

### 3 Results and discussion

The interim analysis of the data shows that subordination ratio and subordination without conjunction correlate negatively with the level of formality. T-Unit length, on the other hand, increases as the level of formality increases.

Besides, these measures of complexity show a significant difference between the first communicative situation, i.e., speaking with a friend, and the other three situations. This would indicate that acquaintance is a more influential context parameter compared to the social distance, education, age, gender, and the profession of the interlocutor.

At the individual level, however, the patterns of variation across registers are not the same for all participants and the amount and, for some participants, the direction of change across registers were different. Figures Fig. 1 and Fig. 2 compare two measures of complexity in the speech of 2 participants. While participant A shows a more consistent variation across four contexts, participant B has little variation in speaking with non-acquainted interlocutors, namely with an unacquainted person, a taxi driver, and a professor.

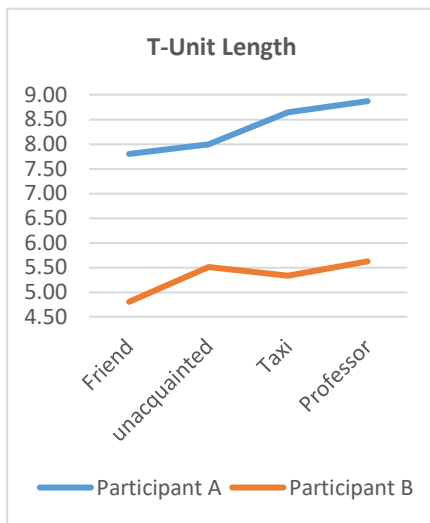


Fig. 2 The mean length of T-Units across four communicative situations

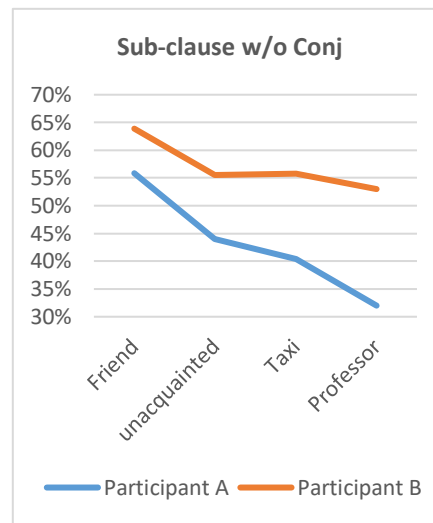


Fig. 1 The ratio of subordinate clauses without conjunction to all subordinate clauses

Analyzing the social network and social surveys of these 2 participants indicates that the structure and content of their network and their familiarity with a communicative situation affects their register performance. Comparing participants A and B's range of activities and influential people in Table 1 and Table 2 shows that Participant A's more register malleability could be connected to these features of her social network.

Table 1. Selected information from social survey and social network questionnaire

Participant A	Participant B
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<b>Gender</b>	Female	Female
<b>Education</b>	B.A. Cinema	B.Sc. Engineering
<b>Occupation</b>	Bookshop assistant	Unemployed
<b>Jobs of 5 important people around her</b>	Chief consultant of the UN/ Journalist / Photographer / Project consultant of the UN / Writer	Self-employed/ housewife/ employee/ tailor/?
<b>Education of the 5 important people</b>	Ph.D. / Master / Vocational school / Ph.D./ Bachelor	Middle school/ Highschool diploma/ associate diploma/ Bachelor/?

Table 2. The frequency of participation in selected social activities

<b>Communicative situation</b>	<b>Participant A</b>	<b>Participant B</b>
<b>Gathering with friends</b>	Weekly	A few times a month
<b>Gathering with acquainted people</b>	Weekly	Monthly
<b>Meetings with superiors you do not know</b>	Daily	A few times a month
<b>Long conversations with people in a professional setting</b>	Daily	Never
<b>Long conversations with unknown people</b>	Daily	Less than once a year
<b>Taking a taxi</b>	Daily	Monthly
<b>Long conversation with a taxi driver</b>	Weekly	Less than once a year

The social network of an individual would, on the one hand, affect his familiarity with different situational contexts and hence his register range, and on the other hand, affects his evaluation of the context. Those with a larger, more heterogenous, and less multiplex networks would have both a richer register repertoire and a higher ability in differentiating the formality of contexts. However, determining the influence of the features of social networks on register performance requires further analysis of the existing data and additional experiments such as acceptability judgment tests and classification tasks which are planned for the next step of the study.

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