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Directionality and disfluency: A corpus-based study of English–Persian simultaneous interpreting in media settings

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Abstract: This study investigates the impact of directionality on disfluency patterns in professional English–Persian simultaneous interpreting, specifically in the context of media interpreting of presidential speeches. The study aims to analyze the prevalence of various disfluency types in simultaneous interpretation based on Bartłomiejczyk and Gumul's (2024) taxonomy, while also exploring the impact of directionality on the incidence and distribution of these disfluencies. The data were produced by four professional interpreters, all native speakers of Persian: two interpreters (A and B) worked from English into Persian (L2→ L1, into their mother tongue), and two (C and D) worked from Persian into English (L1→ L2, into their non-native language). The research employs a corpus-based approach to examine disfluencies, including silent pauses, hesitations, and false starts, in both English-to-Persian and Persian-to-English interpreting directions. The English–Persian corpus comprised three United Nations General Assembly (UNGA) addresses by U.S. President Joe Biden (2022–2024). The Persian–English corpus included two UNGA addresses by President Hassan Rouhani (2014–2015). It also included his 2019 speech marking the 40th anniversary of the Islamic Revolution. The results indicate that hesitations are the predominant disfluency in both directions, underscoring their function as cognitive buffers during real-time speech production. False starts are more prevalent in English-to-Persian interpreting, indicating heightened self-monitoring when interpreters interpret into their mother language. Conversely, silent pauses are more frequent in Persian-to-English interpreting, suggesting increased processing difficulties in non-native language output. These findings underscore the influence of directionality on disfluency distribution and provide practical guidance for interpreting training. The research enhances comprehension of disfluency in a linguistically under-examined language pair.

Keywords: directionality; disfluency; media interpreting; professional interpreter; simultaneous interpreting.

1. Introduction

Baigorri-Jalón, Fernández-Sánchez and Payàs (2021) assert that the Nuremberg trial served as an initial exemplification of simultaneous interpreting. The newly implemented interpreting technique allowed the freshly formed United Nations Organization (UNO) to function in six official languages (Martin, 2016). Since the 1950s, it has become customary at major international assemblies, such as those of the United Nations, to employ interpreters proficient in simultaneous interpreting among the diverse languages spoken by attendees (Christoffels et al., 2006).

Simultaneous interpreting is regarded as a remarkable ability, considering the significant requirements it places on language understanding and memory (Christoffels et al., 2006). Simultaneous interpreters must understand the source language in real-time while articulating the target language, frequently unable to anticipate the speaker's final communicative goal. This concurrent process generates considerable cognitive demand, which typically varies throughout an interpreting task (Bartłomiejczyk & Gumul, 2024). Studies indicate a rise in cognitive load, observable in both the interpreting process and the physical reactions of the interpreter (Chen, 2017). Disfluencies arise when speakers disrupt their typical speech flow with pauses that diverge from anticipated patterns of fluid delivery (Lickley, 2017). They may be perceived as presentation errors, indicating a reduction in interpreting quality, particularly from the audience's perspective (e.g., Bartłomiejczyk, 2010; Macías, 2006).

Altman (1994) defines fluency as the primary characteristic that differentiates professional interpreting from that of trainees. Consequently, scholars recognize fluency and its counterpart, disfluency, as essential determinants in evaluating interpreting quality. Rennert (2010) posits a relationship between perceived fluency and the evaluation of interpreters' accuracy; hence, fluency transcends stylistic considerations and significantly affects clients' perceptions of an interpretation's efficacy and clarity. The results of a study by Eftekhar, Ferdowsi and Azad (2024) highlight the significance of fluency in media interpreting from an Iranian perspective, stressing its value for both general audiences and trainee interpreters as professional observers. The emphasis on fluency is particularly essential in media interpreting, where interpreters must ensure that their style and delivery are very smooth, clear, and brief. The home audience, familiar with television news presenters and pundits with exceptional voice qualities and proficient text delivery (Kurz, 1990), may not fully understand or value the distinct challenges faced by the interpreter. Consequently, interpreting fluency remains a significant problem for multiple stakeholders, including users of interpretation services, professional interpreters, and educators in the field (Han & An, 2021).

Pöchhacker (2011, p. 23) asserts that "the performance of a single interpreter can reach thousands, if not millions of viewers and listeners". The quality of an interpreting performance profoundly influences the audience's experience of interpretation (Pöchhacker, 2011). It may also influence political, social, and cultural communications (Mirzaee & Razavi, 2021), especially concerning presidential speeches, which often serve as pivotal moments for national and international discourse. Effective communication in speeches is essential, particularly in multilingual settings such as the United Nations General Assembly (UNGA), where interpreters are instrumental in accurately conveying information to diverse audiences. Moreover, many of these speeches are widely distributed across various media platforms, augmenting their reach and impact on global

audiences. Bionda, Bourlot, Cobianchi and Villa (1998) contend that television has markedly enhanced its ability to disseminate political information throughout time, hence establishing televised political communication as a distinct genre.

While fluency and disfluency are essential in assessing interpreting proficiency, to the knowledge of the authors, no prior studies have investigated disfluencies in professional simultaneous interpretation between English and Persian. Therefore, this corpus-based study seeks to fill the identified research gap adopting the taxonomy proposed by Bartłomiejczyk and Gumul (2024), identifying three types of disfluencies, including silent pauses, hesitation markers and false starts.

Silent pauses, also referred to in the literature as unfilled pauses (e.g., Han & An, 2021), are the flaws in fluency where no voice activity is recorded. Hesitation markers are also referred to in the literature as 'filled pauses' (Plevoets & Defrancq, 2016) or 'fillers' (Bortfeld et al., 2001). They are characterized as vocalized hesitations and non-lexical fillers in the form of meaningless strings of prolonged sounds (Gumul, 2021). Finally, false starts are typically cases of word truncation. An interpreter either produces part of a word (usually the first syllable) and then the whole word or starts a word and then decides to articulate another one (Gilquin, 2008). They can also affect more extensive text segments. At the sentence level, this means "when the speaker interrupts an utterance and begins a new one without having completed it" (Tissi, 2000, p. 114). This study analyzes interpreting quality by identifying and evaluating disfluencies in presidential speeches simultaneously interpreted by professional interpreters who are native speakers of Persian, from Persian to English and vice versa. Consequently, the subsequent questions were formulated:

- RQ1: What is the frequency of each type of disfluency occurring in simultaneous interpreting based on the taxonomy proposed by Bartłomiejczyk and Gumul (2024)?
- RQ2: How does directionality influence disfluencies in simultaneous interpreting, considering both their types and frequencies?

2. Literature review

2.1. Media interpreting

According to Pöchhacker (2016), media interpreting is mostly designed to make foreign language broadcast content comprehensible to media consumers inside the socio-cultural group. As stated by Falbo (2021), it meets the requirements of interlingual communication in a global and interconnected context. Television programmers employ several linguistic techniques for navigating multilingual contexts, categorized into visual and auditory conversions. Visual components are primarily communicated via subtitles, but auditory elements are conveyed through dubbing, voice-over, commentary, simultaneous interpreting (SI), consecutive interpreting (CI), and whispered interpreting (chuchotage). Dubbing, voice-over, and commentary necessitate prior access to the source text (ST), enabling interpreters to analyze their target text (TT) in advance by anticipating the content, selecting appropriate lexical and syntactic structures, and adjusting the TT to the context and communicative purpose of the ST. Conversely, simultaneous interpretation (SI),

consecutive interpretation (CI), and chuchotage are typically performed without prior access to the source text (ST) and often without the interpreter's expertise in the subject area (Niemants, 2008). Media interpreting includes film, radio, television, and webcast programs; although, the terms 'media interpreting' and 'television interpreting' are occasionally used interchangeably due to the preeminence of television in research and practice (Falbo, 2021).

Media interpreting presents unique challenges. Serrano (2011) identifies two classifications of 'backstage conditions' – a term borrowed from theatre – that limit interpreters' performance. The initial set includes domains where expertise and professionalism can mitigate challenges, such as diminished delays from broadcast timing, limited preparation time (particularly for breaking news), irregular hours, adaptation to diverse subjects/accents, and the need to meet stakeholder expectations. The second category encompasses uncontrolled factors, such as inadequate sound/image quality, insufficient equipment (e.g., non-soundproof booths), lack of direct interaction with speakers, and constraints of remote interpretation. Kurz (1990) notes that live television interpreting often involves heightened stress compared to conference interpretation, since interpreters face substantial pressure from huge audiences and stringent media scrutiny. Viewers, lacking expertise in interpretation challenges, conflate interpreters with polished news anchors, so raising expectations for vocal quality, diction, and fluency.

The quality of media interpretation is inherently subjective (Hellweg, 2023). The previously described barriers make quality a relative concept, highlighting the tension between ideal standards and practical constraints (Straniero Sergio, 2003). Methodologically, the removal of situational context intensifies the gap between academic ideals and practical applicability (Straniero Sergio, 2003), or, as Pöchhacker (2007, p. 129) expresses, the conflict between "what is translationally desirable and what is feasible under the circumstances".

2.2. Speech disfluency

Prior to analyzing speech disfluencies, it is essential to build a comprehensive grasp of fluency. Lickley (2017) defines fluency as the seamless, rhythmic flow of spoken words, characterized by uniform time and effortless execution. This continuous flow engenders the illusion of fluid verbal conversation. When this natural rhythm is disrupted by pauses or inconsistencies, the ensuing speech patterns become disfluent (Lickley, 2017).

Disfluencies, or delivery flaws, are salient characteristics that differentiate oral speech from written discourse (Bartłomiejczyk & Gumul, 2024). Spontaneous oral production, regardless of topic, register, context, or speaker, is consistently characterized by a certain level of disfluency (e.g., Cecot, 2001). Lickley (2017) asserts that disfluencies occur approximately 6 times every 100 words in typical spontaneous speech.

Gósy (2003, 2004, 2005) offers a comprehensive classification method that categorizes disfluencies into two principal types according to their origin in the speech production process. The first category includes disfluencies associated with uncertainty, such as hesitations, fillers, repetitions, restarts, elongations, and intra-word pauses. The second group covers error-type disfluencies, including Freudian slips, grammatical inaccuracies, contamination, false word activation, tip-of-the-tongue phenomena, alterations, ordering issues, and slips.

These disfluencies can be correlated with specific phases of speech production (Gósy, 2003). Disfluencies encompass Freudian slips and malapropisms at a conceptual level. In the course of language planning, speakers may experience grammatical discord, contamination, or interruptions due to modifications in affixes. Phonological planning errors occur as phonological blunders, whereas articulation planning relates to the sequencing of speech elements. During the articulation phase, slips of the tongue may transpire. In situations of uncertainty, speakers demonstrate pauses, hesitations, repetitions, or the incorporation of filler words. Word retrieval difficulties represent a specific type of disfluency. Finally, disruptions in accessing the mental lexicon may lead to restarts, prolongations, or pauses within words.

2.3. Corpus-based Translation and Interpreting Studies

The idea of employing corpora in translation studies was first introduced by Baker (1993, p. 243), asserting that "the availability of large corpora of both original and translated texts, along with the development of a corpus-driven methodology, will enable scholars to elucidate the nature of translated texts as a mediated communicative event". She emphasized the need of corpus-based research in all domains where language is essential.

Following Baker's proposition, corpus-based translation studies (CTS) began in the 1990s and have undergone considerable advancement in the ensuing years. Corpus-based translation studies, emerging from the integration of descriptive translation studies (DTS) and corpus linguistics, primarily focus on linguistic aspects of translation. They represent a shift from prescriptive to descriptive methodologies, aiming to clarify translation regularities, norms, and characteristics, while also revealing the linguistic, cultural, political, and economic factors that govern translation practices through the examination of extensive data sets. Furthermore, the amalgamation of corpus-based translation studies with other disciplines has transformed research methodology in translation studies and expanded the field's scope (Hu, 2016).

The relative novelty of corpus-based interpreting studies (CIS) can be attributed primarily to the challenges in acquiring authentic data concerning interpreters' performance. Setton (2011) considers data collection as the primary impediment in CIS. However, it is not an insurmountable challenge. For many years, researchers in the field of interpretation have voiced dissatisfaction with the existing data, largely because interpreters have frequently resisted allowing researchers to record their speech (Setton, 2011; Viezzi, 2013). This scarcity of primary data has forced researchers to rely on the output of trainee interpreters, which was neither authentic nor comparable to the expertise of professional interpreters (Shlesinger, 1998). Nevertheless, this kind of data was significantly more accessible than authentic data. The corpora obtained from the formerly trainee-based restricted data sets were inadequate for conducting statistical analysis or for generalizing results to different interpretive settings (Castro, 2017).

2.4. Related studies

Investigations into disfluency and/or directionality in interpreting have produced significant findings across several language pairs and contexts. Numerous studies on fluency in interpreting

have been undertaken worldwide. For example, Bartłomiejczyk (2006) examined directionality effects in English–Polish simultaneous interpreting, uncovering strategic disparities between language directions that could affect disfluency patterns. Bartłomiejczyk and Gumul (2024) later examined disfluencies in European Parliament debates, discovering an absence of directionality effects, which contrasts with studies indicating that B→A interpretation is generally more fluent. Dayter (2021) provided further insights by contrasting disfluencies in interpreted and non-interpreted English, revealing that simultaneous interpreting outputs exhibit unique patterns, including a higher frequency of truncations and a lower incidence of fillers and repetitions.

While global studies have revealed notable patterns of disfluency in interpreting, contemporary research within the Iranian context has begun to examine disfluency in Persian–English language pairs in interpreting. For example, the research conducted by Mirzaee and Razavi (2021) examines the influence of directionality on error classification and prevalence in English–Persian simultaneous interpreting, adopting a descriptive-analytic, corpus-based methodology. The researchers transcribed and analyzed source and target texts of six presidential speeches from the United Nations General Assembly to classify errors according to Flores, Laws, Mayo, Zuckerman, Abreu, Medina and Hardt's (2003) taxonomy, which includes omission, substitution, addition, false fluency, and editorialization. The findings indicated that omission was the predominant error (54.09%), followed by substitution (33.68%), whereas directionality (English–Persian *vs.* Persian–English) exhibited no significant impact on error distribution. The research additionally introduced a revised taxonomy, classifying errors based on semantic significance (major / minor) and linguistic tier (lexical / syntactic), thereby improving the accuracy of error analysis. The study highlights the universality of error patterns in critical situations while promoting context-specific classifications in error analysis.

Other Iranian studies have contributed valuable perspectives on disfluency in interpreting. Eftekhar, Ferdowsi and Azad (2024) executed a mixed-methods reception study to examine the expectations of Iranian viewers for English–Persian consecutive interpreting in sports media. The study, utilizing questionnaires and focus groups with general audiences and trainee interpreters, identified six principal expectancy norms: fluency of delivery (ranked highest by both groups), requisite skills, rhetorical abilities, necessary knowledge, pleasant voice, and sense consistency with the original message (ranked lowest). Although both groups prioritized delivery fluency, trainee interpreters placed greater emphasis on essential abilities (e.g., memory, stress management), whereas ordinary audiences valued sense consistency somewhat more, indicating differing priorities based on competence. This research addresses a significant gap in reception studies by examining consecutive interpreting (CI) expectations in neglected language pairings and media genres, while contesting general assumptions regarding audience preferences.

The current body of research on English–Persian simultaneous interpreting indicates a notable deficiency in comprehensive studies of disfluencies, especially in high-stakes contexts like presidential addresses. Although disfluency patterns have been analyzed across other language pairings, professional judgments concerning Persian are still inadequately investigated. The present research fills the gap by utilizing Bartłomiejczyk and Gumul's (2024) disfluency taxonomy on a specialized corpus of United Nations General Assembly interpretations. This study not only expands

on prior disfluency research but also offers novel empirical evidence on a linguistically and politically important language pair that has received limited attention in interpreting studies.

3. Methodology

This study employs a corpus-based approach to examine disfluency in simultaneous Persian–English / English–Persian professional interpreting. The following steps were executed to generate a parallel spoken language corpus.

3.1. Data collection procedure

This study employs a Do-It-Yourself (DIY) corpus approach, adhering to Russo et al. (2018) framework for developing interpreting corpora, concentrating on directionality within the English–Persian language pair.

3.1.1. Corpus design and compilation

The corpus was compiled by initially obtaining six presidential speech videos from YouTube, guaranteeing representation of both English-to-Persian (E→ P) and Persian-to-English (P→ E) simultaneous interpreting directions. Subsequent to selection, the films were transformed into audio files to enable analysis, and Praat software was employed to measure silent pauses surpassing three seconds, regarded as one of the disfluency kinds investigated in the present study. The initial 20 minutes of each interpreted speech were extracted for uniformity, and disfluencies were manually recognized and classified according to the taxonomy established by Bartłomiejczyk and Gumul (2024). The annotated data, comprising pause durations, disfluency types, and directionality (E→ P / P→ E), were further organized for systematic frequency and comparison analysis.

3.1.2. Composition of the English-to-Persian corpus

The English-to-Persian corpus comprised three presidential addresses delivered by U.S. President Joe Biden during the 77th, 78th, and 79th sessions of the United Nations General Assembly (UNGA) in 2022, 2023, and 2024, respectively. Two of these speeches (78th and 79th sessions) were simultaneously interpreted into Persian by the same native Persian speaker interpreter and broadcast on Voice of America (VOA) Persian, while the third (77th session) was interpreted by a different interpreter and aired on Iran International (see Table 1).

Table 1: English-to-Persian component

President	Date of delivery	Interpreter	Broadcast channel
Joe Biden	2022	A	Iran International
Joe Biden	2023	B	VOA Farsi
Joe Biden	2024	B	VOA Farsi

Source: Authors (2026)

3.1.3. Composition of the Persian-to-English corpus

The Persian-to-English corpus included two addresses delivered by President Hassan Rouhani at the 69th and 70th sessions of the United Nations General Assembly (UNGA) in 2014 and 2015, respectively, along with his speech at Tehran's Azadi Square marking the 40th anniversary of the Islamic Revolution in 2019. All three speeches were simultaneously interpreted into English and broadcast on Press TV (see Table 2).

Table 2: Persian-to-English component

President	Date of delivery	Interpreter	Broadcast channel
Hassan Rouhani	2014	C	Press TV
Hassan Rouhani	2015	C	Press TV
Hassan Rouhani	2019	D	Press TV

Source: Authors (2026)

3.1.4. Content of the speeches

The content of the analyzed 20-minute segment of each speech is summarized in Table 3.

Table 3: Setting and content of the analyzed speech segments

Speech	Setting	Main topics in the analyzed segment
Biden, UNGA 77 (21 Sep 2022)	UN General Assembly; formal, read from a prepared text	Russia's invasion of Ukraine, nuclear threats and annexation referendums; defense of the UN Charter; Security Council reform; global food crisis; climate and global health
Biden, UNGA 78 (19 Sep 2023)	Same	Reconciliation with Vietnam; reform of the Security Council and multilateral development banks; Haiti; artificial intelligence; regional partnerships and economic corridors; China; climate
Biden, UNGA 79 (24 Sep 2024)	Same (farewell address)	Personal reflections on his career; the Gaza war, hostages and ceasefire; the Israel–Hezbollah conflict; Ukraine; Sudan; artificial intelligence
Rouhani, UNGA 68 (24 Sep 2013)	UN General Assembly; formal, read from a prepared text	Fear and hope in world affairs; moderation following Iran's 2013 election; critique of Cold War and "Iranophobic" discourse; violence in Palestine and Syria; sanctions as structural violence; the nuclear issue
Rouhani, UNGA 70 (28 Sep 2015)	Same	The Mina Hajj tragedy; the Joint Comprehensive Plan of Action (the 2015 nuclear agreement between Iran and the P5+1) (JCPOA) and Security Council Resolution 2231; sanctions; nuclear disarmament; terrorism and the World Against Violence and Extremism (WAVE) initiative; crises in Syria, Iraq and Yemen
Rouhani, 40th anniversary of the Revolution (11 Feb 2019)	Outdoor rally at Azadi Square; domestic audience	Anniversary of the Revolution; US sanctions and pressure; territorial losses under the Qajar and Pahlavi dynasties; the Iran–Iraq war; domestic military production; achievements of the Revolution

Source: Authors (2026)

Five of the six speeches are UNGA addresses, a relatively homogeneous genre in which heads of state address current international affairs in a formal register. Their topics were major international news at the time of delivery and are therefore likely to have been familiar to professional news-channel interpreters. The 2019 speech differs markedly. It was delivered to a domestic crowd at an outdoor rally, and its analyzed segment contains considerably more numerical information and culture-specific references than the other speeches.

3.2. Data analysis procedure

The analysis employed a systematic approach to investigate disfluencies in the English–Persian simultaneous interpreting of six presidential speeches in both language directions. The recorded interpretations were first transcribed verbatim and temporally synchronized with their respective source utterances to detect discrepancies and disfluent segments. Subsequently, each discovered disfluency was categorized according to the typological framework defined by Bartłomiejczyk and Gumul (2024), which includes hesitation markers (e.g., "um," "uh" in English or their Persian equivalents), false starts (incomplete words or restarted phrases), and silent pauses – measured per 20-minute interpreted segment of presidential speeches.

Subsequent to categorization, quantitative analysis was performed utilizing SPSS (Version 28.0) to calculate the frequency distribution of disfluency kinds according to interpreting direction. A comparative analysis evaluated the impact of directionality—Persian-to-English (P→ E) versus English-to-Persian (E→ P) – on the frequency and distribution patterns of disfluencies, thereby addressing the study's research concerns. Statistical measures, including frequency counts and relative percentages, were utilized to guarantee systematic and replicable outcomes.

4. Results and analysis

4.1. Normality test of variables

Kolmogorov-Smirnov and Shapiro-Wilk tests were run to ensure the normality of data distribution before conducting the statistical analysis. The findings are presented below (Table 4).

Table 4: Normality test of research variables

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Number of silent pauses	.25	6	.11	.94	6	.72
Number of hesitations	.21	6	.2	.96	6	.88
Number of false starts	.23	6	.2	.92	6	.52

Source: Authors (2026)

As the above table shows, the normality assumption was met for all research variables. In other words, the distribution of data for the number of silent pauses, number of hesitations, and number of false starts was normal ($p < 0.05$).

4.2. Results of research question one

As mentioned above, the first research question of the study was: What types of disfluencies are most prevalent in each direction of simultaneous interpretation based on the taxonomy proposed by Bartłomiejczyk and Gumul (2024)? A frequency analysis was conducted to find the frequencies of the three types of disfluencies in terms of the translation direction. The findings are presented below.

Table 5: Number of silent pauses by translation direction

Direction	N	Frequency	Percent
English to Persian	1	2	66.7
	3	1	33.3
	Total	3	100
Persian to English	1	1	33.3
	6	1	33.3
	27	1	33.3
	Total	3	100

Source: Authors (2026)

As the above table shows, the highest frequency of silent pauses was in the one-time use of silent pauses in English-to-Persian translation (66.7%), while the Persian-to-English translations of the three interpreters were equal (33.3%). However, in terms of the number of silent pauses, the Persian-to-English interpreters used more instances of silent pauses.

Table 6 shows that the frequency of the number of hesitations in both translation directions was equal to one, and no number was repeated; however, as the number column (N) shows, the English-to-Persian interpreters used more hesitation markers during simultaneous interpretation.

Table 6: Number of Hesitations by Translation Direction

Direction	N	Frequency	Percent
English to Persian	45.00	1	33.3
	55.00	1	33.3
	89.00	1	33.3
	Total	3	100.0
Persian to English	3.00	1	33.3
	32.00	1	33.3
	53.00	1	33.3
	Total	3	100.0

Source: Authors (2026)

Table 7 shows that the frequency of the number of false starts in both translation directions was equal to one, and no number was repeated; however, as the number column (N) shows, the English-to-Persian interpreters used more false starts during simultaneous interpreting.

Table 7: Number of False Starts by Translation Direction

Direction	N	Frequency	Percent
English to Persian	30.00	1	33.3
	39.00	1	33.3
	46.00	1	33.3
	Total	3	100.0
Persian to English	7.00	1	33.3
	13.00	1	33.3
	15.00	1	33.3
	Total	3	100.0

Source: Authors (2026)

The following sections examine each direction in detail.

4.2.1. English-to-Persian Simultaneous Interpreting

The table below presents the distribution of each type of disfluency in English-to-Persian, detailing their numbers and corresponding percentages.

Table 8: Number & Percentage of Disfluencies in English-to-Persian

Type of disfluency	Number	Percentage
Silent Pause	5	1.62%
Hesitation	189	61.16%
False Start	115	37.22%
Total	309	100

Source: Authors (2026)

The analysis of disfluencies in English-to-Persian simultaneous interpretation revealed a clear hierarchy in their prevalence. Hesitations were the most frequent, accounting for 61.16% of all disfluencies, followed by false starts at 37.22%, while silent pauses were the least common at just 1.62%.

Hesitations or filled pauses are "non-lexical one-syllable vocalizations" indicating different functions, including signs of potential issues in the speech planning processes (Neuberger & Gósy, 2014, p. 8). Cecot (2001) posits that individuals' utilization of hesitations is very distinctive and reflects their speaking style. The prevalence of hesitations indicates that interpreters often employed fillers when interpreting from English to Persian. This may indicate cognitive exertion in processing the source language while attempting to achieve fluency in the target language. Given that Persian is the interpreters' first language, they may have prioritized fluency in delivery, resulting in an increased use of hesitation signs as a natural speech-planning approach.

False starts, the second most prevalent disfluency, signify instances of self-correction or reformulation. Their considerable frequency (37.22%) indicates that interpreters frequently commenced utterances only to promptly amend them, likely due to lexical or syntactic modifications. This language production behavior corresponds with the anticipation of enhanced fluency in native-language output, wherein interpreters may feel a stronger obligation to self-correct for accuracy or naturalness.

Conversely, silent pauses were exceedingly infrequent (1.62%). Ahrens (2004) posited that long silent pauses may signify a comprehensive examination of the source text. However, in a later paper, the author observed that long silent pauses may also arise when interpreters anticipate additional input (Ahrens, 2005). This elucidates the silent pauses noted in the English-to-Persian simultaneous interpreting direction. Three occurrences happened when President Joe Biden halted his address to permit crowd applause, necessitating the interpreter to pause and await his resumption. The remaining two instances occurred while the interpreter awaited further information, suggesting that interpreters favored sustaining the flow of discourse over implementing total pauses in delivery. This may be ascribed to the interpreters' proficiency in Persian, enabling them to depend more on hesitations and false starts – which minimally impede fluency – rather than full pauses.

4.2.2. Persian-to-English Simultaneous Interpreting

The table below presents the distribution of each type of disfluency in Persian-to-English, detailing their numbers and corresponding percentages.

Table 9: Number & Percentage of Disfluencies in Persian-to-English

Type of disfluency	Number	Percentage
Silent Pause	34	21.66%
Hesitation	88	56.05%
False Start	35	22.29%
Total	157	100

Source: Authors (2026)

The analysis of disfluencies in Persian-to-English simultaneous interpreting revealed distinct patterns in their distribution. Hesitations emerged as the most prevalent disfluency, constituting 56.05% of all instances, followed by false starts at 22.29%, while silent pauses accounted for 21.66%.

The prevalence of hesitations indicates that interpreters often utilized fillers when interpreting Persian into English. This pattern may indicate the cognitive demands involved in generating fluent output in a non-native language (English), when interpreters mitigate lexical or syntactic difficulties with hesitation indicators instead of complete breaks in speaking.

False starts, accounting for more than one-fifth of disfluencies (22.29%), signify instances of self-correction or reformulation. Their significant presence indicates that interpreters frequently commenced utterances only to promptly amend them, likely due to challenges in lexical retrieval or syntactic reconfiguration in English. This behavior corresponds with previous studies suggesting that non-native language production frequently entails increased self-monitoring and repair strategies (Petite, 2005).

In contrast to English-to-Persian interpreting, silent pauses occurred more frequently in Persian-to-English interpreting (21.66%). As previously mentioned, silent pauses may indicate a comprehensive review of the source text or arise when interpreters expect additional input. In this context, the majority of silent pauses happened as interpreters awaited information, whereas just a minority resulted from processing challenges.

4.3. Results of research question two

The second research question aimed to find the directionality influence on the disfluencies in simultaneous interpreting, considering both their types and frequencies. For this purpose, a MANOVA was run to compare the two directions of simultaneous interpreting (English to Persian vs. Persian to English) in terms of the three disfluency types (i.e., number of silent pauses, number of hesitations, and number of false starts).

Table 10: Descriptive Statistics of Disfluency Types by Translation Direction

	Language	M	SD	N
Number of Silent Pauses	English to Persian	1.66	1.15	3
	Persian to English	11.33	13.79	3
Number of Hesitations	English to Persian	63	26.06	3
	Persian to English	29.33	25.10	3
Number of False Starts	English to Persian	38.33	8.02	3
	Persian to English	11.66	4.16	3

Source: Authors (2026)

The above table shows that the number of silent pauses had the highest mean in Persian-to-English simultaneous interpreting (M = 11.33, SD = 13.79). In terms of number of hesitations, English-to-Persian simultaneous interpreting (M = 63, SD = 23.06) had the highest mean. Finally, the highest mean in the number of false starts was for English-to-Persian simultaneous interpreting (M = 38.33, SD = 8.02).

Table 11: Multivariate Test of Disfluency Types by Translation Direction

Effect	Value	F	Hypothesis df	Error df	Sig.
Pillai's Trace	.93	9.58	3	2	.04
Wilks' Lambda	.06	9.58	3	2	.04
Hotelling's Trace	14.37	9.58	3	2	.04
Roy's Largest Root	14.37	9.58	3	2	.04

Source: Authors (2026)

The result of Wilks' Lambda F (3,2) = 9.58, P = .04 indicates a statistically significant difference among the disfluency types by translation direction (Table 11). The pairwise comparison results (Table 12) show the types whose difference was significant.

Table 12: Pairwise Comparisons of Disfluency Types by Translation Direction

Dependent variable	(I) Language	(J) Language	Mean difference (I-J)	Std. error	Sig
Number of Silent Pauses	English to Persian	Persian to English	-9.66	7.99	.29
Number of Hesitations	English to Persian	Persian to English	33.66	19.68	.16
Number of False Starts	English to Persian	Persian to English	26.66	5.21	.00

The mean difference is significant at the .05 level

Source: Authors (2026)

The pairwise comparisons table reveals that the difference between the mean scores of the number of false starts was significant ($p < .05$). In other words, the English-to-Persian simultaneous interpreting resulted in the more frequent use of false starts than its counterpart did.

5. Conclusion and discussion

This study set out to explore disfluency patterns in professional English–Persian simultaneous media interpreting of presidential speeches, and to examine whether these patterns differ according to directionality. Using Bartłomiejczyk and Gumul's (2024) taxonomy, we analyzed silent pauses, hesitations and false starts in the first 20 minutes of six interpreted speeches: three English→ Persian (into the interpreters' L1) and three Persian→ English (into their L2). Three key findings emerged. First, hesitations were the most frequent disfluency type in both directions (61.16% in E→ P and 56.05% in P→ E). Second, false starts were considerably more frequent when interpreters worked into their mother tongue (37.22% of disfluencies in E→ P *versus* 22.29% in P→ E). Third, silent pauses were rare in E→ P interpreting (1.62%) but accounted for a larger share of disfluencies in P→ E interpreting (21.66%). Given the small corpus, these differences are treated as exploratory tendencies rather than generalizable effects. The remainder of this section interprets these findings, considers their implications for interpreter training and media interpreting practice, and outlines the study's limitations.

The predominance of hesitations in both interpreting directions corresponds with Lickley's (2017) interpretation of hesitations as inherent cognitive buffers in real-time speech production, wherein speakers utilize fillers to sustain speech flow while processing forthcoming content. The comparable distribution in both directions suggests that this occurrence surpasses language-pair particular traits and may exemplify a universal feature in simultaneous interpreting, although this needs to be confirmed on larger corpora. Moreover, Gósy's (2001) research elucidates these findings by demonstrating that disfluencies fulfill both communicative and cognitive roles, serving as markers of uncertainty while offering necessary processing time during speech production.

A particularly striking observation was the markedly greater incidence of false starts in E→P interpretation compared to P→ E. This phenomenon is consistent with Petite's (2005) account of repair mechanisms in simultaneous interpreting and suggests that interpreters exhibit increased self-monitoring when interpreting into their original language, leading to more frequent self-corrections and reformulations. Gierszal and Łyda (2023) similarly found that interpreters produced more disfluencies when interpreting into their A language. A further contributing factor may be the structural asymmetry between the two languages: because Persian is verb-final, interpreters working into Persian may begin a clause before the necessary information is available and then have to restart it. The reduced frequency of false starts in P→ E interpreting may indicate what Bartłomiejczyk (2006) characterizes as a 'risk-averse' approach in non-native language production, wherein interpreters might prefer fluency above complete accuracy.

The higher share of silent pauses in P→ E interpreting should be interpreted with caution. As reported in Section 4.2.2, most of these pauses occurred while interpreters were waiting for further input from the speaker (cf. Ahrens, 2005), and only a minority appeared to result from processing difficulties. In addition, the number of silent pauses varied considerably between the three P→ E speeches, and the difference between the two directions was not statistically significant (Table 12). Gósy's (2001) research on speech production, which discovered that disfluencies frequently indicate a discrepancy between planning and articulation processes, may partly account for this pattern, as the cognitive burden of generating fluent output in a non-native language can manifest in

measurable pauses that reveal inherent planning challenges. However, the pattern may equally reflect features of the individual speeches, such as the speaker's delivery and the setting, rather than directionality as such.

With these limitations in mind, the findings suggest some tentative implications for interpreting education and professional practice. In P→ E simultaneous interpreting, where silent pauses are more frequent, training might focus on strategies for managing silent pauses, for example by keeping a controlled ear – voice span and using neutral bridging phrases while waiting for input. In contrast, E→ P training may regulate self-monitoring habits, so that interpreters self-correct only where accuracy is at stake and avoid restarts that serve only stylistic purposes, particularly where the syntactic differences between English and Persian encourage premature starts. The results emphasize findings regarding increased audience expectations in media interpreting (Kurz, 1990; Eftekhar et al., 2024), indicating that professionals in broadcast environments should focus on reducing disfluencies that could impact audience perception, while acknowledging that certain disfluencies may enhance comprehension, as noted by Gósy (2001).

Several limitations should be acknowledged while analyzing these findings. The study's limited corpus of six speeches illustrates the ongoing difficulty of acquiring genuine interpretive data, as highlighted by Setton (2011). This number does not allow meaningful inferential statistics at the level of the speech, so the findings should be regarded as exploratory. The restricted number of interpreters (four experts, two of whom produced two interpretations each) suggests that individual variances may have influenced the results, reflecting Shlesinger's (1998) apprehensions over sample sizes in interpreting research. In addition, directionality is confounded with several other factors in the present design. The English→ Persian speeches were all delivered by Joe Biden in 2022–2024 and broadcast on Iran International and VOA Farsi, whereas the Persian→ English speeches were all delivered by Hassan Rouhani in 2014–2019 and broadcast on Press TV. Differences in speaker, delivery rate, speech content, period and broadcasting conditions therefore cannot be fully separated from the effect of direction. In addition, the delivery rate of the source speeches was not measured or controlled; since speech rate is known to affect simultaneous interpreting performance (Gerver, 1969; Pio, 2003), it may have contributed to the disfluency patterns observed, and future studies should take it into account. In particular, the 2019 speech delivered at Azadi Square differs from the UNGA addresses in setting, audience and rhetorical style. Moreover, the singular emphasis on presidential addresses may restrict the applicability to other interpreting circumstances, since Pöchhacker (2007) has illustrated how varying environments can influence interpreter performance.

The current study offers useful quantitative data on disfluency patterns; nevertheless, its methodological approach did not allow for an exploration of the underlying causes via retrospective interviews with professional interpreters. A mixed-methods approach that includes interviews could have provided deeper insights into the cognitive processes underlying the observed disfluencies, specifically concerning whether they signify: (1) strategic choices to manage cognitive load, (2) markers of linguistic uncertainty, or (3) unconscious processing behaviors. Gósy's (2001) discovery that listeners instinctively adjust to disfluencies implies that certain observable events may fulfill significant communicative roles, meriting additional investigation using qualitative methodologies. Subsequent studies may address this gap by using larger corpora that are balanced for speaker, setting and content, by including several interpreters working in both directions, and by integrating

corpus analysis with stimulated recall techniques, enabling interpreters to contemplate their decision-making processes during disfluent segments.

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