

# TESTING THE PRINCIPLE OF PARSIMONY IN TASK-ORIENTED DIALOGUES PERFORMED BY IRAQI EFL LEARNERS

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## ABSTRACT

*This study investigates the efficiency of the principle of Parsimony in task-oriented dialogues performed by Iraqi EFL learners . It is concerned with how speakers behave while engaging in a task-oriented dialogues . Speakers have a multitude of decisions to make when producing an utterance . The effort involved in achieving a goaled task in a dialogue can be measured and the strategies used by speakers to achieve the task successfully can be varied . This study examines the outcomes of Shadbolt`s ( 1984 ) principle of parsimony depending on the work of Davies ( 1997 ) on native speakers of English. The method adopted a subset of HCRC Map Task Corpus ( Anderson et al , 1991a ) and the data are statistically tested*

*Key words : Parsimony , Computational linguistics , HCRC Map Task Corpus*

## 1. INTRODUCTION

Crystal ( 1985:28 ) supposes that any act of communication in a natural human language is basically the transmission of information of some kind from a human source to a human receiver . To achieve a real goaled transmission of communication is to use an object-oriented language . The object-oriented technique is a mode of any common natural language . The relation between the amount of used effort and success of the goaled transmission , the oriented task , is precise . Besides , to achieve a successful communication requires the mutual observation of the interactants to each other needs of information . Such observation shouldn`t lack its amount of effort needed to achieve the task . To make a low effort is a risk . Risks , here , are neglecting some or full checks of the information given or needed by the partner while involving in an object-oriented dialogue . Making high effort is correlated with low risk and success of the oriented task while making low effort is correlated with high risk and failure of the oriented task .

According to Shadbolt`s (1984 ) principle of Parsimony , interactants mustn`t do more than necessary effort to achieve the goal . Hence , this study tries to empirically test the principle of

Parsimony in task-oriented dialogues performed by Iraqi EFL learners , so it produces its hypotheses into two inquires :

- 1- Is it essential to take the total negative score (high risk)? and does it correlate to task success ?
- 2- Do risks decrease over time?

The main value of this study is the transmission from the domain of theory to the empirical domain as associated with measuring the necessary effort to achieve the task of dialogues successfully by using a reliable typology and coding system.

This data was gathered from the task oriented dialogues& the further this set of data was examined rendering the Move attributes categories and a system of coding. The subjects for this research were the English department students of morning batch at College of Education for Humanities. The total sixteen students participated in these dialogues.

## 2. DIFFERENT APPROACHES TO DIALOGUE

Approaches to dialogue can be observed according to various disciplines such as: philosophy, sociolinguistics, psycholinguistics and computational linguistics. As associated with philosophy, Austin`s Speech Act Theory (1962:147) is considered with meanings and the effect of specific utterances in certain circumstances. Thomas (1995:49) analyzed the attention of a speaker in uttering process and he summarized three simultaneous acts: locution, illocution and per locution. Searle (1969) believes that it is conceivable to construct a set of instructions for respective act of speech, which distinguishes such act from all others. Grice`s (1975:45) introduces the Cooperative Principle as associated with maxims (quantity, quality, relation and manner).

As associated with sociolinguistics , Birmingham School Discourse Analysis ( e.g Berry , 1981b ; Coulthard and Montgomery , 1981 ; Coulthard ,1994 ; Stubbs,1983 ) is developed from a combination of Systemic Functional Linguistics and Speech Act Theory. However, its theoretical base is the derivative of scale view & rank of the language defined in Halliday (1961: 241-292). Further, he discusses that analyzing any sort of language could be uttered via relation amongst the analytical units exhibited conferring the rank scale. Levinson (1983) believes that language is structured according to social principles rather than grammatical ones, therefore, he considers the search for recurring patterns in data a more suitable approach.

As associated with psycholinguistics, Anderson & her co-workers mainly showed their concern about how do speakers accomplish their tasks successfully as well as which talk could be associated with a better talk outcomes. Thus, their researches utilize the Map Task to produce the task oriented dialogues. Their studies on child dialogues show there are differences in task success according to age, and the use of certain strategies in dialogues. Clark and her co-workers have established a dialogue model that attracts some structures in the analysis of conversation. The study of Clark concentrates more on the subject of shared knowledge & as well as the significance of what she expresses through grounding. This model represents that how communicators transfer information & how they get that their information is fully understood by the other. Clark and Schaefer ( 1987a:19-41 ) assertion about

communal grounding which is only provided with the help of cooperative procedure of contributing than that the listener independently decode the utterances & interpret it and this is what requires an adequate indication in approved phase for original speaker to contemplate that understanding have been attained. The current research is situated in the computational linguistics' domain.

### 3. COMPUTATIONAL APPROACHES

Such approaches have been established in the paradigm of Artificial Intelligence or computation. We focused on the concepts behind the analysis of linguistics in comparison to the systems themselves. The works of Power ( 1974,1979 ) , Houghton and Israd ( 1987 ) , and Shadbolt ( 1984 ) are important to be concerned .

Power (Power, 1979:107-152) suggests human talk is a means of accomplishing objectives: for instance, if you want to open a window, you can open it by yourself or ask someone else to do it for you. Thus, the agents' power in such system of dialogue is to merely connect with each other when it is essential for an objective to be acquired. Their talk is modelled in the form of 'games', which were goal-directed structures. In Power's (1987:85) system, the relationship between utterances and outcomes is very explicit. The human dialogue hides much of the planning .His interest is primarily in the issue of joint plans as agreement and presumption.

Power's work is developed by Houghton and Isard (1987) .They introduce the concept of interaction frames, which are similar to Power's notion of 'games'. These frames are employed in a computational model of dialogue. Houghton and Isard (1987:252) develop their model which emphasizes on the role of utterances. They state that identical sentences can have different meanings according to the context. This model is developed to apply to natural language dialogues, rather than just being used in a constrained computational models and the dialogues involved are from the HCRC Map Task Corpus. (Davies, 1997:41)

### 4. PRINCIPLE OF PARSIMONY

Shadbolt (1984) presents the ideas such as The Risk-Effort-Trade-Off, Effort/Risk and according to which, he analyzes dialogues similar to these who are in the Corpus. High risk means not to negotiate broadly and it needs low effort while low risk means a broad negotiation and it needs high effort.

He notices that speakers vary in the used strategies according to the situations. He observes plans which mainly concentrate on the amount of information that interactants transfer clearly and the hidden amount which must be discovered by the other speakers. He calls these plans as parameters and the subject in which they are used as communicative postures which are, then, called risks. Shadbolt (1984), supported by Carletta (1992:249-254) who appoints only two concepts: low risk and high risk.

High risk means depending on the Hearer's understanding and knowing the information which probably lead to misunderstanding and failure of plans. However, low risk logically leads to working by the plan. Shadbolt (1984) states that points of high risk needs low effort and leads to probable failure, and points of low risk needs high effort and leads to success of task. Gradually, he admits that speakers operate conferring to the Parsimony principle that is defined as:

*"...a behavioral principle that teaches processors to do no more processing than is essential to attain an aim".*

Shadbolt(1984:342)

Shadbolt summarizes his parameters of Parsimony by questions, Their responses are maximum responses require low risk and minimum responses require high risk (ibid: 346-7):

#### **Variance**

Do you consider that your partner might have dissimilar information regarding the features of map as you have?

#### **Specification**

How unmistakably do you do postulate the recent object discourse?

#### **Ontology**

Would you present novel objects in the discourse?

#### **Concentration**

Do you consider that your companion might not share you focus area?

#### **Decentering**

Do you create an opinion about your partners' state of knowledge?

#### **Response**

Do you deliver the feedback about the discourse contributions of you partner?

Then, he concludes, as Power (1974) concluded, that interactants mustn't do more than necessary effort to achieve the goal. They must choose the parameter which involves high risk and low effort which achieve the goal. The main focus of this study is to test the principle of Parsimony in task-oriented dialogues performed by Iraqi EFL learners.

## **5. MODEL OF STUDY**

Bethan L. Davies (1997:10-83) proceeded with 4 principles of behavior which is recommended as a descriptive models for the human discussions & asses them on the quantity of task oriented dialogues (the HCRC Map Task Corpus). Moreover, she chose a folk linguistic idea of cooperation, Shadbolt's Principle of Parsimony, Grice's Cooperative principle and Clark's Collaborative theory. Further she converted these 4 principles into a demonstrative set of hypotheses. After that she cultivated the system of coding to discriminate amongst the level of strength that contestants utilized in their statements. The sturdiest sustenance is established for the Principle of

Parsimony & also its subordinate the Principle of Least Individual Effort at the disbursement of the Principle of Least Collaborative Effort and Collaborative Principle.

Davies tests the four principles of dialogue on dialogues performed by native speakers of English. Following her model of analysis, this study aims at testing the principle of parsimony in task-oriented dialogues performed by Iraqi EFL learners.

### **5.1 The Map Task Corpus Used in this Study**

The corpus of task oriented dialogues consists of sixty four contestants who created 128 dialogues in a sixteen hours of a speech. Thus, the corpus was planned to estimate the number of remarkable variables of research. The set of data for this research contains a thirty two set of this corpus' dialogues.

### **5.2 The Task**

Every speaker in dialogue contributes as a Follower or a Giver. However, a giver contains a drawn route on his own map while a follower consists of an identical map yet no route drawn (Fig. 1-2). Further, the giver is requested to empower the follower to reproduce the route as correctly as it can on its map. Moreover, the Giver's route on his map relies on a number of minor locations (landmarks or features), yet all of such features are not present on the Followers' or Givers' maps i.e. features that are shared. Each map contains eleven features and out of these 11, eight features would be shared while remaining are unshared and this happen merely on the map of giver and followers. Unshared feature look a lot like the task's complexity. Hence, the contestants must have to negotiate in order to magnificently complete the task. As not even one participant contains the required information. Two members are allowed to seat against one another which make them unable to look at the map of other person. All the applicants are provided the instruction about not utilizing nonverbal gestures during discussions. They are informed as well that the drawn route on the map of a giver is simply a safe route nearby the hindrances. Therefore, they should guarantee about the follower's drawn route as correct as probable.

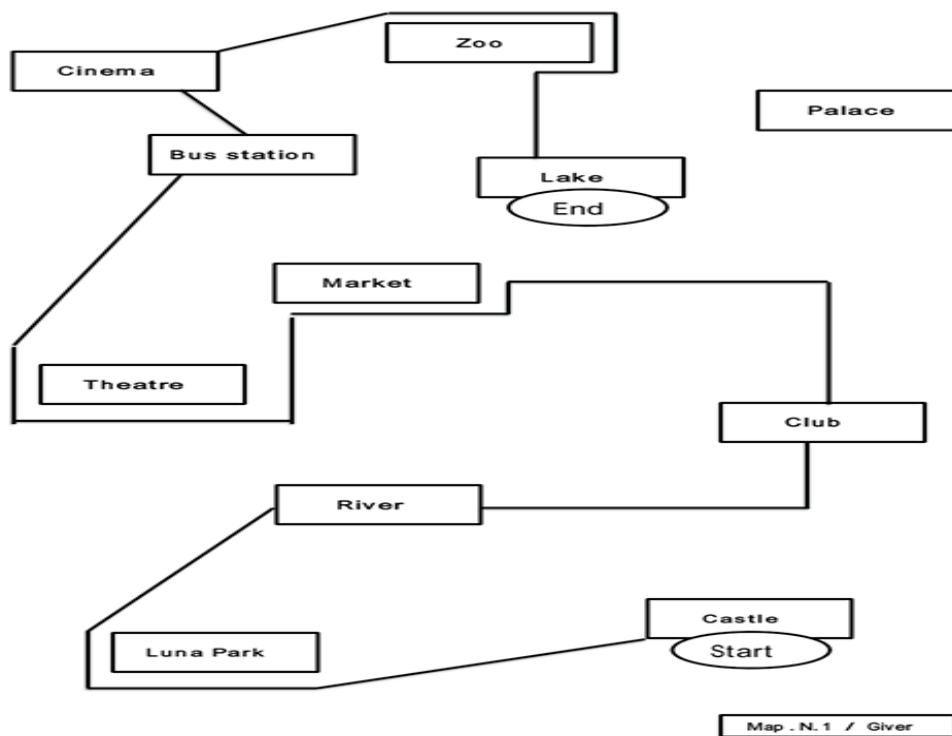


Figure 1 : Example Map from the HCRC Map Task Corpus used by the Givers .

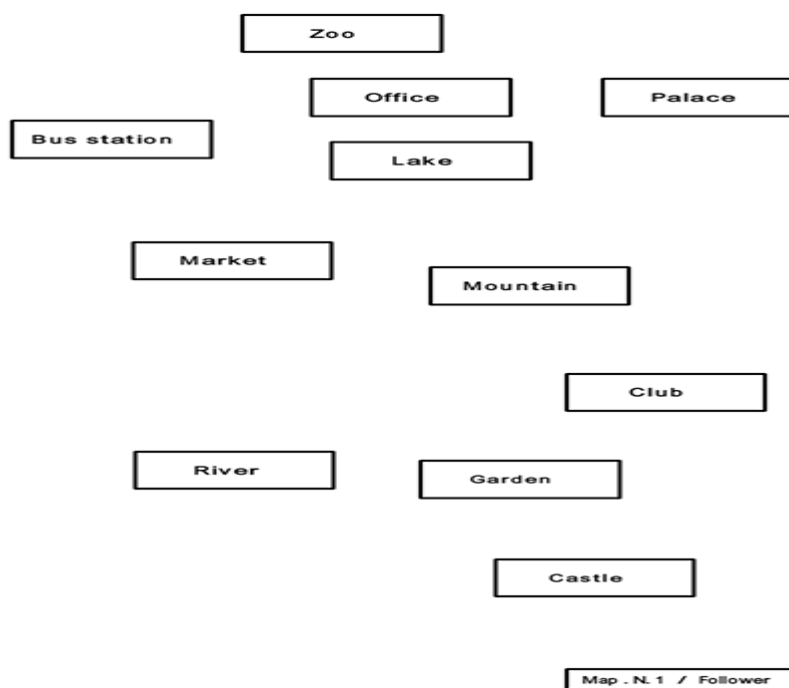


Figure 2: Example Map from the HCRC Map Task Corpus Used by the Followers.

### 5.3 The Design

The collection of corpus is done in quads' series. A quad is represented as a eight dialogues' set created by a 4 speaker's group. Inside each quad, the collection of data relies on the design of Latin square. Which means that every contestant will interact with 2 to 3 other quad's speakers, such as their original partners and also to the other partnership's members. Moreover, every speaker gets the role of speaker (giver) & follower two times. Thus, such portion of research design aid us to acknowledge the variations amongst initial and secondary giving. Therefore, in the complete corpus, four various maps are utilized and such map is being used 4 times in every quad.

### 5.4 High and Low Risk

Essentially mentioning here that through categories of attributes are recognized by means of their absence and instigating a problem of communication. Further, Davies (1997:94) authorized it does not suggest that their nonattendance would constantly lead to some kind of miscommunication.

" Absence is equivalent to a degree of risk: if I talk about a new feature in a route description without checking you know about that feature (an absence), then I risk this causing a knowledge mismatch. However, if we share the feature, then it is likely that no problem will occur: a risk which pays off."

### 5.5 A Typology of Move Attribute

Davies (1997:95) presented a typology initiated by the characteristic category of the taxonomy that signified the specific features of varieties present for the participants of dialogues such as INITIATE, RESPOND, FOLLOW UP as well as the kinds of attributes that are not static to specific type of moves. Moreover, every utterance in thirty two dialogues' data is coded as positive or negative according to their existence or absence in the utterance. This enables us to concentrate on comparing whole dialogues with one another, via their extensive coding.

### 5.6 Effort in the Typology of Move Attributes

Davies (1997:111) describes the characteristics of typology as depending on the quantity of the exertion that a speaker thought to invest in. this research accepts the Davies' effort definition:

Effort

*" The work invested by the Speaker in the following aspects of utterance planning:*

- 1. The social needs of the dialogue*
- 2. The obligation of providing for your partner's requirements*
- 3. The duty of sustaining accurate communal opinions*
- 4. The responsibility of introducing novel subtasks"*

Davies (ibid: 110) grades effort into four levels rendering to their influence in satisfying success in discourses:

1. The social necessities of a dialogue. (Minimum Effort)
2. The concern of delivering your partner's requirements. (Moderate Effort)
3. The duty of upholding the precise common views. (Medium Effort)
4. The obligation of instigating fresh subtasks. (High Effort)

### 5.7 Using Effort Groupings

Davies (ibid: 111) proposes that every coding part is measured conferring to its power grouping. Each positive level of effort has a measurement equals to its number while negative coding measurements are negatively reversed, such as given below:

*Table 1. Effort levels and weightings in the Typology.*

Effort Level (Least first)	Positive Weighting	Negative Weighting
Level 1 – Minimum Effort	+1	-4
Level 2 – Moderate Effort	+2	-3
Level 3 – Medium Effort	+3	-2
Level 4 – High Effort	+4	-1

Davies (ibid: 114) described that the selected measurements have random values but not an arbitrary order. Therefore, she contemplates it as a primary challenge to estimate about the speakers doing in any dialogue. The discourse responsibility of Traum (1994: 195) do not attempt to utilize the obligation concept in a gradable mean.

### 5.8 A Summary of Positive Coding and Negative Coding: (Davies, 1997:161)

*Table 2. A Summary of Positive Coding.*

SUMMARY OF POSITIVE CODINGS		
INSTRUCT		Positive Weighting
+NEW-QUESTION	Inquires but not straight away provoked by former utterances	+4
+RELEVANT-INFO	Presents fresh, unwanted data ('fresh/new' in case of concentration, hypothetically related to section of route)	+4



+NEW-SUGGESTION	Creates spontaneous proposition about where route might go next (which does not need to be <i>precise</i> )	+4
+QUERY	Query (role but not form) stimulated by former utterance might be due to the problematic information or inspecting self- knowledge (inquire if MISMATCH OF KNOWLEDGE is accurate)	+3
+OBJECTION	Declaration (function not form) encouraged by earlier utterance, troubles with the problem in info ( find out if+ KNOWLEDGE MISMATCH is suitable)	+3
+CHECK	Query that beseeches <i>other</i> information understanding which have been already offered.	+2
<b>RESPONSE</b>		
+REPLY-MIN -REPLY-FULL	Inadequate or unsuitable evidence	+1 & -3
+REPLY-YN	Yes-No answer to a Yes-No query	+1
+REPLY-FULL	Responding to WH queries, or extensive answer to YES-NO questions.	+2
(+INFO-INTEG)	Extra material presented (Move should be coded as REPLY-FULL) [RARE]	+4
<b>FOLLOW UP</b>		
+ACK-SHORT	Suitably short sequel	+1
+ACK-FULL	Complete follow-up	+2
(+INFO-INTEG)	Further information provided (Move should be coded as ACK-FULL) [RARE]	+4
<b>FEATURE-SPECIFIC CODINGS</b>		
+FEATURE-INTRO	Emphasized (re-)overview of a factor	+2
+FEATURE-LOC	Effort in locating the feature's position	+3
+FEATURE-UNIQUE	Trying to exclusively recognize a feature (for instance, in location point of view)	+3
<b>HIGHER-LEVEL CODINGS</b>		
+KNOWLEDGE-MISMATCH	Move points out misguided postulation (should be move-coded as +QUESTION or +OBJECTION)	+3

Table 3. A Summary of Negative Coding.

<b>SUMMARY OF NEGATIVE CODINGS</b>		
<b>INSTRUCT</b>		Negative Weighting
-NEW-QUESTION	Not related/available	N/A
-RELEVANT-INFO	Unsuccessful in announcing valuable information when needed.	-1
-NEW-SUGGESTION	Failed while making a fresh recommendation (This behavior is possibly supportive than being essential, & thus failure is unusual)	-1
-QUERY	Disappointment in specifying the problem in information.	-2
-OBJECTION	Not applicable: distinct on variance in role which can only be acknowledged if scheme is understood – use -QUERY	N/A
-CHECK	Failing to understand knowledge of others presented (mostly at subject/section limitations)	-3
<b>RESPONSE</b>		
-REPLY-FULL	None response was provided on requirement	-3
+REPLY-MIN -REPLY-FULL	Replying shortly or unsuitable	3- & 1+
(-INFO-INTEG)	Additional info required [RARE]	-1
<b>FOLLOW-UP</b>		
-ACK-SHORT	No sequel provided when needed.	-4
-ACK-FULL	Unsuitably short-term follow-up. (can happen with +ACK-SHORT)	-3
(-INFO-INTEG)	Further material essential [RARE]	-1
<b>FEATURE-SPECIFIC CODINGS</b>		
-FEATURE-INTRO	Innovative feature announced, while not highlighted (i.e. treated as presented evidence)	-3
-FEATURE-LOC	Disappointment in initiating a procedure of negotiation for unshared (usually) feature	-2
<b>HIGHER-LEVEL CODINGS</b>		

-KNOWLEDGE-MISMATCH	Move unsuccessful to indicate an incorrect supposition (should be move-coded as - QUERY)	N/A
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## 6. EMPIRICAL STUDY

The two testable hypotheses derived from the principle of Parsimony and suggested by Davies (1997) are tested in task-oriented dialogues performed by Iraqi EFL learners. Two different statistical systems are used : Spearman`s rank correlation and Mann –Whitney-Wilcoxon Test .

### 6.1 Is It Essential to Take the Total Negative Score ( High Risk ) ? and Does It Correlate to Task Success ?

This hypothesis states that the interactants will believe that they are misunderstood in dialogues , therefore , task errors are caused . They will do risky behavior since it is less effortful for the speaker . This hypothesis supposes there is a correlation between negative scores and task success . This study aims at discovering whether risky behavior is decreased between the first giving and the second giving or not .

#### 6.1.1 Method of Testing :

The total of the negative coding , weighted according to table 1. & table 3. , is calculated for each dialogue . The totals of each first giving and each second giving are ranked for each quad . They are tested using Spearman`s rank correlation . This is performed both on individual quads and the dataset as a whole , as follows :

Table 4. Testing the 1<sup>st</sup> Quad . ( D. 1 – D.8 )

No.	1 <sup>st</sup> Giving	2 <sup>nd</sup> Giving	Ranks of 1 <sup>st</sup> Giving	Ranks of 2 <sup>nd</sup> Giving	d	d <sup>2</sup>
D 1 & D 2	36	12	3	4	-1	1
D 3 & D 4	51	26	1	2	-1	1
D 5 & D 6	24	14	4	3	1	1
D 7 & D 8	45	27	2	1	1	1
Total						4

$R_s = 1 - (6 \times 4) / (64 - 4) = 0.6$  which is between ( -1 ) and ( +1 ) . So , there is a strong correlation .

Table 5. Testing the 2<sup>nd</sup> Quad . ( D. 9 – D.16 )

No.	1 <sup>st</sup> Giving	2 <sup>nd</sup> Giving	Ranks of 1 <sup>st</sup> Giving	Ranks of 2 <sup>nd</sup> Giving	d	d <sup>2</sup>
D 9 & D 10	30	12	3	4	-1	1
D 11 & D 12	46	20	1	1	0	0
D 13 & D 14	28	17	4	3	1	1
D 15 & D 16	36	18	2	2	0	0
Total						2

$R_s = 1 - (6 \times 2) / (64 - 4) = 0.8$  which is between ( -1 ) and ( +1 ) . So , there is a strong correlation .

Table 6. Testing the 3<sup>rd</sup> Quad . ( D. 17 – D.24 )

No.	1 <sup>st</sup> Giving	2 <sup>nd</sup> Giving	Ranks of 1 <sup>st</sup> Giving	Ranks of 2 <sup>nd</sup> Giving	d	d <sup>2</sup>
D 17 & D 18	28	13	3	4	1	1
D 19 & D 20	42	22	1	1	0	0
D 21 & D 22	26	16	4	2	2	4
D 23 & D 24	34	14	2	3	-1	1
Total						6

$R_s = 1 - (6 \times 6) / (64 - 4) = 0.4$  which is between ( -1 ) and ( +1 ) . So , there is a strong correlation .

Table 7. Testing the 4<sup>th</sup> Quad . ( D. 25 – D.32 )

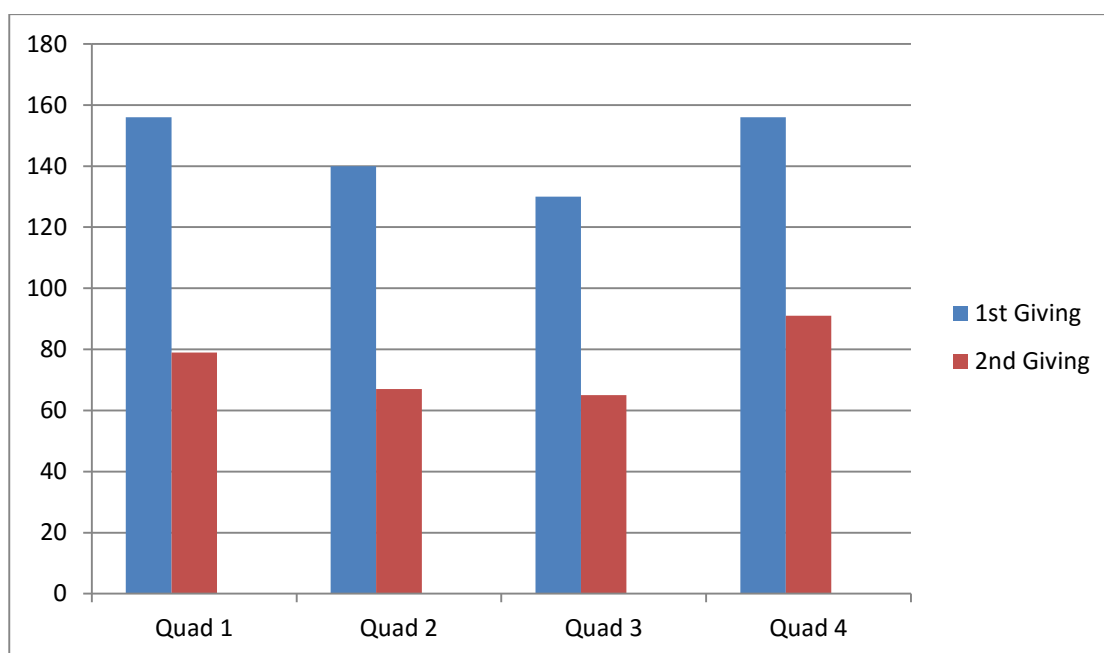
No.	1 <sup>st</sup> Giving	2 <sup>nd</sup> Giving	Ranks of 1 <sup>st</sup> Giving	Ranks of 2 <sup>nd</sup> Giving	d	d <sup>2</sup>
D 25 & D 26	36	17	4	4	0	0
D 27 & D 28	40	28	2	1	1	1
D 29 & D 30	38	24	3	2	1	1
D 31 & D 32	42	22	1	3	-2	4
Total						6

$R_s = 1 - (6 \times 6) / (64 - 4) = 0.4$  which is between ( -1 ) and ( +1 ) . So , there is a strong correlation .

Table 8. Testing the whole quads .

No.	1 <sup>st</sup> Giving	2 <sup>nd</sup> Giving	Ranks of 1 <sup>st</sup> Giving	Ranks of 2 <sup>nd</sup> Giving	d	d <sup>2</sup>
1 <sup>st</sup> Quad	156	79	1.5	2	-0.5	0.25
2 <sup>nd</sup> Quad	140	67	3	3	0	0
3 <sup>rd</sup> Quad	130	65	4	4	0	0
4 <sup>th</sup> Quad	156	91	1.5	1	0.5	0.25
Total						0.5

$R_s = 1 - (6 \times 0.5) / (64 - 4) = 0.95$  which is between (-1) and (+1) . So , there is a strong correlation . As shown in Figure 1 , the negative codings in the first givings are minimized in the second givings .

Figure 1 : Negative Coding of All Quads : 1<sup>st</sup> Giving and 2<sup>nd</sup> Giving

### 6.1.2 Results

All tests , individually and totally , strongly prove that the interactants take risks . Behaviour is considered risky whenever it effects the final product of the dialogue . These results enhance the principle of Parsimony . The less interactant communicates negatively the more successful a dialogue is .

### 6.3 Do Risks Decrease Over Time ?

The first hypothesis shows that interactants take risk which affects the task result . This hypothesis tries to test whether the amount of risks taken decreases over time or not . The study supposes that behaviors which equal negative coding are equivalent to risks . This hypothesis tries to discover whether the negative coding totals decrease as speakers get more experienced in the second giving .

#### 6.3.1 Method of Testing

The dialogues are ranked according to their negative coding totals . Then , the dataset is divided in two according to 1<sup>st</sup> and 2<sup>nd</sup> Giving . The sum of ranks is calculated and tested for significance using Wilcoxon-Mann-Whitney .

Table 9. Total Negative Coding

Quad No.	Conversation No.	Giving No.	Total Negative Coding
1	1	1 <sup>st</sup> Giving	36
	2	2 <sup>nd</sup> Giving	12
	3	1 <sup>st</sup> Giving	51
	4	2 <sup>nd</sup> Giving	26
	5	1 <sup>st</sup> Giving	24
	6	2 <sup>nd</sup> Giving	14
	7	1 <sup>st</sup> Giving	45
	8	2 <sup>nd</sup> Giving	27
2	1	1 <sup>st</sup> Giving	30
	2	2 <sup>nd</sup> Giving	12
	3	1 <sup>st</sup> Giving	46
	4	2 <sup>nd</sup> Giving	20
	5	1 <sup>st</sup> Giving	28
	6	2 <sup>nd</sup> Giving	17
	7	1 <sup>st</sup> Giving	36
	8	2 <sup>nd</sup> Giving	18
3	1	1 <sup>st</sup> Giving	28
	2	2 <sup>nd</sup> Giving	13
	3	1 <sup>st</sup> Giving	42
	4	2 <sup>nd</sup> Giving	22
	5	1 <sup>st</sup> Giving	26

	6	2 <sup>nd</sup> Giving	16
	7	1 <sup>st</sup> Giving	34
	8	2 <sup>nd</sup> Giving	14
4	1	1 <sup>st</sup> Giving	36
	2	2 <sup>nd</sup> Giving	17
	3	1 <sup>st</sup> Giving	40
	4	2 <sup>nd</sup> Giving	28
	5	1 <sup>st</sup> Giving	38
	6	2 <sup>nd</sup> Giving	24
	7	1 <sup>st</sup> Giving	42
	8	2 <sup>nd</sup> Giving	22

Table 10. The Statistical Values of Total Negative Coding

Treatment A ( 1 <sup>st</sup> Giving )		Treatment A ( 2 <sup>nd</sup> Giving )	
Total Negative Coding	Statistical Values	Total Negative Coding	Statistical Values
36	24	12	1.5
51	32	26	15.5
24	13.5	14	4.5
45	30	27	17
30	21	12	1.5
46	31	20	10
28	19	17	7.5
36	24	18	9
28	19	13	3
42	28.5	22	11.5
26	15.5	16	6
34	22	14	4.5
36	24	17	7.5
40	27	28	19
38	26	24	13.5
42	28.5	22	11.5
Sum up	385	Sum up	143

U A ( Sum up of Treatment 1 ) = 307

U B ( Sum up of Treatment 2 ) = 65

Since the critical value is ( 75.0 ) at  $\alpha=0.05$  . Our U STAT ( 65.5 ) is less than our U CRIT value at alpha equals (0.05 ) which leads to a difference between the two treatments .

### 6.3.2 Results

The last statistical test leads to a difference between the ranks of the two treatments . As a conclusion , risks , resembled by negative coding , is decreased over time .

## 7. CONCLUSIONS

1- The study proves that the total negative score correlates with task success . Interactants do risky behavior as they believe that they are misunderstood . Behaviour is considered risky whenever it effects the final product of the dialogue . However , Interactants` risky behavior is decreased when they do the second attempt which supports the principle of Parsimony in oriented-dialogues performed by Iraqi EFL learners .

2- Speakers` learning develops as time continues. Thus, the behavior's alterations most probably occur with the movement of speakers in direction of usage of specific strategies set. As a result, dialogue strategies change over time which supports the principle of Parsimony in oriented-dialogues performed by Iraqi EFL learners.

3- Risks resemble neglecting the needs of the partner to get the fully made information to communicate successfully . When the interactants are involved in more dialogues , they tend to decrease risks . Over time , they invest the real necessary effort needed for reaching the end of the task successfully which enhance the outcomes of Shadbolt`s principle of Parsimony as tested in task-oriented dialogues performed by Iraqi EFL learners .

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