"The committee in my head"

Examining self-talk of American Sign Language-English interpreters

Laura Maddux and Brenda Nicodemus

Anecdotally, interpreters report experiencing self-talk before, during, and after assignments; however, this inner dialogue has neither been confirmed nor described in the literature. Prior studies suggest that guided self-talk can boost performance in learning and human performance activities. It follows that self-talk may also affect interpreting performance, either positively or negatively. In this study, reports of self-talk of American Sign Language-English interpreters were examined for the following characteristics: frequency, valence, overtness, self-determination, motivation, and function. Participants (N = 445) responded to online survey questions about the experience of self-talk in their interpreting work. For *frequency*, more than half of the respondents reported experiencing self-talk between 1–5 times during their work. Regarding *valence*, 62% of respondents reported a mix of positive and negative self-talk about their performance. For *overtness*, 62% reported talking (or signing) aloud in isolated settings about their work experiences. Regarding *self-determination*, nearly half of the respondents (48%) reported self-talk as a mix of conscious and unconscious thoughts. Eighty-nine percent of the respondents reported using self-talk for *motivation*, but 65% reported their self-talk was actually de-motivational at times. The most frequently reported *function* of self-talk was to improve interpreting. The findings offer a rich description of self-talk by American Sign Language-English interpreters. We suggest that more information about self-talk during interpretation may lead to greater self-awareness of the role of this phenomenon in working practitioners, as well as offer insights for the instruction of student interpreters.

Keywords: American Sign Language, interpreter, self-talk, inner speech, interpreter education

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Introduction

As interpreters work, they internally process and evaluate their experiences, engaging in what is known as "self-talk." For example, during an assignment, an interpreter may monitor a client's comprehension ("Are they understanding me? Am I conveying the message clearly?"), silently chide oneself about the work ("I don't know why I thought I should be an interpreter."), or inwardly praise one's own performance on a challenging assignment ("I rocked that interpretation."). Interpreters engage in rapid lexical retrieval, syntactic re-structuring, and discourse development, while simultaneously monitoring and adjusting their language production (Christoffels and de Groot 2005). Interpreters also de-code context-specific jargon (e.g., *allelomorphs*, *chamfer*, and *pork barrel*), side step lexical variants (British "mobile" vs. American "cell phone"), and decipher thick accents (Was that "Texas voice" or "tax invoice?").[1] These linguistic pressures can strain an interpreter's cognitive capabilities, resulting in errors, omissions, and infelicities in the target message (Gile 2009). Given the challenges inherent in interpreting, it may seem unlikely, if not impossible, for interpreters to also experience self-talk as they work.

What is self-talk? A broad definition offered by Hackfort and Schwenkenmezger (1993) characterizes self-talk as statements that people make to themselves, either internally or aloud, which serve to interpret feelings and perceptions, regulate and change evaluations, and provide instructions and reinforcement. One theory on the role of self-talk was popularized by twentieth century Russian psychologist Lev Vygotsky (1986), who suggested that humans use inner dialogue to both generate self-talk and simultaneously listen to themselves. He observed that self-talk may be either internal or spoken aloud, and suggested that self-talk becomes increasingly internal as individuals mature. Self-talk goes by many names, including *inner speech* (Mitchell, Myles and Marsden 2013), *internal dialogue* (Chohan 2010), *private speech* (Diaz and Berk 2014), *inner voice* (Ridgway 2009), and *the dialogical self* (Puchalska-Wasyl, Chmielnicka-Kuter, and Oleś 2008), with each emphasizing the linguistic nature of the messages (Hardy 2006; Theodorakis, Natsis, Douma, and Kazakas 2000).

Self-talk is related to metalinguistic awareness. Metalinguistic awareness is the ability to reflect upon and manipulate the structural features of language, a skill beyond merely using a language system to comprehend and produce sentences (Tunmer and Herriman 1984). To be metalinguistically aware is to understand that language can be looked at with the mind's eye and taken apart, an ability that

1. Examples of jargon from genetics (*allelomorphs*), mechanical engineering (*chamfer*), and politics (*pork barrel*).

is paramount in the work of interpreters. From the point of view of the interpreter, language is not an end in itself, but rather the means to an end, which is the communication of ideas, facts, experiences, and emotions. As Namy (1978) points out, language is, to a large extent, the reflection of a speaker's "thought-world" and an interpreter strives to transcend language in an attempt to perceive these worlds. The ability of interpreters to reflect about their own language has been used to assess how accurately interpreters perform their work (Napier 2003; Napier and Barker 2004), but to date the topic of self-talk has not been directly examined in interpreting. In this study, we use the term self-talk to refer to all thoughts that occur to interpreters as they work, including those about the language in which they are working.

Self-talk has been investigated in a number of other diverse disciplines, including philosophy (Sorabji 2006), psychology (Oliver, Markland and Hardy 2010; Puchalska-Wasyl 2014; Vygotsky 1986), language learning (Ridgway 2009; Tomlinson 2001), and education (Chohan 2010). Language acquisition researchers have argued that self-talk is a necessary component for effectively learning a second language (Tomlinson 2001). Philosophers have suggested that self-talk is an essential component of creating an individual presence that is separate from "the other" (Sorabji 2006), and educators have pointed to self-talk as a tool for learning new ideas and skills (Chohan 2010). Self-talk has also become a darling in pop psychology books such as *Talk Yourself into a New, Successful You* (Wasley 2013) and *Self Talk, Soul Talk: What to Say When You Talk to Yourself* (Rothschild 2007), in which it is argued that positive self-affirmations can help people achieve their life goals.

In the 1980s and 1990s, interest in self-talk began to develop in the United States and Britain for its potential to enhance athletic performance (Bunker, Williams and Zinsser 1993; Hanton and Jones 1999; Highlen and Bennett 1983; Ziegler 1987). A leading researcher on athletes' self-talk, James Hardy (2006), suggested six characteristics comprising the self-talk experience:

1. *frequency* (the amount and prevalence of self-talk),
2. *valence* (self-talk as being positive or negative in nature),
3. *overtness* (self-talk expressed internally vs. aloud),
4. *self-determination* (consciously chosen vs. spontaneously-arising),
5. *motivation* (the motivating vs. de-motivating effects of self-talk), and
6. *function* (whether self-talk is instructional or motivational).

According to Hardy (2006), a person's self-talk may fluctuate in *frequency*, from constant to none at all, depending upon the individual and the context. Frequency points to the dynamic nature of self-talk since some people only experience self-talk during certain tasks or specific periods of time (Hardy, Hall and Hardy 2004;

Mahoney and Avener 1977). Hardy uses the term *valence* to make the distinction between positive and negative self-talk. People tend to assume self-talk is negative in nature, even characterizing it as a "pathos" that arises during anxiety, a mark of eccentricity or self-deception, and even a "cousin to madness" (Ridgway 2005: 13). Valence is the most studied dimension of self-talk as researchers have been interested in determining whether inner dialogue can boost human performance (Hardy 2006). Peters and Williams (2006) extended the positive-negative distinction to include the *facilitative* or *debilitative* nature of self-talk. Although some laboratory-based studies have suggested that positive self-talk can have a facilitative effect on performance, other studies conducted in authentic settings have been less convincing. For example, in a study of self-talk in tennis players, results indicated that the positive or negative nature of self-talk didn't influence sports performance; rather, the determining factor was how the individual players responded to the self-talk they generated (van Raalte et al. 1994).

A third characteristic of self-talk is *overtness*, that is, whether the self-talk takes the form of inner speech (covert) or whether it is spoken aloud (overt) (Hardy 2006; Theodorakis, et al. 2000; Vygotsky 1986). This characteristic may also be important in human performance because some studies indicate that outwardly expressed self-talk has more influence on performance than covert self-talk (Hayes et al. 1985; Kyllo and Landers 1995). Self-talk may also be characterized by its degree of *self-determination*, that is, whether it occurs without the conscious intention of the individual or is specifically planned in advance and purposefully employed (Hardy 2006). Although most research on self-determination of self-talk has occurred in laboratory settings, one study assigned golfers to three groups who were asked to make either instructional, positive, or negative self-talk statements before engaging in their activity (Harvey, van Raalte and Brewer 2002). The results indicated that the group who engaged in the instructional statements showed improvement in their golfing in comparison to the positive or negative self-talk groups. These findings suggest that athletes may receive the greatest performance benefits when an individual or team (e.g., coach, sports psychologist) is involved in directing the self-talk of athletes.

Hardy also observed the *motivational* aspect of self-talk, that is, whether self-talk serves to motivate or de-motivate an individual in a particular task. Research suggests that *both* negative and positive self-talk can be motivating (Hardy, Gammage and Hall 2001; van Raalte et al. 1994). For example, Peters and Williams (2003) found that athletes who perceive their self-talk as facilitative before their performance maintained this orientation during and after their performance. Further, "high performance" athletes had a larger proportion of facilitative self-talk in before, during, and after the event as compared to the "low performance" athletes. Low performance athletes had larger proportions of debilitative self-talk

both before and during their performances, which was associated with lower goal achievement.

Finally, an individual may use self-talk for a number of different *functions*. Athletes in particular have capitalized on self-talk for both *instructional* and *motivational* purposes (Hardy et al. 2001; Theodorakis et al. 2000; Hatzigeorgiadis, Theodorakis and Zourbanos 2004). The instructional function can be further divided into *skill and strategy* self-talk with sub-type functions of *arousal*, *mastery*, and *drive* (Hardy et al. 2001; Hardy 2006). For example, one function of self-talk could be to "psych up" an individual prior to a performance task such as giving a speech or engaging in a competition.

If, as some claim, self-talk can advance mental and physical performance and stimulate psychological well-being, then it might play an important role in the work of interpreters who frequently are placed in demanding mental, physical, and emotional contexts. In the present study, we explored the nature of self-talk in interpreters. Critically, we were interested in learning whether interpreters perceive self-talk as facilitative or debilitative in their work. The aim of this study was two-fold: first, to verify that self-talk occurs during interpretation, and second, to characterize the nature of self-talk in ASL-English interpreters by exploring and describing its various facets. We suggest that accomplishing these aims may serve to shape interpreter practice and education and ultimately lead to strategies that can enhance performance.

Methods

In this study, we used a survey instrument, which was distributed to ASL-English interpreters in the United States and Canada. A survey was used for collecting this data because it allowed us to conduct a large-scale study and provide anonymity for the respondents.

Survey instrument

The online survey was comprised of 35 questions (multiple choice and short answer) regarding self-talk and 11 demographic questions. The questions were based on three sources: (1) categories from Hardy's (2006) study of self-talk in athletes, (2) the researchers' professional knowledge of the interpreting field, and (3) feedback and comments received from a pilot survey. The questions based on Hardy's categories addressed the frequency, valence, overtness, self-determination, motivation, and function of self-talk; the remaining questions were specific to the interpreting profession. Questions were presented in written English and made

available via LimeSurvey, an open source survey application (see Appendix A).[2] The survey required approximately 15 minutes to complete. Involvement in the study was voluntary, and no compensation was provided to participants. The data were transferred from LimeSurvey into Excel for analysis, and partially completed surveys, including participant false starts and technical errors, were eliminated. Due to limitations of LimeSurvey, we are unable to report the numbers of incomplete surveys.

Participants

A total of 471 ASL-English interpreters completed the survey. The majority of interpreters (94%; N = 445) reported experiencing self-talk. The remaining six percent ($n = 26$) reported not experiencing self-talk while interpreting and were instructed not to complete the remainder of the survey. The data in this paper are only on the participants who reported experiencing self-talk (N = 445) in their work.

Process

Using professional networks and snowball sampling (Sadler, Lee, Lim and Fullerton 2010), interpreters were recruited for participation through electronic mailing lists from several groups, including the National Interpreter Education Centers, Sorenson Communications, Gallaudet Interpreting Services, and the Association of Visual Language Interpreters of Canada. In addition, the survey was distributed to several of the researchers' professional contacts. The cover letter encouraged participants to forward the survey link to other interpreters. Snowball sampling provided the opportunity to reach a larger participant pool; unfortunately it restricts the ability to accurately report a response rate.

Results

Participant characteristics

The demographics of the participants are given in Tables 1–9, including data about the participants' gender, age, audiological identity, country, language, education, certification, and working environments.

2. http://www.limesurvey.org/en/

Table 1. Gender distribution of participants.

Gender	Number	Percent
Female	389	87%
Male	46	10%
Prefer not to answer	10	2%

Note: The gender distribution of the participants reflected the gender pattern of member of the Registry of Interpreters for the Deaf (RID), reported as being 87% female.

Table 2. Age distribution of participants.

Age Distribution	Number	Percent
21–30 years	92	21%
31–40	113	25%
41–50	110	25%
51–60	100	22%
60+	23	5%
No Response	7	2%

Table 3. Audiological identity status of participants.[3]

Audiological Identity	Number	Percent
Hearing	352	79%
CODA[3]	52	12%
Hard of hearing	13	3%
Deaf	6	1%
Other	12	3%
No Response	10	2%

Table 4. Country of residence for participants.

Country of Residence	Number	Percent
United States	432	97%
Canada	13	3%

The U.S. respondents resided in 46 different states/districts with the greatest number of respondents from Texas (8%), the District of Columbia (7%), and California

3. CODA is an acronym for "Children of Deaf Adults." These individuals typically acquire signed language from their deaf parents, are bilingual, and may regard signed language as their native language.

(6%). The remaining respondents (79%) lived across other states and Canadian provinces.

Table 5. Native language of participants.

Native Language	Number	Percent
English	388	87%
ASL	49	11%
Other	8	2%

Table 6. Working languages of participants.

Working Languages	Number	Percent
ASL/English	431	97%
ASL/Spanish	14	3%

Table 7. Educational level of participants.

Highest Level of Education Completed	Number	Percent
Associates Degree	157	35%
Bachelor's Degree	96	22%
Master's Degree	32	7%
Other Degrees	18	4%
Certificate Programs	142	32%

Table 8. Certifications of participants.

Interpreting Certification	Number	Percent
National or State	367	82%
Candidate for Certification	46	10%
No Certification	32	7%

Table 9. Work environments of participants.[4]

Work Environments	Number
Video Relay Services[4]	284
Business/Government	237
Post-secondary Education	207
Healthcare	166
K-12 Education	110
Legal	58
Other	70

Interpreters' descriptions of self-talk

How did the interpreters in this study define self-talk? A small sampling of the varied responses is provided here:

> "Self criticism (sadly enough)."
>
> "The ongoing voice in my head. She is NEVER quiet! She exhausts me! But she also keeps me focused."
>
> "Positive affirmations that encourage me to keep going and trust the process."
>
> "My first, and usually my only, support system."
>
> "Encouraging and motivating myself especially through difficult situations."
>
> "It happens when I feel stress."
>
> "The voice within that is sometimes über critical of the work and sometimes on vacation at the worst possible moments."

In addition, interpreters reported a few of their own "pet" names for self-talk, such as "the committee in my head," "the Supervisor," "my mental supporter," "the judge," "the panel," "the Voice," "the jury," "my cheerleader," "Mini-me," "the Peanut Gallery," "The Furies," and "the gang of thugs." Based on these designations, it may be assumed that the powerful "personalities" of self-talk hold sway over interpreters during their work.

4. Video relay service is a telecommunications technology in which individuals using a signed language can communicate with others via video technology and interpreters.

Interpreters' responses on categories of self-talk

Using Hardy's (2006) six characteristics of self-talk–frequency, valence, overtness, self-determination, motivation, and function–we report responses from the survey questions. In addition, we report on other questions pertaining to the structure of interpreter self-talk. Finally, we include sample quotes extracted from the comment sections that illustrate various aspects of interpreter self-talk.

Frequency

The survey contained an overarching question regarding frequency, "How frequently does self-talk typically occur in your interpreting work?" Experiencing self-talk to a "moderate" degree ("3–5 times") was the highest reported response (30%), while experiencing self-talk "occasionally" ("1–2 times") was the second highest response (24%). That is, over half (54%) of the respondents stated that they experience self-talk between 1 to 5 times during their assignments. Surprisingly, nearly one-fourth of the participants (22%) reported experiencing self-talk "constantly" ("ongoing") during their interpretation work, while other participants (19%) reported experiencing self talk "frequently" ("6–10 times"). Thus, 41% of interpreters who reported self-talk experienced self-talk six times or more *or* constantly in their work.

Only a small number (5%) reported "hardly ever" experiencing self-talk. [As a reminder, 26 (6%) of the original survey respondents (described in the *Participants* section above) reported experiencing no self-talk while working.] The frequency data for participants who reported experiencing self-talk are provided in Figure 1.

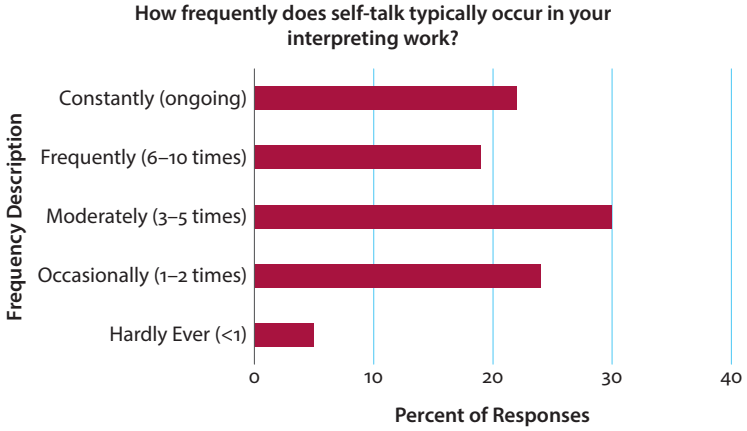

Figure 1. Percentage of reported frequency of self-talk during interpreting work by ASL-English interpreters (N = 445).

Next, participants were asked to identify the frequency of their self-talk *before*, *during*, and *after* interpreting assignments.[5] Over half (55%) of the respondents reported "occasionally" experiencing self-talk *before* assignments. Approximately one-third (34%) reported experiencing self-talk "moderately" *during* assignments. Approximately one third (36%) reported experiencing self-talk "moderately" *after* assignments. Interpreters were also asked to provide examples of the self-talk they experience before, during, and after assignments. A sample of various responses is provided in Table 10.

Table 10. Samples of self-talk reported by ASL-English interpreters (N = 445) that occurred before, during, and after interpreting assignments.

Before assignments	During assignments	After assignments
What generalizations or patterns from previous events might I encounter today?	Stay calm. Focus. Breathe, breathe. Oops, was that the word they wanted to use?	You're a human and no one is perfect.
I'm a professional. Doesn't matter who I'm interpreting for. I'm gonna rock this!!	What does this person want from this meeting? How do I bridge these two cultures? That was good! Oooh, that was bad.	I am amazing! I cannot believe I understood all that ASL from all over the country!
Who is my team? I hope we mesh well.	I am really bored with this discussion.	Ewwww. Really? Are you a real interpreter?
Do I need to go to bathroom now?	I can see this person is getting upset. Get ready.	Will my services be requested again?
I hope I can understand their fingerspelling.	What is this speaker's point?	What could have been more effective?

Next, we asked interpreters whether the frequency of their self-talk changed based on factors within the interpreting assignment. Ninety-six percent ($n = 426$) stated that factors within the assignment affected the frequency of self-talk, while only 4 percent ($n = 19$) reported no change in their self-talk based on assignment factors. The greatest increase in self-talk was caused by "low familiarity with content," as reported by 87 percent of the participants. It follows that the factor most often associated with a decrease in self-talk was "high familiarity with content" (76%). Interestingly, both "low energy level" (39%) and "high energy level" (34%) were reported as increasing self-talk, as well as both "low energy level" (27%) and "high energy level" (31%) being reported as *decreasing* self-talk. Further, while a "positive working relationship with team interpreter" was most often reported as decreasing the amount of self-talk (65%), it also caused an *increase* in self-talk

5. The survey question did not specify the length of an assignment.

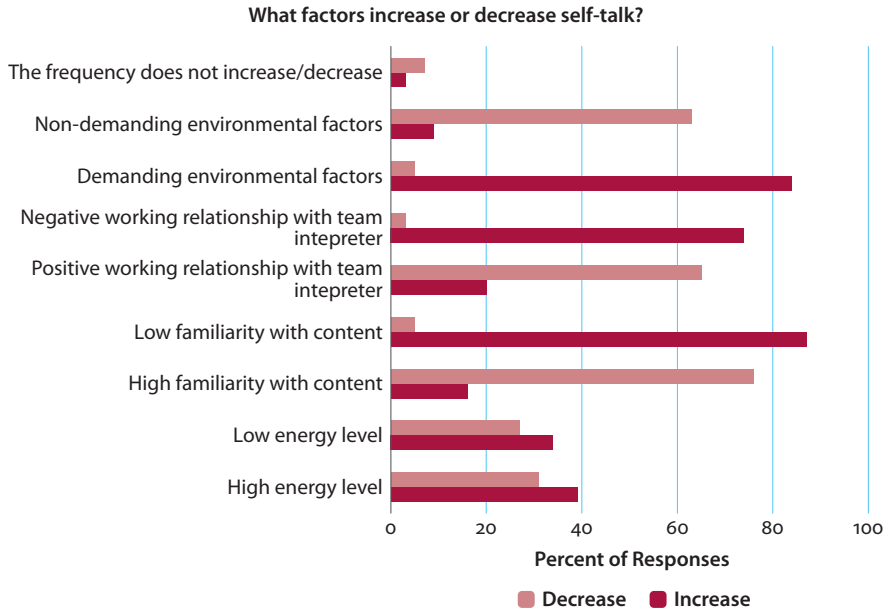

Figure 2. Percentages of reported factors that increased and decreased the experience of self-talk during ASL-English interpreting work.

for 20 percent of the respondents. Figure 2 illustrates the trends in relation to the interpreters' perspectives on increase/decrease of self-talk.

Finally, we asked respondents to report if the frequency of their self-talk had changed as they gained professional experience, and, if so, in what way. The majority of responses revealed that self-talk occurred "much less" (20%) or "slightly less" (18%) as professional experience increased. Fourteen percent of the respondents

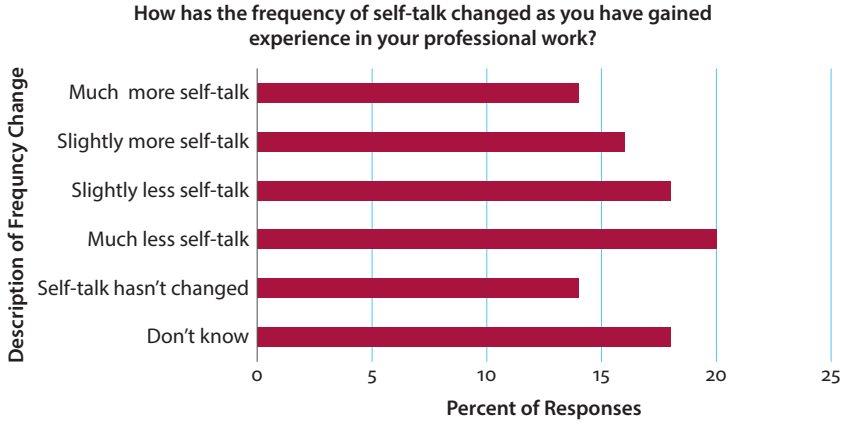

Figure 3. Percentages of reported change in frequency of self-talk in ASL-English interpreters as the result of gaining professional interpreting experience.

reported that "self-talk hasn't changed," with 18% reporting they "don't know" if their professional interpreting experience had changed the frequency of their self-talk (See Figure 3 for all responses).

Valence

When asked about the positive and negative valence of their self-talk, 62 percent of the respondents stated that their self-talk was a mix of both positive and negative messages. Twenty-two percent reported that their self-talk was positive and 14 percent reported their self-talk was negative in nature. One percent of the respondents did not know if their self-talk was positive or negative (See Figure 4).

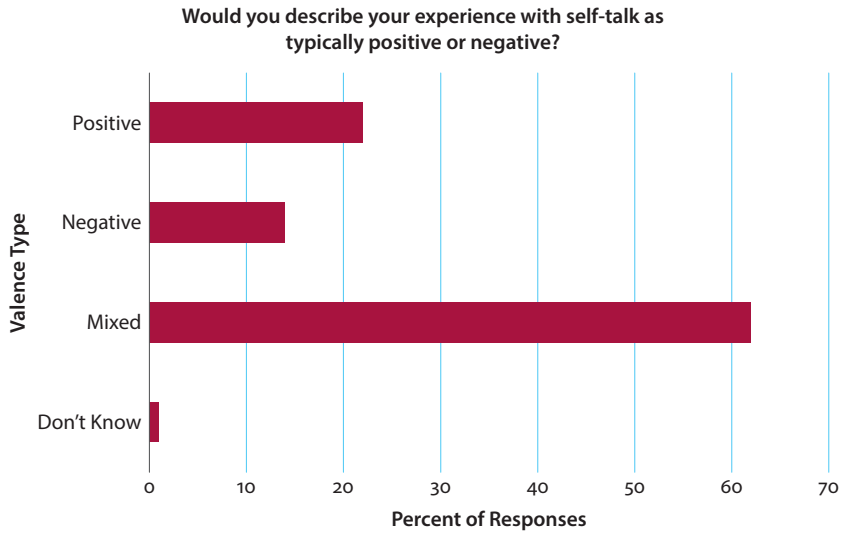

Figure 4. Percentages of responses on whether self-talk was experienced as typically positive or negative in regard to interpreting work.

In a related question, the survey asked respondents whether their experience with self-talk is typically helpful (facilitative) or not helpful (debilitative) to their work. The greatest number (46%) of participants reported that their self-talk served to facilitate their interpreting work, while the next highest number (43%) of participants stated their self-talk was a mix of being facilitative and debilitative. A small group (7%) reported that their self-talk was entirely debilitative, and 4 percent did not know (See Figure 5).

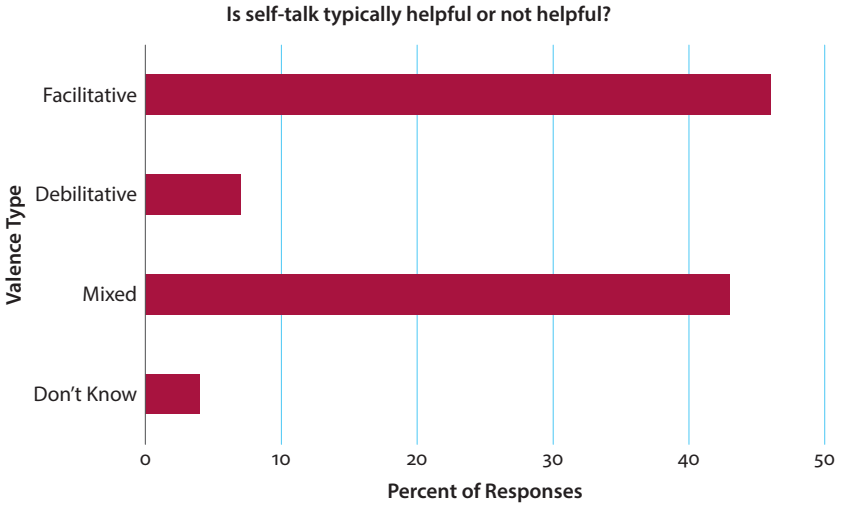

Figure 5. Percentages of responses regarding whether self-talk was regarded as having a facilitative (helpful), debilitative (detrimental), or mixed effect on their interpreting work.

Overtness

The survey primarily investigated covert self-talk; however, one question addressed self-talk that was expressed aloud (overt). Approximately two-thirds (62%) of the respondents reported talking or signing to themselves aloud about their interpreting work, while about one-third (38%) reported not engaging in overt self-talk. Additionally, one survey question asked where the overt self-talk tended to occur and for respondents to offer examples of the types of their overt comments. A few samples are provided here:

> [I experience overt self-talk] in my car before and after an assignment. After team interpreting, I will sometimes do it at home after I have had a chance to sit down, relax, and process.

> [Overt self-talk] happens when I'm alone. Sometimes I think of a better way to sign something, and I can only determine if it would be effective if I sign it. Sometimes I'll blurt out a word that would have been perfect for me to use.

> [I] never [experience overt self-talk] during an assignment. Afterwards, I will go over a situation and voice how I would like to handle it in the future. I practice how the sentences feel in my mouth so I won't forget when I need it. This happens mostly when a negative situation happens, like if a hearing person gives me a hard time or my consumer is being crabby with me. I practice how to handle it in the future.

> [I experience overt self-talk] most often in VRS [video relay service] work because I am mostly 'alone' in the call. Most often I am expressing the things I could never say in a real world environment. I may say that the person was a 'jerk' or something along those lines.

Self-determination

Regarding the self-determination of their self-talk, a survey question asked the participants if their self-talk was done consciously or whether it was an unconscious experience. As seen in Figure 6, nearly half (48%) of the respondents reported that self-talk occurred through a mix of conscious and unconscious thoughts. Nearly one-third (29%) of participants said that their self-talk was always unconscious, and a smaller group (19%) reported their self-talk as always conscious. Four percent of the participants reported that they "don't know."

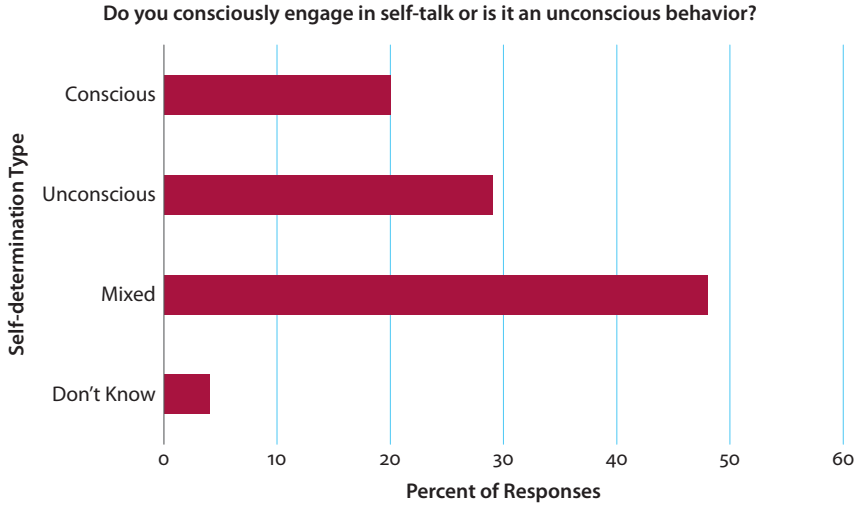

Figure 6. Percentages of responses regarding the self-determination of interpreter self-talk.

Motivation

Participants were asked if they ever use self-talk as a means to motivate themselves for work. Eighty-nine percent of participants responded that they relied on self-talk for motivational purposes, while 11 percent reported they did not use self-talk to motivate themselves. A follow-up question asked in the survey was "Is self-talk ever de-motivational?" Two thirds (65%) of the respondents stated that self-talk could be de-motivational at times, while the remaining 35 percent reported self-talk was not de-motivational in their work.

Function

The respondents were asked to identify the functions that self-talk served in their interpreting work. Based on prior research indicating multiple functions of self-talk (Diaz et al., 2014; Harvey et al., 2002), the survey offered a list of options and respondents were allowed to check as many as they wished. The greatest number of responses for the function of self-talk was "improving interpreting" ($n = 357$), followed closely by "preparation" ($n = 335$), and "awareness" ($n = 320$). The lowest number of responses for a function of self-talk was "relaxing" with 180 responses (See Figure 7).

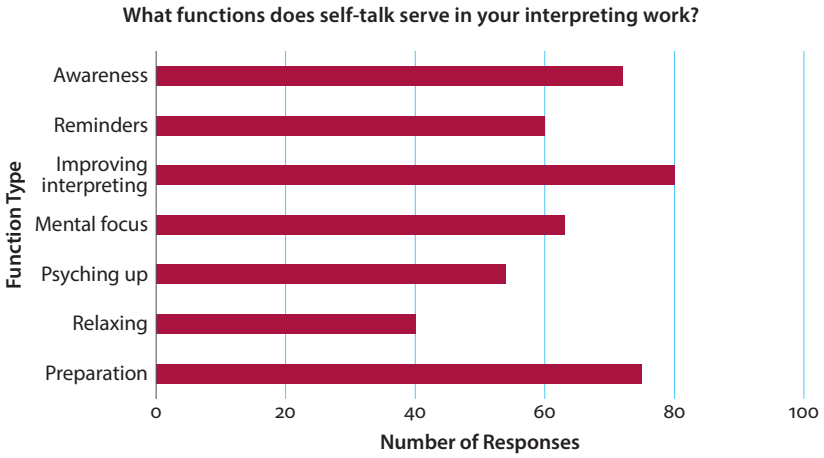

Figure 7. Number of responses on possible functions that self-talk served for ASL-English interpreters (N = 445).

In a related question, interpreters were asked to choose from a list of potential topics on which their self-talk typically focused during interpretation. The highest response rate was on the topic of errors they believed occurred in their interpretation ($n = 82$). As with the function question, the respondents were allowed to check as many as they wished. It is interesting to note that 94 interpreters reported self-talk on "topics unrelated to interpreting" while on the job, suggesting their mental attention was divided during their work (See Figure 8).

Finally, a few questions asked in the survey were outside of Hardy's (2006) categories of self-talk. We were curious to learn about the grammatical structure of self-talk in interpreters. Over half of the respondents ($n = 260$) reported that their self-talk took the form of phrases, while a third of respondents ($n = 143$) stated their self-talk occurred in single lexical items (either English words or ASL signs). The remaining participants ($n = 42$) reported their self-talk occurred as full sentences. We were also interested in knowing whether self-talk was conducted in the

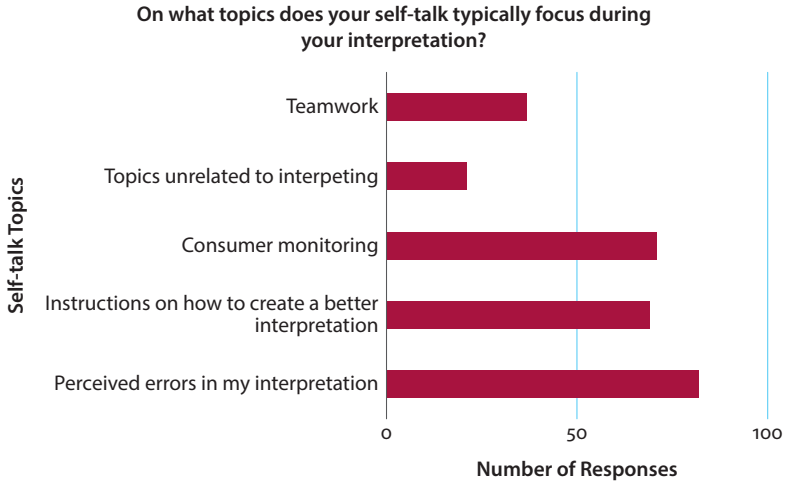

Figure 8. Number of responses for topics on which self-talk focused in ASL-English interpreters (N = 445).

interpreters' first or dominant language (L1) or second language (L2). Of the 445 respondents, 388 participants stated that English was their L1, while 49 stated ASL was their L1. A small group ($n = 8$) reported having a different first language (i.e., French, Spanish, or Swedish). The survey also asked, "In which language do you typically experience self-talk?" Over half of the respondents ($n = 265$) stated they experienced self-talk in their first language. A third of the respondents ($n = 145$) said their self-talk was "mixed" between languages, and 35 individuals said their self-talk was always in their second language. The distinction between talking versus signing to oneself may have different functions, such as practicing the specific language modality in which the interpreter is working; however, we did not address that question in this study.

Discussion

To our knowledge, this is the first study that has explored the experience of self-talk in ASL-English interpreters. As anticipated, the majority of respondents reported they experienced self-talk in relation to their work; in fact, a large number reported self-talk occurring either constantly or with a high degree of frequency. This finding verifies that many interpreters, not only engage in self-talk as they interpret, but do so with some frequency. Both external and internal factors influenced the amount of self-talk reported by interpreters, with "low familiarity with content" resulting in the greatest increase. This result supports the critical role of

preparation in interpreting (Ala-Antti 2003; Galaz 2011; Nicodemus, Swabey and Taylor 2014). It may be that self-talk detracts from cognitive attention during interpreting, and thus, it follows that preparation may reduce self-talk and increase availability of cognitive resources during work. Regarding the impact of professional experience on self-talk, approximately a third ($n = 168$) of the respondents stated that their self-talk decreased as the result of professional experience, while approximately one third ($n = 142$) reported no change, or an unknown amount of change, in the frequency of their self-talk. This points to a possible lack of awareness about self-talk in interpreters' professional lives, which is not surprising given the seeming lack of attention given to self-talk in professional practice, mentoring, and educational settings. If conscious and directed self-talk can enhance performance, as some studies suggest (Hardy 2006), then a lack of awareness about self-talk may result in reducing interpreting performance .

The majority (62%) of respondents reported that their self-talk was a mix of both positive and negative comments; however, 14 percent of the respondents stated their self-talk was always negative. This result is supported by the preponderance of negative names assigned to self-talk by interpreters as well as the numerous stated examples of negative self-talk. Among ASL-English interpreters, it is not uncommon to hear that interpreters are "hard on themselves." Although no statistics are available, it is recognized that many interpreters leave the profession due to the stressful nature of the work (Schwenke 2012; Schwenke, Ashby and Gnilka 2014). Negative self-talk may arise from various factors within the profession, such as uneven educational and experience levels among interpreters, the oft-times competitive nature of the work, exposure to public scrutiny when working in a visual language, or limited internships and mentoring opportunities with experienced practitioners (Stewart, Schein and Cartwright 2003; Winston 2005). Perhaps surprisingly, despite the reported negative nature of some self-talk, a majority of the respondents still reported that their self-talk facilitated their work or had a mix of facilitative and debilitative effects. These findings align with Raalte's et al. (1994) study of tennis players in which the nature of self-talk was not as important as the individual players' reactions to it.

Approximately two-thirds of respondents reported engaging in overt self-talk (spoken or signed aloud), a somewhat surprising result considering that interpreting work involves ongoing language transfer, leaving little space for talking to oneself aloud. However, this result is better understood upon learning the specifics of interpreters' overt self-talk; most often interpreters engage in overt self-talk in their cars going to and from assignments or in other private spaces.

Many respondents reported that their inner speech was not self-determined; they either experienced self-talk unconsciously or as a mix of conscious and unconscious thoughts. If, as Harvey et al. (2002) reported in their study of athletes'

self-talk, the greatest performance benefits of self-talk occur through an external individual (e.g., a coach) guiding messages being received by the athlete, then interpreters may also benefit from guidance in their self-talk.

Interestingly, the majority of interpreters in this study reported that they used self-talk to motivate themselves for work, but, according to the responses from one of the questions, they do not always achieve this outcome. In fact, two-thirds of the participants stated that their self-talk could be *de-motivating* at times. This may be explained by interpreters who set expectations or standards for work that were too high, which ultimately resulted in disappointment in their actual performance; however, this is conjecture as the study did not ask for causal factors. The top rated function of self-talk was "improving interpreting," indicating that interpreters pressed themselves to improve their performance as they worked. It may be that interpreters are uncertain of how to create reasonable goals for themselves, which again may lead to de-motivating self-talk. It also may be that interpreters haven't acquired motivational strategies in their work, which may result in self-talk that is de-motivating.

Limitations of the study

The present study provides a description of interpreters' self-talk; however, findings should be considered in light of the study's limitations. First, the survey questions were written to be aligned with Hardy's (2006) categorizations. Thus, the responses were shaped by a predetermined structure and may have limited alternative ideas about self-talk. However, the survey did contain numerous opportunities for participants' comments, which encouraged thoughts beyond the closed-ended questions. A second issue pertains to weaknesses of survey studies in general, that is, the responses were dependent upon participants' memories, as well as subjective factors (e.g., length of survey, interest in the topic, time constraints). On the other hand, an advantage to survey studies is providing an anonymous forum for participants to report their thoughts, and thus, may result in a degree of candidness not possible with other methods. Finally, the data analysis did not examine differences in self-talk with respect to variables such as age, gender, experience level, and education, but this may be taken up at a later stage of the research.

Conclusion

The purpose of this study was to confirm the occurrence of self-talk in ASL-English interpreters and create a description of its characteristics. The results indicate that self-talk is a pervasive event for many ASL-English interpreters, and interpreters

are able to describe the characteristics of self-talk in their work. Critically, the findings show that self-talk has both reported facilitative and debilitative effects on interpreters' work. To date, self-talk has not been well examined in either interpreter practice or education. Since self-talk is a real phenomenon among signed language interpreters, we suggest that self-talk in interpretation could be a valuable topic and potentially used to enhance interpreter performance. While this study focused specifically on self-talk in ASL-English interpreters, the phenomenon may also occur in interpreters of other signed languages and spoken languages. Thus, future research could serve to increase awareness of the impact of self-talk on a wider span of interpreters, as well as provide tools for teaching student interpreters how to use self-talk to facilitate their work.

Suggestions for further research

This study is a first step in understanding the role of self-talk reported by ASL-English interpreters. A richer picture of how both signed language and spoken language interpreters experience and perceive self-talk is needed. This can be achieved in a number of ways. First, further studies could seek to provide a description of the difference between novice and expert interpreters, which would add to the growing body of literature on interpreter expertise (Liu 2008, Moser-Mercer et al. 1997). Additionally, further research could investigate how interpreters learn about self-talk and develop strategies to effectively manage their thoughts. In addition, other methods, such as interviews, panel discussions, and think-aloud protocols, could be used to capture descriptive commentary about self-talk. It would also be informative to compare self-talk in spoken and signed language interpreters, as spoken language interpreters often bring a different training orientation to their work. Finally, conducting action research or experimental research within interpreter education classrooms to examine how students react to instruction on self-talk may yield interesting findings.

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Appendix A. Self-talk Survey

Introduction

Thank you for participating in this research study on self-talk of signed language interpreters. We appreciate your willingness to share your experiences and insights on this topic. Self-talk is defined as statements that individuals make to themselves, primarily internally, in which they mentally 'talk' about their feelings and perceptions, analyze situations, provide instructions, or give reinforcement to themselves. We are seeking to learn about interpreter self-talk that takes the form of internally generated language (signs, words, phrases, questions, commands). Our focus is NOT on mental images or emotions that arise during interpretation. We are asking about the language of self-talk that may occur before, during, or after an assignment. Please respond to the survey questions based on your own experience with self-talk in your work as an interpreter. We understand that your answers may vary based on specifics of the situation, thus we ask that you respond about your *typical* experience with self-talk. Also, please add additional comments that you feel would better clarify your responses. Thank you again for taking part in this research study.

Survey Questions

1. Do you ever experience self-talk related to your interpreting work? (Yes or No) If you have never experienced self-talk, please add any comments here.
2. What is the first thing that comes to mind when you hear the term 'self-talk' in relation to interpreting?

I. Frequency of self-talk

1. How frequently does self-talk typically occur in your interpreting work? (Hardly ever (1 instance or less per assignment), Occasionally (1–2 instances per assignment), Moderately (3–5 instances per assignment), Frequently (6–10 instances per assignment), Constantly (self-talk is ongoing))
2. Has the frequency of self-talk changed as you have gained experience in your professional work? (Yes or No) If yes, how?
3. Which best describes the typical frequency of your self-talk before, during, and after interpreting assignments? (Hardly ever (1 instance or less per assignment), Occasionally (1–2 instances per assignment), Moderately (3–5 instances per assignment), Frequently (6–10 instances per assignment), Constantly (self-talk is ongoing))
4. Give examples of comments you say to yourself.
5. Does the frequency of self-talk change based on factors within the interpreting assignment? (Yes or No)
6. Please check all factors that increase the amount of self-talk that you experience.
7. Please check all factors that decrease the amount of self-talk that you experience. (High energy level, Low energy level, High familiarity with content, Low familiarity with content, Positive working relationship with team interpreter, Working relationship with team interpreter, Demanding environmental factors, Non-demanding environmental factors, The frequency does not increase, Other_____)

II. Structure of self-talk

1. How would you describe the typical structure of your self-talk? (Single lexical items [words or signs], Phrases, Sentences)
2. What do you consider your first or dominant language (L1)?
3. What do you consider your second or non-dominant language (L2)?
4. What, if any, do you consider your third language (L3)?
5. In which language do you typically experience self-talk? (My first language, My second language, My third language, Mixed)

III. Content of self-talk

1. On what topics does your self-talk typically focus during your interpretation? (Perceived errors in my interpretation, Instructions on how to create a better interpretation, Consumer monitoring, Topics unrelated to interpreting, Teamwork, Other)
2. When does self-talk occur? (When I make a mistake in my interpretation, When my mind starts to wander, When I do something outstanding in my interpretation, When I see a response from the consumer, Other_____)

IV. Description of self-talk

1. Would you describe your experience with self-talk as typically positive or negative?
2. Is the self-talk normally helpful (facilitative) to your work, or typically not helpful (debilitative)?
3. Typically do you consciously engage in self-talk or is it an unconscious behavior?
4. What functions does self-talk serve in your interpreting work? (Preparation for interpreting, Relaxing, "Psyching up", Mental focus, Improving interpreting [self-instruction], Reminders, Awareness, Other_____)

5. Do you ever use self-talk to motivate yourself? (Yes or No)
6. Is self-talk ever de-motivational? (Yes or No)

V. Education and self-talk

1. Did you attend (for any length of time) an Interpreter Education Program (IEP)?
2. Which of the following options best describes the degree level at which you studied interpreting?
3. Was self-talk ever discussed in your interpreter education program?
4. Do you have beneficial self-talk strategies for your interpreting work?
5. Please expand on your answer.
6. If yes, how did you acquire these strategies?

VI. Final questions

1. Have you heard interpreters refer to self-talk as 'the committee in my head'?
2. Do you know of any other names for the self-talk phenomenon as experienced by interpreters? (Yes or No)
3. If yes, what?
4. In this study, self-talk is defined as internal discussion that is not overtly expressed. However it is possible to self-talk out loud (talk to yourself). Do you ever talk or sign to yourself out loud about your interpreting work?
5. If yes, can you describe where does this occur, and what do you say?
6. Do you ever discuss self-talk with other interpreting colleagues?
7. Do you have any other comments about self-talk?

VII. Demographics

1. What is your gender?
2. What is your age range?
3. Which of the following best represents you?
4. How many years have you been interpreting professionally?
5. Do you interpret in any languages other than ASL or English?
6. If so, what languages?
7. How many hours a week on average do you currently interpret?
8. At what age did you first learn ASL?
9. In what state do you primarily provide interpreting services?
10. What settings do you work in during a typical week?
11. What is your current certification level?

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