The role and place of inner and private speech in second/foreign language development: Modern Hebrew students' perspectives

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Abstract

This article analyses and theorizes the role, place and impact internal thought processes, expressed via inner and private speech, played for beginner-level learners of Modern Hebrew as a second/foreign/additional language (henceforth, L2) at a leading Australian university. Underpinned by the Vygotskian sociocultural theorization of language's multidimensional function as both a social/communicative device and an internal tool for organizing/externalizing mental functions, the article discusses students' testimonies of their inner/private speech during, and in response to, whole-class-teacher-led discussions, as well as their out-of-class vocalized-public speech experience.

The study's cyclical process of data collection, comprising of video recording of lesson events and procedures and of students and teacher's interviews captured the teaching-learning environments students were exposed to in, and beyond, the classroom.

The empirical-based findings attest to the important role inner and private speech played in the developmental processes of students' acquisition of Modern Hebrew. These findings especially highlight the fact that participation in whole-cohort discussions by ongoing use of inner speech, above and beyond public engagement, contributed to students' target-language development. Thus, stressing the significant place learners' metacognitive processes play in their L2 development.

The findings of this study add texture to our understandings of L2 Modern Hebrew learners' use of inner and private speech. It draws on students' voices by presenting their own reflections on their internal thought processes thereby enabling testaments pertaining to metacognitive processes entry into, and impact on, scholarly research. Additionally, the conclusions emerging from this study help to promote advanced independent learning and assist in cultivating pedagogical improvements.

Key Words: inner/private speech, metacognitive processes, student voice, L2 development, Modern Hebrew, pedagogy

Introduction

One aspect in the field of second/foreign/additional language learning (henceforth, L2) research, which in the last few decades has been receiving considerable focus and recognition, is the importance of the emerging and evolving developmental processes involved in acquiring L2s (Lantolf, Thorne & Poehner, 2015; van Lier, 2008). Within this area, a major line of inquiry centres on the Vygotskian theorization of the

fundamental place and role language and speech activity play in shaping and mediating higher mental functions (Vygotsky 1978, 1986, 1987,1997).

The findings and theorization presented in this article illuminate Modern Hebrew L2 learners' perceptions of the role and place their inner speech played in their processes of acquiring the language. It presents fresh findings, from Hebrew (a language in which inner and/or private speech-functions have not been investigated) to findings on inner speech previously reported on in other L2 contexts (Karas' 2016 study of advanced ELP university class; McCarthy's 2018 study of L2 advisors in Japan; Ohta's 2001 study of Japanese L2 students; Tomlinson's 2001 study of English L1 speakers and L2 learners).

The empirical-based findings presented here, emerged from a comprehensive study of a beginner Modern Hebrew cohort of a largely communicative classroom-based teaching and learning course at a leading Australian university. I emphasise that the study did not set out to investigate students' inner and/or private speech, nor did it explicitly focus on their L2 metacognitive strategies (Haukas 2018) and/or their L2 learning strategies (Chamot 2005, 2010). Rather, the study aimed to investigate the broader dynamics and speech activity of the cohort's teaching-learning interactions. In doing so, the study identified eight key teaching-learning features that characterized this cohort, including: engagement with new language items imbedded within relevant context; early sensitization; strategic use of code-switching; thoughtful delivery and access to handover; strategic exposure to feedback and feed forward; and, affective and social classroom interactions (Gilead 2018a &b, 2016). Moreover, throughout the data collection phase, students also testified that they were engaged in internal (silent) speech, as well as in private and public speech, during a range of learning activities, both in and out of class. These findings and students' testimonies are elaborated here for the first time.

In the proceeding pages I will present a summary of the Vygotskian sociocultural theorization of speech activity, followed by a discussion of what we can learn from students' testimonies about the role and place their inner and private speech play in their L2 Modern Hebrew acquisition trajectory. The article concludes by offering approaches that inform pedagogies to assist students' enhancement of their cognitive and metacognitive processes by drawing on their inner and private speech.

Theoretical Framework

> Language arises initially as a means of communication between the child and the people in his environment. Only subsequently, upon conversion to internal speech, does it come to organize the child's thought, that is, become an internal mental function.
>
> (Vygotsky 1978:89)

The above is one of several statements in Lev Vygotsky's writings that postulates the fact that language, above and beyond its communicative function, is a means of organizing and externalizing mental functions. On the one hand, language functions as a communicative device which enables social interaction in the public (interpersonal) domain; on the other hand, language is used when private mental functions are organized and internalized in the transition from the interpersonal to the intrapersonal arena. Hence, language is one of the main tools, if not the major one, that expresses, influences, as well as being shaped by, people's cognitive functions (Lantolf & Poehner 2013:5271). Moreover, Vygotsky postulated the social nature of language and speech activity, whether directed to oneself or to others. In other words, language is a two-fold tool/device: it serves our ability to communicate with the external-social world that surrounds us, both to receive and impart information: "Speech is *a means of social interaction*, a means of expression and understanding" (1997:48; italics in the original). As well, language is a cognitive and metacognitive tool/device that serves intermetal psychological functions: "a means of psychological action on behavior, on one's own or another's, a means of internal activity directed towards mastering man himself" (Vygotsky,1997, vol 4:62).

A further element highlighted in Vygotsky's writing is the developmental nature of language, which, he argues, is more important to research than the final public vocal product: "It follows, then, that we need to concentrate not on the *product* of development but on the very *process* by which higher forms are established" (1978:64, italics in the original).

Vygotsky and his colleagues (Luria, Leontiev, and Sokolov) theorized that language exists in two interlinking domains: in people's external-social environment and in their internal-private cognitive domain. Language operates both as an intermetal psycholinguistic mechanism and as a reciprocal intramental device connecting people. Vygotsky advocated the existence of four main speech functions: (i) social-public speech, spoken out-loud; (ii) private-egocentric speech, uttered quietly to one-self; (iii) inner speech, silent-internal thinking processes[1]; and, (iv) written speech. Consequently, he argued that there is a relationship between these four functions. Moreover, Vygotsky hypothesized that young children's first language (L1) private, inner, and written speech, develop as a result of, and following, participation in social interactions. Thus, he posits the following: "the child begins to converse with himself as he previously conversed with others", "the first form of speech in the child, then, is purely social" (1987:75, 74). As these quotes indicate, children's L1 first develops in the form of audible speech, uttered quietly to one-self and/or communicated publicly. Only once these external speech modes are adequately developed, reaching a level in which the child is understood by others, the internalization of language in the form of thinking processes, takes hold:

"we can then conclude that the process of inner speech develops and forms in the early school years: (1987:72).

In a similar way for L2 users/learners, inner speech emerges from participation in social interaction:

> Inner speech is not primary but must be formed through social interaction…Inner speech begins to develop through the process of social interaction, and through verbal interaction that includes private speech.
>
> (Ohta 2001:18)

For L1 adult speakers the process is reversed: pure thought, which transforms into inner speech is the precursor to private and public speech (Lantolf & Poehner 2013:5272).

Thus, above and beyond its role as a vocal public device that is outwardly uttered and intended to communicate with others, speech activity relates to thoughts/higher mental functions and is directed inwardly to one-self; acting as a mechanism of self-regulation and self-ascertainment (Werani, 2014:289).

This multidimensional perspective of language and speech activity as (i) having a communicative function to both oneself and others; (ii) expressing, shaping and transforming thoughts and cognition; and, (iii) continuously evolving and developing, is seen by many L2 scholars as especially productive in theorizing L2 learning and development (de Guerrero 1994, 2004, 2005; Lantolf 2000; Lantolf & Thorne 2006; Ohta 2000, 2001; Tomlinson 2001; van Lier 2004, 2008).

Literature Review

Thus far in the research literature on L2 Modern Hebrew there has only been one publication on the role and place internal thought processes (inner and private speech) play in students' language learning. In a 1990 study of intermediate-level L2 learners of Hebrew in Israel, Andrew Cohen found that students participated silently in lessons' proceedings by selectively choosing the peers they considered worthwhile listening to:

> Learners only listen to some of what their fellow students say…whether they are willing to pay attention to a student who says a lot in class, or whether they have the patience to listen while a weaker student struggles to produce an utterance.
>
> (Cohen 1990:45)

In the wider field of second/foreign languages acquisition, earlier research projects have reported on students' inner speech experience, namely, silently engaging in classroom activities whilst others are engaged in vocal-public discussion. Lantolf and Genung (2002) report on GP's (an L1

English-speaker) experience of learning Chinese. Whilst they state that the case presents a negative and failed L2 attempt, mainly since the use of English was forbidden, hence prohibiting "students from asking any questions at all" (2002:180), GP did report that she silently rehearsed dialogues that were publicly rehearsed in class, as well as "silently answering questions asked of other students and then mentally correcting their answers" (2002:190). Lantolf and Genung further emphasise that PG reported that she was only engaged in such inner speech activity when she was interested in the whole cohort discussion, or when realizing her turn to recite the dialogue was next (2002:190).

Amy Ohta's study (2000) of a classroom based L2 Japanese, led her to coin the term "auditors" for students who at a particular time in the lesson are not directly addressed, yet they may soon become the addressees:

> Auditors are persons who are not being addressed, but whose participation in the particular group is licensed. Auditors may become addressees at any time…as adult learners are also well able to capitalize on their inner voices in active, silent responses.
>
> (Ohta 2000:57)

Thus, within the context of classroom interactions, all learners are auditors/potential addressees, and they are the ones who determine their level of silently partaking in lessons' proceedings.

Lastly, Maria de Guerrero who investigated the mental rehearsal of Puerto Rican adult ESL students, reported that "84 percent… admitted to having experienced inner speech in their L2…[providing] sound empirical evidence of the existence of L2 inner speech among adult ESL learners" (1994:94).

As the wider L2 research literature has only scant publications on the role and place inner and private speech play in students' language learning, and only one dated publication in the area of L2 Modern Hebrew (Cohen 1990), I believe that providing updated research on the topic is significant.

Moreover, gaining insight into students' perspectives was one of the major aims of the wider study, as I believe that in the main, Modern Hebrew pedagogy is underpinned by teachers' perceptions and understanding of the teaching-learning processes, Hence, lacking sufficient consideration of student views. This leaves the discipline significantly under researched (Avni 2014; Feuer 2009; Raizen 2002), and considerably devoid of learners' input (Gilead 2018a). Offering fresh empirical insights into learners' internal thought processes is critical to the field of Hebrew pedagogy, as well as of considered importance to the wider arena of L2 research.

In summation, the theoretical underpinning of the analysis presented in this article, is firstly, that speech activity- public, private, inner, and

written – is how the target language is acquired, and, secondly, that inner and private speech emerges from public/social participation in, and interaction with, the target language, its society and culture.[2]

Methodology

The methodology I employed in researching this study was designed "to look at the entire situation and ask what is it in this environment that makes things happen the way they do?" (van Lier 2004:11-12). Utilizing a wide empirical research-net allowed me to investigate the teaching and learning environments students were exposed to both in and out of class.

The investigated cohort comprised of ten complete beginner learners of Modern Hebrew, seven female and three male students, ranging in age between 18-36, who all choose their own pseudonyms. The teacher, referred to as T, was a native speaker of Hebrew who was also fluent in English. As a way of gaining insights into the students' L2 inner speech/internal thought process, I adhered to Chamot's advice to provide a stage for their voices to be heard: "at the present time the only way to gain any insight at all into the unobservable mental learning strategies of learners is by asking them to reveal their thinking processes" (Chamot 2001:26).

The process of data collection and analysis is discussed at length in Gilead (2018a & b, 2016). Therefore, I only provide a succinct summary of it here. Data was collected over one academic semester and included audio and video recordings of lessons; interviews, respectively, with the students and the teacher; observation notes; and, collection of teaching and learning resources.

I interviewed the students both during the lessons themselves (this is referred to as the 'mid-lesson student interviews') and once at the end of semester; the teacher was only interviewed at the end of the teaching period. I conducted the mid-lesson student interviews as close as possible to teaching-learning interactions that I considered to be especially significant and/or interesting (Gilead 2018:36-39). Given permission by the teacher to holt a lesson's proceedings, I asked open-ended questions, such as "what were your internal thought process during this activity"; and, "I observed X, what can you tell me about your learning process." These interviews were carried out orally and in English (students' L1 or common language) to allow them to speak openly and freely and provide responses that truly reflect their internal thought processes.

Having employed a wide empirical research-net, following the data and allowing it to shape the research narrative has shed light on several phenomena, unforeseen at the start of the research, inner speech being one of these (LeCompte & Schensul 1999; Lincoln & Guba, 1985).

Results: Inner speech during whole class discussions

As stated above, many L2 scholars have adopted the sociocultural view of the multidimensional functions of language, of the fundamental role and place communicative activity plays in L2 development, and of the additional opportunities afforded to researchers by focusing on the impact learners' inner speech has on their public discourse. As the following analysis will show the findings emerging from this study support these three sociocultural understandings of language. Hence, the students' testimonies reveal the role inner/private speech played for them in their learning process and how closely this internal this speech form was linked to, and emerged from, their participation in class discussions.

On four occasions during the data-collection phase, students reported on their internal thought-process during whole-class discussions whilst other students were engaged in question-and-answer dialogues with the teacher. These whole-cohort exchanges occurred during the opening phase of lessons, where the teacher led the L2 interaction by asking the students מה אתם עושים בסוף-שבוע? [what do you do on the weekend?] (using the present tense as the past tense had not been introduced). This discursive activity, which the teacher conceived as being a 'warm-up' activity, served to revise and consolidate language items introduced in previous lesson/s, whilst at the same time affording students with a platform to use Hebrew and relate information of their choice (Gilead 2018a & b). These four occasions, took place, respectively, in the fifth, seventh, ninth and thirteenth (last) weeks of semester.

Week 5: the teaching-learning activity focused on reading and understanding a group of illustrations in the textbook *The New Hebrew From Scratch – Part* I (Chayat, Israeli & Kobliner, 2007:54), which focused on the four present-tense forms of Hebrew's עושָׂה/עושָׂה/עושים/עושות [do/does/doing]. In the mid-lesson interview, I asked the students about their internal thought process during the teaching-learning activity. These are the answers they provided:

Mic	Quite often I stops on first one [illustration] and I re-examining the letters. I get the pronunciation right and then … they're already on to the third [illustration] … so I usually just catch up with the third one and hopefully come back to the second one at some stage.
Tami	I write because it sorts of helps me… I have a very photographic memory, and I need to see it written down the way I write it so that I can see it again and understand it. … I'll write down … the transliteration and what it means in English.

Mike	I agree with Tami. It's the same method I'm following, and it helps me a lot.
Ethel	I have to hear what T [teacher] says first, and then maybe later I'll go back over it. Because I'm worried that if he goes on to something else, I won't be able to understand that.
Hanna	I think I can't go on if I can't understand one thing. I'll keep thinking but the class will go on, so I'll just catch up later…. just look at [textbook's summary] and sort of understand what he's [teacher] trying to say. But when he speaks in the classroom I normally I can't go on if I can't understand.

These responses show that students' cognition centered on the processes they followed in carrying out this reading and understanding activity. At this very early stage of language learning some could only focus on one language skill, and/or one part of the activity. Thus, Mic's attention centered on letter recognition, Tami and Mike focused on Hebrew's orthographic form (and relied heavily on transliterating Hebrew into their L1), and Ethel focused on the way Hebrew is expressed. Not surprisingly, all required significant time to understand and internalize the newly introduced language (Hanna, Ethel, Mic). Significantly, at this stage, the students did not attest to using Hebrew in their internal thought processes. In other words, their inner speech did not include Hebrew discourse. This fact coincides with the theorization that L2 learners (as L1 children) require a "certain ability in the L2", which "must be formed through social interaction: (Ohta, 2001:20 &18, respectively), before their inner speech is formed (Lantolf & Genung, 2002:190; Tomlinson 2001:27).

Week 7: This teaching-learning activity formed part of consolidating students' use of the present-tense בא/באה/באים/באות [come/comes/coming] (briefly introduced in the previous lesson). In line with his typical pedagogic practice, the teacher used/re-introduced the verb into the classroom discourse by posing the question ?מאיין את באה/אתה בא לאוניברסיטה [where from do you come to the university?] and addressing it to each student. This activity lasted about ten minutes allowing students to relate where he/she comes from by incorporating the correct form ...אני בא/באה מ [I come from…] in their respective responses, with the teacher scaffolding their utterances. Once the teacher's round of questioning ended, I conducted a mid-lesson interview in which I asked the students about their thought-process during this activity. As the responses below show, participating in a Hebrew social and interactive environment over seven weeks (26 hours of class time, as well as an estimated 10-20 hours of out-of-class study)

provided sufficient time of L2 use and exposure for some students' inner speech to form (Lucy, Tami). For others (Sarah, Ethel, Hanna), this amount of time did not enable them to develop their L2 inner speech.

Sarah	Trying to understand it
Ethel	Yeah, trying to understand what was going on
Lucy	I try to correct the other if I see a mistake; in my mind I correct them.
Tami	I sort of try to plan the answer myself just in case I get asked
Hanna	I usually lose focus when other peers are speaking

Nonetheless, only two weeks later (34 hours of class time supported by additional individual out-of-class study) all the students in this cohort testified to the fact that they formed Hebrew inner speech.

Week 9: The teaching-learning activity I inquired about was the lesson-opening 'warm up' activity. The teacher began by asking the students מתי את באה/אתה בא לאוניברסיטה? [when do you come to university?] (now consolidating the structure אני בא/באה לאוניברסיטה ב + זמן [I come to university + time]). Following this question, he inquired what they do once they arrive at university, including מה אתם אוכלים /שותים /עושים באוניברסיטה? [what do you eat/drink/do at university?]

This type of teacher-led dialogical question-and-answers exchanges afforded students with opportunities to use and consolidate recently introduced language (Gilead 2018a, pp 61-63, 158-158). By this point in their L2 learning trajectory, all students reported that they silently participated in the exchange.

Sarah	I'm always listening to the conversation and thinking about what I would answer…so I'm always following the conversation between the teacher …
Hanna	I think usually I sort of lose track… to be honest, but then I get back on track and start to answer [in my head] the question that the teacher is asking. …. I think I don't pay too much attention to what other people are answering ... I think I concentrate more

	on what I would be saying … sometimes I do listen and sometimes I don't listen.
Mic	I usually listen to the person and try and figure out the answer as well.
Mike	Same as Mic.
Ethel	I usually listen, well usually look at T first, and try to remember the words we've learned and … how he uses it and then I'll listen to how the other person. I'll just watch for T's reactions…. Yes, there is [awareness to teacher correcting others].
Tal	I try, like, make my own sentences in my own head pretty quickly and then I just listen to other people and the mistakes that they make and then I try not to do the same thing.
Eliza	Usually I try to figure it out in my head, and I don't listen, and I wish I did listen because I get it wrong
Tony	At first, I used to be nervous when T asked me, and I didn't know… and I also listen to what other students are questioned about and see if there's any mistakes or something else.
Lucy	I listen to the first person who is speaking and then I continue to listen and then … I check what was wrong, I check the preposition and I prepare my sentence.

As can be seen, having 34 hours of social and discursive interaction in the Hebrew classroom (supported by additional individual out-of-class study) has enabled the students to develop necessary Hebrew ability to form an L2 inner speech. As discussed above, this finding concurs with findings from other L2 (Lantolf & Genung 2002; Lantolf & Poehner 2011; Ohta 2000, 2001; Tomlinson 2001), as well as with the Vygotskian theorization of children's L1 development. Significantly, the students also testified that their use and knowledge of Hebrew did not only emerge from the affordances provided by the teacher, but also that their peers' speech impacted on their speech.

Final Group Interview: Following the last lesson of the semester, I conducted a lengthy interview with the students in which a range of topics were discussed, and students were encouraged to reflect on teaching-learning aspects they considered especially significant to them. One of these was whether other students' speech had an impacted on their own speech.

Whilst, all reported the existence of a well-formed Hebrew inner speech, some also testified that they corrected, to themselves, their peers' utterances (Sarah, Tami). As well, others testified to the following: as "auditors" (Ohta 2000b:57) and/or "vicarious respondents" (de Guerrero 2013:4669), they tuned in and out of whole-class discussions depending (i) on their position as prospective addressees (Hanna, Tami); (ii) how focused they were (Eliza); and, (iii) their level of interest in the exchanges (Mic, Tony).

Hanna	To be honest I never really pay attention to what other people say … because I'm busy thinking about what I should say [..] so I'm planning my answer …. But when I'm finished processing my answer then I listen to what other people are saying. [..] For example, last time I realized that Sarah divided her [answer] … and I thought this was a really good idea and I tried to think I should answer the same way … If there's new things that I didn't think about I try to spontaneously like add it to my answer in my thought and then try to use it.
Eliza	It depends how switched on you are in the morning; … Just trying to get my grammar right before I say anything ... not [preparing my answer] on the weekend or out of class just in class... T has never asked me first so whilst he asked Tal or Mic or whatever I'll just think about it.
Sarah	I usually listen to other people and [...] if they get something wrong, I'll correct it in my head, sort of...
Tami	I'm probably the same as like Sarah. I'll try and think of something in my head before I get asked it, so I can make sure it is as correct as possible.
Mic	I actually listen to what other people say [...] yes, just listen and try to understand [..] just basic translation like who Tal spoke with that weekend, or which restaurant Hanna went to.
Tony	I also focus on what the people have done on the weekend because I'm very interested in what they did on the weekend.

These testimonies provide evidence that whole-cohort discussions contribute to students' target-language development even when their participation is internal and silent (Gilead 2018b:211). As well, students' internal participation was also evident by their non-verbal responses such as laughter and turning to look at the student conversing with the teacher. Thus, these finding confirm that students benefit from whole-cohort exchanges by developing their L2 both individually and as a group.

Moreover, the study's finding further support Lantolf and Poehner's supposition that "As the group-as-whole develops, the individuals comprising the group also develop" (2011:24; also, Ohta 2001:76). Finally, these findings provide empirical evidence to the sociocultural theorization that L2 users/learners' inner speech is formed following, and resulting from, their participation in public speech. As learners' target language use and knowledge expands, their inner speech further develops.

Speech activities outside of class

The findings also highlighted the role and place learners' out-of-class speech activities played in their L2 emergence and development[3]. I now turn to address the students' utilisation of their Hebrew inner, private and public speech-functions outside the classroom. In the mid-lesson interview, conducted in Week 9 of semester (discussed above), the students related their experiences of engaging with Hebrew outside of class. Significantly, they testified that they utilise the three discursive speech functions (inner, private and public), by speaking not just to themselves, but also addressing others even though these others did not understand Hebrew[4].

Tal	Yeah [I engage with Hebrew] at home cause the people that I live with don't speak Hebrew, but I just talk to them in Hebrew … I might pick up the verb and … make them pick it up too, just like little words and little questions and its good cause I can practice with them and they can make funny faces and not understand what I'm saying… it's when I'm doing normal things and like I'm doing this verb and this verb … Yeay I know how to say this in Hebrew, it's cool… Oh when I'm home alone I don't care that I'm talking out-loud to myself sometimes, but usually it's just in my head.
Hanna	I do speak with my brother in Hebrew and he will say "what" and stuff, so I practice my Hebrew like that ... he doesn't [know Hebrew] and I do it so I get comfortable with Hebrew [.] and when I walk and staff I try to sort of [.] make up sentences that I know, but then questions pop up because I know אני [I] and I know אוהבת [love] and I know את [you f.s.] right? but its [.] I want to say that but then I'm not sure if it's right so I try to make up sentences with the things that I know … I do speak when I walk, and stuff and I try.
Ethel	I usually try because I've got some friends who … did Modern Hebrew in high school and so I'll try speak to them and they'll try and correct me… sometime when I do my homework I speak

	out-loud, or like just go over it in my head, or like talk to my house-mates who they don't know Hebrew.
Sarah	I think something if I'm just not even thinking about it at all… if I'm thinking something else unconsciously … like Hebrew word for something, I'll think of it in my head, corresponding to what I'm saying or doing, but I'm not trying to, I'll just think of it.
Tami	If my brother will ask me a question, or something, I might say to him "אני לא יודעת" [I don't know] but he doesn't know what it means, I say it because I enjoy it. It's sort of not usually conscious. And my uncle speaks Hebrew, and sometimes on the phone he might try and say some conversation, but like it doesn't usually work.
Mic	I don't think it matters, its [thought process out-of-class] just like rote learning , but I've started using links to the Army radio and I'm finding it's actually very helpful, because although I don't understand ninety-nine percent of it, I feel like I'm getting accustomed to hearing it and every now and then you pick up a word and yeah it's one word I know… I just had no exposure to Hebrew anywhere except of the classroom and I felt like needed it.
Eliza	We don't always see each other out of class, Like I see Ethel a lot and I say"?שלום, מה נשמע" [Hi, how's things?] just like in the middle of the Quad and staff[5]. And like, we always do this, and umm, I was catching a bus this morning, and I was like "אוטובוס" [bus]… [lots of peer laughter]. And I try to write the Hebrew in my head, and also my flat mates are really good, like, I come home and "שלומי-לום" [hidey] and they like, I know it's not real Hebrew, but we say it and it gets in our head, and yeah really good [lots of peer laughter].
Tony	I just do the same things, but sometimes I'm gonna say 'oh, what about in Hebrew'. Sometimes […] I repeat it […].

As evident from these testimonies, the students continued to engage with Hebrew in their out-of-class social environment. They attested to the continued presence of Hebrew inner and private speech beyond the classroom, in the following situations: Tal- whilst doing normal things, which she learned to express in Hebrew; Hanna- made up sentences when walking; Ethel- went over the language whilst completing home-work tasks;

Sarah- unconsciously thought in Hebrew while saying or doing other things; Eliza- experienced Hebrew popping up, which she tried writing in her head; and, Toni- thought of the Hebrew equivalents.

Moreover, the students attested to the fact that in addition to utilizing inner speech, and self-directed private speech, as a way of organizing their thoughts and consolidating their usage and knowledge of Hebrew, they also employed public speech. They used vocal-public speech as a supplementary tool to articulate their audible speech and to externalize the L2, even when their listeners did not know Hebrew. Yet, this public speech, whilst directed to others, served their own private needs, as they were well aware that their speech was incomprehensible to their audience. Tal addressed the people she lived with, which at times resulted in their picking up a word or two; Hanna addressed her brother as a way of practicing her own language use; Ethel spoke with friends that know Modern Hebrew as a way of improving her command of the language; Tami enjoyed responding to her brother's questions using the Hebrew expression "אני לא יודעת" ; and, Eliza used Hebrew to greet fellow students when she met them out-of-class, as well as her flat-mates, as a way of internalizing the L2.

To conclude, these testimonies highlight situations in which certain students used external audible speech as a social-interpersonal communicative device. Nonetheless, they did so for their own personal benefit, knowing that their speech was in the main unintelligible to their, respective, reciprocal partners.

Discussion

As discussed in the opening pages of this article, the Vygotskian sociocultural theorization, highlights language's multidimensional functions both as a social/communicative device and as a tool for organizing and externalizing internal mental functions. This has been widely accepted by L2 scholars in understanding language development, both first and additional. Thus, even though "[t]he area of inner speech is one of the most difficult to investigate" (Vygotsky, 1986:226), "we need to find out more about how an L2 inner voice develops (or does not develop) in both natural and formal L2 language acquisition" (Tomlinson 2001:32). Similar to the investigation of private speech, inner speech provides "important clues into aspects of L2 language learning and use that may not be readily perceived but are nonetheless essential" (de Guerrero 2013:4671).

The findings, of inner and private speech, emerging from this cohort of Modern Hebrew students expand our knowledge of the role and function inner and private speech played in their development and acquisition of the target language. Their testimonies add L2 Modern Hebrew to earlier findings from other L2 contexts and provide further confirmation to the hypothesis that L2 learners' silent and private speech emerges following their participation in social interaction. The students' testimonies also

provide evidence that their participation in the whole-cohort discussions contributed to their target-language development by ongoing involvement through the use of inner speech even when they, themselves, were not publicly engaging. As Ohta (2001), Poehner (2009), and Lantolf & Poehner (2011) assert, L2 students develop both as individuals and as a group. Moreover, the study's findings highlight the fact that students' vocal and public contribution to whole-cohort interactions cannot serve as the sole indication of their full engagement with the target language. Rather, even at moments when students are not the direct addressees in a whole-class dialogical exchange, they participate silently in it (Diagram 1 below).

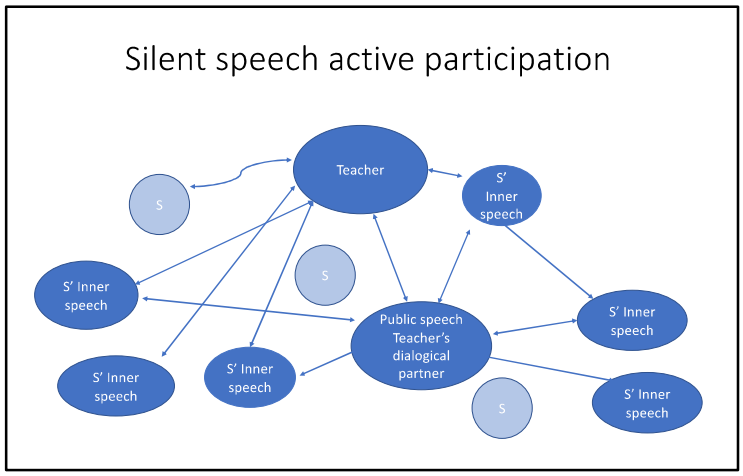

Diagram 1

These findings contrast a commonly held assumption that students who are not the teacher's direct addressees at certain moments in the whole-class discussion are not participating actively, a fact that significantly reduces their learning time (Diagram 2 below).

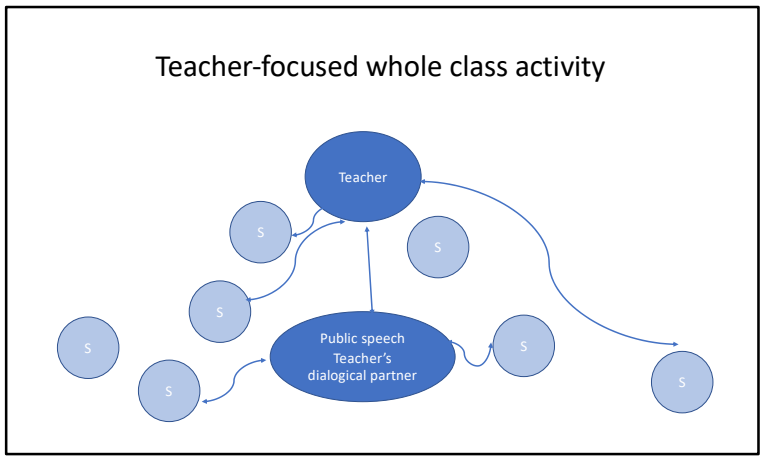

Diagram 2

This commonly held supposition (Diagram 2) underpins Gross & Rutland's call to reduce teacher-focused whole-class discussions and replace it with pair/small group activity (2015:75). Whilst I fully agree with the fundamental importance of allocating considerable class time to pair/small group activity, as it affords learners with optimal target-language engagement and speaking opportunities, lessens their participation anxiety (Dornyei & Ushioda 2009, 2011; Karas, 2016; Lightbown & Spada 2006) and, reduces teachers' speaking time (Dufficy, 2005:62), the study's findings indicate that students' active learning takes place even though it is not publicly and outwardly apparent. Thus, the findings suggest that limiting our observation to learners' public speech not only fails to account for the role inner and private speech play in their target language development, but also fails to consider the fundamental part these speech functions play in the emergence of their public speech. As the findings show, students, as 'auditors', were augmenting their individual speaking time by capitalizing on their inner voices: "to figure out the answer as well" (Mic), or "to try not to do the same [mistake]" (Tal). As well, they silently corrected their peers: "if they get something wrong, I'll correct it in my head" (Sarah). Hence, the role whole-cohort-teacher-led interactions and language modelling play in scaffolding L2 engagement can be as beneficial as pairs/small group interactions. In the whole-cohort-engagement lays the foundations for more intensive and individualized practice in pair/group work.

The study's finding further support Bao (2014:21) and Granger's (2013:5217) calls to view L2 learners' 'silence' in a more positive light[6]. Accordingly, external silence does not indicate lack of engagement and learning. Rather, some learners might prefer silent and attentive modes of learning and communication.

Finally, based on its Vygotskian theoretical underpinnings, this study found that inner and private speech only formed once students had ample exposure to Modern Hebrew social and public speech. As well, the

study showed that learners require adequate, yet individually varied, access to, and engagement with, the L2 before their L2 inner speech formed. This suggests the following pedagogical improvements: Firstly, knowledge regarding the functions inner and private speech play in L2 development, should be shared with the students (I recommend utilizing students L1 for beginner learners). Secondly, students should be encouraged to advance their independent learning by intentionally drawing on their inner and private speech, in addition to their public speech, both in class and beyond. Thirdly, and as Haukas (2018) posits, teachers should encourage their students to be metacognitively engaged by self-reflecting on their individual learning practices, as well as by sharing their learning approaches with their peers, thus broadening the pool of cognitive and metacognitive learning strategies open to all.

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Notes

[1] "Thought can be compared to a hovering cloud which gushes a shower of words" (Vygotsky 1987:281; as well as 1987:202-205). Thus, people's internal cognitive domain includes both silent speech, which syntactically acquires linguistic shape, and the more internal process of pure thought.
[2] And I would further include reading as a type of speech activity as reading enhances silent, and at times also private, speech.
[3] See Gilead's discussion of students using L1 private speech whilst completing challenging cognitive tasks (2018a, 2016).
[4] The students also discussed the role and place writing played in their L2 development and acquisition.
[5] See Gilead's discussion regarding this cohort's, teacher included, especially positive and effective social relations both in and out of class (2018a:184-192)
[6] Especially pertinent is Ellwood & Ikuko's (2009) call to view the 'culture of silence' of Asian students enrolled in Australian universities, in a more positive light. Thus, according to these scholars' studies, Asian students' external silence does not indicate lack of engagement and learning. Rather, they are adhering to the cultural convention of their respective Eastern

educational backgrounds, which promote contemplation, thoughtfulness and silent and attentive modes of learning and communication (as opposed to Australia's mainstream Western social verbosity norms).

References

Avni, S 2014. 'Hebrew Education in the United States: Historical Perspectives and Future Directions', *Journal of Jewish Education,* vol. 80, no. 3, pp. 256-286.

Bao, D 2014. *Understanding Silence and Reticence: Ways of Participating in Second Language Acquisition.*, Bloomsbury, London.

Chamot, A. 2010. 'Differentiated instruction for language and learning strategies: classroom application', in Chan, W, Bhatt, S, & Walker, I (eds.), *New Perspectives on the Development of Key Competencies in Foreign Language Education*, De Gruyter Mouton, pp. 115-129.

2005. 'Language learning strategy instruction: current issues and research ', *Annual Review of Applied Linguistics,* vol 25, pp.112-130.

2001. 'The role of learning strategies in second language acquisition', in Breen, MP (ed.), *Learner contributions to language learning*, Longman, Harlow, London, New York.

Chayat, S, Israeli, S & Kobliner, H 2007. *עברית מן ההתחלה חלק א Ivrit min ha-hathala he-hadash-helek alef [The new Hebrew from scratch - Part A]*, Academon, Jerusalem.

Cohen, AD 1990. *Language learning: insights for learners, teachers, and researchers*, Newbury House Publishers, New York, NY.

De Guerrero, M 2013. 'Private speech in second language acquisition', in Chappelle, CA (ed.), *The Encyclopedia of Applied Linguistics*, Wiley–Blackwell, Malden, MA.

2005. 'Inner speech - L2: thinking words in a second language ', Springer, New York, NY.

2004. 'Early stages of L2 inner speech development: what verbal reports suggest', *International Journal of Applied Linguistics,* vol. 14, no. 4, pp. 90-112.

1994, 'Form and functions of inner speech in adult second language learning', in Lantolf, JP & Appel, G (eds.), *Vygotskian approaches to second language research*, Ablex Pub. Corp., Norwood, N.J.

Dufficy, P 2005. "Becoming' in classroom talk', *Prospect* vol. 20, no. 1, pp. 59-81.

Ellwood, C & Ikuko, N 2009. 'Privileging of Speech in EAP and Mainstream University Classrooms: A Critical Evaluation of Participation ', *TESOL Quarterly,* vol. 43, no. 2, pp. 202-230.

Feuer, A 2009. 'Jewish Intergroup Convergence and Divergence in the University Hebrew Class', in Feuer, A, Armon-Lotem, S &

Cooperman, B (eds.), *Issues in the acquisition and teaching of Hebrew*, University Press of Maryland, Bethesda, Maryland.

Gilead, Y 2018a. *Dynamics of Teaching and Learning Modern Hebrew as an Additional Language: Using Hebrew as means of instruction and acquisition*, Brill, Leiden, Boston.

2018b. 'Developing communicative competence: the role of handover in scaffolding oral communication', in Walker, I, Chan, D, Nagami, M & Bourguignon, C (eds.), *New Perspectives on the Development of Key Competencies in Foreign Language Education*, De Gruyter Mouton, pp. 205-226.

2016. 'Code-switching functions in Modern Hebrew teaching and learning', *Journal of Jewish Education,* vol. 82, no. 4, pp. 268-292.

Granger, C 2013. 'Silence and participation in the language classroom ', in Chappelle, CA (ed.), *The Encyclopedia of Applied Linguistics*, Wiley–Blackwell, Malden, MA.

Gross, Z & Rutland, S 2015. 'The Place of Hebrew and Israel Education in Australian Jewish schools', in Burla, S & Lawrence, D (eds.), *Australia & Israel: a diasporic, cultural and political relationship*, Sussex Academic Press, Eastbourne; Chicago.

Haukås, Å 2018. 'Metacognition in Language Learning and Teaching Metacognition', in Haukås, Å, Bjørke, C & Dypedahl, M (eds), *Language Learning and Teaching,* Routledge, New York.

Karas, M 2016. 'Turn-taking and silent learning during open class discussions', *ELT Journal,* vol. 71, no. 1, pp. 1-11.

Lantolf, J 2000. *Sociocultural theory and second language learning*, Oxford University Press, Oxford [Eng.]; New York.

Lantolf, J & Genung, P 2002. '"I'd rather switch than fight": An Activity-Theoretic Study of Power, Success, and Failure in a Foreign Language Classroom', in Kramsch, CJ (ed.), *Language acquisition and language socialization: ecological perspectives*, Continuum, London; New York.

Lantolf, J & Poehner. M 2013, 'Sociocultural theory', in Chappelle, CA (ed.), *The Encyclopedia of Applied Linguistics*, Wiley–Blackwell, Malden, MA.

2011. 'Dynamic assessment in the classroom: Vygotskian praxis for second language development', *Language Teaching Research,* vol. 15, no. 1, pp. 11-33.

Lantolf, J & Thorne, S 2006. *Sociocultural theory and the genesis of second language development*, Oxford University Press, Oxford, New York.

Lantolf, J, Thorne, S & Poehner, M 2015. 'Sociocultural theory and second language development ', in Vanpatten, B & Williams, J (eds.), *Theories in second language acquisition: an introduction,* 2nd, ed, Routledge New York and London.

LeCompte, MD & Schensul, JJ 1999. *Analyzing and interpreting ethnographic data*, AltaMira Press, Walnut Creek, Calif.

Lightbown, P & Spada, N 2006. *How languages are learned*, 3rd Edition, Oxford University Press, Oxford.

Lincoln, YS & Guba, E 1985. *Naturalistic inquiry* Sage Publications, Beverly Hills, London, New Delhi.

McCarthy, TM 2018. 'Exploring Inner Speech as a Psycho-educational Resource for Language Learning Advisors', *Applied Linguistics,* vol. 39, no. 2, pp. 159-187.

Ohta, AS 2001. *Second language acquisition processes in the classroom: learning Japanese*, Lawrence Erlbaum Associates, Mahwah, New Jersey and London.

2000. 'Rethinking Recasts: A Learner-Centered Examination of Corrective Feedback in the Japanese Language Classroom', in Hall, JK & Verplaetse, LS (eds.), *Second and foreign language learning through classroom interaction*, Lawrence Erlbaum Associates, Mahwah, New Jersey and London.

Raizen, E 2002. 'כלים אנו צריכים ולא אידיאולוגיה Keylim anou tzrichim--ve-lo ide'ologya [Tools we need-- and not ideology]', *Hebrew Higher Education,* vol. 10, pp. 19-22.

Tomlinson, B 2001, 'The inner voice: c critical factor in L2 learning', *The journal of imagination in language learning and teaching,* vol. 6, pp. 26-33.

van Lier, L 2008, 'Agency in the classroom', in Lantolf, J & Poehne, M (eds.), *Sociocultural theory and the teaching of second languages* Equinox, London, Oakeville.

2004, *The ecology and semiotics of language learning: a sociocultural perspective*, Kluwer Academic, Boston; Dordrecht Norwell, Mass.

Vygotsky, LS 1987, *The collected works of L.S. Vygotsky*, Plenum Press, New York.

1986, *Thought and Language*, Translation newly revised and edited of the original l Russian version of Thought and Language, 1934 ed, MIT Press, Cambridge, Mass.

1978, *Mind in society: the development of higher psychological processes*, Harvard University Press, Cambridge.

Vygotsky, LS 1997, *The collected works of L.S. Vygotsky*, *Vol. IV: The History of the Development of Higher Mental Functions*, ed. Rieber, R. W. Plenum Press, New York.

Werani, A 2014, 'A review of inner speech in cultural-historical tradition', in Yasnitsky, A, Van Der Veer, R & Ferrari, M (eds.), *The Cambridge handbook of cultural-historical psychology* Cambridge University Press, Cambridge.