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Revisiting Marx and problematizing Vygotsky: a transformative approach to language and speech internalization

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ABSTRACT

Following Marx, Vygotsky saw the historical origins of language in labor, geared to coordinating productive activity that transforms the world and humans themselves. This collaborative activity entails dynamic interactivity, productive practicality and the profound sociality and historicity of language. Vygotsky's attempted to advance psychology on these Marxist grounds while integrating insights from psychological and linguistic theories of his time, resulting in a complicated tapestry of ideas not without gaps and contradictions. Consequently, many valuable questions have been raised regarding Vygotsky's views, especially on speech internalization, in an ongoing debate that is currently far from settled. This paper proposes that Vygotsky's theory of language can be revised and deepened on the premises of a transformative onto-epistemology (Stetsenko, 2016) that helps to restore and advance its original Marxist orientation. The transformative approach expands on Marx's and Vygotsky's key insights while moving beyond their canonical interpretations. One of the implications of this approach is that internalization is not the mere appropriation of social language for individual mental use, but a process of *turning toward oneself* as a collaborative social quasi-partner in transformative activity. We further consider the role of language in a Marxist-Vygotskian framework that foregrounds agentic, transformative social activity.

What promise for understanding human psychology might be held by a Marxist approach to language? A consideration of the relevance of Marx's thought for linguistics and other fields concerned with language and speech, such as psychology, can begin from a wide range of positions and can employ a wide range of methodologies. By far the best illustration of the inherent diversity and vitality of Marxist thought is the continuing clashes and dialogues, re-discoveries, and radical disjunctures among the discordant schemes of the many "Marxisms" spawned in the decades since Marx's death, and in existence today. Indeed, there is arguably neither one "correct" set of applicable Marxist ideas and postulates, nor one unique method of assessing their relevance to a given field of problematics. Marxism, being one of the "grand" philosophical traditions, offers a broad and overarching frame that encompasses ontology, epistemology, and ethics. Marxism also suggests insights and ideas on a plethora of concrete topics including language – that are impossible to grasp without first situating

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them within this overarching frame – along with providing a vast methodological "tool kit" for analyzing phenomena and processes of disparate order and disciplinary affiliation.

What we want to draw attention to is how Marx addressed several issues that remain active concerns in works on language and speech, especially in the Vygotsky-inspired (or -related) lineage, and to Marx's proposed pointers that can potentially influence current research. To further get at the value of Marxism for the study of language, an important step is to explore the way in which Vygotsky applied and further developed Marxist theory in constructing the cultural-historical approach in which language and speech became of central importance. In addressing Vygotsky's approach to language, it will be necessary to reckon with the key concept of *internalization,* including recent critiques of this notion (Jones, 2009). We view these critiques as a productive impetus to revisit and rethink Vygotsky's approach to language. At the same time, we hope to draw out and build on the kernels of what we see as productive elements in approaching language that run through both Marxism and Vygotsky's works.

An additional specification of our approach is that we attempt to delineate Vygotsky's ideas while revealing gaps and contradictions in them, diagnosing their points of growth in what we consider to be the zone of their own proximal development. We consider this to be in the spirit of Marx who warned against the mechanical application of ideas such as through ahistorical analytical schemes (e.g. Marx, 1878/1961), claiming for example that there is no master key to unlock the mysteries of political-economic developments. By drawing out the transformative core of Marx and Vygotsky's revolutionary insights and applying a more consistent transformative onto-epistemology, we hope to move past some of these gaps and contradictions, and to elaborate a view of language that foregrounds agentic, transformative human practice.

1. Marxist theory of consciousness and language

To begin with the central idea developed by Marx as we see it, what human beings are, the essence of their humanness or species-specific being, coincides with the process of materially producing, or actively realizing and concretely enacting, their own lives and existence. This is a process of an active interchange (or commerce) with the environment, in which, out of which, and through which people simultaneously bring into existence (realize, create, produce) *both* themselves and their world (for a detailed presentation, see Stetsenko, 2016). In Marx's words, "In creating an objective world by his practical activity, in working-up inorganic nature, man proves himself a conscious species being" (1844/1978, p. 76). This process is about shaping and molding the world for the benefits of (initially) adapting and surviving and later, for advancing human lives, society, and human civilization at large. It is the process in which, out of which, and through which all aspects and forms of human subjectivity emerge and develop, including the development of consciousness, language, and speech.

Labor is the term that Marx uses to designate this process of *a collectivity of humans acting together in and on nature and its material conditions* to sustain and produce their lives and themselves. Labor – material, collective, productive human practices (for short, praxis) – stands neither for material "conditions" as such, nor for production of materials and goods. Instead, it stands for the process that creates the essence and all forms and expressions of human life – humans engaging and acting in and on the world (including themselves and other people) through practices of changing their conditions and circumstances of life. The historically developing means and forms of labor constitute the driving force and the very fabric of history, society, *and* human development, including the development of language and speech.

In *Dialectics of Nature,* Engels provides an account of how the development of collaborative, productive human activity gave rise to speech:

> Mastery over nature began with the development of the hand, with labor, and widened man's horizon at every new advance. He was continually discovering new, hitherto unknown properties in natural objects. On the other hand, the development of labor necessarily helped to bring the members of society closer together by increasing cases of mutual support and joint activity, and by making clear the advantages of this joint activity to each individual. In short, men arrived at the point where *they had something to say* to each other (Engels, 1873–1883/1961).

Labor is a life-producing and history-making process – the practical process that is "creating an objective world" (Marx, 1844/1978, p. 76) and, at the same time, forming the ontological grounding for human development – because "the productive life is the life of the species. It is life-engendering life. The whole character of a species, its species-character, is contained in the character of its life activity" (Marx, 1844/1978, p. 76). As expressed in *The German Ideology*: "… *the entire so-called history of the world* is nothing but the begetting [creation] of man through human labor, nothing but the coming-to-be of nature for man, so he has the visible, irrefutable proof of his *birth* through himself, of his *process of coming-to-be*" (Marx & Engels, 1845-1846/1978, p. 92).

Marx's understanding is that human existence is created through specifically *collaborative* labor – a *coordinated* activity by people who are altering and creating conditions of their life while *merging their efforts together* and relying on collectively invented, increasingly sophisticated tools and know-how as these are accumulated by human *communities* and passed through generations. In Marx's words, "Not only is the material of my activity given to me as a social product (as is even the language in which the thinker is active): my *own* existence *is* social activity, and therefore that which I make of myself, I make of myself for society and with the consciousness of myself as a social being" (1844/1978, p. 86).

This connection between social activity, language and consciousness is evident in the following quote:

> Language is as old as consciousness, language *is* practical, real consciousness that exists for other men as well, and only therefore does it also exist for me; language, like consciousness, only arises from the necessity of intercourse with other men… Consciousness is, therefore, from the very beginning a social product (Marx & Engels, 1845-1846/1978, p. 122).

By this account, language and consciousness arise in a dialectical connection to the primary purpose of coordinating and *sharing* with others during productive interactions. As we will see, these threads – language as a material force based in and emerging out of labor and practical activity, and language as a social practice tightly linked to individual consciousness – will be taken up and elaborated by Vygotsky.

From this brief account, it follows that the broad assumption in Marxism pertinent to studies of language and speech is that relations constitutive of *practical, productive social being* (existence) determine consciousness and all forms of human subjectivity and intersubjectivity. That is, the social ways and forms through which humans collectively act on the world to produce their communal lives constitute a fundamental, determining foundation for all forms of human knowing, being and doing. Thus, human beings are a self-creating species, producing their actual life and society by producing their means of subsistence and conditions of life through activities and practices of collective labor. This notion of transformative collaborative practice (praxis) was advanced against the naturalistic understanding that only nature affects human beings and that only natural conditions determine their historical development, which "neglected studying the influence of human activity on man's thinking, [forgetting that] the most crucial and proximate basis of human thinking consists exactly in man changing nature rather than nature as such, and human mind developed in accordance with how humans learned to change nature" (Engels, 1873-1883/1961, p. 545).

Both the practically productive and the fully and inescapably social nature of human praxis are critical and must be considered *together* because they are inextricably merged in the notion of labor/praxis as a life-producing and history-making process. This entails, first, *acting* in and on the world to transform it according to the needs and demands of communal life and second, *acting together* in collectivities that alone can make the production of human life, including the very fabric of society, possible. These twin (as two-in-one) characteristics of human praxis likely emerged gradually as intertwined (merged) in evolutionary history, at a critical juncture leading to significant advantages in adaptation (through active transformation of the environment afforded by collective acting on it) and the very genesis of the human species. From this point of view, the *productive social interactions* or *interactive social productions* (the two expressions being equivalent) – that underpin and engender human life, society and human development – are not simply additional features of human beings. Rather, they are the very condition of humanness, its sine qua non.

All forms of human subjectivity and intersubjectivity, therefore – including consciousness, thinking, and speech – are from the start social products of practical origin emerging out of the socially productive process of people actively relating to their world. In the words of Marx, "my relationship to my surrounds is my consciousness" (Marx & Engels, 1845-1846/1978, p. 29) and, importantly, "neither thoughts nor language in themselves form a realm of their own, [since] they are only *manifestations* of actual life" (pp. 448–449). This leads us to the core premise that can be derived from Marxism under the condition that "actual life" is understood as the process of people materially producing their life through collective practices:

> My *general* consciousness is only the *theoretical* shape of that of which the *living* shape is the *real* community, the social fabric... The *activity* of my general consciousness, as an activity, is therefore also my *theoretical* existence as a social being. (Marx, 1844/1978, p. 86)

Therefore, the general conclusion can be made that thought and language are not systems in and of themselves, but rather particular forms (or incarnations) of social practice. This is a critically important point that cannot be grasped within the traditional worldview fashioned on the static philosophy of mechanicism, where what exists are separate things that only extraneously interact and affect each other. The alternative is to understand the world to be existing in and as a process of movement, a continual becoming through ever-expanding social practices. Grasping that thought and language are themselves forms of social practice – ways of people doing things together while collaboratively acting in pursuit of their goals and desires – requires a shift away from the old mechanical worldview and towards a dynamically relational one (Stetsenko, 2016).

Marxist philosophy thus overcomes the "spectator stance" in the realization that the only access people have to reality is through active collective engagement with and agentive participation in it, rather than through passively existing, or dwelling, in the world. This account resists depicting the mind – and with it, all forms of human subjectivity including thinking and speech – as a mere effect of external or internal causes, a device for processing incoming stimuli, a container that stores knowledge, or a reflection of reality by a passive spectator gazing at the world. Instead, this is a philosophy that focuses on continuous activity by agentive *social actors* carried out to solve problems constantly emerging in communal life, with the mind understood to be fully realizing itself in action, thus *abolishing the gaps between human subjectivity and reality and between the actor and the world*.

This approach by Marx can be seen as a precursor to many cutting-edge, contemporary perspectives that do not necessarily give credit to their roots in Marxism, though they bear profound similarities to it. For example, an action-based or enactivist orientation is grounded in the assertion that people form complex fabrics of inextricably intertwined relationships whereby faculties of the mind are not solely cognitive features, but temporarily crystallized enactments in webs of mutually defining elements (Davis and Sumara, 1997). Similarly, Gibson's ecological-relational approach and theory of "direct

perception" emphasized the coordination of individuals and environment through ongoing activity (Costall, 2004). Continuing this approach, Ingold (1992) is forthright in explicating the role of acting in perception, in an amazing congruence with Marx. He writes about the mutualism of person and environment whereby "life is given in engagement, not in disengagement" (p. 44) and that it "is by their action in the world that people know it, and come to perceive what it affords" (p. 48). These themes resonate with the Marxist idea that it is the real-life process of actively relating to one's world that gives rise to and constitutes the grounds for consciousness. Ingold is correct to conclude that such an approach, which we suggest is traceable to Marx, effectively allows for an overturn of the Cartesian prioritization of cognition over action, or mind and thought over life.

The core notions traceable to Marx that are directly applicable to language can be captured as follows. Firstly, if what exists is not a plethora of things to be named and labelled, but instead an ongoing process of fluid and ever-changing doings and becomings continuously enacted in the unending flow of communal practices, then the dictum that 'words stand for things' and that the main use of language is to tell others about an already existing reality does not and cannot hold. Secondly and concurrently, another position common to traditional linguistics, namely that language can be regarded as a realm unto itself – a more or less static, fixed system of signs unique to a given community – is also challenged. Such a system is typically understood to exist outside people as an objective resource, a tool kit to be drawn upon and used as needed, without this use affecting the system itself. For language understood as a mere vocabulary or nomenclature to designate events and express ideas, real-life activities are of no practical consequence – a position which is de facto fully refuted by Marx. As becomes apparent in the interpretation offered herein, the Marxist approach to language and thinking is remarkably relevant to many of the current core debates in linguistics. As Shotter (2012, p. 136) has summarized these debates,

> The structuralist and post-structuralist tradition which began with Ferdinand de Saussure (1911/1950) and culminated with Derrida (1976), but continued in America, is a tradition within which language is treated as "a system unto itself" […]; but there is also … a Vygotsky, Wittgenstein, Bakhtin, Voloshinov, Merleau-Ponty tradition [all traceable to Marx's core ideas] within which language use, our speakings – that is, our linguistic utterances and expressions – are treated, not as entities in themselves, but as *aspects of our spontaneously responsive (and thus expressive) living, bodily activities*.

In this interpretation, Marxism is actually congruent with the integrationist conceptions of language (Harris, 1996; Jones, 2011) employed in recent critiques of Vygotsky's theory of speech internalization (Jones, 2009). For example, it is arguably for both Marx and the integrationists that "signs are created in an act of endowing phenomena with transient significance *as part of an action* being purposefully pursued," that is, "in the dynamically developing chain of ongoing action in collaboration or privately" (Jones, 2009, p. 176). The case indeed can be made that both Marx and the integrationists

> instead …of starting with such abstractions as 'the language', …begin from '*the first-order activity* of making and interpreting linguistic signs, which in turn is a real-time, contextually determined process of investing behaviour or the products of behaviour (vocal, gestural or other) with semiotic significance' (Love, 2004, p. 530; quoted in Jones, 2009)

2. Vygotsky's approach to language

Like Marx, Vygotsky situated human language within practical activity that transforms the world and humans themselves in the process. Vygotsky agreed with Marx and Engels that human speech developed to further social interaction within the labor process (Vygotsky, 1987), and he saw the invention of speech as on par with the invention and creation of physical tools for transforming the material world. In his words,

> The history of labor and that of speech can scarcely be understood one without the other. Man created not only the tools for work with the help of which he subjugated to his will the forces of nature, but also the stimuli that induced and regulated his own behavior, subjecting his own powers to his will. (Vygotsky, 1999, p. 63)

By this view, collaborative labor gives rise to speech activity as a means of coordinating and further facilitating this activity, which transforms both human behavior and the world at large. The invention of tools aims at the transformation of the natural world, while the use of signs helps humans to direct and transform their own behavior. As Vygotsky wrote, "social interaction… requires some system of means. Human speech, a system that emerged with the need *to interact socially in the labor process*, has always been and will always be the prototype of this kind of means" (Vygotsky, 1987, p. 48; emphasis added).

Extrapolating Engels' ideas to psychology, Vygotsky argued that we can go so far as to say that "labor created man himself…that is, created the higher psychological functions which distinguish man as man" (1999, p. 67). Because language arose for the practical purpose of enabling and enhancing human cooperation during practical activities, Vygotsky echoes Goethe's *Faust* that "in the beginning there was the deed," in opposition to the biblical pronouncement that "in the beginning was the word." Words, as it were, arose from human deeds, with the purpose of better organizing, coordinating, and harmonizing these deeds in the productive practical labor of early humans. Arising within such activity, speech transforms collaborative human activity such that "the word …makes the action of man free" (Vygotsky, 1999, p. 68). By situating the source of language and human psychology in labor, or practical social activity, Vygotsky's approach poses a radical alternative to the mentalistic and individualistic approaches that have dominated psychology from its inception to the present day.

To clear the way for such an analysis, Vygotsky argued for the need to study tools and signs, and thinking and speech, in their relation to each other within practical human activity, whereas up to that point their developmental trajectories had been examined separately. Vygotsky points out that although apes can create simple tools and solve certain problems nonverbally (as Kohler's studies demonstrated), and certain species of birds can closely mimic human speech, practical intellect and complex forms of language remain isolated in all species besides humans. Furthermore, even in cases where language and tool use "were closely intertwined in one and the same activity, they were considered separately as processes that belonged to two completely different classes of independent phenomena" (1999, p. 13) creating a seemingly uncrossable Rubicon.

That Vygotsky placed collaborative activity at the center of human development – like Marx – is evident in his "general law" of development, though it takes a close look at this law to discern its meaning past first impressions. In an early formulation that became widely cited and associated with this law, Vygotsky states:

> Any function in the child's cultural development appears twice, or on two planes. First it appears on the social plane, and then on the psychological plane. First it appears between people as an interpsychological category, and then within the child as an intrapsychological category. This is equally true with regard to voluntary attention, logical memory, the formation of concepts, and the development of volition… (Vygotsky, 1997, p. 106).

However, what is glossed over in this formulation and what is overlooked in subsequent interpretations by many contemporary scholars is that Vygotsky significantly advances this initial formulation in his later work *Thinking and Speech*. In it, Vygotsky unequivocally equates "the general transition from inter-mental functions to intra-mental functions" with "*the transition from the child's social, collective activity to his individual mental functions"* (1987, p. 259; emphasis added). As if to erase any doubts, he says immediately after that "as we have shown in one of our earlier works, this transition constitutes the general law of the development of all higher mental functions. Initially, *these functions arise as forms of cooperative activity*. Only later are they transformed by the child into the sphere of his own mental activity" (1987, p. 259; emphasis added).

In the same paragraph, however, an unfortunate translation error completely distorts Vygotsky's meaning. In the English translation, we read: "Thus, the central tendency of the child's development is not a gradual socialization introduced from the outside, but a gradual individualization that emerges on the foundation of the child's internal socialization" (p. 259). This sentence is hard to parse due to the mysterious expression "internal *socialization*." However, what Vygotsky actually writes is "a gradual individualization that emerges on the foundation of the child's *inherent sociality* [or sociability; vnutrennej sotsialnosti – Rus.]" (1987, p. 259; emphasis added). These formulations directly suggest that psychological functions emerge out of social activity and imply that, being ontologically derivative from this activity, they never completely break away from it. Thus, the development of faculties of mind such as speech and thinking are neither the result of a rather vaguely understood transfer of mental processes from some undefined social plane to an individual plane of consciousness (as is often implied in recent interpretations), nor the result of some mysterious "inner socialization." Instead, they result from the changing dynamics and transformations in collective activity, exactly as Marx surmised all along! This theme cuts across many of Vygotsky's works, although he struggled to articulate it consistently through his entire corpus of works (cf. Arievitch and Stetsenko, 2014; Stetsenko, 2004).

For a situation exemplifying the intimate links between language and practical activity, as well as their developmental connections, Vygotsky chose to examine egocentric speech. This speech – spoken aloud by children but apparently addressed to nobody – was first systematically observed by Piaget. Today, however, it is more commonly known as *private speech*, reflecting the ascendance of the Vygotskian interpretation. Critiquing the Freudian roots of Piaget's position, Vygotsky disagreed that children's speech had asocial origins which required gradual socialization. Vygotsky countered that children are social beings attuned to social and material reality from the very commencement of life. Above all, Vygotsky criticized Piaget's notion that egocentric speech exists "separately from action, does not interact with it, and proceeds parallel. to it" (1999, p. 14). He took issue with the fact that Piaget "did not ascribe to speech any substantial role in the organization of the behavior of the child" (1999, p. 14). Vygotsky avowed that such speech was indeed useful, and in fact followed the "reality principle," helping the child carry out practical activity in the real world. Rather than a useless accompaniment to the child's activity, Vygotsky argued that private speech "serves mental orientation, conscious understanding; it helps in overcoming difficulties" (Vygotsky, 1987, p. 259). In concluding his critique of Piaget's work, Vygotsky wrote "what is missing, then, in Piaget's perspective is reality and the child's relationship to that reality. What is missing is the child's practical activity" (1987, p. 87).

Crucially for Vygotsky, the psychological functions of private speech are grounded in the practical activity of children:

> *Activity and practice* – these are the new concepts that have allowed us to consider the function of egocentric speech from a new perspective, to consider it in its completeness. . . But we have seen that where the child's egocentric speech is linked to his practical activity, where it is linked to his thinking, things really do operate on his mind and influence it. By the word "things," we mean reality. However, what we have in mind is not reality as it is passively reflected in perception or abstractly cognized. We mean reality as it is encountered in practice. (Vygotsky, 1987, pp. 78–79)

Here, Vygotsky's position is closely associated with a Marxist understanding of practice and reality, reminiscent of Marx's formulation in the *Theses on Feuerbach* (1845/1978). In grounding thinking and speech in practical activity, Vygotsky also echoes Lenin's critique of Hegel: "The human practice, repeated a billion times, anchors the figures of logic in human consciousness" (Vygotsky, 1987, p. 88).

Vygotsky regarded speech to be "*flowing in the process of practical activity*" (1999, p. 25) and its history to be "linked to the deep reconstruction [or transformation; perestrojka - Rus.] of the entire behavior of the child" (1999, p. 25). He thus asserts the practical relevance of speech in unity with other forms of social behavior that realize the relations of individuals to themselves, to other people, and to the world around them. In Vygotsky's interpretation, speech acts and other 'mental' processes are not fleeting, ephemeral phenomena in the shadow of action but instead, powerful ways of acting in the world. This is especially transparent in the following quote:

> We saw that the child's egocentric speech is not divorced from reality, from the child's practical activity, from his or her real adaptation, as if 'hanging in air.' We saw that this speech enters the child's intellectual activity as an indispensable constitutive moment…We saw that in the child's more complex activity it begins to serve as a means for forming intentions and plans (1987, pp. 61–62).

Vygotsky's perspective can be interpreted to suggest that the mind originates out of transformations in collective activity leading to ever more complex levels that entail, without ontological breaks, what is traditionally and erroneously understood as separately existing mental processes such as thinking and speech. This theme cuts across many of Vygotsky's works, even if not fully articulated, and sometimes Vygotsky even appeared to waver between the radical new framework and more traditional mentalist views. It is no accident that many scholars in the Vygotskian tradition refer to variations of acting and activity as the fundamental unit of analysis (cf. Blanton et al., 1998), for instance mediated action (Wertsch, 1998), activity or event (Rogoff, 2003), and activity system (Cole and Engeström, 1993). In this light, Jones (2002) is right to dismiss objections to Vygotsky's account on the grounds that in it, speech turns out to be primary in relation to practical action. As Jones states in his rebuttal (2002, p. 151),

> The use of words in planning cannot be artificially counterposed to activity, since it *is* activity... The word (or other objectified form of the ideal) is generated between people in the course of their activity as *a form of the activity itself* but that form through which they begin to actively appropriate in conscious images their own powers and relations.

In sum, Vygotsky makes a radical step in charting a new path for understanding how the human mind – including language – emerges within, and out of, collaborative historical practices. These practices are instantiated in socially interactive joint activities starting from simple forms such as adult-child interactions. These interactions, though seemingly mundane and philosophically unsophisticated, are meaningful and highly organized endeavors that are based in cultural rules and norms, mediated by social artifacts, and arranged based on complex principles. As such, adult-child social interactions are enactments of the broad sociocultural practice of parenting on one pole of the process, and of growing up as a child on the other. In drawing on the notion of collaborative social practice – extending through history and saturated with cumulative communal achievements – as the driving source of development, Vygotsky is unique in the history of psychology (Stetsenko, 2016).

3. Speech 'Internalization' as key to human thinking

Because Vygotsky took the increasingly complex social activities and relations generated by human labor to be foundational for human consciousness, he aimed to build a psychology that avoided analyzing consciousness as "an abstraction inherent in each single individual" (Marx and Engels, 1845/1978, p. 144), and instead as based in collaborative practical activity, or the "real ensemble of social relations" (Vygotsky, 1998, p. 570). To accomplish this, the notion of *internalization* became indispensable. Vygotsky indicated the Marxist roots of this notion by paraphrasing Marx's sixth thesis on Feuerbach: "The psychological nature of man is an aggregate of social relations transferred within and becoming functions of the personality, the dynamic parts of its structure" (Vygotsky, 1998, p. 170).

In addition to arguing for the dialectical interpenetration of speech and thinking in social practical activity, Vygotsky used his critique of Piaget to argue against the developmental notion of an initially egocentric child who becomes socialized, instead suggesting a developmental trajectory of *social speech—egocentric speech—inner speech.* Vygotsky hypothesized that as private speech makes its way "inward," it shows a developmental tendency toward abbreviation phonologically, grammatically, and semantically, approaching a point of condensation where verbal thought becomes an act of "thinking in pure meanings" (1987, p. 280). In this manner, speech and practical thinking become dialectically intertwined to create a powerful new form of cognition. Crucially, these changes in the *form* that speech takes are driven by transformations in the *function* of children's speech, as children increasingly employ speech for cognitive purposes, in addition to utilizing it for social communication.

Interestingly, years later after Vygotsky's death, Piaget (1962) admitted that Vygotsky was correct on the social origin, usefulness, and progressive internalization of social speech. Research conducted in recent decades has provided further support for this position. For example, private speech in the form of "crib talk" has been shown to begin as early as one-and-a-half years (Nelson, 1989). Private speech has been found to be most frequently used by children from around three to seven years of age, and to follow an inverted U-shape in frequency across this span, becoming less frequent and partially internalized or covert (see Winsler, 2009 for a review). This curvilinear trajectory supports Vygotsky's idea that self-directed speech emerges from and becomes differentiated from social speech in early development. Vygotsky's claims also find support in more recent evidence that private speech and social speech are related ontogenetically (Furrow, 1984, 1992), and

are both affected by similar social and cultural factors (Al-Namlah et al., 2006; Winsler et al., 1999), including for bilingual children (Sawyer, 2016).

Echoing the long-term trajectory toward increasing covertness of self-directed speech, private speech follows a similar microgenetic trajectory as individuals master an unfamiliar or difficult practical activity (Winsler, 2009). This evidence builds on Vygotsky's discovery that children use private speech more frequently when facing difficult challenges, as if to 'talk themselves though' the steps and strategies for solving a problem. In contrast, such verbal thinking can apparently be carried out more covertly as an activity is performed more proficiently (e.g. Berk and Winsler, 1995), with such shifts sometimes occurring over a matter of minutes or hours (Duncan and Pratt, 1997). Thus, while private speech tends to lessen in frequency after childhood, this general trajectory does not preclude moments or short-term periods during which children or adults increase their use of private speech to facilitate practical activity. Throughout the lifespan, practical activity that presents intense cognitive or emotional challenges is more likely to summon the use of private speech (Behrend et al., 1989; Duncan and Tarulli, 2003; Winsler and Diaz, 1995). Such private speech may be conceptualized as a reexternalization of inner speech on a momentary basis, and this notion is consistent with introspective reports that inner speech itself takes on relatively expanded dialogical forms when people are faced with challenges (Fernyhough, 2009).

Because Vygotsky viewed speech internalization as fundamentally reorganizing the functional relations of human psychology, modern investigators have searched for evidence of a domain-general shift toward verbal mediation during childhood, as indicated by both private and inner speech. Inner speech, a psychological process with no explicit manifestation, has been viewed as difficult or impossible to study empirically (Alderson-Day and Fernyhough, 2015). However, current methodological advances have opened new ways to study inner speech, for instance by actively interfering with inner speech and then assessing how cognitive processes are affected. To take one example, Al-Namlah et al. (2006) argued that, if Vygotsky's arguments were correct, the use of verbal mediation in one domain should be connected to verbal mediation in other domains. Supporting this hypothesis, the study found that children's use of overt, self-regulatory private speech substantially predicted their use of phonological recoding in inner speech – indicated by the interference of phonological similarity between words with children's ability to remember them. This suggests that audible private speech and covert phonological recoding may represent different facets of a domain-general shift toward verbal mediation, consistent with Vygotsky's theory of the dialectical intertwining of thinking and speech in the process of internalization.

Considering such evidence, a picture emerges of how the development of self-directed speech furthers the practical activity of individual children, always in social connection and collaboration with others, just as the historical development of language facilitated and transformed human labor activity. While Vygotsky's work primarily emphasizes the self-regulating functions of private speech, later research has suggested a multitude of practical functions and developments associated with private speech. These include motivational and playful functions (Atencio and Montero, 2009; Sawyer, 2017), creativity (White and Daugherty, 2009), dialogical perspective-taking (Fernyhough, 2009), social understanding (Carpendale et al., 2009), and enhanced competence in social communication (Feigenbaum, 2009). Moreover, deaf children have been found to use *private sign* – self-directed sign language – which appears to play the same role in practical activity that private speech does in hearing children (Jamieson, 1994). The multiplicity of functions and forms that private speech can take are examples of a more general process of internalization, in which a diverse variety of social activities and relations become self-relations. As Vygotsky wrote, "The child begins to practice with respect to himself the same forms of behavior that others formerly practiced with respect to him" (1997a,b, p. 156).

4. Moving forward: grappling with tensions and conundrums in Vygotsky's approach

While the Marxist approach taken up by Vygotsky offers many entry points for a new approach to language, his work sometimes equivocates between the old and new views (for details, see Stetsenko, 2004, 2009, 2016). This is by no means unusual or unexpected. Like any revolutionary scholar, Vygotsky can be seen as situated on *the cusp between the old and the new*. This observation is aligned with interpretations of scientific revolutions that reveal how players in profound changes, from Copernicus to Newton, while making breakthrough advances, simultaneously had one foot in old traditions and relied heavily on their predecessors (cf. Nickles, 2017).

This is evident in Vygotsky's approach to language and speech. First, Vygotsky consistently resorts to analytic dichotomies when speaking of these processes and their genesis. While tracing the distinct phylogenetic origins of thinking and speech in various species, it appears that Vygotsky too readily mapped this discrepancy onto ontogenetic development. For example, he insists that thinking and speech are initially separate and therefore must be brought together at a certain point during childhood, rather than emerging together through collaborative activity from the moment of a child's birth. Second, the same type of split can be seen in Vygotsky positing natural and cultural lines of development, and corresponding levels of lower and higher mental functions as relatively autonomous realms rather than as belonging to one unified – dynamic and seamless – stream of inherent transformations *within* activity/practice. For example, especially in his later works, Vygotsky (e.g., 1987) focused almost exclusively on the role of speech as a form of cultural mediation of mental functions, thus ceding ground to the mentalist interpretation of psychological development as resulting from the "communication of minds." This is exactly what happened in many interpretations where inter-psychological functioning became viewed as "socially distributed consciousness" rather than an inherent dimension of the broader realm of social practice (Arievitch, 2017; Arievitch and Stetsenko, 2014).

Vygotsky's position regarding the development of psychological processes contained a twofold and self-contradictory view. On one hand, he claimed that all higher psychological processes grow from social interaction and that their development entails complex processes of mediation by cultural tools. Yet he also seemed to assume that some lower ("natural") psychological processes are present from birth and that their early development has little to do with cultural influences. Vygotsky aimed at addressing the issue of how these lower, natural psychological functions become dialectically transformed into cultural, higher processes. According to Vygotsky, signs and symbols play a major role in this transformation by 'growing into' the natural psychological process. Hence Vygotsky's insistence on the decisive role of the mastery of language – the major sign system – in children's mental development.

However, as discussed in Arievitch and Stetsenko (2014), by using the notion of lower psychological processes of a biological nature, Vygotsky de facto admitted that some "internal" plane existed before the child's immersion within social and cultural activities and practices. In addition, Vygotsky's strong emphasis on the verbal forms of social interaction and mediation, to the exclusion of ontogenetically earlier preverbal forms, left room for mentalist interpretations. This led to tension between the main message of Vygotsky's project – about the cultural-historical origins of the human mind in practical collaborative activities – and many of his specific explanations, concepts, and terminology. Such dichotomies left room for a tacit but highly restrictive influence of traditional mentalist assumptions within the newly emerging approach. Interestingly, there is evidence emerging from Vygotsky's archives that he ultimately realized that the dichotomization of natural versus cultural processes was a faulty solution (Zavershneva, 2007). Yet another nuance is that this solution could have been more of a rhetorical device to draw attention to the uniqueness of cultural processes by contrasting them with the natural ones – a device that could serve as but the first analytical step in developing the new, non-dichotomous approach (Stetsenko, 2004, 2009).

These caveats notwithstanding, many of the subsequent interpretations of Vygotsky are marred by the residual dichotomizations and inconsistencies carried over from his works, with scholars often stopping short of fully acknowledging the developmental roots of psychological processes in, and their ontological unity with, collaborative practices and activities. For example, the direction taken by many interpretations is to emphasize that psychological processes emerge *through participation* in culturally mediated, historically developing, practical activity involving cultural practices and tools (Cole, 1996). In stating that psychological processes emerge through participation, however, ambiguity remains as to their ontological status as still somehow separate from practical activity, though interconnected with or embedded into it (cf. Stetsenko, 2009).

One of the core implications of the inconsistencies and gaps in Vygotsky's approach is that society came to be viewed, contra explicit warnings by Marx, as a force outside the individual that merely exerts influences on people – be it in the form of constraints, mediations, or affordances for acting. In this way, human development is thought to be explained by Vygotsky as driven by socio-cultural factors that exist prior to and independently of individuals, and which are imposed on individuals in top-down fashion. This position suggests that "culture and meanings are on the external plane and must be internalized by the child; they cannot be created by the child" (Lerman, 2000, p. 213). From this it follows that individuals are *passive recipients* of cultural forces with little role other than to acquire and internalize (or, in another terminology, appropriate) outside influences (for details, see Stetsenko, 2013, 2016).

Whether such a top-down understanding of human development is present in Vygotsky's works or is a result of misinterpretations is a complicated question, the answer to which is likely both. The inconsistencies in Vygotsky's works notwithstanding, he made several breakthroughs with which contemporary psychology is just beginning to catch up. For example, while positing that environment, especially the sociocultural one, is a systematic and powerful influence on development, Vygotsky writes that the organism is part of the environment *in so far as it acts in the environment*. As he put it, "all this gives us the right to speak of the organism *only* in interaction with the environment" and, it follows logically, vice versa (1997a, p. 159; note that in the English translation the word *only* is omitted, and the meaning is thus distorted). He also insisted that it is not specific external conditions that drive development, but the "*internal logic of the process of development itself*" (1998, p. 192; emphasis added). It might sound paradoxical that Vygotsky is talking about the "internal logic" of development, as if referring to something inside the organism. However, a closer look at Vygotsky's logic (especially in the context of the corpus of his writings) suggests a more dialectical interpretation (for details, see Stetsenko, 2009). Vygotsky states that this approach resolves the argument between nativism and empiricism by showing that "*everything* in personalities is built on a species-generic, innate basis and, at the same time, everything in them is supra-organic, contingent, that is, *social*" (Vygotsky, 1993, pp. 154–155). Here Vygotsky directly intuits currently cutting-edge approaches such as Dynamic Systems Theory, according to which development is "fully a product of biology *and* culture" (Lickliter and Honeycutt, 2003, p. 469) and what counts as 'biological' falls entirely within the domain of what counts as 'cultural' and vice versa (cf. Ingold, 2000).

In addition, the notion of speech internalization and the dialectical interpenetration of thinking and speech suggested by Vygotsky was meant to illuminate both psychology's foundation in practical activity, and the transformative qualities of speech as part of that activity. Recently, however, provocative questions have been raised about this cornerstone of Vygotskian, and by extension, cultural-historical activity theory. While we differ with some of the formulations, it is our belief that Jones (2007, 2009) has done a service by encouraging a closer examination of the theory of language that underpins Vygotsky's work. Jones is rightly skeptical of the idea that when children use private speech, they literally go through a real-time process in which they first mentally form a complete sentence, and then pronounce only the parts that are necessary in that moment.

Examining the quotes that Jones supplies from works by Wertsch, Luria and others, it does appear that followers of Vygotsky may have interpreted his views in this manner. Such a mechanical notion of the psychological processes related to language presents a problem, and we do not believe this was Vygotsky's intention. An alternative is to focus not on whether a speaker's utterance is expanded or abbreviated, but on how such formal aspects of speech are related to what is *mutually known* by two interlocutors. In this case, the shared context of the question is what is omitted, and thus the child has no need to use a more "fully expanded phrase." Such shared knowledge and meaning, grounded in the shared practical activity or situation, has been referred to as "common ground" (Clark, 1996; Tomasello, 2003; Liebal et al., 2013). It is our contention that Vygotsky's emphasis on what might be called speakers' common ground more likely implies that such shared understanding is *never even formulated* in words in the first place. Nevertheless, Vygotsky's use of terms such as *drops*, *abbreviates*, and *condenses* leaves the door open to interpretations in which the child is indeed first mentally forming a more complete and elaborated sentence, from which certain grammatical elements are then eliminated.

5. A transformative approach to language

It is evident that much work needs to be carried out in developing accounts that acknowledge the role of individuals in their own development yet do not fall into a dichotomization that divides language and speech into subjective processes that can claim autonomy before and outside social practices, on one hand, versus an external and self-contained realm of objective resources to be internalized, on the other. One possible solution offered by an integrationist approach to language is to posit that "the activity of 'self-communication' is not *derived from* 'other-communication' but is already *part of it* from the very beginning… The 'inner', personal experiential realm of communication is, therefore, an inseparable part of our 'external', social behavior" (Jones, 2009, p. 180).

Integrationism includes an emphasis on what the child *herself* is doing, for example through self-communication, rather than on a "transferal" of external processes and resources into the passive child. Other attempts – similar in their orientation toward overcoming the splitting of persons from their world – include Dynamic Systems Theory (Thelen, 2000), Developmental Systems and monistic "non-split" approaches (Lerner, 2006), and related co-constitutive approaches (for a recent overview in application to agency, see Sokol et al., 2015; Stetsenko, 2016). In these approaches, the emphasis is on co-constitution of persons and the world, suggesting that the contributions of psychological and social processes are not separable, with special attention paid (especially by Thelen, 2000) to the level of *self-dynamics*. Typically, these approaches focus on how psychological processes first arise from basic biophysical processes associated with infants' earliest sensorimotor acts and perceptions of one's body that give rise to self-awareness and "feeling experience" that precede more explicit awareness (Rochat, 2010). Thus, as summarized by Sokol et al. (2015), self-produced action from birth yields proprioceptive information that is "self-specifying" yet also relational because it derives from the embodied experiences of relations with the environment. And further, given that babies are born into a community, "social structures go hand-in-hand with psychological structures" (p. 285).

However, for these accounts to avoid falling again into the dichotomistic prioritizing of the personal over the social, as is the case with the notion that it is "the experience of self-communication which shapes and informs our understanding of interpersonal communication, and not vice versa" (Harris, 1996, p. 183; quoted in Jones, 2009), a number of analytical steps of a radical order are needed. The avenue for such analysis, as suggested by Stetsenko (2016) is to advance Marxist approaches by more centrally integrating notions of agency exercised by individuals as *actors of society,* who not only participate in but also contribute to social communities and their collaborative practices from the start of life. This renders relational approaches simultaneously transformative by acknowledging that human beings not only adapt to the environment, but also always and inevitably transform it, each from a unique position and stance. This proposal for a transformative onto-epistemology (or transformative activist stance, see Stetsenko, 2008, 2016) builds upon Marx's and Vygotsky's insight that people "*actively participate in relations with the environment*" (1997b, p. 59). In a further specification,

> human agentive, purposeful, and interconnected processes of being, knowing, and doing – constituted by and constitutive of culturally mediated, historically evolving, dynamic, collaborative social practices – are taken to be *a world- and self-forming* process that produces the core ontological and epistemological relations in simultaneously creating the world and human beings. This perspective places human agency understood as a relational and transformative process – as it is enacted in transactional and collaborative dynamics of social practices in the process of individuals contributing to their realization – at the core of human development (Stetsenko, 2016, p. 172).

Thus, human development can be understood to be a matter of "collaborative effort and work…of making up the mind by people acting – essentially laboring and striving – together, within the sites of historical struggles, while always moving beyond the status quo" (Stetsenko, 2016, p. 257). Development therefore "does not just happen to people – it is a collaborative and *creative* accomplishment, within and through collective social practices and their affordances and mediations, as well as obstacles and contradictions, as these are created by people collaborating in agentively enacting these very practices" (Stetsenko, 2016, p. 257). Critical to this position (as elaborated by Stetsenko in a series of works in the 1980s and 1990s; for a summary, see 2005) is that infants' initial experiences ensue *not* from solitary modes of relating to the world such as looking and touching, but from inherently communal, collaborative, social, and culturally mediated processes of *being held and touched, fed and nursed by others.* Infants' actions of looking, touching, and hearing are all initially *performed together with the other*, as intricate parts of activities arranged and orchestrated by caregivers. Yet,

crucially, the most elementary action of picking up an infant requires reciprocity and responsiveness *on the infant's part* – even if expressed only through readying oneself for being picked up by the other (e.g., adjusting body tone, stiffening neck muscles, changing head position). Infants are drawn into these socioculturally orchestrated events whereby they themselves *also* enact them. In this account, "meanings accrue from an intricate coordination of individual contributions to joint actions and their distributed dynamics – reciprocity, mutual elaboration, the push-and-pull of doing things together, responsiveness, coordination with, and mutual embedding into the actions [with and] of the other" (Arievitch and Stetsenko, 2014, p. 230).

The development of speech in this transformative Marxist-Vygotskian approach (as expanded through a consistently transformative onto-epistemology, see Stetsenko, 2016) can be understood as a facet (or an emergent property) of a simultaneously social and individual process of *contributing* to the dynamics of transformative social practices of communal life in their world-changing and history-making status. Development of language and speech, therefore, is enacted and realized by individuals, yet by individuals acting as social subjects and actors of collective history who are brought into existence by collaborative practices, that is, as community members and co-creators of their own communal world and collective history. In this approach, individuals come to be, to know, and to act – including through speech – only within social practices and while utilizing cultural resources and tools indispensable for development and learning. Thus, "the primary emphasis is on people encountering, confronting, and overcoming the circumstances and conditions that are not so much given as *taken up* by people who actively grapple with them and, thus, realize and bring them forth in striving to change and transcend them" (Stetsenko, 2016, p. 35).

This Marxist- and Vygotsky-inspired transformative approach is actually consistent with the emphasis in the integrationist approach on inner signs not being outer ones just mechanically internalized but "novel semiotic creations which feed on both private and public experiences but are crafted afresh as integrated parts of our ongoing thinking or acting" (Jones, 2009, p. 180). For this reason, rather than completely jettisoning the concept of internalization, returning to Vygotsky's work with fresh eyes and a transformative lens can help us discover insights pointing in a more promising direction. One of kernels may be in Vygotsky's description of the developmental transformation of social speech into self-directed private speech as "a social method of behavior applied to oneself" (1999, p. 53). This suggests that internalization is not a mere appropriation of signs and symbols for mental use, but rather a process of *turning toward oneself* as a collaborative social partner in transformative activity. Reorienting toward oneself as a *quasi-partner* opens possibilities for the creation of signs to facilitate, enhance, and transform individual (though never asocial) practical activity, just as creation of such signs facilitates collaborative activity with others. Speech, up to this point used by toddlers to coordinate activities with others, begins to be enacted in dialoguing with the self during practical activity, and often spoken aloud as private speech. The activity of communicating with oneself is creative, spontaneous, and directed toward the needs of the moment, just as in social speech. Thus, we answer with a resounding 'yes' when Jones asks:

> Could we not see these utterances [of private speech] as an indissoluble part of whatever the child is doing, as a contribution to the working out of the child's feelings and actions in which any and all previous experiences, including communicative ones, can be drawn on, or imaginatively 'recreated', 'borrowed' or redesigned, in the act of crafting something of semiotic value in the here-and-now? (2009, p. 177)

What the process of turning toward the self as a collaborative partner further portends is the progressively deeper integration of speech and thinking as a new layer of activity – verbal thinking – within the unceasing flow of purposeful human activity. This process proceeds through a myriad of moments of creative self-communicative activity, in which the child borrows, reshapes, and invents new forms of semiological activity to further her overall practical activity, just as she does in collaborative social activity. While beginning to act with the use of private speech opens new possibilities for transforming one's own activity, the full integration of speech and thinking creates an "*entirely unique, independent, and distinctive speech function*…an internal plane of verbal thinking" (Vygotsky, 1987, p. 279). Reconceptualized in this way, it is this entire creative, transformative, ongoing process which constitutes the developmental process of speech internalization.

6. Conclusions

The Marxist-Vygotskian foundations for understanding phenomena and processes of language development, in the expanded formulations built on transformative onto-epistemology, suggest several productive directions for theorizing and research. These directions partly overlap with contemporary developments such as enactivism, DST, and integrationism, but also open venues as yet unexplored. The latter involve explorations into the active production of language as a form of collaborative acting to transform the world. This is a creative process that entails agentive contributions to social practices while innovating and moving beyond their status quo from one's own unique position and stance (as follows from the transformative activist stance, see Stetsenko, 2016). Language and speech contribute to changes in social practices that are individual and collective at once, representing a continuum of one *unified* reality composed of individually unique, but interactively co-created and co-constituted and thus thoroughly social, contributions. This is a resolute shift away from the dualism of the individual and the social, whereby *each and every individual human being* is understood as profoundly and deeply social—that is, as instantiating a common history and humanity in all of their vicissitudes and local expressions, carrying on and transformatively realizing them (for details, see Stetsenko, 2013, 2016).

This transformative approach opens ways to focus on what is essentially the process of *language-ing,* conceived primarily as a form of acting within ensembles of social relations rather than an exchange of information premised on translation into and out of various codes. Ultimately, the question is not how children learn word meanings but *how they learn to act meaningfully* in productive interactions with others and while making a difference in these interactions, including with the help of language and other semiotic devices – gestures, prosody etc. It is not only that language grows out of prior ways of acting and interacting with others, as just another incarnation of jointly coordinated activities. More importantly, learning to talk is itself a new way of acting and interacting – with the help of words – that opens up prospects for infinite degrees of freedom, self-determination and ultimately a socially just society. These goals remain to be fully realized in the course of a revolutionary transformation, as both Marx and Vygotsky envisioned all along.

Appendix A. Supplementary data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.langsci.2018.05.003.

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