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Author

Trentman, Emma

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L2 Arabic Dialect Comprehension: Empirical Evidence for the Transfer of Familiar Dialect Knowledge to Unfamiliar Dialects

EMMA TRENTMAN

Michigan State University
E-mail: trentma1@msu.edu

Arabic is a diglossic language, and learners must become competent in both Modern Standard Arabic (MSA) and a spoken dialect. However, Arabic dialects are typically not taught in U.S. classrooms. One reason is the question of which dialect to teach? This study looks at two cases of transfer between familiar dialect listening ability and unfamiliar dialect listening ability. The first is between Egyptian and Levantine dialects, where one is familiar and one is not (EL transfer). The second is from Egyptian and/or Levantine dialects to Iraqi, Saudi, and Tunisian dialects when the speakers of these latter dialects are accommodating towards MSA (Accommodation transfer). In both cases, correlations and partial correlations revealed significant and positive relationships between the comprehension of unfamiliar dialects and both familiar dialect listening ability and MSA listening ability. Multiple regression analysis revealed that familiar dialect listening ability was a significant predictor of unfamiliar dialect listening ability for EL transfer, and MSA listening ability was not. For accommodation transfer, both familiar dialect listening ability and MSA listening ability were significant predictors of the comprehension of unfamiliar dialects, although MSA listening ability was slightly better. The implications of these results for the Arabic classroom are discussed.

INTRODUCTION

Variation is a natural component of language, such that within a given language, there exists a great deal of variation according to measures such as geographical dialect and social register. Unfortunately, the language classroom often ignores this variation, leading to the assumption that there is a monolithic, unvarying standard language. In fact, depending on the context, the ability to understand different varieties of the same language may be very necessary for the L2 learner to communicate. In the case of Arabic much of the variation manifests itself through diglossia, and learners cannot function across a variety of spoken and written contexts without being competent in both the formal variety of Modern Standard Arabic (MSA) as well as one of the spoken varieties or dialects. However, these latter varieties are typically not taught in the foreign language classroom, leaving learners dependent on study abroad for exposure to a dialect. There are a number of reasons for this, one of which is a logistical question: which of the many Arabic dialects should be taught? This study sheds light on this discussion by looking at the effects of MSA listening ability and familiar Arabic dialect listening ability on the comprehension of unfamiliar dialects of spoken Arabic.

LITERATURE REVIEW

L2 Comprehension of Non-standard Varieties

The literature on the L2 comprehension of non-standard[i] varieties focuses on the L2 comprehension of non-native varieties, or the ability of non-native speakers of a language (NNSs) to comprehend other NNSs of the same language (Anderson-Hsieh & Koehler, 1988; Major, Fitzmaurice, Bunta, & Balasubramanian, 2002; Munro, Derwing, & Morton, 2006; Ortmeyer & Boyle, 1985; Pihko, 1997; Tauroza & Luk, 1996; Wilcox, 1978). There are also a few studies that examine the L2 comprehension of non-standard native varieties, or the ability of NNSs of a language to understand native speakers (NSs) of the same language who speak with a social, ethnic, or regional accent or dialect (Bonin, 1978; Cunningham-Andersson, 1996; Eisenstein, 1982, 1986; Eisenstein & Verdi, 1985; Major, Fitzmaurice, Bunta, & Balasubramanian, 2005; Pihko, 1997; Sabatini, 2000). This study focuses on the latter, but I will discuss the former as well since many of the same factors may affect comprehension regardless of whether the non-standard variety is a native or non-native one.

It is also worth noting that the choice of "accent" or "dialect" to describe non-standard varieties seems to depend on the context and the researcher's preference rather than on a clear-cut linguistic line. Much of this research has been done on the English language and in this context non-native varieties are typically called accents, while native varieties are either accents or dialects. In the Arabic context, non-standard Arabic varieties are traditionally referred to as dialects, and the differences between them (which will be discussed later in this paper) go beyond what most people would consider an "accent." However, since much of the previous literature on the L2 comprehension of non-standard varieties uses the term accent, even for varieties that could also be considered dialects, I will discuss studies that focus on accent as well as on dialect. Furthermore, comparing MSA with "standard English" and the Arabic dialects with "non-standard English" is sociolinguistically incorrect. NSs of Arabic necessarily speak a dialect and usually speak MSA as well, while English speakers may speak only the standard. However, since the majority of the literature on dialect comprehension focuses on English and other non-diglossic European languages, and I was unable to find any on Arabic, this is the literature that I will review. Despite these sociolinguistic differences, the effects of phonological, lexical, and morpho-syntactic variation on comprehension are certainly relevant across languages, including Arabic.

In general, non-standard varieties seem to be harder for L2 learners to understand than standard ones. Studies focusing on the comprehension of non-native accents in English compared to native ones in English find that non-native accents are usually more difficult for L2 learners to understand (Anderson-Hsieh & Koehler, 1988; Major et al., 2002; Ortmeyer & Boyle, 1985; Pihko, 1997). Learners also have trouble with non-standard native varieties. Pihko (1997) found that more colloquial varieties of English (particularly Midwestern English) were more difficult for Finnish learners of English than more standard ones, and sometimes even more difficult than non-native varieties. Bonin (1978) notes that L2 French learners are often frustrated by their inability to understand colloquial French, and scored only about half as well on a test of colloquial French vs. one in standard French. Study abroad students did better, but still scored lower on the colloquial variety. Similarly, Major et al. (2005) looked at ESL students' comprehension of four dialects of English compared to

standard American English: African-American, Australian, subcontinental Indian, and southern American. They found that dialect significantly affected listening comprehension, not only for NNSs of English but also for NSs (although the latter generally scored higher than the NNSs). Eisenstein and Verdi (1985) and Eisenstein (1986) found that ESL learners were generally better able to comprehend standard American English than working-class New York English and African-American English, even for learners with a fair amount of exposure to the latter varieties. Sabatini (2000) found that non-standard varieties of English (native and non-native) were more difficult for Italian interpreters in several interpretation tasks. Although most of these studies do not measure learner's input directly, they note that classrooms often teach only the standard variety.

Dialect identification tasks have also been used to examine L2 learners' knowledge of L2 dialects. Cunningham-Andersson (1996) looked at the abilities of NSs and NNSs to discriminate between and to identify Swedish dialects. She found significant differences between the groups on both discrimination and identification tasks. However, there was considerable individual variation within both groups, and while the NSs as a whole did better, in all tasks the best NNSs did as well as or better than the NSs. Thus she concluded that there are "few absolute differences" between NSs and NNSs. Eisenstein (1982, 1986) found that learners could discriminate between dialects of English at low stages of proficiency, but that their ability improved with proficiency. Advanced speakers were statistically indistinguishable from NSs.

Thus, non-standard varieties of the L2, whether native or non-native, pose problems for listening comprehension. There are a number of possible reasons for this. Munro (2008) distinguishes between stimulus properties and listener factors. Stimulus properties relate to the linguistic content of the sample, while listener factors include items such as language experience and familiarity with the variety. Although Munro cautions that the relative importance of these factors has yet to be determined, research indicates that they both need to be taken into account. In terms of listener factors, familiarity with a particular variety often aids comprehension. Gass and Varonis (1984) found that NSs familiar with a particular non-native accent were better able to understand it. Eisenstein (1982, 1986) found that working class ESL learners were better able to understand working class New York English than middle class learners and she hypothesized that this was due to familiarity. Pihko (1997) also found that familiarity with a variety of English, whether standard or non-standard, aided comprehension, whereas unfamiliar varieties were more difficult.

Ortmeyer and Boyle (1985) found that proficiency plays an important role, such that the difference between L2 learners' comprehension of native and non-native varieties decreased with proficiency. Affective factors, such as biases towards or against certain varieties, may also come into play. Looking at non-native varieties, Pihko (1997) found that these varieties were judged as strange and unfavorably received, even when they were easier for learners to understand than non-standard native varieties. Major et al. (2002) note that unfavorable attitudes towards certain non-native varieties might explain why these varieties were less intelligible. For non-standard native varieties, Eisenstein (1982, 1986) states that NNS develop much the same negative attitudes and stereotypes about non-standard native varieties as NS do and she suggests that NNS may not try as hard to understand non-standard varieties.

Linguistic factors also play an important role in the comprehension of non-standard

varieties by both NSs and NNSs. Phonological factors are particularly important, including prosody (Anderson-Hsieh, Johnson, & Koehler, 1992; Major et al., 2002), clarity of pronunciation (Pihko, 1997), and speech rate (Anderson-Hsieh & Koehler, 1988; Munro & Derwing, 2001). Lexical factors also have an effect: in looking at the L2 comprehension of colloquial French, Bonin (1978) found that colloquial lexical items were the most difficult for learners. It seems likely that morpho-syntactic differences would also cause difficulties for NNS learners, no such studies have been undertaken.

Mutual Intelligibility Studies

Further support for the importance of linguistic differences in comprehension comes from studies looking at the mutual intelligibility of dialects and closely related languages by NSs of these dialects and languages. These differences are also more relevant to the case of Arabic, as the linguistic differences extend far beyond what is considered an "accent" and cover the scale from highly mutually intelligible to mutually incomprehensible. The importance of pronunciation factors is affirmed in assessments of the mutual intelligibility and perceptual differences of Scandinavian languages (Gooskens, 2006, 2007), Norwegian dialects (Gooskens & Heeringa, 2004, 2006), West Germanic Languages (Gooskens, 2007), and Chinese dialects (Tang & van Heuven, 2007). Prosody plays an important role in identifying Norwegian dialects (Gooskens, 2005) and a lesser role in identifying Dutch and English dialects (Gooskens, 2005; van Bezooijen & Gooskens, 1999). Lexical factors play an important role in the mutual intelligibility of Chinese dialects (Tang & van Heuven, 2007, 2009) and West Germanic languages (Gooskens, 2007).

In investigating the mutual intelligibility of dialects and related languages, studies also note that linguistic factors are not the only explanation of differences in mutual intelligibility; factors such as contact and attitude also play a role. For example, the Chinese speakers in Tang and van Heuven (2007, 2009) were often able to understand the Beijing dialect even when it was not linguistically close to their own dialect because it is almost identical to Standard Chinese. Thus, linguistic and listener factors play an important role in both the L1 and L2 comprehension of non-standard varieties.

Variation in Arabic

The studies cited above focus primarily on European languages and, in the L2 case, primarily on English, while this study focuses on Arabic. To date, research on Arabic listening comprehension has focused on the role of anxiety (Elkhafaifi, 2005a) and pre-listening activities (Elkhafaifi, 2005b). No studies have been realized on the L2 comprehension of Arabic dialects. However, the diglossic situation and the historical development of Arabic have important implications for both linguistic and listener factors in L2 Arabic dialect comprehension.

Ferguson (1959b) cites Arabic as one of his classic examples of diglossia, describing Classical Arabic as a High variety and the regional dialects as the Low variety. Since that time, many scholars, including Ferguson himself, have problematized his definition of diglossia. Topic, interlocutor, situation, and educational experience all play a role in determining the language used, and this language is quite often a mix of high and low varieties, rather than

one or the other (Hary, 1996; Holes, 2004). While a full discussion of the current Arabic sociolinguistic situation is beyond the scope of this article (see Holes, 2004; Kaye, 2001; Versteegh, 1997), it is important to note that this situation is quite complex, particularly since the advent of the internet and telecommunications, and with increased migration. Furthermore, in situations once deemed the exclusive domain of Modern Standard Arabic (MSA, the modern equivalent of Classical Arabic), such as written correspondence, the dialect may now be acceptable, particularly in Egypt (Belnap & Bishop, 2003; Kaye, 2001). Holes (2004) describes the modern situation as follows:

> The concept of Arabic as a "diglossic" language, if it was ever accurate, is now an oversimplification: the behavior of most Arabic speakers, educated or not, is rather one of constant style shifting along a cline at opposite ends of which are "pure" MSA and the "pure" regional dialect, more accurately conceived of as idealized constructs than real entities. (p. 49)

Finally, it is worth noting that Arabic does not have one low variety, but many, and these in turn can be ranked according to prestige. When Arabs from different dialect backgrounds communicate, they may switch towards a more well-known or prestigious dialect, towards the standard variety, towards a European language, or towards some combination of the three (Abd-El-Jawad, 1987; Abu-Melhim, 1991; Mitchell, 1986; S'hiri, 2002; Walters, 2003).

Learning Arabic Variation

For NNSs, Arabic diglossia is a complex situation to encounter, let alone master. Learning a single variety, whether it is MSA or a dialect, will not suffice; educated NSs know and use both. This is an important distinction between Arabic and many other languages: all languages have dialects, but most languages have speakers for whom the standard is their native variety. In Arabic, this is not the case: all NSs learn the dialect at home and they learn MSA through education. Because of the sociolinguistic situation, neither the dialect nor the standard alone suffices to meet the linguistic needs of an educated NS. Therefore, students wishing to approximate this model of the educated native speaker must undertake the learning of both varieties.

The proficiency guidelines published by the American Council on the Teaching of Foreign Languages (ACTFL) recognize both the necessity and the difficulty of learning this variation. According to the ACTFL proficiency guidelines for Arabic (ACTFL, 1989), in order to achieve superior level proficiency in Arabic, learners must demonstrate superior level proficiency in MSA and at least one spoken dialect, as well as strategies for shifting between them appropriately. However, either MSA or a spoken variety is acceptable up to the Advanced High level, and full competence in style shifting between MSA and a spoken variety is considered to be above even Superior level (ACTFL, 1989). Yet control of a spoken variety (even incompletely) is important at lower levels as well, particularly in study abroad situations. Palmer (2007) states that:

> Students who have only studied this "high variety", or formal Arabic, are kept outside the in-groups and often experience frustration and embarrassment when trying to communicate with Arabic speakers. The very culture and language the students are trying

to study is somewhat off-limits to those who do not speak the appropriate code or register. (p. 112)

There is also evidence that students of Arabic wish to learn spoken varieties of Arabic. Palmer (2007) found that the majority of students wanted to study a colloquial variety, and that 88% of them were studying Arabic to converse with NSs, an activity that would almost certainly take place in colloquial Arabic. Palmer (2008) found that 71% of students thought that a spoken variety should be taught at the same time as MSA and 86% thought that one should be taught before traveling abroad.

There are also arguments from Arabic language teachers and researchers supporting the teaching of colloquial varieties. Al-Batal and Belnap (2006) state that the classroom cannot claim to use authentic language without incorporating colloquial varieties. Wilmsen (2006) focuses on the comical aspects of conducting everyday activities in formal Arabic, and he notes that even professional interpreters often use some degree of vernacular Arabic in formal situations. Wahba (2006) reiterates that if the "educated native speaker" is to be the model for learners, then they must also learn colloquial Arabic, as it is an important part of the educated NS's linguistic repertoire. Younes (2006) goes a step further and describes a program of integrating MSA and a dialect that has been developed at Cornell University over the last 14 years, demonstrating that these varieties can be taught side by side in the classroom.

Despite all of these arguments for teaching spoken Arabic, it remains the exception rather than the norm. There are two main reasons for this: ideology and logistics (Palmer, 2007, 2008). Ideologically, MSA is the prestigious, prescriptively correct language, while the dialects, even prestigious ones, are often considered "impure" versions. Logistically, there is the question of which variety to teach. Students may study abroad in a country that has a different variety than that spoken by their teacher, or there may be limited teaching materials available in the dialect of the teacher. Without study abroad experience, students may never be exposed to Arabic dialects, and for this reason they find them difficult to understand. After all, the evidence indicates that familiarity is key to understanding non-standard varieties of language.

While the prospect of becoming familiar with a multitude of different Arabic dialects is daunting, the historical development of Arabic provides evidence that it is important to consider these dialects as a whole, rather than as mostly unrelated varieties. Although varieties of Arabic are geographically widespread, there is ample evidence that they are as a whole closer to each other linguistically than to MSA (Bateson, 2003; Brustad, 2000; Holes, 1986; Ferguson, 1959a; Nydell, 1994; Versteegh, 1997). Diglossia is theorized to have existed in Arabic even in pre-Islamic times. At that time, there was a distinction between the dialects of the Arabian Peninsula used in everyday speech (which differed from each other) and an elevated poetic language shared throughout the region (Holes, 2004). In some regions, these two varieties may have been similar; in others they were almost certainly very different (Versteegh, 1997).

While the exact history of the linguistic developments between pre-Islamic times and the present are a source of debate (see Holes, 2004, Ferguson, 1959a, Versteegh, 1997), two prevailing theories provide compelling historical explanations for the linguistic features shared by the dialects as compared to MSA. Holes (2004) theorizes that the modern Arabic dialects

are descended from Middle Arabic, the language that resulted from contact between the dialects of the Arabian Peninsula and other languages during the Arab conquest, while MSA is descended from the Classical, poetic language. Ferguson (1959a) takes this a step further, proposing that the modern dialects are descended from a conversational koine, which although it had its origins in the Arabian peninsula, developed and spread with the Arab conquest. Ferguson notes that similar developments in the dialects could theoretically occur as independent linguistic drift, but the number and complexity of these shared features (he lists fourteen in total) suggests a common, non- Classical origin.

In the end, there are many ways in which the dialects as a whole differ from MSA, as listed in Table 1 (Bateson, 2003; Ferguson 1959a; Holes, 2004; Versteegh, 1997). While no single dialect has all of these features, together they form what Versteegh (1997) calls the "common denominators" of the Arabic dialects. Nydell (1994) notes that there is a certain predictability in the variation of the dialects from MSA, with certain features that are more likely to vary than others.

Phonology	Fewer consonant phonemes: loss of interdentals, merger of dˤ and ðˤ
	Uvular stop changes to velar or glottal stop
	More vowel phonemes
	Different syllable structure
Morphology	A more analytic rather than synthetic morphological system Analytic genitive for possession Numbers have fewer case and agreement rules Reduced case system, pronominal system, and dual system Mood and voice expressed through stem additions rather than internal vowels Dialects have a similar negation system Reformation of geminate verbs
Syntax	SVO rather than VSO
Lexicon	More loanwords from contact languages Certain words shared among many of the dialects, but different in MSA

Table 1. Some common denominators of spoken Arabic compared to MSA (Bateson, 2003; Holes, 2004; Ferguson 1959a; Versteegh, 1997)

In terms of L2 Arabic listening comprehension, these shared dialect features have important implications for both the linguistic and listener factors previously discussed. Linguistic features shared by Arabic suggest that different dialects may not be as linguistically distant as geography would suggest. In turn, this implies that a learner familiar with one dialect may be able to transfer features of this dialect to another one, or at least be aware of how the new dialect is likely to differ from MSA. For example, a learner who knows that b is prefixed to the imperfective verb in certain circumstances in Egyptian dialect may be able to transfer this knowledge to new dialects, even when the consonant prefix is different (k in

Moroccan or d in Iraqi).   This idea is further supported by research in Scandinavian languages: Gooskens (2007) states that one reason that Norwegian speakers may be able to understand Swedish and Danish with greater facility than what linguistic differences would predict is due to the strong presence of dialects in Norway.   Norwegian speakers are accustomed to hearing variation and are thus better able to understand closely related languages.   Returning to the case of Arabic, Al-Batal and Belnap (2006) use this argument to attack the idea that dialects should not be taught because it is difficult to determine which one to teach:

> The argument presumes that learning a second dialect presents a major
> challenge for learners.   Experience has shown that students can move readily from learning one dialect to another. The transition from Egyptian to Levantine (or vice versa) is particularly easy and some exposure to both of these varieties is a significant plus. (p. 396)

The purpose of this study is to empirically examine this last statement.   While the experience of many teachers and students provides anecdotal experience for transfer of linguistic knowledge between Arabic dialects, and particularly between Levantine and Egyptian Arabic, it has not to my knowledge been tested empirically. Linguistic differences and listener familiarity are good predictors of intelligibility, and the dialects are more similar to each other than to MSA. Therefore, it is reasonable to predict that familiarity with one dialect would be more useful in understanding other dialects than knowing MSA would be to understanding other dialects.   This paper looks at two instances of dialect transfer: first, between Egyptian and Levantine dialects (hereafter referred to as EL transfer) and second, between Egyptian and/or Levantine dialects and other unfamiliar dialects when the speakers of these dialects are accommodating towards MSA (hereafter referred to as Accommodation transfer). These two instances were chosen due to limitations on the participant pool and the Arabic test instrument, which will be discussed later in this paper. The EL transfer case looks at students with exposure to either Egyptian or Levantine Arabic (but not both) and asks the following research questions:

1. Is there a relationship between MSA listening ability and the ability to understand Egyptian or Levantine Arabic as an unfamiliar dialect?

2. Is there a relationship between familiar dialect listening ability and the ability to understand Egyptian or Levantine Arabic as an unfamiliar dialect?

3. Which is a better predictor of the ability to understand Egyptian or Levantine Arabic as an unfamiliar dialect: MSA listening ability or familiar dialect listening ability?

The Accommodation transfer case looks at students with exposure to Egyptian and/or Levantine dialects and asks the following research questions:

1. Is there a relationship between MSA listening ability and the ability to understand other Arabic dialects (Iraqi, Gulf, and North African) when the speakers of these

dialects are accommodating towards MSA?

2. Is there a relationship between familiar dialect listening ability and the ability to understand these unfamiliar dialects?

3. Which is a better predictor of the ability to understand these unfamiliar dialects: MSA listening ability or familiar dialect listening ability?

My hypotheses in both cases are that both MSA listening ability and familiar dialect listening ability will have a strong, positive, and significant correlation with the ability to understand unfamiliar dialects. In the case of EL transfer, dialect listening ability will be a better predictor of the ability to understand unfamiliar dialects. This is because students who are familiar with a spoken variety will have a better idea of how the dialects differ from MSA, and they will have more practice understanding these differences. In the case of Accommodation transfer, MSA listening ability will be a better predictor of the ability to understand the unfamiliar dialects because the speakers are accommodating more towards MSA. Thus, the dependent variable in this study will be unfamiliar dialect listening comprehension. The independent variables will be MSA listening comprehension and familiar dialect listening comprehension.

METHOD

Participants

The participants in this study were 58 non-native or heritage learners of Arabic who were able to fully complete the online instrument.[ii] Participants were recruited via the Arabic-L online mailing list, classroom visits, and personal contacts. Table 2 lists the years of Arabic studied by the participants, their dialect exposure, and whether they are heritage speakers. With the exception of one student who learned MSA through five years of self-study, all of the students had formally studied MSA. The years of Arabic studied were based on participants' responses to the following questions on the background questionnaire:
   1. Please list all courses you have taken in Arabic with the following details: length of time, location, year, and hours/week.
   2. Are you currently enrolled in an Arabic class or classes? If so, please list the following details: location and hours/week.
   Dialect exposure was determined according to participants' answers to the following questions:
   1. Please list all courses you have taken in Arabic with the following details: length of time, location, year, and hours/week.
   2. Have you lived in or traveled to Arabic-speaking countries? If so, please list the country, length of time spent there, year, and reason for visiting.
   3. Do you speak Arabic with your family?
   4. Have you studied or been exposed to Arabic dialects? If so, which ones and how?
   5. Which Arabic dialect are you best at?
Dialect exposure was measured liberally. For example, participants who stated that they had

lived in an Arab country but had not studied the dialect were counted as exposed to that dialect, as were participants who said they had friends or colleagues that used that dialect. Participants who listed no dialect coursework or experience abroad, but claimed to have a best dialect (other than MSA) were also counted as exposed to that dialect, as this may have occurred informally or through their course materials or instructor. Participants were classified according to their exposure to the five main dialect groups outlined in Nydell (1994): North African, Egyptian, Levantine, Gulf, and Iraqi.

Heritage status was measured according to participants' answers to the following questions:

1. Do you speak Arabic with your family?
2. How important is Arabic to your daily life?
3. Why are you studying Arabic?

Heritage status was also measured liberally. Participants who stated that they did not speak Arabic with their family but wanted to learn Arabic because they were of Arab descent were counted as heritage speakers. On the other hand, participants who said they spoke Arabic with their in-laws or their non-native Arabic speaking spouses were not counted as heritage speakers.

Years of Arabic	None	Egyptian Dialect Only	Levantine Dialect Only	Gulf Dialect Only	Multiple Dialects	Total
1	2	1	0	0	0	3
2	4	4	2 (2)	1	0	11 (2)
3	0	4 (1)	1 (1)	0	5	10 (2)
4	0	0	2	0	4 (1)	6 (1)
5 or more	0	3	3 (2)	0	22 (4)	28 (6)
Total	6	12 (1)	8 (5)	1	27 (5)	58 (11)

Table 2. Participants' years of Arabic study, dialect exposure, and heritage status
Note. The number in parentheses is the number of heritage speakers in this group.

As is apparent from Table 2, the majority of participants were advanced learners of Arabic who had studied multiple dialects. There are two potential reasons for this concentration of advanced students. One is that advanced speakers are more likely to participate in a dialect test, as they may feel more confident that they will do well and they are more curious about how much they understand. The second reason is that many participants were recruited from among my personal contacts, and these are mostly advanced learners of Arabic.

In terms of their dialect exposure, the numbers reflect the current privileged status of Egyptian and Levantine dialects among universities in the United States and Europe[iii] and the fact that learners typically begin dialect study after MSA. Only six students (10%) were not exposed to a dialect; all of them were in their first or second year of Arabic. There were 11 heritage speakers (19%). Egyptian Arabic was the most commonly known dialect, with 41 participants (72%) saying that they had been exposed to it, followed by Levantine Arabic, where 33 (57%) reported exposure. The other three dialect groups listed by Nydell (1994)

were much less well-known: 12 participants (21%) reported exposure to Gulf Arabic, 9 participants (16%) to Iraqi Arabic, and 8 (14%) to North African Arabic. While this may seem like a remarkable amount of dialect exposure given the fact that Arabic dialects are often not taught in the classroom, it is important to note that much of this exposure was informal. The majority of participants (n=45 or 78%) had traveled to or lived in an Arabic-speaking country and gained exposure this way. Those who had exposure, but had not traveled, gained it through their family, friends, or formal study. Formal instruction in Arabic dialects was reported by 34 participants (57%), but formal instruction in Arabic dialects outside of an Arabic-speaking country was reported by only 17 participants (29%).

Due to the dominance of Egyptian and Levantine Arabic as familiar dialects, this study became restricted to situations of transfer where Egyptian and/or Levantine dialect was a familiar dialect. A subgroup of participants with the relevant dialect exposure was used for each case of transfer. In the case of the EL transfer, this included participants with exposure to either Levantine or Egyptian Arabic but not both. In the case of the Accommodation transfer, this included participants who had been exposed to Egyptian and/or Levantine Arabic, but not Iraqi, Gulf, or North African Arabic. Unfortunately, many respondents had exposure to multiple dialects, which necessitated eliminating them from the analysis. For example, a participant whose best dialect was Egyptian, having lived there for five years, but had colleagues who used Levantine Arabic, would not be a good candidate for measuring the effect of Egyptian as a familiar dialect on Levantine as an unfamiliar dialect. For the EL transfer analysis, I eliminated 23 participants who had exposure to both Egyptian and Levantine varieties, 1 participant who had exposure to neither Egyptian nor Levantine varieties, and 6 participants who had exposure to no dialects. This left 28 participants for the analysis, an unfortunate but necessary reduction in sample size. Table 3 shows the years of Arabic, dialect exposure, and heritage status of this participant group.

Years of Arabic	Egyptian Dialect Only	Levantine Dialect Only	Eg. Dialect plus other non-Lev. dialects	Lev. Dialect plus other non-Eg. Dialects	Total
1	1	0	0	0	1
2	4	2 (2)	0	0	6 (2)
3	4 (1)	1 (1)	0	1	6 (2)
4	0	2	0	0	2
5 or more	3	3 (2)	6	1 (1)	13 (3)
Total	12 (1)	8 (5)	6	2 (1)	28(7)

Table 3. Years of Arabic study, dialect exposure, and heritage status for participants in the EL transfer analysis
Note. The number in parentheses is the number of heritage speakers in this group.

For Accommodation transfer analysis, I eliminated participants who had exposure to Iraqi, Gulf, or North African dialects as well as those who had no dialect exposure. This left 33 participants for this analysis. Table 4 shows the years of Arabic, dialect exposure, and heritage status of this participant group.

Years of Arabic	Egyptian Dialect Only	Levantine Dialect Only	Eg. and Lev. Dialects	Total
1	1	0	0	1
2	4	2 (2)	0	6 (2)
3	4 (1)	1 (1)	3	8 (2)
4	0	2	4 (1)	6 (1)
5 or more	3	3 (2)	6 (1)	12 (3)
Total	12 (1)	8 (5)	13 (2)	33 (8)

Table 4. Years of Arabic study, dialect exposure, and heritage status for participants in the accommodation transfer analysis
Note. The number in parentheses is the number of heritage speakers in this group.

INSTRUMENTS

Background Questionnaire

Participants answered questions about their background in learning and using Arabic. These questions covered the classes they had taken, whether they had been exposed to Arabic dialects, their study abroad experience, whether they spoke Arabic with their families, why they were studying Arabic, and the importance of Arabic in their daily life and in their future. Participants also rated their listening, reading, speaking, and writing skills in MSA, and their listening and speaking skills in their most familiar dialect on a scale of 1-7 (from beginner to NS).

Arabic Listening Test

The purpose of this test was to measure the independent and dependent variables needed for this study (MSA listening comprehension, familiar dialect listening comprehension, and unfamiliar dialect listening comprehension). I chose to measure these constructs based on a shared test rather than participants' demographic information to help control for the variety in the experience and background of the participants. This test consisted of 30 audio recordings, five each from six Arabic varieties: MSA, Egyptian, Lebanese, Tunisian, Iraqi, and Saudi. The order of the recordings was randomized such that participants did not listen to the same dialect in a row. Participants listened to each recording twice, and then answered in English two free response questions about the sample that were also written in English. Thus participants listened to five sample passages and answered ten questions on each variety. Each question was worth one point, with a possible high score of ten points for each variety.

The five dialects for the test were chosen from the five main geographic areas of Arabic dialects outlined in Nydell (1994): North African, Egyptian, Levantine, Gulf, and Iraqi. Within each area there are, of course, dialectal differences according to geographical and social factors, but these are beyond the scope of this study. Within these broad geographic areas, the dialects selected were those for which speakers could easily be recruited.

English was chosen as the language of assessment because I wanted to ensure that

participants understood the passages, rather than simply repeating them or guessing as multiple choice would allow them to do.

The audio samples were based on the spontaneous responses of NSs of each dialect and a NS asked to speak in MSA to five questions, which I then edited to make them comparable in length and semantic content, such that differences in comprehension of the samples would be more due to dialect. However, I also made an independent measure of the amount of dialect in the recordings. As mentioned in the literature review, NS speech typically falls into a range between "pure dialect" and "pure MSA," and thus I could not assume that speakers would use the same amount of dialect.

Previous studies of intelligibility controlled for length and semantic content by asking NSs to read aloud a written passage in their language, dialect, or accent (Gooskens, 2006, 2007; Major et al., 2005; Pihko, 1997; Tang & van Heuven, 2007). However, this method was not advisable for the present study. The first reason involved authenticity: L2 learners are more likely to encounter dialects when listening to spontaneous speech than when listening to a written text read aloud. Furthermore, most written texts are in MSA, and rendering them in a dialect is generally unsuitable sociolinguistically. If asked to translate a written passage into their dialect, NSs might veer towards MSA due to the written form. The second reason was practical. If learners listened to the same passage five times, they would likely understand it better the last few times because they had already heard the passage numerous times, regardless of the dialect. Other studies have avoided the latter problem by having different groups of learners listen to each sample. However, my data collection methods (anonymous and online) made this impractical—I would not get enough learners for each NS sample, and these learners would not be comparable in their linguistic backgrounds. Thus, I decided to record spontaneous speech and edit the recordings to make the semantic content and length comparable.

The unedited recordings consisted of the responses to ten questions I asked in English. English was chosen rather than MSA or Egyptian Arabic (the other Arabic varieties in which I could have asked the questions) so as to not prejudice the response by my use of these varieties. For the dialect samples, speakers were instructed to respond as if they were speaking to another NS of their dialect.

From the unedited recordings, I chose the five answers for which the semantic content was most comparable (but not the same).[iv] This allowed me to balance the need for semantic similarity, the differences attributed to the dialect, and semantic difference in order to prevent a test effect where students would be able to guess the answers based on previous passages. These were the following five topics:

1. Tell me about your family.
2. What is your job?
3. What do you like to do in the summer?
4. If you hadn't chosen your current job, what would you be doing instead?
5. What is one of the biggest problems facing the world today and why?

I then edited the responses to comparable lengths so that memory would not be an issue on the test.[v] Although respondents were instructed to respond to each question in 2-3 sentences, actual answers varied from a brief sentence to a monologue of several minutes, depending on the topic. Word count was used as a measure of length rather than the length

of the audio clip to control for pauses and different speech rates. However, the answer needed to seem like a complete response, not one that was cut-off partway through, which resulted in slightly different word counts for each sample. Table 5 lists the overall word count and average word count per sample for each dialect. While the numbers are not the same, they are comparable, ranging from an average of 26-40 words per sample and 130-199 overall.

Variety	Total word count	Average word count per sample	SD
Egyptian	199	40	22
Lebanese	147	30	10
Iraqi	181	36	15
Saudi	130	26	15
Tunisian	169	34	11
MSA	199	40	11

Table 5. Word count in the tests
Note. SD=standard deviation

Finally, I compared the amount of dialect in the samples. Although all speakers were instructed to speak as if they were speaking to another NS of their dialect, my impression while recording was that the Iraqi, Saudi, and Tunisian speakers sounded closer to MSA than the Egyptian and Lebanese speakers. To compare the amount of dialect in the recordings, I used a modified version of the system used by Gooskens (2006) to compare Scandinavian languages. Using a transcription of the samples, I marked each phonological, morpho-syntactic, and lexical item that differed from MSA. This coding was based on my knowledge of MSA and the training I received in two Arabic dialectology classes. Following my coding, the samples were reviewed by an academic dialectologist. In the reviewed transcripts, each phonological difference (such as Egyptian g for MSA ʒ[vi] or ʤ or Iraqi(ʧ for k) was assigned one point, except for a difference in a short vowel (a minor vowel pronunciation difference), which was given half a point. The addition, deletion, or shift of a short vowel (such as Saudi *kunit* for MSA *kunt(u)* or Tunisian *qbal* for *qabl*) was also given half a point. The lack of *iʕraab*[vii] was not scored, as these are typically not used in spoken MSA. Stress was not scored; however, there were no stress differences in these samples that were independent of other phonological differences. Morpho-syntactic and lexical differences also got one point each. The total number of points in the sample was divided by the word count to give a "percent dialect" for each sample. Example one demonstrates this method for a sample from the Egyptian dialect. There are five dialect elements marked in bold: the b-prefix on the two verbs, the pronunciation *adris* rather than *adrus*, the use of the verb *aʕmal* instead of *adrus*, the use of *bita:ʕ* to denote possession, and t rather than θ. There are fifteen words in the sample, so this would be considered 33% dialect. Importantly, this does not mean that the remaining 67% is MSA—it is elements shared by Egyptian dialect and MSA (such as al-maʤisteer) in addition to MSA elements (keeping the long vowel in ta:niya rather than changing it to tanya).

Example 1. Calculating the dialect percentage.

ana tˠa:liba **badr**is fi: [University Name] wi **baʕmal** al-majisteer **bita:ʕti** fi: tadriis al-luɣa al-ingliziyya ka-luɣa **t**a:niya.

"I'm a student studying at [University Name] and I'm doing my Masters in teaching English as a Second Language."

The total number of points from all samples of a given dialect was divided by the total word count for the samples in that dialect to give an overall percentage for each dialect in the test. Table 6 lists the percent dialect for each dialect test as well as the average percent dialect per sample. This analysis confirmed my impression that there was a difference between the percent dialect in the Lebanese and Egyptian samples (49% each) compared to the Iraqi, Saudi, and Tunisian ones (22%, 23%, and 21% respectively).

Dialect	Total dialect percent	Average dialect percent per sample	SD
Egyptian	49	43	12
Lebanese	49	57	12
Iraqi	22	22	8
Saudi	23	23	11
Tunisian	21	18	14

Table 6. Percent dialect in the tests
Note. SD=standard deviation

Since I wanted the samples from each dialect to be comparable, these differences at first seemed problematic. However, they may also reflect important social, cultural, and political influences on Arabic speech. One social influence is the perception that some dialects are more widely understood than others (Abu-Melhim, 1991; Mitchell, 1978; S'hiri, 2002; Walters, 2003). Egypt and Lebanon have historically been considered the cultural center of the Arab world and continue to be heavy cultural exporters. Furthermore, many Egyptians and Lebanese travel to other Arab countries (especially in the Gulf) for work. For these reasons, and perhaps others, there is a perception among native Arabic speakers that these dialects (among others) are more widely understood (S'hiri, 2002). This directly relates to the next social influence, the interlocutor. Although I told all of the speakers to speak as if they were speaking to a NS of their own dialect, they were in fact speaking to a NNS of Arabic (me). Research shows that when NSs of Arabic communicate with speakers who are not from the same dialect background, they will avoid using very local dialect forms, particularly if their dialect is more stigmatized or considered difficult to understand (Abd-El-Jawad, 1987; Holes, 1986; Walters, 2003; Younes, 2006).

Focusing on Tunisian in particular, Walters (1996, 2003) notes that speakers of Tunisian Arabic are often reluctant to use it with NNSs of Arabic and with Arabs from other areas. S'hiri (2002) studied linguistic accommodation between Tunisians and Arabs from the eastern part of the Arab world (mostly Egyptians and Lebanese). She found that the Tunisians nearly always accommodated their language to Eastern forms of Arabic or to English, and took pride in their ability to speak multiple dialects and languages and to accommodate to their interlocutors. The Easterners, on the other hand, never accommodated their language and

ordered the Tunisians to "speak Arabic please!"

Thus the NSs of dialects that are perceived as less well-known (Tunisian, Saudi, and Iraqi) may have avoided using dialect forms since they were speaking to a NNS of their dialect, and this is a situation in which they might typically accommodate to their interlocutor rather than persist in their own dialect. Furthermore, all of these speakers know me as a highly proficient speaker of MSA and Egyptian Arabic; this may have caused them to include more MSA and Egyptian elements in their speech.[viii]   The Egyptian and Lebanese speakers, confident in the knowledge that their dialects are widely understood, may not have felt this social pressure. Regarding Egyptian dialect in particular, Abu-Melhim (1991) and Mitchell (1986) note that Egyptians rarely switch from their dialect when speaking to other Arabs.

It is important to take these social factors into account, as they are certain to play out when students converse with NSs in the real word. Furthermore, as mentioned above, the everyday speech of native speakers covers a range between "pure MSA" and "pure dialect" rather than clear-cut examples of one or the other. At the same time, I did not want differences in the percent dialect in the samples to skew my results, i.e. for the Tunisian sample to be "easier" because it was closer to MSA. For these reasons, I chose to focus on only two instances of transfer to unfamiliar dialects rather than trying to look at each dialect or their average as unfamiliar dialects. In the EL transfer analysis, the unfamiliar dialect is either Egyptian or Lebanese, and these two tests had the same overall amount of dialect. In the Accommodation transfer analysis, the unfamiliar dialects are Iraqi, Saudi, and Tunisian, and these three tests have similar overall amounts of dialect. Furthermore, the results of the Accommodation analysis are interpreted as being relevant to the ability to understand unfamiliar dialects when the speakers are accommodating towards MSA, rather than the ability to understand these dialects without accommodation.

Finally, to look at the reliability of the test items within each test, Cronbach's alpha was calculated. Table 7 provides the values of Cronbach's alpha for each test. For all of the tests this measure was greater than .7 (or very close for Tunisian, .69), indicating that the items were reliable.

Test	Cronbach's alpha
Egyptian	.79
Lebanese	.73
Iraqi	.78
Saudi	.79
Tunisian	.69
MSA	.81

Table 7. Cronbach's Alpha for the tests (n=58)

PROCEDURE

The Arabic listening test and background questionnaire were administered online via a combination of the mash-up program from the Center for Language Education and Research (CLEAR)[ix] and Google's embeddable forms.[x] The listening test questions were randomized such that participants did not hear responses to the same question or samples from the same

dialect in a row. All participants responded online and anonymously. On average, it took participants 45-60 minutes to complete the activity. They completed the listening test before the background questionnaire because I did not want them thinking too much about Arabic language variety before the test, and the background questionnaire specifically asked them about MSA and their dialect knowledge. At the very end of the background questionnaire, students were asked if they had any comments on the listening activity.

ANALYSIS

Variables

My research questions asked about the relationships between three different factors: MSA listening ability, familiar dialect listening ability, and unfamiliar dialect listening ability.

In analyzing both EL and Accommodation transfer, MSA listening ability was measured as participants' scores on the MSA questions on the Arabic listening test. I chose to use this independent measure rather than relying on the self-ratings and history of Arabic study students provided on the background questionnaire in order to control for the wide range of exposure likely to occur via anonymous and online sampling.   However, the MSA scores from the test did correlate significantly with participants' self-rated MSA listening ability (τ=.66, p<.001 in the EL transfer analysis and τ=.72, p<.001 in the Accommodation transfer analysis).[xi]

In the EL transfer analysis, the familiar dialect score was the score on either the Egyptian or Lebanese test, depending on whether the participants had been exposed to Egyptian or Levantine dialects. In the Accommodation transfer analysis, the familiar dialect score was also the score on either the Egyptian or Lebanese tests. If a participant had only been exposed to either Egyptian or Levantine dialects, it was the score on this dialect. If they had been exposed to both, it was the one they put in response to the question "which Arabic dialect are you best at?" If they listed both Egyptian and Levantine dialects as a response to this question, the higher score was chosen. Again, I chose to use these measures rather than participants' self-ratings in order to control for variation in participants' background. However, in both analyses there was a significant correlation between the familiar dialect score and participants' self-rated listening ability in their best dialect (τ=.47, p=.002 for the EL transfer analysis, and τ=.41, p=.003 for the Accommodation transfer analysis).

In the EL transfer analysis, unfamiliar dialect listening ability was the score on the dialect (either Egyptian or Lebanese) to which the participant had not been exposed. In the Accommodation transfer analysis, unfamiliar dialect listening ability was the average of the Iraqi, Saudi, and Tunisian scores, since all participants included in this analysis had not been exposed to these three dialects.

Correlations and Partial Correlations

To determine whether there are relationships between MSA listening ability, familiar dialect listening ability, and unfamiliar dialect listening ability, I used correlations. In both the EL and Accommodation transfer analyses, correlations were calculated between the MSA

score and the unfamiliar dialect score and between the familiar dialect score and the unfamiliar dialect score. Because the Shapiro-Wilk test of normality indicated that the data were not normally distributed, and there were a number of tied ranks in the data, Kendall's tau was used (Field, 2005).

Significant values in these correlations may simply indicate that both the familiar dialect score and the MSA score are indicative of some more general measure of proficiency. For this reason, I also performed partial correlations. Partial correlations examine the relationship between the familiar dialect score and the unfamiliar dialect score when the effects of the MSA score are controlled for, and between the MSA score and the unfamiliar dialect score when the effects of the familiar dialect score are controlled for. Because the data were not normally distributed according to the Shapiro-Wilk test of normality, Kendall's partial tau was used.

Multiple Regression Analysis

However, correlations do not indicate causality or make predictions. My research questions also asked whether MSA listening ability or familiar dialect listening ability is a better predictor of unfamiliar dialect listening ability. Therefore, to answer this question, I used multiple regression analysis, which does make predictions. A forced entry regression analysis was performed for each of the EL and Accommodation transfer analyses. The unfamiliar dialect listening score was the outcome variable, and the familiar dialect score and the MSA scores were the predictor variables. For each analysis, the following assumptions of regression were tested and met: variable type, non-zero variance, no perfect multicollinearity, predictor variables uncorrelated with external variables, homoscedasticity, independent errors, normally distributed errors, independence, and linearity.

RESULTS

Descriptive Statistics

Table 8 shows the means, standard deviation, minimum, maximum, and range for each test for all participants based on their dialect exposure. Although all participants were not included in the further analyses, these descriptive statistics give an overall sense of the test results. The highest possible score was ten for each test. The group with no dialect exposure (n=6) did poorly on all of the tests, with a high score of 4.3 on the Egyptian test and a low score of 2.2 on the MSA test. The group with exposure only to Egyptian (n=12) also scored highest on the Egyptian test (M=7.1) and lowest on the MSA test (M=4.3). The group with exposure only to Levantine dialects (n=8) scored equally high on the Egyptian and Levantine dialects (M=8.6) and lowest on the MSA test (M=6.4). The group with multiple dialect exposure scored highest on the Egyptian test (M=7.8) and lowest on the MSA test (M=5.9). In general, the groups with dialect exposure did better on all parts of the test than the group with no dialect exposure, but this is likely because the group with no dialect exposure consisted of only first and second year students, whereas the other groups included many learners who had been studying Arabic for five or more years.

The fact that the Lebanese and Egyptian scores are highest is not surprising given the fact

that these are the most commonly studied dialects, and that there is a prevalence of teachers from Egypt and the Levant (as well as NNSs trained in those dialects) among Arabic teachers (at least in the United States, where the majority of participants studied). It is somewhat surprising that MSA is the lowest score, since this is what all of the participants had studied, but there are several possible explanations for this. One is that although I attempted to make the semantic content of all samples comparable, some differences were unavoidable. The MSA test had a few of these difficult items, such as "religious tourism" and "water resources." Second, the MSA speaker used *iʕraab* in much of his speech. The *iʕraab* are a system of nominal declensions and verbal inflections which add vowels or a vowel plus consonant to the end of the word depending on its relationship to other words within the sentence (for example, case endings). They are a hallmark of high-quality MSA, but they are typically not used in spoken MSA. Thus, participants may be less accustomed to them and, as a result, find them more difficult. Furthermore, while the participants had all studied MSA, their listening exposure to MSA may not have been consistent with the years they studied Arabic. Many of the Arabic classes listed beyond third and fourth year Arabic were literature classes, which would presumably focus more on reading in MSA. At least in the United States, it is not uncommon to have advanced Arabic literature classes that are taught in English, although the readings are in Arabic.

In the case of the group that had no dialect exposure, it is also surprising that they did worse on the MSA test. This may be for the reasons listed above (and first and second year classes may also focus less on listening to recorded speech than other skills). Or, it may be the case that these students had been exposed to some dialect--perhaps Egyptian or Levantine if they used the al-Kitaab series (Brustad, Al-Batal, and Al-Tonsi, 2004, 2006, 2007, 2009, 2010) or Levantine if they used the Integrated Approach series (Younes, 1995, 1999) and were simply not aware of it. This uncertainty was another reason why these participants were not included in subsequent analyses.

Test		None (N=6)	Egyptian Dialect Only (N=12)	Levantine Dialect Only (N=8)	Multiple Dialects (N=27)
Egyptian	Mean	4.3	7.1	8.6	7.8
	SD	1.2	2.7	1.2	2.3
	Min	3	3	6	2
	Max	6	10	10	10
	Range	3	7	4	8
Lebanese	Mean	3.8	6.4	8.6	7.7
	SD	1.9	2.8	1.6	2.5
	Min	1	2	6	1
	Max	6	10	10	10
	Range	5	8	4	9
Iraqi	Mean	3.2	5.8	7.8	7.0
	SD	0.8	2.9	1.5	2.5
	Min	2	2	5	2
	Max	4	10	9	10
	Range	2	8	4	8
Saudi	Mean	2.8	5.8	7.5	7.2
	SD	0.4	2.9	2.4	2.7
	Min	2	1	4	1
	Max	3	10	10	10
	Range	1	9	6	9
Tunisian	Mean	4.2	5.1	7.5	6.6
	SD	1.2	2.4	1.9	2.3
	Min	3	2	4	2
	Max	6	9	9	10
	Range	3	7	5	8
MSA	Mean	2.2	4.3	6.4	5.9
	SD	0.4	3.3	3.1	3.1
	Min	2	1	2	1
	Max	3	10	10	10
	Range	1	9	8	9

Table 8. Means on the Test of Arabic by Dialect Exposure[xii]
Note. SD=standard deviation

EL Transfer Analysis

This analysis focused on the ability of participants to transfer between Egyptian and Levantine dialects, when one was a familiar dialect and the other was an unfamiliar dialect.

Table 9 lists the means, standard deviation, minimum, maximum, and range for the variables used in this analysis: MSA score, familiar dialect score, and unfamiliar dialect score.

Variable	Mean	SD	Minimum	Maximum	Range
MSA Score	5.6	3.2	1	10	9
Familiar Dialect Score	7.8	2.5	2	10	8
Unfamiliar Dialect Score	7.4	2.4	2	10	8

Table 9. Means for the Variables Used in the EL Transfer Analysis (n=28)
Note. SD=standard deviation

Correlations and Partial Correlations

There were equally strong and significant correlations between the familiar dialect score and the unfamiliar dialect score (τ=.72, p<.001) and the MSA score and the unfamiliar dialect score (τ=.72, p<.001). This demonstrates that there is a relationship between familiar dialect listening ability and unfamiliar dialect listening ability, as well between MSA listening ability and unfamiliar dialect listening ability in the case of EL transfer.

However, the familiar dialect score and the MSA score also correlated significantly with each other (τ=.76, p<.001), emphasizing the need to look at the partial correlations. The partial correlation between the familiar dialect score and the unfamiliar dialect score remained significant but lost strength when the effects of the MSA score were controlled for (τ=.39, p=.045). The partial correlation between the MSA score and the unfamiliar dialect score also remained significant but lost strength when the effects of the MSA score were controlled for (τ=.39, p=.044).

Multiple Regression

Table 10 lists the results of the regression analysis. The regression model can predict 88% of the variance in the unfamiliar dialect scores. Only the familiar dialect score is a significant predictor; the MSA score is not. This indicates that familiar dialect listening ability is a better predictor of unfamiliar dialect listening ability than MSA listening ability when looking at transfer between Egyptian and Levantine dialects.

	B	SE B	β	t	Sig.
Constant	1.25	0.79		1.58	0.127
Familiar Dialect Score	0.65	0.15	0.66	4.23	.000
MSA Score	0.21	0.12	0.27	1.72	0.097

Table 10. EL Transfer Regression Analysis (n=28)
Note. R^2 =.78

Accommodation transfer Analysis

This analysis focuses on the ability of Arabic learners with exposure to Egyptian and/or Levantine dialects to comprehend dialects they are not familiar with when the speakers are accommodating towards Modern Standard Arabic. Table 11 lists the means, standard deviation, minimum, maximum, and range for the variables used in this analysis: MSA score,

familiar dialect score (from either Egyptian or Lebanese), and unfamiliar dialect score (the average of the Iraqi, Saudi, and Tunisian scores)

.

Variable	Mean	SD	Minimum	Maximum	Range
MSA Score	5.8	3.1	1	10	9
Familiar Dialect Score	8.0	2.1	3	10	7
Unfamiliar Dialect Score	7.1	2.2	2.7	10	7.3

Table 11. Means for the Variables Used in the Accommodation transfer Analysis (n=33)
Note. SD=standard deviation

Correlations and Partial Correlations

There were strong and significant correlations between both the MSA score and the unfamiliar dialect score (τ=.79, p<.001) and the familiar dialect score and the unfamiliar dialect score (τ=.70, p<.001). This demonstrates that there is a relationship between familiar dialect listening ability and unfamiliar dialect listening ability, as well as between MSA listening ability and unfamiliar dialect listening ability.

In this analysis as well, the familiar dialect score and the MSA score also correlated significantly with each other (τ=.67, p<.001), again emphasizing the need to look at the partial correlations. The correlation between the familiar dialect score and unfamiliar dialect score when the effects of the MSA score are controlled for remained significant, although the strength was reduced (τ=.36, p=.041). The correlation between the MSA score and the unfamiliar dialect score when the effects of the familiar dialect score were controlled for remained significant and lost little strength (τ=.60, p<.001).

Multiple Regression

Table 12 lists the results of the regression analysis. The regression model can predict 93% of the variance in the unfamiliar dialect scores. In this analysis, both the familiar dialect score and the MSA score are significant predictors. The standardized B scores can be used to indicate which predictor variables are better than others in regression analysis (a higher score means a better predictor). In this model, the standardized B score for the MSA score (.547) is slightly higher than that of the familiar dialect score (.436). This indicates that MSA listening ability is a slightly better predictor of unfamiliar dialect listening ability when learners who know Egyptian and Levantine dialects are listening to unfamiliar dialects in which the speaker accommodates towards MSA.

	B	SE B	β	t	Sig.
Constant	1.04	0.655		1.60	0.121
Familiar Dialect Score	0.468	0.117	0.436	4.01	0.000
MSA Score	0.394	0.078	0.547	5.04	0.000

Table 12. Accommodation Transfer Regression Analysis (n=33)
Note. R^2 =.87

DISCUSSION

My first research question asked whether there is a relationship between MSA listening ability and unfamiliar dialect listening ability. In the case of transfer between Egyptian and Levantine dialects, there is a relationship between these abilities, although less so when the effects of familiar dialect listening ability are controlled for. Similarly, there is also a relationship between MSA listening ability and unfamiliar dialect listening ability in the case of transfer from Egyptian and/or Levantine dialects to Iraqi, Saudi, and Tunisian dialects when speakers of these latter dialects are accommodating towards MSA. This relationship is only slightly weaker when the effects of familiar dialect listening ability are controlled for. My second research question asked whether there is a relationship between familiar dialect listening ability and unfamiliar dialect listening ability. The results of this study demonstrate that there is a strong relationship between these two abilities in the case of transfer between the Egyptian and Levantine dialects, although it is weakened when the effects of MSA listening ability are controlled for. In the Accommodation transfer case, there is also a strong relationship between familiar and unfamiliar dialect listening abilities, although it is weakened when the effects of MSA listening ability are controlled for. My third research question asked whether familiar dialect listening ability or MSA listening ability was a better predictor of unfamiliar dialect listening ability. For the EL transfer case, familiar dialect listening ability is a significant predictor of unfamiliar dialect listening ability, but MSA listening ability is not. In the Accommodation transfer case, both MSA listening ability and familiar dialect listening ability are significant predictors, but MSA listening ability is a slightly better predictor.

These results tentatively confirm my hypotheses. In the case of EL transfer, I posited that based on historical developments in the Arabic language that have led to the dialects sharing a number of phonological, morpho-syntactic, and lexical features against MSA, the knowledge of a familiar dialect would be more useful in understanding unfamiliar dialects than the knowledge of MSA. The results reveal that this is indeed the case, as familiar dialect listening ability is a significant predictor of unfamiliar dialect listening ability and MSA listening ability is not. In the case of Accommodation transfer, I hypothesized that MSA listening ability would be a better predictor as the speakers were accommodating towards MSA rather than using their dialect. The results of this study demonstrate that MSA listening ability is a slightly better predictor of unfamiliar dialect listening ability when these dialects are accommodated towards MSA, although familiar dialect listening ability is also a significant predictor.

There are a number of limitations to this study that future studies should address. While I was able to control to some degree the semantic content, length, and amount of dialect on the Arabic listening test, there was variation. Also, due to the difficulty of finding speakers of five different dialects and MSA, I was unable to control for speaker factors such as age and speech rate. Future studies could address these issues by recruiting more widely for speakers and participants such that it is possible to combine spontaneous dialect samples (as in this test) with dialect translations of the same written text (which would require multiple tests taken by different participants with common backgrounds). Using a written text would provide more control over semantic content, although the same sociolinguistic factors that affect the amount of dialect in spontaneous speech may also affect the amount in a written text translated into dialect. A larger sample size would make for a more rigorous study as well

as allow the introduction of other predictor variables into the regression analysis. These could be learner variables such as aptitude and motivation, or linguistic variables such as the phonological, morpho-syntactic, and lexical differences between samples. Proficiency may also be a potentially confounding variable: while I used the familiar dialect score and MSA score to distinguish between two listening abilities, they are of course more generally related to Arabic listening ability. It is important to remember that Arabic is a diglossic language, not a series of separate languages. While partial correlations can control for this overlap, it may not be possible to obtain two fully separate measures of MSA listening ability and familiar dialect listening proficiency.

Nevertheless, the results of this study have important implications for Arabic study and the Arabic classroom. The significance of MSA listening ability and familiar dialect listening ability for understanding unfamiliar dialects emphasizes the need to teach both MSA and an Arabic dialect in the classroom. While the importance of MSA is usually accepted as a given, the importance of dialect study is more contested. The question of which dialect to teach is often raised as an obstacle to dialect study, particularly when teachers are from different dialect backgrounds and students may study in multiples countries whose dialects differ from their classroom experience. This study provides the first empirical evidence that knowledge of Egyptian Arabic does not limit a student to understanding Egyptian Arabic only, but also assists them in understanding Levantine varieties, and vice versa. For example, students who study Syrian dialect in class and then study abroad in Egypt will find their knowledge of Syrian Arabic to be more useful to understanding Egyptian Arabic than their knowledge of MSA.

This study also provides empirical evidence that knowledge of Egyptian and Levantine dialects can aid in the comprehension of Iraqi, Gulf, and North African Arabic varieties, at least as long as the speakers of these varieties are accommodating towards MSA. If speakers from these regions typically accommodate towards Egyptian and Levantine dialects or MSA with NSs of Arabic, it is reasonable to assume that they would also accommodate to NNSs of Arabic in this manner (if they indeed use Arabic and not English or French). Thus, teaching Egyptian or Levantine Arabic in addition to MSA will better prepare students for study abroad in these regions as well.

Al-Batal and Belnap (2006) suggest that these two dialects are the answer to the question of which dialect to teach as 86% of students interested in studying a dialect prefer one of these two dialects. Palmer (2007) adds that there are sufficient resources to enable NNSs of these dialects to teach them, particularly as they are widely spoken and understood throughout the Arab world. Younes (2006) adds that teachers from a number of different dialect backgrounds have successfully used his integrated approach. This study lends empirical support to this suggestion by demonstrating that the transfer between these two dialects is greater than the transfer between MSA and these dialects, and that these dialects are also useful in understanding speakers of other dialects who accommodate towards MSA.

However, it is also important to recognize the privilege given to Egyptian and Levantine dialects by both native and non-native speakers and to consider whether this is something to actively continue promoting through teaching Arabic as an additional language. As discussed earlier in this paper, native speakers generally consider Egyptian and Levantine dialects to be more comprehensible than other dialects (Abu-Melhim, 1991; Mitchell, 1978; S'hiri, 2002; Walters, 2003). While there are to my knowledge no studies on NNSs' attitudes towards

Arabic varieties, research on other languages suggests that learners do acquire NS stereotypes about language varieties (Eisenstein, 1982, 1986; Major et al., 2002; Pihko, 1997). Anecdotally, I can add that I have heard a number of Arabic learners express the idea that Egyptian or Levantine dialects are "more useful" particularly in comparison to North African dialects, which are often cast as "incomprehensible" or "not real Arabic," similar to the attitudes revealed in S'hiri's (2002) study.

The transfer of these language attitudes may in fact be one reason why 86% of the students in al-Batal and Belnap's (2006) study wished to study Egyptian and Levantine dialects. The results of this study show that students for the most part get this wish--of the 58 participants, only one participant who had studied dialect had not studied one of these two dialects, and many participants had studied both. If dialect is incorporated at all into MSA textbooks, it is (as far as I know) one of these dialects. For example, the Integrated Approach series (Younes, 1995, 1999) incorporates Levantine Arabic, and the al-Kitaab series (Brustad et al. 2004, 2006, 2007, 2010) incorporates Egyptian Arabic, as well as providing a series of Levantine videos (Brustad et al., 2009).

The participants in this study were also much more likely to study abroad in these areas. Study abroad destinations are of course dependent on a number of other factors as well, including political stability, the availability of Arabic programs for NNS, and university affiliations. However, these factors alone are not enough to account for the fact that the majority of participants studied in Egypt and the Levant. For example, Morocco is politically stable and has a long history of offering Arabic courses for NNS, and recent interest in Arabic has led to a proliferation of new study abroad programs in many Arab counties. Furthermore, the events of early 2011 demonstrated that political stability is not something that can be taken for granted in the Arab world. It is also interesting to note that for many participants, there was no single "switch" from Egyptian to Levantine Arabic or vice versa, or between other dialects, rather they seemed to go back and forth between the classes and contexts in which they were exposed to a given dialect.

Future studies are needed to confirm the findings of this study, as well as to extend research on L2 Arabic dialect intelligibility to other dialects besides Egyptian and Levantine Arabic. While the current privileged status of these two dialects may make it impossible to find large numbers of learners who have been exposed to Arabic dialects but not to Egyptian or Levantine ones, there is certainly much that can be done in terms of investigating language attitudes as well as the usefulness of Egyptian and Levantine knowledge in understanding other dialects when the speakers are not accommodating their speech. Studies of this nature would help demonstrate whether the transfer between Egyptian and Levantine Arabic is a result simply of the fact that these dialects may be closer to each other, for example sharing many lexical items (Cadora, 1976; Younes, 2006), or whether there are more fundamental intelligibility relationships between the dialects compared to MSA. It is hoped that these types of studies will gain prominence in the future, expanding on the current study, which as the first of its kind makes an important contribution to the understanding of how Arabic learners deal with variation in Arabic. Based on the results of this study however, program designers and teachers of Arabic should focus less on worrying about which dialect to teach, and more on implementing the teaching of both MSA and at least an Egyptian or Levantine dialect in the classroom in a pedagogically sound way.

NOTES

[i] While the terms "standard" and "non-standard" are certainly debatable in the case of all language varieties referred to in this paper, I have maintained the same distinctions as authors in previous research. Regarding Arabic, while the "standard" in Modern Standard Arabic may also be debatable, it is the term commonly used to refer to this variety of Arabic.

[ii] One participant was dropped from the analysis because s/he was unable to answer several items in the instrument due to technological issues.

[iii] The majority of participants had studied at American universities, but three had studied at European universities.

[iv] Although I tried to make the semantic content comparable, because respondents were responding to personal questions, some differences were inevitable. To minimize the effects of a single different vocabulary word (i.e. responding that they liked arranging flowers compared to journalism) I made sure that any sample in which there was a question about a specific vocabulary word also contained a more general question not dependent on vocabulary.

[v] In order to avoid making memory a concern, I also made sure to never ask for more than two items in a list. Thus, if a speaker gave a list of five activities she liked to do in the summer, I only asked for two.

[vi] The one exception was the word "ingliziyya" (English) because I personally have heard it pronounced with a g in dialects other than Egyptian, particularly when the speaker also speaks English, which all of the NSs did.

[vii] The iʕraab are a system of nominal declensions and verbal inflections which add vowels or a vowel plus consonant to the end of the word depending on its relationship to other words within the sentence (for example, case endings).

[viii] There were a few instances in the full recordings of spontaneous speech where participants accommodated towards Egyptian Arabic as well. For example, the Iraqi speaker used both the b- (Egyptian and Levantine) and d- (Iraqi) as an imperfective verb prefix. However, none of these instances made it into the final Arabic test.

[ix] http://clear.msu.edu/teaching/online/ria/

[x] http://docs.google.com

[xi] Because the Shapiro-Wilk test of normality indicated that the data were not normally distributed and because the data contained many tied ranks, I used Kendall's tau to calculate the correlation

[xii] Since there was only one participant who only had exposure to a Gulf dialect, he/she is not included in this chart, nor is he/she included in any analyses. His/Her scores were: Egyptian=6, Lebanese=4, Iraqi=3, Saudi=3, Tunisian=4, MSA=2

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