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Abstract

This paper arose as a result of dialogue between researchers involved in a research project undertaken across England, Finland, France, and Romania. The research aimed to improve the educational experience for Roma children in school, who face sustained racism, discrimination and poverty, alongside reduced levels of access to and inequitable outcomes in education, by focussing on translanguaging as a transformative pedagogy. A close reading of the translanguaging literature revealed an oft *assumed* sociocultural understanding of learning. This paper is an exploration of the synergies and tensions between sociocultural theory as a learning theory and translanguaging as a theory of language in use and as a pedagogical approach in order to suggest a conceptual integration useful to both. In particular, we focus on the formation and form of Vygotskian inner speech, given its central role in higher mental activity such as learning. We examine movement between external speech in collaborative activity (and to oneself) to condensed inner speech in reimagining Guerrero's (2005) schema, by fusing translanguaging theory with Vygotskian notions of sense and meaning, and everyday and scientific concepts. We also consider translanguaging in joint activity in terms of neo-Vygotskian notions of cumulative and exploratory talk, arguing the usefulness of microgenetic analysis to reveal learning in action within joint activity. The paper therefore provides both a renewal of sociocultural understandings of language and learning, and conceptual tools for a more refined and robust articulation and analysis of the operation of translanguaging-to-learn.

Key words: Translanguaging, sociocultural theory, inner speech, concept development, sense and meaning.

This paper reports on an exploration of the synergies and contestations between sociocultural theory (henceforth referred to as SCT) as a learning theory and translanguaging as a theory of language in use and as a pedagogical approach. The aim of the paper is to reimagine SCT in light of current thinking whilst providing conceptual tools for understanding translanguaging as a tool for learning for pupils of school age in an increasingly multilingual world. The exploration arose as a result of dialogue between researchers involved in a three-year research project undertaken across England, Finland, France, and Romania, which aimed to improve the educational experience for Roma children by focussing on a translanguaging pedagogic approach in school contexts. Roma face sustained racism, discrimination and poverty, alongside reduced levels of access to education and, where measured, there are hugely inequitable educational outcomes for Roma pupils (Gatti, Karacsony, Anan, Ferre, and De Paz Nieves 2016). The project adopted a translanguaging approach given its conception as a transformative pedagogy with the potential to liberate minoritised students' 'voices' and remove the hierarchy of languaging practices which operates to afford differential values according to language status (Garcia and Leiva 2014). Translanguaging pedagogy is argued to enable pupils to leverage all of their languaging practices in the pursuit of learning, thereby enhancing teaching and learning (Creese and Blackledge 2010) whilst enabling pupils to demonstrate what they know and can do (Garcia and Li Wei 2014) and to develop and enact standard academic ways of languaging (Garcia and Sylvan 2011).

In order to reveal the full potential of translanguaging as an emancipatory tool for learning, however, one must situate it firmly within a conceptual framework provided by a theory of learning. To argue that learning is taking place, one must first propose an understanding of the nature of learning. A close reading of the translanguaging literature revealed an oft assumed sociocultural understanding of learning with reference to sociocultural concepts such as scaffolding (Lewis, Jones and Baker, 2012b; Daniel, [Jiménez](#), [Pray](#) and [Pacheco](#) 2017), private (Garcia 2011) and inner (Garcia and Kleifgen 2010) speech and the zone of proximal development (Li and Luo 2017). Even those translanguaging studies which overtly situate the research within a sociocultural frame (for example: Duarte 2016; Martin-Bletran 2014; Pontier and Gort 2016), have, as yet, to more firmly harmonise the two conceptual frameworks. At the same time, SCT focussed on L2 learning has faced criticism that it has not located ‘itself more explicitly with respect to linguistic theory’ (Mitchell and Myles 2004: 220). In response to this critique, Lantolf and Poehner (2014) acknowledged that earlier SCT L2 research could have more explicitly clarified the ‘meaning and usage-based’ perspective of language theorisation embedded in this research.

To avoid further assumptions of a simpatico relationship between SCT and translanguaging, this paper attempts to provide a more robust consideration than currently exists of the possible parallelisms and tensions between these conceptual frameworks in their understandings of the role of language(s)/languaging in thinking and learning. This is an attempt to integrate sociocultural understandings of languaging to learn with theories of translanguaging in practice, in order to support the transformative potential of a translanguaging pedagogy. Whilst we fully acknowledge and understand the coercive operation of the language hierarchy in contexts such as school to limit the potential of translanguaging-to-learn, this paper concentrates on technicalities in relation to language(ing) and learning. More specifically the primary focus here is on inner speech given its central role in higher mental activity such as learning, and given that it is acknowledged that translanguaging has been framed as a way to extend pupils’ inner speech. For example, Garcia and Kleifgen (2010) posit that translanguaging offers the potential for ‘emergent bilinguals’ to become agentive in actively extending their semiotic meaning-making repertoire in practising languaging for authentic and complex operations in classrooms.

To reiterate, this paper is intended as a precursor to further conversations on modern interpretations of SCT in a multilingual world, and the way in which translanguaging as a developing linguistic theory is useful to understanding learning. Further work capturing examples of translanguaging to think and learn in action, both intra-and-inter-mentally, will complement or complicate the conceptual imaginings here. We do this conceptual work as researchers who understand learning through a sociocultural lens, and who believe in the transformative potential of translanguaging pedagogy. As Swain et al (2015: xvii) contend, were Vygotsky alive today he would have wanted to develop his thinking in line with recent research evidence, and so ‘those with a good understanding of his concepts may and should adapt Vygotskian concepts to suit the current state of knowledge.’ Further, and more specifically, Guerrero (2018) in her state of the art article about inner and private speech, issues a plea that research on inner speech goes beyond a monolingual frame given the prevalence of multilingualism and the ways in which the nature and processes of inner speech will be affected for those living in two or more languages.

A SCT of learning and translanguaging-to-learn: proposing a conceptual integration

SCT is a theory of development which posits that language is central to thinking and learning. Although originally conceived by Vygotsky in a predominantly monolingual frame, it has long been appropriated in the study of bilingual¹ learners (e.g. Anton and Di Camilla 1999; Donato 2000; Frawley and Lantolf 1985; Lantolf and Appel 1994; Moll 2014; Ohta 2000; Swain 2006), and now, as stated, in reference to translanguaging. Translanguaging was originally framed by educationalists Cen Williams (1994) and his colleague Dafydd Whittall as a particular pedagogical approach in Wales - *trawsieithu* - to describe the systematic and planned use of Welsh and English within the same lesson (Lewis et al 2012a); the term was later translated into English by Williams and Baker who agreed on the term ‘translanguaging’. This history is important as the pedagogy derived from a context of English dominance and the suppression and endangerment of Welsh (Lewis et al 2012) as a means of maximising learning through the purposeful use of both languages. Since then, translanguaging has gained global attention as an expanded pedagogy, but also has developed into a conceptual framework to capture ‘the expanded complex practices of speakers who could not avoid having had languages inscribed in their body’ (Garcia and Wei 2014: 18): a theory of language practice as Li Wei (2018) has called it. As with its genesis, modern usage of translanguaging remains concerned with liberating oppressed voices as it attends to the socio-political and historical contexts in which speakers operate. Lewis et al (2012b) describe translanguaging as about context and not just content, and about cognitive and cerebral activity and not just linguistic code. And so here we can see how a theory of language practice, when applied to sense making, effective communication and learning may have much in common with SCT, which prioritises language and its genesis in social interaction as a semiotic tool for cognitive activity. This is the view articulated by Swain et al (2015), who find important connections between the two theories. In order to take this further, let us first consider how exactly Vygotsky conceived the role of language in thinking and learning, by drawing on sociocultural conceptions of inner speech.

Inner speech

A fundamental assertion within SCT is that symbolic tools and signs, chief amongst which is language, mediate cognitive activity. From birth babies and their families co-construct actions and sounds as signs carrying intended meaning or ‘communicative value’ (Wells 1999). Gradually this social activity leads to children appropriating the phonetic, semantic, syntactic and pragmatic features of the language(s) around them alongside the cultural, social and individual ways of using language(s), which they begin to direct to themselves as egocentric speech. Lantolf and Appel (1994) note that it was Wertsch who later called for the term private speech (a term originally coined by John Flavell (1966)), to replace egocentric speech in sociocultural studies. Recent neuroscientific studies provide support to Vygotsky’s developmental model, and, as reported by Alderson-Day and Fernyhough (2015) in a summary of related research, these studies have shown that private speech, due to the principle of continuous access (Frawley and Lantolf 1985: 22), functions beyond self-regulation of cognition, enabling for example, emotional expression, fantasy, and planning. Vygotsky proposed that over time private speech becomes ever more elliptic in form because ‘the self is a highly sympathetic and understanding listener’ (Berk 1992: 21). In a process he termed internalisation of social to inner speech, egocentric speech gradually becomes more covert as it is transmuted into ‘semantically dense’ (Ellis 1999) inner speech. Inner speech functions to regulate one’s behaviour and to mediate one’s thinking in what Vygotsky (1978) referred to as higher mental functions such as voluntary

attention, planning, intentional memory, logical thought, problem solving, evaluation, and hence development.

The exact constitution of inner speech and its relation to social speech, even within a monolingual framing, is contested. Guerrero (2005) outlines the most common debates, drawing on the extensive work by Carruthers and Boucher (1998), as a distinction between the communicative and cognitive conceptions of the role of language in cognition and thought. The communicative conception views language as a *means* of communication rather than an essential catalyst of thought, which is said to exist as some form of abstract representational or computational language of thought: Fodor's (1975) *mentalese*. Natural language as inner speech acts as a separate, modular input-output device for central cognition as an encoding/decoding process for pure thoughts. It acts to enhance or facilitate thoughts rather than actually constituting thinking. The cognitive conception, on the other hand, views language as intrinsically related to thought, where thinking either requires language to function effectively or where language is constitutively involved in thinking itself, i.e. is the medium of those thoughts. Guerrero suggests that Vygotskian notions of inner speech would lie most comfortably within Carruthers and Boucher's *requirement* category of the cognitive conception in that he did not view thought as identical to language as it can also be non-verbal.

In a more recent example of continued debates on the constitution of inner speech, Jones (2009: 180) has critiqued what he views as segregationist assumptions within Vygotskian theory, where language 'constitutes a self-contained realm of meaningful forms which maintains its integrity and identity as between people and contexts.' Thus, language is viewed as segregated from the actual concrete practices of communication in real life and, therefore, of the actual individuals who are responsible for these practices (Jones 2009: 168). Of particular concern to Jones is the construction of inner speech in abbreviated form, which he argues reflects assumptions, biases and agendas of grammatical tradition rather than the perspective of language users. He argues that rather than thinking of speech utterances as abbreviated forms *derived from* expanded forms, every utterance, whether internal or external, expanded or abbreviated 'is a creative act on the part of the speaking and hearing participants' (Jones 2009: 174).

What is interesting here is the apparent resonance in Jones' critique of Vygotskian theorisation of inner speech with developments in translanguaging. Translanguaging is understood as emanating from the empirically observed 'complex language practices of plurilingual individuals and communities' (Garcia and Li 2014: 20), i.e. from the perspective of language users. As such, translanguaging theorists draw on the notion of an idiolect to describe 'a person's own unique, personal language, the person's mental grammar that emerges in interaction with other speakers and enables the person's use of language' (Otheguy, García and Reid: 289). Jones's (2009) insistence on the unique and creative construction of language use for communication, internally or externally, is resonant with translanguaging theorization about idiolects (or linguistic repertoires) *and* creativity or the 'ability to choose between following or flouting the rules ... including the use of language ... pushing and breaking the boundaries between the old and new, the conventional and the original, and the acceptable and the challenging' (Li Wei 2011: 1223). Extending thinking about idiolects, in distinguishing translanguaging from 'monoglossic ideologies of bilingualism' (Garcia 2009) such as code-switching, some theorists have proposed that bilingual mental grammars 'consist of large and complex arrays of disaggregated structural

features (phonetic, phonological, morphological, and semantic) that do not belong to or reside inside of the speaker's two or more languages by virtue of inherently differentiated linguistic membership' (Otheguy et al: 644). To label mental grammars in terms of named languages imbues them with a linguistic reality which is illusory (Garcia and Kleyn 2016:14), a phrase which Jones (2009: 175) also uses to describe grammarians' scriptist assumptions as applied to inner speech forms and their development. Further, the general consensus currently in neurolinguistics research that 'both languages of a bilingual are always to some extent active in lexical memory and interact with each other' (Szmalec, Brysbaert and Duyck et al 2012: 85), provides support for the conceptualisation of the repertoire as a unitary system. One could therefore argue that translanguaging theorizations of semiotic repertoires depart from sociocultural understandings of inner speech form and development in favour of a more integrational linguistic perspective as argued by Jones (2009).

Before acceding to this assertion, however, let us first consider a more detailed examination of inner speech, its relation to external speech and what this means for bilingual learning, particularly in terms of learning in schools. Whilst some sociocultural scholars consider inner speech as pure thought having no linguistic form (e.g. Swain, Kinnear and Steinman 2015; see Guerrero 2018 for a further discussion on this), in an extended focus on Vygotskian inner speech for bilinguals, Guerrero constructs a careful argument based on Vygotsky's own writing together with evidence from other neo-Vygotskian research, that inner speech ought to be conceived as existing in stages or levels of processing from 'pure thought' towards external speech and vice versa:

And whereas it is true that inner speech must be syntactically reduced and semantically condensed for the mind to operate with a maximum of efficiency during automatized verbally-mediated tasks, it is nonetheless a fact that inner speech may at times require a more elaborate and unfolded structure, with high levels of semanticization, lexicalization, and grammaticization, for example, when leisurely self-talking ... or when thinking over what to write. (Guerrero 2005: 16).

Crucially, Guerrero also stresses that inner speech is language using, language in action, rather than an abstraction or 'some type of internal language entity, a body of language knowledge, a collection of word forms, or a network of meanings, existing somewhere in the recesses of the mind' (Guerrero 2005: 17). She explains that inner speech recruits internalized (and external) linguistic resources, utilizing them for thinking, but does not constitute those resources. Or as Vygotsky (1986: 251) put it, 'thought does not express itself in words, but rather realizes itself in them'. Vygotsky (1986) drew a crucial distinction between *meanings* attached to words in the general cultural sense, more akin to stable dictionary meanings (the Russian *znachenije*), and the idiosyncratic *sense* of words constructed from personal concrete experiences over time (the Russian word *smysl*), both of which are involved in inner speech. As already intimated, in translanguaging theory, named languages or codes are not seen as having a linguistic reality for the speaker; the words bilinguals use (intramentally as well as intermentally) are simply *their* words, resonant with Vygotsky's notion of word sense. In communicating with others who are *not* likely to share a similar idiolect, bilinguals would therefore need to consider generalised meanings for joint meaning-making. This would be particularly pertinent for pupils working together in schools, who will have a huge variety and length of experience with languaging and translanguaging practices across contexts.

Drawing on Vygotsky’s distinction between sense and meaning, Guerrero (2005) proposes a transition model between inner and external speech although it is worth noting the model refers to the production of L2 alone and presupposes advanced levels of development in the L2. The model begins with a motive for thinking, transitioning to thought as pure meaning or a non-linguistic conceptual component (as in a monolingual model). The next phase proposed is condensed bilingual inner speech as a unitary system in the transition from inner to external speech for bilinguals, where word sense is linked to both languages of a bilingual (or more if they are multilingual) as conceptual representations:

Inner speech will be at the first stage [in the process of turning thought into L2 words] highly condensed but rich in allusions to subjective word meanings, or word senses – to use the Vygostkyan term – and with links to L1, L2, unified, or bi-codal conceptual representations. (Guerrero 2005: 174)

Then there is an application of the L2 code to the bilingual inner speech with a synthesis of sense and meaning, concretized through L2 word meanings and with rudimentary syntax. Following this there is a transitional phase which may occur as expanded inner speech, involving ‘lexicalisation, grammatical elaboration, and phonological encoding’ in the second language (Guerrero 2005: 173 (see figure 1). In a translanguaging model this would be the point at which interlocutors selectively suppress or activate parts of their repertoire in order to participate in joint meaning making with others who do not share their idiolect.

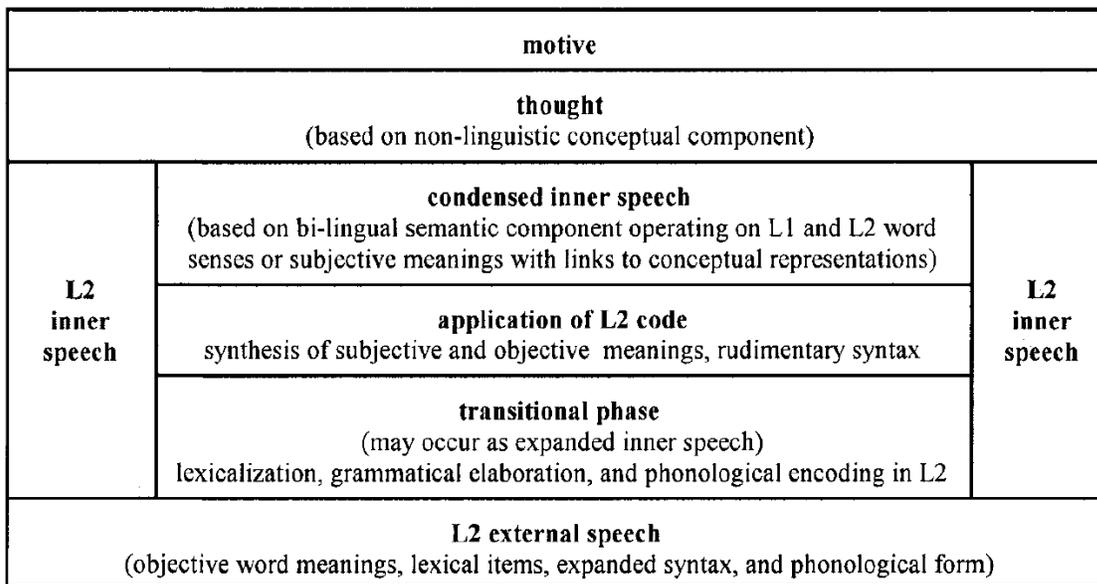


Figure 1: Guerrero’s (2005: 173) original schema of inner speech externalisation at advanced levels of L2 development.

Vygotsky (1986: 249) described relations between sense (subjective) and meaning (generalised) within inner speech as ‘a dynamic shifting, unstable thing, fluttering between word and thought,

the two more or less stable, more or less firmly delineated components of verbal thought' and 'precisely because thought does not have its automatic counterpart in words, the transition from thought to word leads through meaning' (Vygotsky 1986: 251). By synthesising translanguaging theory and considerations of the contexts for translanguaging with Guerrero's model of inner speech, we might further reimagine this transition from thought to external speech for bilinguals, in order to better understand the role of translanguaging in meaning making and learning.

Imagine for a moment that one is speaking with others who one knows are likely to share a similar idiolect. Imagine if the focus of thinking is something other than language production per se, when solving a maths problem or undertaking a history investigation, for example. What if this is not dependent on your 'level' of L2, as you can draw on any or all of your semiotic resources to make meaning and to communicate this meaning effectively. Perhaps, this fluttering between word and thought in inner speech for higher mental functions in bilinguals who have developed generalised meanings associated with idiosyncratic senses in translanguaging activity (in and out of school) means that transition from thought in pure meanings without verbal form to externalised speech is not exactly nor consistently as Guerrero's model suggests. Indeed Guerrero herself noted that the model might look different for multilinguals (p. 173, note 69) and that in most cases transition from thought to externalised speech is not a smooth process; for example, producing written text may result in a far more agitated process (p 174).

In order to develop this line of thinking further, let us first postulate that translanguaging as 'a process of making meaning, shaping experiences, gaining understanding and knowledge' (Baker 2011: 288) by drawing on a speaker's full linguistic repertoire (or idiolect) in intramental activity *is* inner speech. In its first phase beyond pure thought, this inner speech is condensed in utilization of semantically dense bi/multilingual idiosyncratic meanings (Vygotsky's 'sense') developed through translanguaging practices (in and out of school) and existing as a unitary system. One would then imagine that strategic selection from a speaker's repertoire to support effective communication during translanguaging would not involve application of a specific language code as in Guerrero's transition model. Rather, it would involve application of new languaging practices arising as a result of translanguaging activity in ontogenic development, where subjective and objective meaning synthesis for concretisation involves utilising 'language practices that use different features that had previously moved independently constrained by different histories, but that are now experienced against each other in speakers' interactions as one *new* whole. (Garcia and Wei 2014: 21). One might then refer to this as application of a translanguaging lens phase in an intramental space in which 'competing language practices, as well as knowledge and doing, emerging from both home and school are *brought together*. ... [to generate] new knowledge and learning as well as new languaging and texts' (Garcia and Wei 2014: 68, original italics).

Of course this requires as a minimum a school context in which translanguaging is allowed, better still enabled, in which the language hierarchy is disrupted and pupils are not forced to reject parts of their idiolect. The subsequent transitional phase may then result in a translanguaged version of the more expanded lexicalisation, grammatical elaboration and phonological encoding. We have attempted to capture this in an amended version of Guerrero's schema (figure 2).

Whether these stages always necessarily occur and how this relates to context, including the socio-political context, and to experience and knowledge of parts of one's idiolect, and to what

extent a fluttering between stages takes place is all, of course, open to question. However, developing this model and its transitional phases goes some way to understanding how bilinguals can translanguage ‘without thinking of the fact that they have one language that is different from the other’ which implies a lack of consciousness of language differentiation, whilst also learning to ‘supress certain features [of their repertoire] depending on the communicative situation, which requires a conscious act and awareness of language differentiation (both of these definitions are given by Ofelia Garcia in defining translanguageing in a one minute 19 seconds video at: <https://www.youtube.com/watch?v=veylQoGrySg>). It may also provide a response to McSwann’s (2017) critique of translanguageing theory. He argues that although the notion of an idiolect as ‘idealizations’ of socio-politically named languages is not controversial amongst sociolinguists, the assumption that mental grammars for plurilinguals exist as an entirely unitary internal system in which discrete languages are not differentiated, is contestable. Perhaps one could conceive of the integrated multilingual model he argues for in which plurilinguals ‘have a single system with many shared grammatical resources but with some internal language-specific differentiation as well’ (McSwann 2017: 179) as being represented in the stages of intramental translanguageing as inner speech.

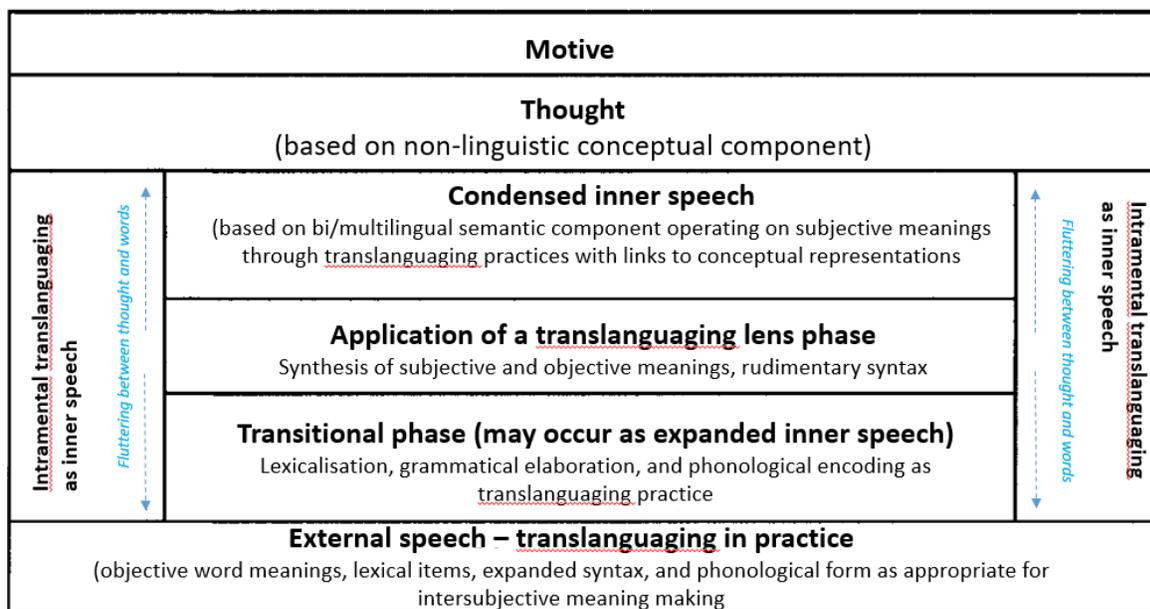


Figure 2: Translanguageing schema of inner speech externalisation

Further, one could propose that when bilinguals are focussed on thinking through a problem in the company of others who they know are likely to share a similar idiolect, the two phases after condensed bilingual inner speech are perhaps more like the phases undertaken by a monolingual. As Otheguy et al (2015: 297) point out, translanguageing is never used completely freely as ‘all speakers, even monolinguals, monitor their speech to some extent in order to adapt to the interlocutor and social situation at hand.’ The argument would be that because meaning making is the focus of attention, the exact form of language externalised is of secondary consideration, as would be the case for monolinguals in joint activity. The resulting external speech may therefore

more closely resemble the inner speech utilised for thinking in intramental translanguaging activity in those later phases, and in such contexts we may then be privy to how translanguaging for thinking occurs, as in the occurrence of private speech. In sociocultural studies of private speech, there is an assumption that externally verbalised private speech provides a window into a person's inner speech, **as was argued for and supported by Vygotsky's theoretical and empirical research**. Indeed, Ohta (2001: 34) argued in relation to L2 learning that 'private speech in the language being learned should reveal internalisation processes.'

There may of course be problems during the movement from inner to external speech, for example in the synthesis of subjective and objective meanings in the application of a translanguaging lens phase (as described above), given the varied knowledge and experience of bilinguals in the contexts in which their translanguaging is undertaken (more on this below). However, when these problems are verbalised, or when an interlocutor exposes such problems in other ways, such as stalling their vocalisation, other interlocutors are then also privy to these problems, which is tremendously useful for teachers, but also for other interlocutors when engaged in dialogic activity. For bilinguals this may reveal problems in their knowledge or understandings, or in finding ways to express this through translanguaging, as well as, of course, their affective experiences of translanguaging in certain contexts. Again, this is not dissimilar to some sociocultural studies of externalised private speech in collaborative activity, which have analysed the social effect of private speech: 'all speech uttered aloud in the presence of another person has the potential to be perceived as an intermental act, even if one's intention is primarily private.' (Smith 2007: 354).

Concept Development

The possible difficulties encountered during the synthesis of subjective and objective meanings may also be explained by drawing on Vygotsky's distinction between scientific and everyday (sometimes referred to as spontaneous) concepts. Vygotsky proposed that everyday concepts arise from unsystematic, practical, experiential and interactive activity in natural everyday contexts and events. Although all concepts are generalised, everyday concepts involve simplistic classifications based on superficial observable characteristics. Although the activity from which the everyday concept arises involves conscious participation, the concept itself is not held up to conscious scrutiny. In contrast, scientific concepts are 'abstract, systematic relationships and definitions' (Swain et al 2015: 50) and hence not attached to the particular. Developmentally, scientific concepts go beyond everyday generalisations firstly to vertical taxonomic relationships (generalisations of generalisations), and then to horizontal relationships where the interconnectedness of concepts begins. Scientific concepts are taught (mostly in school settings) as part of a system of concepts in terms of both vertical and horizontal relationships (Wells, 1999). Crucially, in terms of translanguaging, Vygotsky viewed these concepts as dialectically integrated, in that 'as systemisation is introduced into the child's thinking through instruction in relation to scientific concepts, it leads to a restructuring of his or her spontaneous concepts, making them more systemic and bringing them under conscious control.' (Wells 1999: 30) However, one needs the everyday concepts to mediate understanding of scientific concepts or instruction becomes a mindless learning of words or an 'empty verbalism' as Vygotsky (1987) put it. It is worth quoting in full Vygotsky's proposition in how these two operate together to enable development:

In working its slow way upward, an everyday concept clears a path for the scientific concept and its downward development. It creates a series of structures necessary for the evolution of a concept's more primitive, elementary aspects, which give it body and vitality. Scientific concepts, in turn, supply structures for the upward development of the child's spontaneous concepts toward consciousness and deliberate use. Scientific concepts grow downward through spontaneous concepts; spontaneous concepts grow upward through scientific concepts. (Vygotsky 1987: 194)

Vygotsky understood 'the concept is not possible without the word' (Vygotsky 1987: 131), and that although word meaning is always a generalisation, 'the generality of meaning of each word continues to develop, as it enters into structural relationships with other words.' (Wells 1999: 30). To summarise then, children learn ways with words for learning which not only advance conceptual development but also develop their languaging practices per se.

In applying a theory of translanguaging, one can say that everyday concepts, although not systematically mediated, will be associated with a pupil's full idiolect. Systematic intermental mediation of scientific concepts, however, is most likely to occur most frequently for most pupils in school and therefore in most contexts in the languaging practices of school. By drawing on their full linguistic repertoire during collaborative learning activity (as explored below), pupils can appropriate ways with the words associated with the scientific concepts for intramental conscious and deliberate languaging to enable abstraction of and connections between everyday and scientific concepts. This means they are simultaneously also developing their idiolect in full. So, if they do not have words in their home language to attach to a scientific concept, their development of this concept is not hampered, as they can draw on everyday concepts mediated by their full linguistic repertoire and in so doing both provide the concept with body and vitality, whilst drawing elements of their linguistic repertoire associated with everyday concepts into the focus of their conscious attention. This would hold true in whatever subject the concept emerges, be it language learning per se or other subjects.

As development of scientific concepts in the way described above is a conscious activity, in the model of inner speech proposed, such development would take place somewhere between the application of a translanguaging lens phase where subjective and objective word meanings are synthesised and the transitional phase. During synthesis difficulties may arise between aspects of one's idiolect concerned with scientific concepts associated with objective word meanings learnt during instructed activity in the languaging practices of schooling, and those associated with subjective word meanings across the whole repertoire. Within such cognitive dissonance, learning is enabled, particularly in joint activity where pupils can work together to overcome such difficulties. Indeed, in any theorisation of a relationship between SCT and translanguaging-to-learn, we need to be cognisant of the continued role of social speech in learning *with others* in dialogic activity, and what that means for multilingual speakers in classrooms today: a turn from thinking about the technicalities of the role of language(s) *in* thinking intrapersonally, towards (trans)languaging *for* thinking and learning interpersonally.

Cumulative and Exploratory talk

Translanguaging as a process of drawing on one's idiolect or linguistic repertoire to maximise learning is redolent with the way language (and more recently languaging) continues to be theorised in sociocultural terms as a semiotic tool to mediate cognition and development between individuals. Garcia and Li Wei (2014) devoted an entire chapter of their book to

‘translanguaging to learn’ in which they describe pupils translanguaging together to mediate complex cognitive activities (Garcia and Li Wei 2014: 79) by drawing on ‘their linguistic repertoires as resources for learning’, as Garcia, Johnson and Seltzer (2017: xi) put it in an entire text dedicated to translanguaging pedagogy. This includes, of course, development of the idiolect itself, as argued above, which is ‘dynamically altered through social interaction’ (Garcia and Kleyn 2016: 22). In a sociocultural understanding of the relationship between language and thinking, Wells (1999) considers speech as simultaneously a product or ideational and material object, and a process in the act of saying. As an object, speech can lead interlocutors into extending and enhancing previously existing knowledge and understandings in a type of talk Mercer (2000: 97) called cumulative talk: ‘speakers build on each other’s contributions, add information of their own and in a mutually supportive, uncritical way construct together a body of shared knowledge and understanding’. Cumulative talk may be present in translanguaging-to-learn as pupils use translanguaging objects present in the discourse to make meaning and solve problems together: it is a sort of happy layering of translanguaging utterances.

Alternatively, the object of someone else’s translanguaging may provide a challenge to existing knowledge. In circumstances where a shared understanding breaks down whilst activity aims remain shared, a type of talk named exploratory talk may emerge. Mercer proposes that this type of talk, although rare in most classrooms, is the most useful for cognitive development as it is characterised by pupils engaging:

critically but constructively with each other’s ideas. Relevant information is offered for joint consideration. Proposals may be challenged and counter-challenged, but if so reasons are given and alternatives are offered. Agreement is sought as a basis for joint progress. Knowledge is made publicly accountable and reasoning is visible in the talk. (Mercer 2000: 98)

One could envisage the sort of cognitive dissonance described above in relation to scientific and everyday concepts, occurring in this sort of talk during joint activity. Interestingly, however, Barnes (2008: 5), who first proposed the term exploratory talk, maintains that a focus on making sense for others is less important to a speaker, as in exploratory talk he/she is ‘more concerned with sorting out his or her thoughts’, which may, as previously suggested, lead us to a closer view of their inner speech and how pupils are able to translanguage to think, make meaning and learn. Of course with a mixed multilingual group this still requires some attention to the form of languaging used to communicate effectively, during the transitional phase perhaps. However, as Barnes (2008) also explains, exploratory talk involves risk as speakers try out ideas to hear how they sound and what others make of them. It is arguable that public creativity and risk taking in exploratory talk is more likely to occur in more symmetric interactions when unequal power relations between pupils and their linguistic communities are given consideration. This is a facet of classroom organisation congruent with a translanguaging pedagogy which aims to legitimize actual language practices of language minoritised pupils by finding ways of enabling more symmetric interactions in classrooms. Although Vygostky originally proposed development between an expert and a novice, as Rogoff (1999) reminds us, the inequity in Vygotsky’s meaning is in skills and understanding, rather than power. Moreover, sociocultural second language research has demonstrated that ‘learning can emerge in the absence of a recognised expert’ (Lantolf 2000: 84), through a process of collective scaffolding, where appropriate and

contingent support is provided across speakers to produce something that each would not have been capable of independently (Anton and Di Camilla 1999; Donato 1994; Smith 2006). The ways in which we group pupils during solving problem is therefore immensely important in considering how to enable translanguaging-to-learn.

In both cumulative and exploratory talk the physiological act of speaking itself can also trigger thinking in the speaker as gaps or inconsistencies are highlighted: thinking as one speaks. This may be a result of problems synthesising thought and word in inner speech as mentioned previously, or it can result from conceptual difficulties which only come to light when attempting to articulate one's thoughts. Conceiving speech as both a process and a product in joint meaning making, means it is an artifactual form (Swain 2000) available to the speaker him- or-herself also and about which the speaker can ask self-evaluative questions. Of course, this is far more likely in joint activity where articulation of concepts in exploratory talk is a requirement of participation, and where, as already commented upon, peer scaffolding can facilitate joint knowledge construction. The greater the pupil's motivation to participate in the problem solving, and to do so via translanguaging, therefore, the greater the learning affordances of the activity.

Microgenetic analysis

As one can therefore glean, SCT views learning as manifest in the interaction. As Van Lier (2000: 246) explained, 'the verbal and non-verbal interaction in which the learner engages, are central to an understanding of learning. In other words, they do not just facilitate learning, they *are* learning in a fundamental way.' When learners translanguage to learn together, we are privy to their knowledge as previously constructed and externally verbalised through translanguaging and to the historical and contextualised reconstruction of that knowledge (including a dynamically altered idiolect itself, used for inner speech) as it occurs in communicative moments of the translanguaging-to-learn activity. We may also be privy to pupils' appropriation of knowledge collectively constructed over the course of the interaction, including the ways pupils use translanguaging to regulate their own learning. As Swain et al (2015: 96) put it, language is not just a conveyor of meaning in joint meaning making and problem solving, it is also 'an agent in the making of meaning'. We may also witness the socio-emotional effects of translanguaging-to-learn, from pupils' decisions to refuse to participate, perhaps based on an internalised history of rejection, to delight at participating in the dismantling of the language hierarchy. This moment-by-moment unravelling of an activity is known in sociocultural terms as microgenetic analysis, and has been shown to be useful in researching translanguaging-to-learn in a study by Martin-Beltran (2014), who examined how high school learners' translanguaging practices became mediational tools. Li Wei (2011: 1224) has suggested the use of moment analysis for investigating translanguaging in practice with a focus on 'spontaneous, impromptu, and momentary actions and performances'. Whilst this may be very useful in examining the naturalistic occurrence of translanguaging, it is perhaps less useful than microgenetic analysis in revealing learning in collective activity. Indeed, microgenetic analysis of collaborative activity is also likely to better capture meaning *negotiation*, something which Canagarajah (2011) has called for in translanguaging research.

Concluding thoughts

This paper has explored the integration of a SCT of development through learning with translanguaging as a linguistic theory and as tool for learning, in order to strengthen both, to

update the sociocultural understandings of Vygotsky, and to provide conceptual tools to support a more refined articulation and analysis of the operation of translanguaging-to-learn. It provides ways of conceiving the role of inner speech in learning, concept development in association with inner speech, and cumulative and exploratory talk, through a translanguaging lens. In so doing, it has also reimagined Guerrero's schema of inner speech externalisation thereby widening its remit beyond the specificity of externalised speech in L2 only and for those perceived to be advanced learners of L2 to everyone living in two or more languages. It has also provided a conceptual basis for understanding how the leveraging of one's repertoire in translanguaging for intra-and-intermental activity can support learning with contextual factors to consider.

It is helpful to reflect what this might mean in terms of translanguaging as a pedagogy, to enable pupils to translanguage to learn in the ways described here. Firstly, it is clear that teachers need to understand the way pupils will draw upon their repertoire for thinking as inner speech. Hence it is critical to think about activities which will not only allow this, viewing it as normal and advantageous practice, but also enable it through, for example: joint problem solving with pupils likely to share similar idiolects; drawing explicit comparisons between languages particularly in terms of words associated with scientific concepts; and representing/capturing their knowledge in a translanguaged form (written or recorded), even if as a scaffold en route to a more standardised form of representation. The argument here is not about activities to *train* one's inner speech, it is about using our understanding of the way in which inner speech operates naturally within a translanguaging framework, to guide learning activities. Finally, by situating translanguaging-to-learn within a SCT of mind, microgenetic analysis is offered as a method for analysing the discourse of translanguaging-to-learn during such activities. The more translanguaging research studies carried out which situate learning within a SCT of mind, the better evidence we will have to judge the value of the imaginings in this paper to both sociocultural theorists and translanguaging pedagogues.

1. Please note we use the terms bilingual and multilingual interchangeably in this paper to refer to pupils who live in two or more languages.

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