The Impact of Task Type and Gender on Total Incidence of Negotiation for Meaning

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The current study aims at investigating whether the gender of EFL learners and the kind of task utilized in task-based conversational interactions influence the total incidence of one salient type of feedback, namely, *negotiation for meaning*. Forty Iranian EFL students who were all English teaching majors completed the interactional tasks with both male and female interlocutors. Their language production in terms of the exchanged feedback was analyzed for the total incidence of negotiation for meaning. The study investigated whether (1) the total incidence of negotiation for meaning in feedback is different according to the group type (matched vs. mixed) and the kind of task utilized, (2) the feedback of males and females interacting in mixed-gender groups is different from each other in terms of negotiation for meaning and the type of the assigned task, and (3) the incidence of negotiation for meaning in feedback is different according to the interlocutors' gender. The results of statistical analysis indicate that the incidence of negotiation for meaning did not vary across the group types; thus the gender composition of the group did not seem to affect the amount of negotiation. The participants of both genders generally tended to be engaged in more negotiation for meaning in mixed-gender groups than in matched-gender groups, but this engagement was highly under the influence of task type.

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Keywords: Negotiation for Meaning, Feedback, Interaction, Task, Gender

A large body of research on language and gender (e.g., Oliver, 2002; Cameron, 2003a, 2003b) has demonstrated differences between the ways that males and females use language when they interact. However, as Piller and Pavlenko (2001) have pointed out the role of gender in second language acquisition (SLA) "continues to be under-theorized and under-researched" (p.1). Since many significant differences between male and female speech have been identified in conversational interactions between native speakers (e.g. Goodwin 1990; Tannen, 1990), one area of SLA, specifically foreign language learning in which the impact of gender in terms of the use and quality of feedback being exchanged among learners might be particularly significant, is in research conducted within the framework of the Interaction Hypothesis (Long, 1983, 1996).

The Interaction Hypothesis, as put forward by Long (1996), suggests that engaging in conversational interaction facilitates SLA by providing learners with opportunities to receive comprehensible input and feedback (Gass, 1997, 2003; Long, 1996; Pica, 1994b, cited in Mitchell & Myles, 2004) as well as to make changes in their output (Swain, 1995, cited in Kaplan 2002). While it has been acknowledged that input or interactional modifications may differ across classes, genders, and cultures (Long, 1996), most research in second language acquisition and particularly foreign language learning has not considered the ways in which the gender of the participants might influence second and foreign language interactions. Although some researchers (e.g., Gass & Varonis, 1985a, 1986; Pica, et al., 1991) report the numbers of participants of each gender involved in their studies, few have considered the influence that the gender of learners, or the gender groupings of the participants, might have on their interactions. Since the Interaction Hypothesis assumes that conversational interaction is a site for second language learning, differences between males and females in these interactions, particularly the provision and quality of feedback, may influence language learning through interaction.

One basic type of feedback, which is of utmost importance in task-based conversational interactions, is *negotiation for meaning*. The purpose of the current research is, therefore, to investigate the question of whether the total incidence of negotiation for meaning as one type of task-based conversational feedback is influenced by the gender of the participants and the kind of task they engage in. The following sections provide an overview of the interaction hypothesis focusing on negotiation for meaning as one significant type of feedback and review some of the researches, related to language and gender, which have been conducted within the area of second language acquisition.

Background

An Overview of the Interaction Hypothesis

Using a second language in a conversation with a native speaker or fluent non-native speaker has traditionally been viewed as a means to practice what has already been learned. The Interaction Hypothesis which was initially given prominence by Wagner-Gough and Hatch (1975, cited in Kaplan 2002) and refined by Long (1983) and others (Gass & Veronis, 1985a; Mackey, 1999; Pica & Doughty 1985), has its main claim that one route to second language learning is through conversational interaction.

Long (1996) believes that second language acquisition is facilitated by conversational interaction, which provides learners with opportunities to receive target language input, to produce output, and, through interactional adjustments, to draw their attention to mismatches between their interlanguage and the target language. Through interaction, learners receive comprehensible input and feedback from their interlocutors, and are provided with opportunities to test target language hypotheses (Swain, 1995) as well as to 'notice the gap' between their interlanguage and the target language. This is where task-based language teaching can be considered as an effective way to strengthen classroom interaction. Ellis (2006) argues that classroom participants should forget where

they are and why they are there and to act in the belief that they can learn the language indirectly through communicating in it rather than directly through studying it. It is probably easier to achieve when students are interacting among themselves, without the teacher being present, as the greater symmetry of social roles leads naturally to the kinds of risk-taking behavior required of task-based pedagogy (Ellis, 2006). This is one significant reason why pair and group work are seen as central to task-based teaching.

As Long (1996) explains, during interaction, learners receive feedback on the form and meaning of their messages, modify their speech in an attempt to enhance the comprehensibility of their message, and push their interlocutors, whether native speakers (NS) or non-native speakers (NNS), to do the same. Gass and Mackey (2002) argue that receiving information on what is target-like in the language at the exact time that the learner has produced a non-target like utterance allows the learner to connect form with meaning, an important step along the road to more target-like usage of a structure. This is true whether the information, or feedback, comes to the learner in the form of explicit correction or more implicitly, as a model of target-like language, or negotiation for meaning. Mackey (2006) considers negotiation for meaning and the provision of recasts as two helpful interactional processes, because both can supply corrective feedback letting learners know that their utterances were problematic.

Feedback

Pica (1994b) points out that feedback provides learners with information about their language production, giving them the opportunity to modify their output, compare their utterances with a target-like model, or explicitly discuss language form. In other words, feedback is the information that learners receive from their interlocutors about their language production. Feedback can be either positive, demonstrating comprehension of the learner's language, or it can be negative, pointing out to the learner what was non-target like about his or her utterance. Feedback can be

provided either implicitly, for example by demonstrating a lack of understanding of a learner's utterance, or explicitly, by telling the learner what was non-target like about his or her utterance.

Feedback can be examined in terms of form-focused episodes, recasts, and negotiation for meaning (Pica, 1994a). However, the focus of this study is on negotiation for meaning.

Negotiation for Meaning

One of the first types of feedback examined by L2 researchers is *negotiation for meaning*, described by Pica (1994a) as an activity that occurs as a result of interaction "in which L2 learners seek clarification, confirmation, and repetition of L2 utterances they do not understand" (p.56). By turning from the content of the conversation, L2 learners can attend to form-meaning connections and, thus, push themselves and their interlocutors to reach a more target-like way of expressing themselves in the conversation (Gass & Varonis, 1985; Pica, 1994b). Negotiation for meaning may be particularly helpful for acquisition because it is supplied when the L2 learner has demonstrated a lack of control over a form, whether grammatical or lexical. As Gass (1997) has observed, negotiation for meaning provides L2 learners simultaneously with both input and feedback, and so may facilitate second language acquisition by focusing the L2 learners' attention on the mismatch between their language and target-like language use.

Long (1996) has argued that *negotiation* provides exactly that opportunity by bringing together several crucial aspects of interaction: Input from a conversational partner, noticing of the gap between the L2 learner's interlanguage and the L2, and an opportunity for the L2 learner to put this information together and produce a modified output.

The incidence of negotiation for meaning may be influenced by certain variables. One such variable is the *task* in which L2 learners engage. For example, when they are required to exchange information with each other, they negotiate more meaning as compared with an information exchange that is an optional feature

of task completion (Doughty & Pica, 1986). Other task features that may promote negotiation for meaning include: A two-way exchange of information among the L2 learners, a closed task outcome, and tasks that are unfamiliar to the learners (Ellis, 2003).

Whether the interlocutor is a native or non-native speaker of the target language is another factor that may influence the incidence of negotiation for meaning. It has been found that negotiation for meaning is more frequent in native speakers (NS)-nonnative speakers (NNS) conversations than in NS-NS conversations and the most prevalent in NNS-NNS discourse (Oliver, 2002).

A further possibility is that other aspects of task-based instruction may influence the incidence of negotiation for meaning. The *gender* of L2 learners and their interlocutors is one possibility that the current study intends to explore. A great deal of research (e.g., Cameron, 2003; Oliver, 2002) on language and gender has pointed to significant differences between males' and females' patterns of communication; for example, how speakers of different genders ask and answer questions and follow up on topics raised by their conversational partners. It is possible that L2 learners' gender contributes to the incidence of negotiation for meaning, with differing amounts of negotiation being undertaken by males and females in *mixed-* and *matched-gender groups.* This would mean that there are different opportunities for L2 learners to receive feedback on their language production, to notice the gap between their interlanguage and the target, and to attempt to modify their language in a more target-like manner. Given that these processes, brought together in negotiation, have proven to be facilitative of SLA, it is important to know about their effect, if any, in foreign language learning, and whether L2 learners have differential access to these opportunities based on their own gender or that of their interlocutors.

Interactional Style

While the focus of much of the research on interaction has been on interaction in the context of second language acquisition,

it is important to remember that interaction refers to exchanges between native speakers of a language as well. Researchers have found gender differences when studying these everyday interactions. Tannen's (1990) study of same-sex friendships, for example, found that across age groups, males and females acted differently when conversing with a same-sex friend. Males and females differed in the amount of talk they engaged in, with females generally talking more overall and discussing fewer topics than males, who discussed many topics briefly.

Differences between males and females have been found in mixed settings as well as matched-gender interactions. In one study of undergraduate students, Aries (1976) reported that males both initiated and received more interaction than females. In the interpretation of the findings, Aries mentioned that males spoke more than females, and individuals spoke more to males than to females; this latter finding raises the possibility that it is not just the gender of the speaker that influences interactional style, but also the gender of the interlocutor. She also pointed out that the mixed group setting seems to benefit men more than women by allowing men more variation in their interpersonal style.

Interactional differences have also been found in giving and receiving compliments. Holmes (1998) examined interactions involving compliments and found that women both gave (68%) and received (74%) the vast majority of compliments. While men were in the minority on both ends, they were much more likely to give a compliment to a female (23%) than to a male (9%) and to receive a compliment from a female (17%) than a male (9%). Thus, even within a linguistic behavior as gender-differentiated as compliment giving, not only does the gender of either of the compliment giver and complement receiver matter, but the interaction of these two factors, namely, the gender of both the individual and the interlocutor must be taken into account as well.

It is apparent from these studies that, depending on the context and the individuals involved, there may be differences in interactional style between males and females. These differences may be especially important if they affect other areas of life, such as education and achievement.

Gender and Second Language Interaction

Gender has been a subject of study in many fields closely related to second language acquisition, including some areas of linguistics, as well as psychology and education. A small number of studies (most of them carried out in second language context rather than foreign language situation) have addressed the question of the role of gender in second language interaction (Aries, 1976; Gass & Varonis, 1986; Kasanga, 1996; Oliver, 2002; Pica et al., 1991). The results of the few studies that have been conducted on the impact of gender in SLA have pointed to possible gender differences in second language interactions. In interactions between learners, one study found that the most negotiation occurred in male-female dyads, followed by male-male dyads and then female-female dyads (Gass & Varonis, 1986), but another study found no significant differences between male-male and female-female dyads (Oliver, 2002). When looking at individual learner language production, studies have suggested that both males and females negotiate more in mixed-gender pairings than in matched-gender pairings, males indicate non-understanding with a greater frequency than females, and in mixed-gender pairings, males dominate in both the amount of talk and the performance of the task (Kasanga, 1996). In interactions between learners and native speakers, no significant differences were found for the incidence of negotiation in different types of dyads (Pica et al., 1991), but when looking at individuals, female NS were found to negotiate more with male learners than with female learners and female learners were found to negotiate more with female NS than with male NS. There were no significant differences for males, either learners or native speakers.

Tasks and Second Language Interaction

Tasks have been defined by different researchers (Long, 1985; Richards, Platt and Webber, 1986; Breen, 1987; Ellis, 2003; Nunan, 2006, cited in Nunan, 2006) in various ways. Nunan (2006,

p. 5) defines a task as:

> a piece of classroom work that involves learners in comprehending, manipulating, producing or interacting in the target language while their attention is focused on mobilizing their grammatical knowledge in order to express meaning, and in which the intention is to convey meaning rather than to manipulate form. The task should also have a sense of completeness, being able to stand alone as a communicative act in its own right with a beginning, a middle and an end.

Taguchi (2007) argues that a main objective in researching language tasks has been to identify a set of task characteristics based on the assumption that learner performance varies according to task characteristics.

Under the interactionist framework, various aspects of tasks that are believed to influence interaction have been investigated. One of the early distinctions was made by Pica, Kanagy, and Falodun (1993), who classified tasks in terms of the source and flow of information. Tasks can be either one-way, with one participant holding all of the information to be conveyed to the other, or two-way, with each participant having part of the information that needs to be shared. Tasks can be further classified according to whether the exchange of information between participants is required, meaning that in order to complete the task, learners have to share information with each other, or optional, meaning that learners could choose to share information, but could also complete the task without doing so. Another distinction that can be made is between tasks with an open outcome, meaning that there is no predetermined solution or right answer and tasks with a closed outcome, in which participants are trying to find a specific solution (Ellis, 2003).

Statement of the Problem

As discussed in the background section earlier, research conducted within the framework of the Interaction Hypothesis has indicated that conversational interaction can promote SLA (e.g., Ellis et al., 1994; Han, 2002; Iwashita, 2003; Leeman, 2003). Interaction may influence learning by providing learners with multiple opportunities: to receive input, produce output, and, through feedback on the comprehensibility and grammaticality of their own production to notice the difference between their interlanguage and the target language (Gass 2003; Pica, 1994b).

Individual differences such as motivation, aptitude, working memory, anxiety, analytic ability, and the developmental level among learners may affect the ways that they interact and, possibly, the learning that results from such interaction (Mackey & Philip, 1998; Robinson, 2001). Gender can also be considered as another important factor which might influence the effectiveness of interactions.

The research indicates that gender differences are apparent in L1 interaction beginning at an early age (e.g., Goodwin, 1990; Kyratzi & Guo, 2001). Males and females may have different educational experiences in the same classroom, use different learning strategies to different degrees, and their motivation and willingness to communicate may differ both in degree and by context. Finally, they may behave differently in mixed-gender situations than in matched-gender contexts. Studies of gender differences in second language interactions have further suggested that there are differences between males and females in the use of negotiation signals, or indicators of non-understanding (Pica et al., 1991; Kasanga, 1996). They have also indicated that it is possible that interactions in matched-gender pairs differ from interactions in mixed-gender pairs, both in the amount and type of interaction (Pica et al., 1991).

However, despite the fact that the possible influence of gender on interaction has been called "a crucial issue" (Long, 1996, p. 421), there are relatively few studies of gender and interaction, particularly in EFL context and in terms of total

incidence of negotiation for meaning, and these studies generally involve small numbers of participants (between 4 and 10 dyads). One very significant limitation of such studies is that, they include participants with a limited set of L1s: it is unknown to what extent these findings apply to speakers of languages other than those spoken by the participants in the above studies. Although in these studies, some learner characteristics, such as proficiency level, have been considered, most of the analyses appear to have treated learners as homogeneous and have overlooked individual differences and background variables. Furthermore, while these studies offered interesting findings with regard to gender, some were not designed to investigate gender differences in interaction. None of the studies have given participants the opportunity to interact in both mixed-and matched-gender groups, but rather have compared different individuals in each condition, raising the possibility that the findings, for example, of male dominance in mixed-gender groups may be more due to the individuals in the groups than a specific gender-related characteristic.

Findings of gender differences in interaction and specifically total incidence of negotiation for meaning therefore remain speculative, especially in an EFL context. More concrete findings are necessary in order to gain a better understanding of the ways that gender might influence language learning through interaction. If males and females use different interactional strategies, or if their interactions are influenced by whether they interact with an interlocutor of the same or different gender, it is possible that these differences might lead to differences in language learning.

The present study focuses on an analysis of the impact of one type of feedback, namely, total incidence of negotiation for meaning provided by males and females in mixed-and matched-gender groups in an EFL context (Persian academic community involving Iranian EFL students studying English teaching as their major at the B.A level) in an effort to determine to what extent and under what conditions learners' gender affects the total incidence of negotiation for meaning. Findings of this study will hopefully lay the foundation for future investigations of gender and foreign language development. The findings of this study can also be

beneficial to researchers, helping them understand how gender may influence experimental findings and, ultimately, the language learning that results from interaction, and to teachers, who may wish to gain a better understanding of the dynamics of interaction in their classrooms and what implications they might have for task design.

Research Questions

As mentioned previously, the current study aims to shed light on the impact of gender on task-based conversational interactions of foreign language learners by addressing the following major questions: Does the use and incidence of task-based conversational feedback vary according to the gender of the participants? If so, how?

These questions are further divided into three sub-questions:

1. Does the total incidence of negotiation for meaning in feedback differ according to group type (matched vs. mixed)?
2. Is the feedback of males and females in mixed-gender groups different in terms of total incidence of negotiation for meaning?
3. Is the total incidence of negotiation for meaning in feedback different according to the interlocutors' gender?
4. Does the total incidence of negotiation for meaning in feedback differ according to the task type?

Research Hypotheses

1. The total incidence of negotiation for meaning in feedback does not differ according to the group type (matched vs. mixed).
2. The feedback of males and females in mixed-gender groups is not different in terms of total incidence of negotiation for meaning.
3. The total incidence of negotiation for meaning in feedback is not different according to the interlocutors' gender.

4. The total incidence of negotiation for meaning in feedback does not differ according to the task type.

Method

Participants

Primarily, a group of 80 EFL students who were all Persian native speakers participated in this study. They were English Teaching majors taking laboratory classes as a four-credit course at the BA level. In fact, the researcher was the lab teacher as well, thus the participants were engaged in the completion of the assigned tasks as part of their class activities. Attempts were made to keep the class atmosphere as normal as possible, so that the subjects would not feel they were performing the tasks under experimental conditions. In fact, this has been done to remove Hawthorn effect, which, according to Brown (1988), is the effect produced by the introduction of a new element into a learning situation. Thus, it is possible for subjects to be so pleased about being included in a study that the results of the investigation are more closely related to this pleasure than to anything that actually occurs in the research.

All participants took a pretest prior to the main phase of the experiment. This pretest consisted of the speaking and listening modules of IELTS. After the completion of this test, 40 (20 males and 20 females) of the whole population of 80 whose scores were within the lower intermediate level of IELTS band score, which is 5, were selected. Since the administered test was taken from IELTS 5 which is actually a course book not real IELTS, the scoring was done by three independent raters for the sake of inter-rater reliability. The researcher interviewed the subjects and recorded all the exchanged information. Then the raters listened to the interviews and scored them individually. The results were submitted to correlation analysis; the coefficient was 0.86. This was considered significantly high to determine that the rating was objective.

Materials

Treatment Tasks

Based on the findings of various researches mentioned in Ellis (2003), interaction is promoted by tasks that have a two-way, required exchange of information and a closed outcome. Accordingly, the tasks selected for this study are Picture Differences, Picture Placement, and Picture Story which are described in Table 1, and the characteristics of the tasks described above are presented in Table 2.

Table 1

Treatment tasks and their description

Task	Description
Picture Differences	Without showing each other their pictures, learners must work together to identify ten differences between the pictures.
Picture Placement	Without showing each other their pictures, learners must help each other place the missing objects in their pictures of a special place (e.g. a kitchen) in order to make their kitchens identical.
Picture Story	Learners work together to arrange eight pictures in the correct order to tell a story and then write the story.

Table 2

Task characteristics

Task	Type	Flow of Information	Exchange of Information	Outcome
Picture Differences	Information Gap	Two-way	Required	Closed
Picture Placement	Information Gap	One-way repeated	Required	Closed
Picture Story	Collaborative	Two-way	Optional	Closed

The Picture Differences task is a kind of information gap task because each partner holds some of the information. It requires a two-way exchange of information, and all members of the group must participate in the task. Information gap tasks, and in particular picture difference tasks, have been empirically demonstrated to provide opportunities for negotiation for meaning and other types of feedback (Mackey & Oliver, 2002).

The Picture Placement was adapted from Ellis (2001). Like the picture differences task, this task also requires an exchange of information, leading to participation by all members of the groups. However, it is possible to view this task as a combination of two one-way tasks, as each learner must share specific information about different items and their location with his or her partners. This task provides each participant with the opportunity to give directions, allowing comparisons with the findings of dominance by Gass and Varonis (1986) in direction giving.

The Picture Story task provides an opportunity for learners to work together in a situation in which a two-way exchange of information is optional. In this task, based on one used by Swain and Lapkin (1998), optional completion of the task requires a discussion and resolution by all members of the group; however one partner could simply bypass the others and institute his or her own decisions. The picture story task also adds the element of writing, not required by the other two tasks. The addition of a writing component to this task, as well as the differing characteristics of the three tasks, may shed light on the different types of interaction elicited by different types of tasks, and allow an examination of whether different task characteristics affect the role of gender in task-based interactions.

Design

This study employed a repeated measures design, in which participants interacted in both mixed- and matched-gender groups. There were ten groups including four participants in each. This approach was chosen to ensure that results would reflect actual

differences among interactions, rather than individual differences among participants other than gender. Participants, in groups of four, completed three tasks on each of the two days. In order to ensure that results from all groups were comparable, and that any differences were due to gender rather than task-ordering effects, all groups completed the tasks in the same order, and the instructions for each version of the task remained constant. Gender groupings were counterbalanced: On the first day, half of the students participated in mixed-gender groups (i.e. groups consisting of two males and two females). The other half of the students participated in matched-gender groups (i.e., groups of four males or four females). On the second day, the students who had previously completed the tasks in mixed-gender groups completed the tasks in matched-gender groups, and the students who had already completed the tasks in matched-gender groups worked in mixed-gender groups. Half of the total participants in each condition completed Task Set A on Day 1 and Task Set B on Day 2; half did the opposite, task set A and task set B consist of some tasks related to picture placement, picture differences and picture story which are actually different versions of the same tasks. Since the same participants were supposed to participate in both matched- and mixed-gender groups on each of the two days, their performance might get affected by their familiarity with completing identical tasks; thus, two versions of the same tasks were selected to avoid task wiseness. All interactions were audio-recorded for later transcription and coding.

Transcription and Coding Procedures

The first step in coding negotiation for meaning was to determine the type of negotiation represented by the utterance. For the purposes of this study, negotiation for meaning was operationalized as an incidence of one of the "3cs": *confirmation checks, clarification requests, and comprehension checks* (Foster, 1998; Oliver, 1998). A *confirmation check* is "any expression immediately following an utterance by the interlocutor which is designed to elicit confirmation that the utterance has been correctly

heard or understood by the speaker" (Long, 1983, p. 137). An example of a confirmation check, from the current study, is presented in *Example 1* below, in which the female learner 2 confirms (line 2) that she has correctly understood the statement made by female learner 1 in line 1. Once she receives confirmation that she has (line 3), she is able to move on with the task by explaining how her picture is different (line 4):

Example 1: **Confirmation Check**
- Female learner 1: I see one cup, uh bowl on the table. One bowl on the table.
- Female learner 2: **One bowl, only one?**
- Female learner 1: Yes, only one.
- Female learner 2: On mine, two dishes. Two dishes and too are uh plates.

A *clarification request* is "any expression designed to elicit clarification of the interlocutor's preceding utterances" (Long, 1983, p. 137). An example of a clarification request is presented in *Example 2*, in which the female learner clarifies (line 4) whether the male learner is asking her about how many umbrellas she has in her picture, or how many colors there are in the umbrella she has. Once she understands what she is being asked, she provides him with the information he wants (line 6)"

Example 2: **Clarification Request**
- Male learner: In your picture, do you have an umbrella?
- Female learner: Yes.
- Male learner: And, how many colors?
- Female learner: **How many colors or how many umbrellas?**
- Male learner: How many colors has the umbrella?
- Female learner: Oh, have uh, one umbrella have, um, two colors. The second umbrella two colors, too.

A *comprehension check* is an attempt "to anticipate and prevent a breakdown in communication" (Long, 1983, p. 136). An example of a comprehension check is provided in *Example 3*, in

which male learner 1 asks male learner 2 if he understands what they are supposed to do in the task (line 1):

Example 3: **Comprehension Check**
- Male learner 1: Okay, good. **Have you understood it now?**
- Male learner 2: Yes, Uh you have to tell. You have to asking me about the thing.

The second step in coding for negotiation for meaning is to determine the focus of the negotiation: Whether learners are negotiating about the task, the meaning of their interlocutor's utterance(s), or the form(s) of their interlocutor's utterance(s). Negotiating about the task involves confirming, clarifying, or making sure that the interlocutors understand the task instructions or other aspects of the task. *Example 3* above, in which the male learner 1 makes sure that his partner understands the instructions for the picture placement task, is an example of *negotiation about the task*. *Negotiation about meaning* involved a learner confirming or clarifying the meaning of his/her interlocutor's utterance(s), or making sure that the interlocutor understood the learner's utterance(s). *Examples 1 and 2* above are examples of *negotiating about meaning.*

Finally, *negotiating about form* involved learners negotiating about the grammar of an utterance, as in *Example 4* below. In this negotiation sequence, the learners are writing a story together. The male learner 1 has suggested that they write "she try" (line 1), which the male learner 2 then expands to "she try to stop" (line 2). In line 3, the male learner 3 tries to confirm that this is the correct form and receives this confirmation in line 4.

Example 4: **Negotiation about Form**
- Male learner 1: She try, she try.
- Male learner 2: She try to stop
- Male learner 3: **Try to?**
- Male learner 2: She try to stop. Try to stop.
-

Data Analysis

Total Negotiation

In order to make the analysis of negotiation uniform across the tasks, the total amount of negotiation for meaning was analyzed as a proportion of negotiation to total turns; thus the total number of negotiation moves for each group or individual was divided by the total number of turns taken by the group or individual in the task.

Table 3 presents the descriptive statistics for the incidence of negotiation for meaning per turn by each group on each task; Figure 1 is a graphical representation of the mean proportion of turns containing negotiation on each task in each of the three group types.

Table 3.

Descriptive statistics: total incidence of negotiation for each group type

Task	Group Type	No. of Groups	Mean	Standard Deviation	95% Confidence Interval	
					Lower Bound	Upper Bound
Picture Differences	MMMM	5	0.14	0.02	0.13	0.15
	FFFF	5	0.14	0.02	0.12	0.15
	MMFF	10	0.16	0.02	0.14	0.15
Picture Placement	MMMM	5	0.17	0.03	0.16	0.18
	FFFF	5	0.18	0.02	0.16	0.18
	MMFF	10	0.16	0.02	0.16	0.17
Picture Story	MMMM	5	0.07	0.01	0.06	0.08
	FFFF	5	0.07	0.02	0.06	0.07
	MMFF	10	0.06	0.01	0.05	0.06

The incidence of negotiation was fairly uniform across the group types; the gender composition of the group did not seem to affect the amount of negotiation.
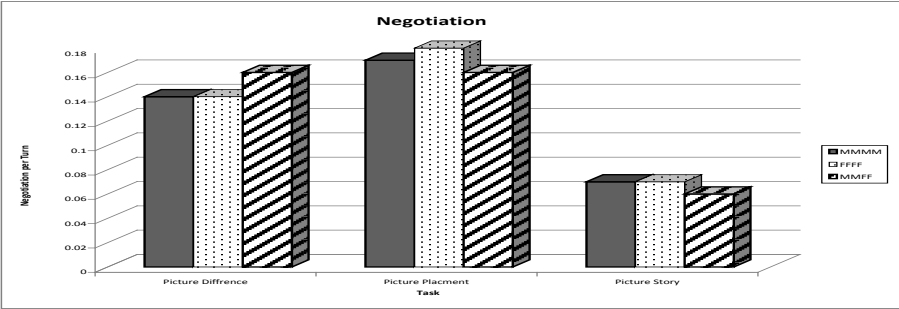
Figure 1. Total negotiation for meaning by each group type

Task did seem to influence the incidence of negotiation; the participants negotiated least in the picture story task, with more negotiation in the picture differences and the picture placement tasks. The results of the repeated measures ANOVAs (Table 4) confirmed these descriptive findings.

Table 4

Analysis of variance: total negotiation by each group type

Factor	Source of Variance	Sum of Squares	df	Mean Square	F	P
Group	Between Groups	0.001	2	0.00	0.94	0.39
Task	Within Groups	0.46	2	0.20	531.84	0.00
Group*Task	Interaction	0.002	4	0.001	1.73	0.14

Group type was not found to be significant (F=0.94, df=2, p=0.39), which means that the incidence of negotiation did not vary according to whether the group comprised of 4 males, 4 females, or 2 males and 2 females.

Task was a significant factor (F=531.84, df=2, p=0.00), which means that there were significantly different proportions of negotiation on different tasks. Post hoc Tukeys performed on the significant finding for the task revealed that there was more

negotiation on the picture differences task than on the picture story task (p=0.00), and more negotiation on the picture placement task than on the picture story task (p=0.00), the difference between the picture differences and picture placement tasks was not significant (p=0.06), but very close to significant. The interaction between the task and the group was not significant (F=1.73, df=4, p=0.14).

Table 5 presents the descriptive statistics for the incidence of negotiation for meaning per turn by the males and the females in mixed-gender groups; Figure 2 is a graphical representation of the mean proportion of turns containing negotiation on each task by the participants of each gender.

Table 5

Descriptive statistics: total incidence of negotiation for meaning by the in mixed-gender groups

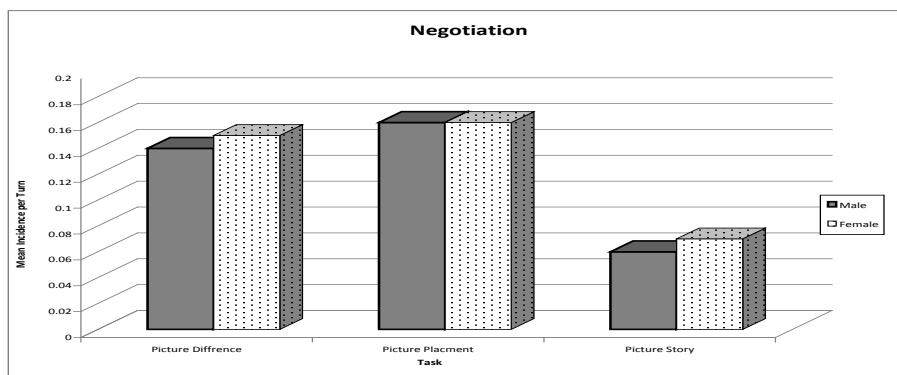| Task	Gender	N	Mean	Standard Deviation	95% Confidence Interval	
					Lower Bound	Upper Bound
Picture Differences	Male	20	0.14	0.01	0.13	0.15
	Female	20	0.15	0.02	0.14	0.15
Picture Placement	Male	20	0.16	0.02	0.15	0.18
	Female	20	0.16	0.02	0.15	0.17
Picture Story	Male	20	0.06	0.01	0.06	0.07
	Female	20	0.07	0.02	0.06	0.08

Figure 2. Total negotiation for meaning by the participants in mixed-gender groups

The males and the females engaged in similar levels of negotiation across the tasks; the participants of both genders negotiated the least in the picture story task, with more negotiation in the picture differences and the picture placement tasks, which had very similar incidences of negotiation.

The results of the repeated measures ANOVAs (Table 6) reflected these descriptive findings.

Table 6
Analysis of variance: total negotiation by the participants in mixed-gender groups

Factor	Source of Variance	Sum of Squares	df	Mean Square	F	P
Group	Between Groups	0.00	1	0.00	0.18	0.67
Task	Within Groups	0.19	2	0.10	246.8	**0.00**
Group*Task	Interaction	0.00	2	0.00	0.06	0.94

Gender was not found to be a significant factor (F=0.18, df=1, p=0.67), which means that the males and the females did not differ in their incidence of negotiation for meaning.

Task was a significant factor (F=246.8, df=2, p=0.00), which means that there were significantly different proportions of negotiation on the different tasks. Post hoc Tukeys performed on the significant finding for the task revealed that there was more negotiation on the picture differences task than on the picture story task (p=0.00), and more negotiation on the picture placement task than on the picture story task (p=0.00), with no significant differences between the picture differences and the picture placement tasks (p=0.00).

The interaction between the task and the group was not significant (F=0.06, df=2, p-0.94).

Table 7 presents the descriptive statistics and the results of paired-samples t-tests for the incidence of negotiation for meaning per turn by the participants on each task in each group type. Figure

3 is a graphical representation of the mean incidence of negotiation for meaning by the participants in each group type.

Table 7
Total negotiation by the participants in mixed- and matched-gender groups

Task	Gender	Group Type	N	Mean	Standard Deviation	Paired-samples t-tests		
Picture Differences	Male	Mixed	20	0.15	0.02	t=0.57	df=19	p=0.57
		Matched	20	0.14	0.01			
	Female	Mixed	20	0.15	0.01	t=1.22	df=19	p=0.24
		Matched	20	0.14	0.02			
Picture Placement	Male	Mixed	20	0.16	0.02	t= -0.55	df=19	p=0.59
		Matched	20	0.17	0.02			
	Female	Mixed	20	0.16	0.02	t=-0.31	df= 19	p=0.76
		Matched	20	0.17	0.01			
Picture Story	Male	Mixed	20	0.07	0.01	t=-0.12	df= 19	p=0.91
		Matched	20	0.07	0.02			
	Female	Mixed	20	0.07	0.02	t= 0.90	df= 19	p=0.38
		Matched	20	0.06	0.01			
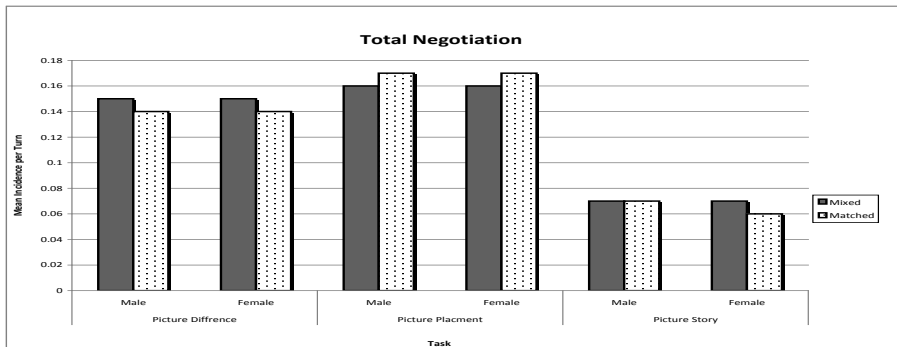
Figure 3. Negotiation for meaning by the participants in mixed- and gender groups

With the exception of the males and the females on the picture placement task, for whom the incidence of negotiation for meaning was more in matched-gender groups than in mixed-

gender groups, and the males on the picture story task, for whom the incidence of negotiation for meaning was equal in mixed- and matched-gender groups, the participants of both genders generally engaged in more negotiation for meaning in mixed-gender groups than in matched-gender groups. However, the differences between mixed- and matched-gender groups were small, as reflected by the non-significant results of the paired-samples t-tests.

Discussion

The previous section presented the analysis and results for each research question. This section will discuss those results with the goal of bringing together the findings from the various analyses in order to create an overall picture of the role of gender in foreign language learner interactions. The discussion will be centered on two themes: gender effects and task effects.

Gender Effects

The relationship between gender and negotiation for meaning seemed to be a rather complicated issue. There were no effects for the gender composition of the group on the total incidence of negotiation for meaning, in contrast with earlier findings by Gass and Varonis (1986), who found more negotiation in mixed-gender groups than in matched-gender groups and more negotiation in male-male groups than in female-female groups. The current findings are in line with the research conducted by Oliver (2000) and Pica et al. (1991). Both of the studies revealed no significant differences between group types. Unlike the results of the study conducted by Gass and Varonis (1986), the results of the investigations done by Oliver (2000) and Pica et al. (1991), as well as the findings of the current study were subjected to inferential statistics, which can be interpreted more strongly than the descriptive statistics reported by Gass and Varonis (1986).

The above-mentioned studies have examined the overall negotiation for meaning in speakers of mixed L1s (Oliver, 2002), Japanese (Pica, et al., 1991), Persian (the current study), children

(Oliver, 2002), adults (Pica, et al., 1991; the current study), and among learners and native speakers (Pica, et al., 1991), providing fairly strong evidence that the overall incidence of negotiation for meaning does NOT vary by group type.

The male and female L2 learners in the current study did not differ significantly in the total amount of negotiation they initiated in mixed-gender groups, in contrast with the results of the studies reported by Gass and Varonis (1985a) and Kasanga (1996), whose male participants negotiated more than females they worked with. However, like the study conducted by Gass and Varonis (1986), Gass and Varonis (1985a) reported only descriptive, not inferential statistics, and Kasanga (1996) examined types of negotiation for meaning, but not the overall incidence.

Unlike Gass and Varonis (1986), who found that both males and females negotiated more in mixed-gender groups than in matched-gender groups, and Pica et al. (1991), who reported that female learners, but not male learners, negotiated significantly more in matched-gender groups than in mixed-gender groups, the current study did not disclose any significant difference between the total amount of negotiation initiated by the males or the females in mixed- or matched-gender groups.

There are a few possible reasons for the differences between the studies reported in literature and the current study: Earlier studies compared learners in different conditions; in other words, the learners who interacted in mixed-gender groups in the studies by Gass and Varonis (1986) and Pica et al. (1991) were different from those who interacted in matched-gender groups. It is possible, then, that the findings attributed to gender differences were actually individual differences, and that the learners in the matched-gender groups were simply more prone to negotiate than the learners in the mixed-gender groups. Differences between Gass and Varonis (1986) study and the current study can be explained in terms of lack of inferential analysis in Gass and Varonis study.

The differences between the results reported by Pica et al. (1991) and those of the current study may reflect the differences in the study designs and the participants' populations. The L2 learners in the study by Pica et al. (1991) interacted with native

speakers with whom they were matched for the purposes of that research study, but the L2 learners in the present study interacted with fellow L2 learners whom they saw every day in their classes: "Women and men are most likely to use language differently when gender is a salient factor in the interaction" (Galliano, 2003, p.150). *Gender* is more likely to predict differential language use when interactions are public, short-term, and unfamiliar (Galliano, 2003), as they were in the study carried out by Pica et al. (1991). No differential language use, on the other hand, was predicted when interactions were between participants who were familiar with each other and interacted over a long term (Aries, 1976).

A further possibility is that the influence of gender is different in interactions among learners and native speakers than among learners themselves. Gender differences may be more likely to arise in contexts in which interactions are not equal (Galliano, 2003). In the present study, because all the participants in interactional groups were L2 learners, they were more equal in terms of their communicative ability than those in the study by Pica et al. (1991), in which learners may have perceived themselves as less equal to their native speaker interlocutors. Another explanation may lie in the fact that the participants in the study by Pica et al.'s (1991) and the participants in this study differed in terms of their linguistic, cultural, and educational backgrounds, with Pica's participants being L1 speakers of Japanese in a University ESL program and the participants in the current study being L1 speakers of Persian in a university EFL program.

Moreover, the earlier literature review critiqued these studies on the ground that they had different participants interacting in different gender groupings. In particular, the fact that the individuals interacting in mixed-gender groups were not the same as the individuals interacting in matched-gender groups raised the possibility that the findings of gender differences were actually misattributed findings of individual communicative styles. The results of the current study, in which the same males and females interacted in mixed- and matched-gender groups, lent support to this suggestion.

Task Effects

The most amount of negotiation overall, for both groups and individuals, was observed over picture differences and picture placement tasks. These findings are consistent with the previous research (e.g., Gass & Varonis, 1985; Kasanga, 1996) regarding task effects on the overall incidence of negotiation for meaning.

The picture differences and picture placement tasks both required an exchange of information, while the exchange of information on the picture-story task was optional. A required exchange of information has repeatedly been found to foster more negotiation than an optional exchange of information (Doughty & Pica, 1986; Foster, 1998; Gass & Varonis, 1985; Kasanga, 1996; Newton, 1991, cited in Ellis, 2003).

This study, therefore, adds to the body of existing research, making plain that requiring L2 learners to exchange information results in more negotiation for meaning than making the exchange of information optional.

Implications

The results of this study suggest that the experience of engaging in task-based interactions with other learners may be a different experience for males and females, and that learners' interactions may differ depending on whether their interlocutor is of the same or different gender. This is more noticeable in a foreign language context like Iran, where, from the very early years of schooling, male and female learners, because of the religious beliefs, are segregated.

The findings of this study raise some crucial questions about negotiation for meaning. The crux of the matter is that, with respect to the overall negotiation for meaning, the effect of gender was less widespread than would have been expected from the research carried out in this area (Gass & Varonis, 1985, 1986; Kasanga, 1996; Pica, et al., 1989; Pica, et al., 1991). If future research on gender and negotiation for meaning confirms the results of the current study, that gender

is not predictive of overall negotiation, while other factors, like task are, then, SLA researchers may be able to disregard the findings of the previous studies with respect to gender and negotiation, concentrating their efforts more on exploring and controlling factors which influence learners more on tasks than gender.

Teachers want to give their students the best possible opportunities to learn and use the target language. Given the findings that gender may influence learners' experiences in task-based conversational interactions, teachers may wish to encourage their students to work with interlocutors of a special gender, in the case of negotiation for meaning, mixed-gender groups. Teachers should consider planning for times when learners can work together in mixed-gender groups in order to allow them the best possible context for the learning opportunities that arise from negotiation for meaning.

Teachers should also be aware that the influence of gender on task-based interactions might vary with the task the learners are engaged in, with different tasks mitigating the effect of gender differently. Tasks and task types should be carefully chosen to elicit the kinds of interactions desired. Given the finding that some tasks were more likely to uncover gender differences than others, it is important to use a variety of tasks and task types when investigating the role of gender in second or foreign language interaction. Many of these implications are relevant for language teachers as well as SLA researchers.

Conclusion

Despite the fact that single-sex education is preferred to co-education in Iran due to some religious beliefs, and the fact that all the participants were university students studying at the BA level at a private university (the one in which they are supposed to pay almost a high tuition thus coming from well-to-do families), and were almost equal in terms of social status, the incidence of negotiation for meaning did not vary across the group types; thus the gender composition of the group did not seem to affect the

incidence of negotiation. When the males and the females worked together in mixed-gender groups, their interactions were remarkably equal with respect to the incidence of negotiation for meaning. The participants of both genders generally tended to be engaged in more negotiation for meaning in mixed-gender groups than in matched-gender groups, but this engagement was highly under the influence of task type.

Task played a significant role in the incidence of negotiation for meaning, with the most negotiation overall occurring on the picture differences and the picture placement tasks than the picture story task.

This study can be considered as one systematic investigation of gender and interaction that compares male and female interactional patterns in different group types, in male-female interactions, and as learners interact in mixed- and matched-gender groups; as a result, it provides the opportunity to make claims about the role of gender in foreign language interactions. This study has made an attempt to lay the groundwork for a great deal of research on the role of gender in task-based interactions among foreign language learners, including the role of the task the learners are engaged in, variation among individual learners, and developmental investigations of gender and foreign language learning through interaction. Most importantly, the current study clearly shows that the gender of the learners' interlocutor(s) can significantly influence the total incidence of negotiation for meaning in task-based interactions among foreign language learners.

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