Greetings in Iraqi Arabic: An Auditory Study

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Abstract. Iraqi Arabic includes the use of different types of politeness, such as greetings. Greetings are essential parts of everyday interaction. These polite sayings are produced on different intonational patterns. The speech of 48 Iraqi Arabic speakers is recorded to examine the intonational patterns of greetings. The participants are divided into three groups: educated, partly educated and uneducated participants. Each group includes eight men and eight women. The intonational system of Halliday and Greaves (2008) is adopted to describe the intonational patterns used. study concludes that greetings in Iraqi Arabic are formal or informal depending on the relationship between the speaker and addressee in addition to the context of the situation. In respect to intonation, men use falling tones more than women do on formal and informal greetings. The study requires a modification of Halliday and Greaves’ system of intonation (2008) by adding new symbols to account for the intonational patterns observed in Iraqi Arabic.

Keywords. Greetings, Iraqi Arabic, Intonational patterns, Halliday, Greaves.

Key to the symbols used

The following tables present the symbols used in the transliteration of Iraqi Arabic, quoted from Versteegh (2014: xiv - xv) 1, with its description following Ghalib (1984: xii-xiii).

Table 1. Consonants
Two modifications of consonants are done in the table: ḫ is used instead of h to represent [x], because when it occurs in the tonic it loses its identity, and ſ is used to represent ḋ instead of ʾ which is closey similar to ᵃ that represent ʕ

**Table 2. The Vowels**
1. Introduction

Politeness is a norm of social behaviour. It affects linguistic choices in communication. Lakoff (1990: 34) and (Jasim, 2017: 34) remark that polite utterances “facilitate interaction by minimizing the potential for conflict and confrontation inherent in all human interaction”. Politeness is defined as “the behaviour which actively expresses positive concern for others, as well as non-imposing distancing behaviour” (Holmes, 1995: 5). It involves the use of greetings, partings, and address terms among many other types.

Greetings are communicative acts that have important discourse and social functions. They signal identity and assert solidarity. They usually begin an interaction. If no conversation is involved, greetings can function as ‘self-identifiers and attention-getters’ (Gorgis and Al-Quran, 2003: 610). Such linguistic devices are tied to specific situations and are usually used by everyone in the culture. Malinowski (1923, in Jibreen, 2010: 1) defines an expression of greeting such as “How do you do” as a special type of speech which is called ‘phatic communication’, i.e. “a type of speech in which ties of union are created by a mere exchange of words”. These words do not exchange meanings, instead, they fulfill a social function.

Most people greet family members and friends differently from those they barely know, and from those who are in a superior relationship to them. Often nicknames or endearments are used between people who know each other well (e.g. mornin’ sweetheart, hello love). When speaking to a superior, a title plus last name is usually used (e.g. Miss Firth, Mr. Halliday) or a formal greeting is used without any names, such as good morning (Holmes, 2013: 13).

Greetings are particularly important in Arab culture since the Holy Qur’an advised Muslims to greet each other and to return a greeting with interest (Emery, 2000: 200-201). It is declared in An-Nisaa verse 86 “When you are greeted with a greeting, greet in return with what is better than it, or (at least) return it equally”. Some of these Arabic expressions have a global religious dimension (Emery, 2000: 201; Al-Ajmi and Al-Harbi, 2005:2), such as:

1. “as-salāmu ʿalaykum. ‘Peace be upon you’
   The response might be any of the following:
2. salām. ‘Peace’, meaning ‘and peace be upon you’
3. waʿalaykum. ‘And be it upon you’
4. waʿalaykum is-salām. ‘And peace be upon you’
5. waʿalaykum is-salām wa-r rahma. ‘And peace be upon you and (His) mercy’
6. waʿalaykum is-salām wa rahmatul-lāh. ‘And peace be upon you and Allah’s mercy’
7. wa’alaykum is-salām wa raḥmatul-lāhi wa barakātuh. ‘And peace be upon you and Allah’s mercy and blessings’ (Gorgis and Al-Quran, 2003: 611-12).

Arab culture, like many other cultures, has greetings which are appropriate to particular times of the day, such as

8. ṣabāḥ-il ḫayr. ‘Good morning, said from early morning up to 1 a.m.’ replied with the same expression or with “ṣabāḥ-in nūr” ‘morning of light’ (Emery, 2000: 203-204; Al-Bazi, 2006: 131)

9. masāˀ-il ḫayr. ‘Good evening’ ‘extends from afternoon or early evening to late night and answered with “masāˀ-il ḥayrāt” ‘good evening (plural)’ or “masāˀ-in nūr” ‘(good) evening of light’

10. massākum alla bi-l ḫēr. ‘May Allah bid you good evening’ (Gorgis and Al-Quran, 2003: 615).

There are also other expressions of greetings such as “marḥabā” ‘hello’ for ‘welcome’ or “halāw” ‘Hello’ for which the addressee may respond with “hala” ‘hello’ or its extension “‘ahlan wa saḥlan” ‘most welcome’ or to add more politeness where these responses might be preceded by “yā” (Gorgis and Al-Quran, 2003: 614; Al-Ajmi and Al-Harbi, 2005: 3-4).

Just as vocabulary conveys social information, the use of different pronunciation also conveys social information. This is largely dependent on intonation and tone of voice (Laplante and Ambady, 2003: 434-35) Intonation is the music of speech (Anis, 1971: 103). When one speaks, one makes continuous rises and falls in the pitch of the voice to make a certain effect on the addressee. It is a feature of everyday spoken language. It contributes critically to the flow of discourse (Halliday and Greaves, 2008: 97).


Halliday (1967, 1970 and 2008) asserts in his study of spoken English intonation that language is the primary system of meaning. The higher phonological unit is the tone unit that matches the unit of information, that is, the unit of lexicogrammar (Halliday and Greaves, 2008: 14, 41).

The tone unit consists of one obligatory element, the Tonic, in addition to one optional element, the Pretonic. The Tonic begins with a prominent syllable called the tonic syllable which carries the defining pitch contour of the tone unit (Halliday and Greaves, 2008: 53-54). A tone unit consists of one or more feet, a foot of one or more syllables, and a syllable of one or more phonemes. Salient syllables usually occur at fairly regular intervals of time (Halliday and Greaves, 2008: 55). According to Halliday and Greaves (2008: 210), four phonological levels are involved in making meaning through intonation:

Tonality is the “distribution of speech into units of tone, with the location of the boundaries;
Rhythm is the “distribution of speech into feet (metric units) with the location of the boundary;
Tonicity is the “distribution of the speech over the tunic and peritoneum, with the position of tonic foot; and the Tone is the choice of primary and secondary tone.

Halliday and Greaves (2008) distinguish seven primary tones: five simple tones and two compound tones. The simple tones consist of one tonic syllable, whereas compound tones include two tonic syllables as tone 13 and tone 53 (Halliday and Greaves, 2008: 164). The following is a consideration of each tone.
2.1. Tone 1

Tone 1 is a falling tone. It has three variants in the Tonic segment and three in the Pretonic. The first variants are called direct secondary tones because they are directly related to Tonic while those related to the Pretonic are called indirect secondary tones.

The neutral type for the Tonic, symbolised as 1., is that which starts at about mid or mid-high levels of pitch and ends on a low pitch. The neutral Pretonic has an even contour that remains level at about mid or mid-high. The even Pretonic may have an ascending or descending form or it may be a combination of an ascending movement followed by a descending one (Halliday, 1970: 10; Halliday and Greaves, 2008: 165). Thus, in the neutral tone 1. the tonic starts at the same pitch as the end of the pretonic, while in the marked types there is a jump in pitch at this point, up jump with 1+, down jump with 1- (Halliday and Greaves, 2008: 171). The marked types of Tone 1. may be high falling 1+ or low falling 1- according to where it starts. Since all these variants end low, and all take the same amount of time, the movement in pitch with the high fall is steeper than that with the low (Halliday and Greaves, 2008: 165, 171).

The various types of tone 1 (represented as 1+ 1. 1-, respectively) belongs to the system of declarative key, having the three terms strong, neutral and mild, respectively. Tone 1+ is contrastive and forceful (Halliday and Greaves, 2008: 169-170). In contrast, the mild key variant tone 1- refers to given information, which is still in focus.

The Pretonic of Tone 1 has three variants: it may be steady, bouncing or listing. These are represented as (.1, ...1, -1 respectively). In the bouncing or insistent Pretonic, each foot takes a bouncing movement starting from a low, dipping tone, and going rapidly up to about mid-high (Halliday and Greaves, 2008:171-172). The listing pretonic, on the other hand, consists of two or more rising movements counting the non-final items in a list, and the grammatical unit taking the rising segment is a word, group or phrase rather than a clause.

2.2. Tone 2

The neutral unmarked tonic of tone 2 ‘2.’ is a straightforward rising tone. The unmarked position is on the final lexical element in the tone unit. The sharp fall-rise 2, on the other hand, is a combination of a falling tone 1 with a high rising tone; the fall-rise indicates something like “I’m telling you: this is what I want to know”. The tone may occur on more than one foot (Halliday and Greaves, 2008: 174-175). The neutral variant of the Pretonic ‘.2’ is high and tends to be fairly level. The involved variant ‘-2’, is also fairly level, but remains at a low pitch (Halliday and Greaves, 2008:175).

2.3. Tone 3

Tone 3 is phonologically a level tone (that is, neither falling nor rising), but is realized phonetically as a low rising contour (Halliday and Greaves, 2008: 178). The indirect secondary tone system includes two types of pretonic: the unmarked mid-level .3 and the marked low level -3. These usually remain fairly steady in pitch, and they correspond in principle to the two end points of the tonic.

Tone .3 may give the impression of ‘this is an additional, minor point’, as in compound tones 13 and 53; or, when it occurs by itself, it may mean ‘I’m uncommitted’. Because it is a rising tone, it reveals uncertainty, in contrast to the certainty reflected by a fall (Halliday and Greaves,
2008: 178). Tone -3 is a marked variant that indicates casualness (Halliday and Greaves, 2008: 179).

2.4. Tones 4 and 5
The complex tones 4 (falling-rising) and 5 (rising-falling) have one secondary tone system, having an unmarked term which is mid to high (4., 5.) and a marked term which is low (4, 5) (Halliday and Greaves, 2008: 179-180). In the low type, each pretonic foot imitates the movement in the tonic. In addition, 5, but not 4, tends to have a breathy quality associated with it. Functionally, tones 4 and 5 are very different. Since it ends with a fall, like tone 1, tone 5 tends to be independent and final, Tone 4, like tone 2 which ends with a rise, tends to be dependent and non-final.

3. Methodology

3.1. Aims and Objectives
The current study is an auditory investigation of the intonational patterns of Iraqi Arabic greetings spoken in Basrah city center. It aims to examine the role of gender in the use of different intonational patterns. It seeks to find out whether men and women of the same educational level use the same intonational patterns.

3.2. Participants
Forty-eight men and women participated in the study. They are divided into three groups: the educated, the partially educated, and the uneducated participants. Each group included sixteen participants: eight men and eight women. They are given an information sheet to record their personal information, including name, birth date, birth place, residence and educational status. According to the information provided, all participants were born and raised in Basra city center, and are divided as follows: Educated participants (Edu.Ps) include those who have completed a diploma, bachelor's degree or postgraduate studies. Partially educated participants (Pedu.Ps) include those with primary or secondary education levels; and the uneducated participants (Unedu.Ps) are those who do not have any level of education.

3.3. Data Collection and Recording Technique
This study is based on the recordings of spontaneous speech. The recorded speech includes everyday speech at home, work, family visits, and phone calls. Recordings were made using a Sony ICD-PX333 integrated circuit recorder. Total recorded speech time is 77 hours, 32 minutes and 06 seconds. They are divided into 12:21:16 by educated men (Edu.M), 13:56:54 by educated women (Edu.W), 14:05:00 by partly educated men (Pedu.M), 14:21:30 by partly educated women (Pedu.W), 12:13:53 by uneducated men (Unedu.M) and 10:50:33 by uneducated women (Unedu.W).

3.4. Auditory Analysis
Each of the forty-eight participants was given a recorder to record one and a half to two hours of his / her daily speech and conversation with family, friends, colleagues, or strangers. These recordings were then collected and carefully listened to identify the types of utterances under discussion and their associated intonational patterns.
Using the free digital audio editor (Audacity) and headphones Kotion Each (Model-GT7500) the recorded speech of every participant was listened to carefully and cut down into sound files. Unrelated speech or unclear speech was discarded using three dots. In addition, lengthening of a syllable is indicated by colons (:, ::, ::::), and high pitched speech is referred to by (<<falsetto>>).

As for the intonational model used, Halliday and Greaves (2008) make available a variety of tonics and pretonics that facilitate the analysis of the data collected.

3.5. Statistical analysis

The performance of men and women in each educational group turns into numbers and ratios to examine gender variance in the pronunciation of greetings. For the statistical analysis, the independent samples t-test was used to verify the presence of significant differences in the performance of men and women in the three educational groups. The statistical package IBM SPSS (Statistical Package for the Social Sciences), version 24.0, is used to obtain the results.

The significance level of 5% (0.050) is used for the statistical test, that is, when the calculated significance value (p) is less than 5% (0.050), there is a statistically significant difference, that is, there is an effective difference. When the calculated significance value (p) is equal to or higher than 5% (0.050), there is a statistically non-significant difference, that is, there was similarity.

4. Results

After collecting the recorded speech of the participants, it was transliterated, translated and auditorily analysed. The following is a presentation of the greetings used by the participants.

4.1. Greetings

Greetings are uttered to establish contact and commence an interaction. They are either formal or informal, and are usually followed by questions about health, family and latest news. They often include the use of various terms of address depending on the formality of a situation and type of relationship between speaker and addressee.

4.1.1. Formal Greetings

The religious greeting formula ‘salāmu ‘alaykum’ ‘Peace be upon you’ is usually said by Edu.M in almost every situation and with various endings and intonational patterns. Edu.M are characterized of their lengthy greetings that include the use of polite address terms in addition to three or four questions about health, latest news and family followed by wishes and blessings. Other greetings are those starting with an address term or including times of the day. Edu.M pronounce formal greetings on tones 1 (1, -1), 3 (-3), 5 and 53 (53, 5-3H):

1. P.8 greeted a man // 1 gaw/wāk /aḷḷa /sayyid// ‘Allah may grant you strength, sayyid’.
2. P.1 greeted a female official in municipality department // -1 sa/lāmu ‘a/laykum// 5 šōnǐc /sit// 1 šōn shi/tič// ‘Peace be upon you. How are you, madame? How is your health?’
3. P.8 replied to a male customer // 5-3H ṭah/lan dik/tōr// 5 ṭah/lan// 1 šō/nak// 5 šōn şihʃtak// 1 zēn /nšāḷḷa// ‘Hello, doctor. Hello. How are you? How is your health? Good, Allah willing?’ Tone -3H is a higher and stronger variant of tone -3; it starts like tone -3 but ends higher and takes a wider range. It indicates excitement, warmth and appreciation.

Edu.W, on the other hand, pronounce greetings on tones 1 (1, -1), 5 and 13:
6. P.6 greeted her relatives visiting her at home on Eid Al-Adha // 1 sa/lāmu ‘a/laykum// ‘Peace be upon you’.
7. P.7 greeted the female manager at work // -1 ṣa/bāḥ il-/ḫēr// ‘Good morning’.
8. P.6 greeted a female service employee // 5 ṣabāḥ il-/ḫēr /ḥāla// ‘Good morning, aunt’. And, she greeted a female colleague // 5 ṣa/bāḥ il-/ḫēr ’um-zay/nab// ‘Good morning, Zaynab’s mother’.
9. P.1 greeted her students //13 sa/lā:mu ‘a/laykum// ‘Peace be upon you’.

Pedu.M pronounce formal greetings on tones 1 and 5 (5, -5):
10. P.8 greeted his colleagues //1 sa/lāmu a/laykum// 1 ṣab/baḥkum a ḥāla // ‘Peace be upon you. Allah bids you good morning’.
11. On the phone, P.1 greeted his addressee before asking about a paper // 5 marḥabā// ‘hello’.
12. P.5 knocked at the door of his department manager and greeted him // -5 sa/lāmu ‘a/laykum// 5 ḥāla // 5 sayyid // 1 gawwāk /aḷḷa// ‘Peace be upon you. Well, sayyid. Allah strengthens you’. Then P.5 asked his manager a question. Tone -5 is the rising falling tone preceded by a falling rising pretonic. It indicates warmth and intimacy even with a formal greeting said to a superior.

Pedu.W pronounce formal greetings on tones 1 (-1, +1):
13. On the phone, P.1 greeted a man before asking him to register her name in a doctor’s visit // -1 sa/lāmu’a/laykum// ‘Peace be upon you’. And, she greeted another whom she used to buy fish from on the phone // -2 ‘a/-lū//-1 sa/lāmu’alay/kum// 5 šōnak /ʾēnī// ‘Hello. Peace be upon you. How are you, my eye?’
14. P.7 greeted a woman on the phone exchange // +1 sa/lāmu’a/lay/ku:m// ‘Peace be upon you’. Tone +1 is the falling tone (1) proceeded by a rising falling pretonic. It reveals high positive feeling.

Formal greetings are pronounced by Unedu.M on tones 1 (1, 1+, +1), 5 (5, 5):
15. P.7 greeted a man // 5 hāla dik/tōr// 5 šōnak /zēn// ‘Hello, doctor. How are you, Fine?’ P.7 greeted a colleague // 1 ‘abu fī/rās /šōnak// 5 zēn// ‘Firas’s father, how are you? Fine?’
16. P.5 greeted a man // 1+ ‘uḥu ru/qayya /šōnak// ‘Ruqayya’s father, how are you?’
17. P.3 greeted a colleague // 5 sa/lāmu ‘a/laykum // 5 šōnakum// ‘Peace be upon you. How are you?’
18. P.3 greeted a female colleague // 5 hā ḥāɡ/ḡiyya /aḷḷa /ysā’i dič // 5 šōnič // 5 šōn /šiqtič// ‘Well, hajjia. Allah helps you. How are you? How is your health?’
19. P.7 greeted a man // +1 šōnak /stād /ḥaydar// ‘How are you, mister Haydar’.

Formal greetings are registered in the speech of Unedu.W pronounced on tone 5:
20. P.2 greeted her colleagues // 5 ’is-sa/lāmu ‘a/laykum // ‘Peace be upon you’.
22. P.1 greeted a man // 5 šōnak dik/tōr // ‘How are you, doctor?’ And, P.1 greeted the manager // 5 ʾaḷlah /ysā dak is/tāḍ // ‘Allah helps you, sir’.

The above are formal greetings uttered by the participants in everyday interaction.

4.1.2. InformalGreetings

In addition to formal greetings, informal greetings occur between relatives, friends and colleagues. Edu.M pronounce informal greetings on tones 1 (1, -1, +1), 3 (3, -3H), 5, 53 (5-3, 5-3H) and -5+1:

1. In a family visit on Eid Al-Fitir, P.1 greeted his male relative // 1 sa/lāmu ʿa/laykum// ‘Peace be upon you’. And, he greeted a female relative // -1 sa/lāmu ʿa/laykum // 1 šōnič /ḥūya// 1 šōn /ṣiḥtič // 1 zēna-n /nšāḷḷ // ‘Peace be upon you. How are you, brother (Implicitly sister)? How is your health? Fine, Allah’s willing?’

2. P.7 entered the room of his female colleagues and greeted them //+1 ʾas-sa/lāmu ʿa/lay/ku:m// 5 marḥabā::// 5 šlōnku::m// ‘Peace be upon you. Welcome. How are you?’ Notice the use of the rising falling pretonic before the falling tone which adds warmth and excitement which is further revealed by the lengthening of the final vowel in the following tone units.

3. P.1 greeted a friend // -3H ʾaḷḷa ysāʾ/iddū:m// 1 šōnak ḥa/bibi// 5 šōn ṣiḥ/tak// ‘Allah may help you. How are you, my love? How is your health?’

4. P.1 greeted a friend // 5-3H sa/lāmu ʿa/layku:m// 1 šō/nak// 5 šōn ṣiḥ/tak// ‘Peace be upon you. How are you? How is your health?’

5. On the phone, P.2 greeted his friend // -5+1 sa/lāmu ʿa/lay/kum // 1 šōnak abu/-ḥaydar// -3 šōn šiḥ/tak// ‘Peace be upon you. How are you, Haydar’s father? How is your health?’

The first tone group is said on a tone combination of the rising falling tone ‘5’ preceded by a bouncing pretonic, symolised as -, plus tone 1.


7. On the phone, P.4 greeted a service employee before asking him where he is // 5 hā /ḥālid// 3 sa/lāmu ʿa/lay/kum// ‘Well, Khalid. Peace be upon you’.

8. P.5 greeted a male friend // 5-3 hā bu/-musli::m// ‘Well, Muslim’s father’. Tone -3 starts and continues a level movement.

9. P.5 greeted a male colleague // -3H sa/lāmu ʿa/lay/kum // 1 šōnkum// ‘Peace be upon you. How are you?’

The speech of Edu.W registers the production of informal greetings on tones 1 (1,-1), 3 (3, -3), 4, 5 and 53 (53, 5-3H):

10. P.2 replied to her colleague // -1 ša/bāḥ il/-ḥē:r <<haha>>// 1 ša/bāḥ il/-ḥē:r// ‘Good morning. Good morning’.

11. P.7 greeted her relative whom she is welcoming at home // 3 ha/law// ‘Hello’.


13. P.5 greeted a male colleague // 5 kar/rār-/aḷḷa /ysāʾ dak// ‘Karrar, Allah may help you’.

14. P.8 greeted her female cousin // 4 halaw// 53 šōnič// ‘Hello. How are you?’

15. P.6 greeted her relative’s child // 53 halaw ḥassū/nī// ‘Hello, Hassuni’.

Pedu.M pronounce informal greetings on tones 1 (1,-1, 1+), 3 (-3, -3H) and 5 (5, 5):
20. P.6 greeted a friend on the phone // 5 ḥa/bīḫ/ʿam/mār// ‘My love, Ammaar’. Informal greetings are pronounced on tones 1, 2 (-2), 3, 5 and -5+1 by Pedu.W:
21. On the Phone, P.5 greeted a man she knows // -2 ʿalū::h // 5 ha/la:::// ‘Hello’. Unedu.M pronounce informal greetings on tones 1 (1, -1, 1+), 3 (3, -3, -3H) and 5 (5, 5):
22. On the phone, P.1 greeted her husband // 1 ṣalu /ḥā /halaw /kā ḥim // 1 ṣōnāk// ‘Hello. Well, hello, Kadhum. How are you?’
23. P.4 greeted a female friend // <<falsetto>> 3 ha:/law// ‘Hello’.
24. P.2 greeted her colleagues // -5+1 ṣa/sā/lāmu ʿa/layku::m// 5 ṣōnku::m // -3H ʿaḥ/wālk::m// 1 ṣōni::ći // 1 ṣaḥwālǐ::ći // ‘Peace be upon you. How are you all? How do you do?’
25. P.2 greeted a colleague // 1 hala bu-/fāḍil// ‘Hello, Fadhil’s father’.
27. P.2 greeted his colleagues when entering their room // 1+ salā:m ʿa/laykum// ‘Peace be upon you’.
28. After opening the door on his female colleagues, P.2 greeted them saying // -3 ṣa/:m // 3 ʿa/layku::m (0.3) // 5 ṣām/ham/mū:ḍ // 1 ṣām /ḥāğa::r// ‘Peace be upon you, Hammud’s mother and Haajar’s mother’
29. P.7 greeted a colleague // -3H sa/lāmu ʿa/layku::m//...//5 ʿaḥ/nu/k::m//...//5 ṣaḥ/ar/k:ar// 5 ʿaḥ/nu /bībih// ‘Peace be upon you. How are you? How are you? Karrar’s father. How are you, my love?” (P.7 Greeting 2).
30. P.3 greeted a colleague // 5 ḥā // 5 ṣaḥ/ab-/sōm // ‘Hi, Som’s father’. And, he greeted another // 5 ṣaḥ/ab-dūlī /ṣānāḥ (ṣōnak) /ḥūya // 5 ṣōn /ṣiḥ/tak // ‘Adduli, how are you, my brother? How is your health?” (k is assimilated to ḫ).
31. P.7 greeted a colleague // 5 sa/lāmu ʿa/lay/kum <<falsetto>>// ‘Peace be upon you’. Informal greetings are pronounced on tones 1, 3 (-3H), 5 (5, 5) and 5+1 by Unedu.W:
32. P.2 greeted a colleague // 5 hala bil-ḥāṣ/giː // 1 hala bil-ḥa/bāyib// ‘Hello, Hajji. Hello, loved ones’. Also, she greeted another // 1 ṣal/lā ḥa/bīr// ‘Allah bids you good morning’. And, she said to another // -3H ṣal/lā ḥa/bīr// 1 ṣōn /ṣiḥ/tak// ‘Allah bids you good morning. How are you? How is home (implicitly ‘your family’)?”
33. P.2 greeted a female colleague // -3H halaw // 5+1 ṣa/m/mū/na;// ‘Hello, Ammunna’.
34. P.6 greeted her male relative // 5 ṣōnak // 5 ḥāl// 1 ṣōn /ṣiḥ/tak// ‘How are you, uncle? How is your health?’

5. Analysis of Results and Discussion
This section presents the analysis and discussion of results indicated in tables and figures.
5.1. Formal Greetings
Formal greetings are produced by Edu.Ps, Pedu.Ps and Unedu.Ps as table (3) reveals.

<table>
<thead>
<tr>
<th>Participants/ Politeness Type</th>
<th>Educated Participants</th>
<th>Partly Educated Participants</th>
<th>Uneducated Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total M % W %</td>
<td>Total M % W %</td>
<td>Total M % W %</td>
<td></td>
</tr>
<tr>
<td>Formal Greetings</td>
<td>8 5 62.5% 3 37.5%</td>
<td>5 3 60% 2 40%</td>
<td>8 5 62.5% 3 37.5%</td>
</tr>
</tbody>
</table>

Formal greetings are produced by five Edu.M, three Edu.W, three Pedu.M, two Pedu.W, five Unedu.M and three Unedu.W. They are often pronounced on falling tones. Men of the three educational groups exceed women in the number of TUs produced of this type as table (4) below reveals.

<table>
<thead>
<tr>
<th>Participants/ Tones</th>
<th>Educated Participants</th>
<th>Partly Educated Participants</th>
<th>Uneducated Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total M % W %</td>
<td>Total M % W %</td>
<td>Total M % W %</td>
<td></td>
</tr>
<tr>
<td>Falling</td>
<td>12 8 67% 4 33%</td>
<td>7 5 71% 2 29%</td>
<td>13 10 77% 3 23%</td>
</tr>
<tr>
<td>Rising</td>
<td>5 4 80% 1 20%</td>
<td>0 0 0% 0 0%</td>
<td>0 0 0% 0 0%</td>
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</tbody>
</table>

Edu.M produced eight TUs on falling tones to four TUs on rising tones, whereas Edu.W produced four TUs on falling tones to one TU only on a rising tone. Men and women of the other educational groups produced their TUs on falling tones only. In general, men used falling tones on twenty three TUs, whereas women pronounced nine TUs on falling tones as indicated in table (5) below.

<table>
<thead>
<tr>
<th>Tones/ Participants</th>
<th>Total M % W %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falling</td>
<td>32 23 72% 9 28%</td>
</tr>
<tr>
<td>Rising</td>
<td>5 4 80% 1 20%</td>
</tr>
</tbody>
</table>

Men’s use of falling tones is statistically significant as illustrated in table (6) below.

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean Rank</th>
<th>P value</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>24</td>
<td>28.17</td>
<td>0.041</td>
<td>sig.</td>
</tr>
<tr>
<td>W</td>
<td>24</td>
<td>20.83</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
With reference to Mann-Whitney U test, men differ from women in the use of falling tones on formal greetings (the mean ranks of men and women were 28.17 and 20.83 respectively, \( p = 0.041; p < 0.05 \)). Men use more falling tones on formal greetings and this difference is significant.

Formal greetings are pronounced on tones 1 (1, -1, +1, 1+), 5 (5, -5, 5), 3 (-3), 13, 53 (53, 5-3\(^H\)) as indicated in table (7) below.

Table 7. The Tones Used on Formal Greetings

<table>
<thead>
<tr>
<th>Tones</th>
<th>Falling Tones</th>
<th>Rising Tones</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 -1 +1 1+ 5 -5 5 -3 13 53 5-3(^H)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edu.M</td>
<td>3 1 - - 4 - - 2 - 1 1 1 12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edu.W</td>
<td>1 2 - - 1 - - - 1 - - 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedu.M</td>
<td>2 - - - 2 1 - - - - - 5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedu.W</td>
<td>- 1 1 - - - - - - - 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unedu.M</td>
<td>3 - 1 1 4 - 1 - - - - 10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unedu.W</td>
<td>- - - 3 - - - - - - 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9 4 2 1 14 1 1 2 1 1 1 37</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Tone 5 collected fourteen TUs by the participants and was mostly pronounced by men. Tone 1 collected nine TUs which were also mostly produced by men. Tone -1 with its bouncing pretonic occurred on four TUs, with three TUs being produced by women. The other tones received fewer responses. Almost all rising TUs were produced by Edu.M; tone -3 occurred twice and tone 53 and 5-3\(^H\) received one performance each. Tone 13 was used on the only performance registered of Edu.W in this type. These results are revealed in figure (1) below.

Figure 1. Participants’ Performance in Formal Greetings

Edu.M produced more formal greetings than women. Their TUs were pronounced on rising tones and falling tones. It is noteworthy to mention than Edu.M were the only men to produce rising tones here.

5.2. Informal Greetings
Some of the participants produce informal greetings during their daily interactions as table (8) below reveals.

**Table 8. Participants’ Performance in Informal Greetings**

<table>
<thead>
<tr>
<th>Participants/ Politeness Type</th>
<th>Educated Participants</th>
<th>Partly Educated Participants</th>
<th>Uneducated Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total M % W</td>
<td>Total M % W</td>
<td>Total M % W</td>
</tr>
<tr>
<td>Informal Greetings</td>
<td>12 7 58% 5 42%</td>
<td>10 5 50% 5 50%</td>
<td>6 4 67% 2 33%</td>
</tr>
</tbody>
</table>

Informal greetings are produced by twelve Edu.Ps, ten Pedu.Ps and six Unedu.Ps only. Men of the three educational groups exceed women in the use of falling tones on informal greetings but approximate them in the use of rising tones as illustrated in table (9) below.

**Table 9. Participants’ Performance in the Intonational Patterns of Informal Greetings**

<table>
<thead>
<tr>
<th>Participants/ Tones</th>
<th>Educated Participants</th>
<th>Partly Educated Participants</th>
<th>Uneducated Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total M % W</td>
<td>Total M % W</td>
<td>Total M % W</td>
</tr>
<tr>
<td>Falling</td>
<td>14 10 71% 4 29%</td>
<td>14 9 64% 5 36%</td>
<td>14 9 64% 5 36%</td>
</tr>
<tr>
<td>Rising</td>
<td>10 5 50% 5 50%</td>
<td>4 2 50% 2 50%</td>
<td>4 3 75% 1 25%</td>
</tr>
</tbody>
</table>

Edu.M used more falling tones on informal greetings than women; men produced ten TUs on falling tones to four TUs only by Edu.W. In relation to rising tones, Edu.M and Edu.W produced five TUs each. The same applies to Pedu.Ps where men and women produced nine and five TUs on falling tones, respectively, to two TUs each on rising tones. Unedu.M exceed women in the use of falling tones and rising tones; men produced nine TUs on falling tones to three TUs on rising tones, whereas women produced five TUs on falling tones to one only on a rising tone. In general, men exceed women in the use of falling tones but approximate them in the use of rising tones as table (10) below reveals.

**Table 10. Total Men and Women’s Performance in Informal Greetings**

<table>
<thead>
<tr>
<th>Tones/ Participants</th>
<th>Total M % W</th>
<th>Total M % W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falling</td>
<td>42 28 67% 14 33%</td>
<td></td>
</tr>
<tr>
<td>Rising</td>
<td>18 10 56% 8 44%</td>
<td></td>
</tr>
</tbody>
</table>

Men produced 67% of the TUs pronounced on falling tones and 56% of the TUs pronounced on rising tones. This difference in the use of falling tones is statistically significant as indicated in table (11) below.
Table 11. Statistical Analysis of Men and Women’s Use of Falling Tones on Informal Greetings

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean Rank</th>
<th>P value</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>24</td>
<td>28.21</td>
<td>0.049</td>
<td>sig.</td>
</tr>
<tr>
<td>Women</td>
<td>24</td>
<td>20.79</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

With reference to Mann-Whitney U test, men exceed women in the use of falling tones on informal greetings (the mean ranks of men and women were 28.21 and 20.79, respectively, \( p = 0.049; p < 0.05 \)).

Informal greetings are pronounced on tones 1 (1, -1, +1, 1+), 2 (-2), 3 (3, -3, -3H), 4, 5 (5, 5), 53 (53, 5-3, 5-3H) and 5+1 (5+1, -5+1) as table (12) below indicates.

Table 12. The Tones Used on Informal Greetings

<table>
<thead>
<tr>
<th>Tones / Participants</th>
<th>Falling Tones</th>
<th>Rising Tones</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 - +1 1+ 5 5 5+1 5+1</td>
<td>2 3 3H 4 53 5-3 5-3H</td>
<td></td>
</tr>
<tr>
<td>Edu.M</td>
<td>4 1 1 - 3 - 1 - 1 - 2 - - - 1 1</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Edu.W</td>
<td>2 1 - - 1 - - - 1 1 - - - 1 1</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Pedu.M</td>
<td>1 1 - 1 4 2 - - - 1 1 - - - - -</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Pedu.W</td>
<td>3 - - - 1 - - 1 1 1 - - - - - -</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Unedu.M</td>
<td>1 2 - 1 4 1 - - 1 1 1 - - - - -</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Unedu.W</td>
<td>2 - - - 1 1 1 - - - 1 - - - - -</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>13 5 1 2 14 4 1 2 1 4 3 5 1 1 1 2</td>
<td>60</td>
<td></td>
</tr>
</tbody>
</table>

Tone 1 and tone 5 gathered 13 and 14 occurrences respectively, with the first being used more by women and the second being used more by men. The other falling and rising tones collected few responses by the participants. Figure (2) below indicates the results.
Figure 2. Participants’ Performance in Informal Greetings

Edu.M used more falling tones than Edu.W but approximate then in using tone 53. Pedu.M, on the other hand, used tones 3 and 5 more than Pedu.W but approximate then in using tone 1. Unedu.M also used tones 1, 3 and 5 more than Unedu.W.

6. Conclusions

The ultimate conclusions that are drawn from the findings of the study are:

1. The intonational patterns used by men and women vary according to the speaker, addressee and the situation.
2. Men use falling tones more than women on formal greetings and informal greetings. They produce 72% of formal greetings and 67% of informal greetings pronounced on falling tones as compared to women.
3. The investigation of the intonational patterns used in Iraqi Arabic required a modification of Halliday and Greaves’ intonational system (2008), which was especially designed to describe the intonation of British English, by adding new symbols to account for the intonational patterns observed such as tone +1, -5 and 3H. Such positive, emotional tones are widely used to indicate positive feelings of happiness and excitement.

References
