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Tomasello, Vygotsky, and the Phylogenesis of Mind: A Reply to Potapov’s “Objectification and the Labour of the Negative in the Origin of Human Thinking”

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I appreciate Kyrill Potapov’s recent response “Objectification and the Labour of the Negative in the Origin of Human Thinking.” There, Potapov defends Vygotsky against my view that Tomasello’s account of the role of joint intentionality in the phylogenesis of human cognition can help avoid the problems of Vygotsky’s “directive-centric” account of the origin of human thought. Potapov presents a strong challenge to anyone thinking of applying Tomasello’s account of *phylogenesis* to Vygotsky’s theory of *ontogenesis*. However, I’m skeptical that this applies to my critique of phylogenesis in Vygotsky.

Potapov perhaps rightly took issue with my formulation of Vygotsky’s account as “Machiavellian.” I’ll admit that this phrasing was somewhat tongue-in-cheek. It was meant to point out that Vygotsky, in centralizing directive speech acts in phylogenesis, seems to run the risk of endorsing Humphrey’s “Machiavellian Intelligence” hypothesis—of which surely no Vygotskian, or Marxist for that matter, would likely approve. Humphrey (1976) posits competition and social subterfuge as the main drivers of human cognitive phylogenesis. Moll and Tomasello call their account of cognitive origins the “Vygotsky Intelligence Hypothesis” to stress that “the unique aspects of human cognition ... were driven by, or even constituted by, social cooperation” (2007, 639). However, my point was that even Vygotsky might not be so “Vygotskian” when it comes to phylogenesis.

Tomasello claims that competition and subordination drive non-human cognition. The representational states available to such individually intentional agents remain situation-bound, reflecting ego-centric, and never joint or collective, goals. Joint intentionality, however, provides the missing phylogenetic link between more primitive individually intentional hominids and the fully collective intentionality of behaviorally modern *Homo sapiens*, replete with propositional representations, reflective inferences, and importantly for Potapov, normative forms of self-governance. I claimed that insofar as Vygotsky lacks a notion of joint intentionality, his account of the phylogenetic development of cognition risks explaining not *human* but rather *non-human* hominids (i.e., Tomasello’s “individually intentional” agents).

Potapov doubts that Vygotsky needs a theory of intentionality, joint or otherwise, to explain the emergence of higher mental functions. But his alternative doesn’t address the fact that Vygotsky sure seems to be talking about individually intentional agents when he should be talking about joint and collective agents. Instead, Potapov takes issue with my positioning of Vygotsky among “Liberal” theories of consciousness. This includes labeling Vygotsky as “Machiavellian,” applying Hegel’s master/slave dialectic to Vygotsky’s theory of the origin of language and higher mental functions, and relying on Tomasello insofar as he draws from analytic social ontology. This response will attempt to redress these criticisms while also expanding on some other aspects of Tomasello that are relevant to the Vygotskian project.

Vygotsky: Dialectics in Mind

Vygotsky does seem to adhere to the general Marxian critique of classical liberalism and its correlating philosophies of mind as exemplified in Hobbes, Locke, and especially Berkeley (Lenin 1938; Ilyenkov 1977, 1982). Mapped onto an atomistic political ontology, such

“liberal” analyses bore out in a mechanistic and individualistic internalism, where consciousness “was measured uniquely by perception and representation as actualized in the reflexive knowledge of the individual” (Mamardašvili 1986, 104). Transposed into the arena of early 20th century psychology, for Vygotsky this meant overcoming the eliminative materialism and psycho-physical parallelism of the reflexologists and introspectionists, who either apportioned mental phenomena no “objective existence *whatsoever*” or resorted to mind-brain dualism to effectively explain away the problem of the origin of consciousness (Vygotsky 1997a, 46).

For these early psychological schools, the problem of causal interaction between the subjective and objective so familiar to the early moderns is recapitulated, along with the related and seemingly insurmountable problem of the epiphenomenalism of the subjective. Vygotsky took it as his task to surmount such a divide by recontextualizing consciousness as an object of study. As a materialist, he saw the subjective as simply another aspect of the objective “*Mind without behavior is as impossible as behavior without mind*, if only because they are one and the same” (1997a, 46). Thus, in concert with Marx, human relations and their greater historical and social structure must be taken as the site from which the individual’s consciousness develops.¹

Potapov does well to remind us of some this in pointing out Vygotsky’s rejection of the dualism that haunted early 20th century psychology (Potapov 2021, 25). But then why does Vygotsky run the risk of being associated with such “cognitive liberalism” when he clearly seems to prefer a critical, dialectical account? My answer was, and still is, that Vygotsky’s affinity for Pierre Janet’s “command-origin” theory of language poses a problem, specifically with its idea that social subordination is the primary function of speech in a phylogenetic context. In Vygotsky’s picture of the (pre)historical origin of language and mind, subordination in the social world is mirrored internally as the subordination and regulation of affectual drives. *Homo sapiens* achieve behavioral modernity insofar as they control their impulses and focus their attention willfully. The higher mental functions are achieved by a means of self-mastery, which mirrors some primordial social scene that appears to be a “Machiavellian” one—or at least one that takes domination and social antagonism as coeval with the origin of human-specific cognition.

The Antagonism of Naming

In my earlier piece, I followed Jones (2009, 2019, 2020) in characterizing this aspect of Vygotsky’s account as “antagonistic,” in the sense that for Vygotsky, primitive mental development seems to be marked by a dialectic of dominance and subservience. I likened this to something akin to Hegel’s master/slave dialectic. Potapov takes issue with characterizing Vygotsky’s account of internalization in this manner, and points to the Pittsburgh Hegelians as a way of viewing the master/slave dialectic not as a power struggle but a process of recognitive affirmation. Potapov is probably right that my interpretation of Hegel here is colored and Kojève. But I’m not committed to such a reading. Maybe the

¹ This still does not dispense with the problem of the causal interaction between the subjective and objective aspects of reality, as the problem of downward causation is still very much an issue for non-reductive materialists (Kim 2003). But for Vygotsky, such issues can only be resolved once a materialist and empirical theory of psychology has been put in place (1997a, 46).

pragmatists are right. I'm not in a position to say.² What I do stand by, however, is my claim that Vygotsky's account of primordial speech and mental development centralizes a dominant/subordinative dialectic. If this is bad Hegel, so be it. But Vygotsky invites the Kojèvian comparison with claims such as the following:

The relation of psychological functions is genetically linked to real relations between people: regulation of the word, verbalized behavior = power-submission ... Hence Leont'ev's example of labor: both what the overseer does and what the slave does are combined in one person: this is a mechanism of voluntary attention and labor ... (Vygotsky 1989, 57).

According to Janet, the word is always a command because it is a basic means of controlling behavior. For this reason, if we want to explain genetically from what the volitional function of the word is derived, why the word subordinates motor reaction, what the origin of the power of the word over behavior is in both ontogenesis and phylogenesis, we unavoidably arrive at the real function of the command. Janet says that the power of the word over mental functions is based on the real power of the superior over the subordinate; the relation of mental functions must be genetically attributed to real relations between people. Regulating another's behavior by means of the word leads gradually to the development of verbalized behavior of the individual himself. (Vygotsky 1997b, 103-104)

To be clear, if the issue one of labels, then I'll substitute "Janetian" for both "Machiavellian" and "Hegelian." The point is, Vygotsky still uses language of subordination and domination in his account of the phylogenetic origin of higher mental functions. I need more from Potapov to dissuade me of this. Even Vygotsky and Luria's account of primitive "mnemotechnical" devices points to an antagonistic labor scene. Invoking Karl Bücher's *Rhythmus und Arbeit* (1899), Vygotsky and Luria describe primitive, percussive, "digging sticks" that function to replicate the sound of a "work cry or command" with the "purpose of rhythmically organizing work" (Vygotsky and Luria 2016, 138). This adds another dimension of materiality to Vygotsky's idea that "regulation of the word, verbalized behavior = power-submission" (Vygotsky 1989, 57). But it doesn't point to a story of recognition.

It's possible that there has been a misunderstanding here, since the examples Potapov uses to defend a nonsubordinative account of internalization all deal with childhood development. In particular, Potapov cites instructive passages from Vygotsky which explain childhood ego development in pretense play. These are interesting, but don't fairly address the problem that I'm working on, which is Vygotsky's account of the phylogenesis of higher mental functions.

² A full treatment of Hegel on recognition not possible here. But it would presumably include a discussion of Hegel's *Philosophy of Right* and the grounding of institutional reality. My point in referring to the master/slave dialectic was generally to point to the idea that Vygotsky's "command" or "directive" account seems stuck in the Hobbesian/Machiavellian moment of Hegel's "struggle."

Vygotsky and Tomasello: Pretense Play

There is a way in which Vygotsky's account of childhood play *does* cohere with Tomasello's intentionalistic account. I didn't go into this in replying to Azeri (2020), but since it's on the table, I'll mention a few things.

For Vygotsky—and Potapov relays this much to us—play serves as a transitional stage in ontogenesis wherein the child learns to perceive the world not merely with respect to environmental affordances (i.e., as object-bound) but rather in terms of its varied levels of meaningfulness (i.e., as subject-bound). As Vygotsky (2016) states:

Action according to rules begins to be determined by thought, not by objects themselves. This is such a reversal of the child's relationship to the real, immediate, concrete situation that it is hard to evaluate its full significance. The child does not do this all at once. It is terribly difficult for a child to split off thought (the meaning of a word) from its object. Play is a transitional stage in this direction. At that critical moment when a stick—i.e., an object—becomes a pivot for severing the meaning of horse from a real horse, one of the basic psychological structures determining the child's relationship to reality is radically altered (13).

In a sense, Vygotsky is describing the transition in perception that occurs when the child can see—to use a favorite example of Searle's (2005)—not merely a man running across a line on a green field, but the scoring of a touchdown. According to Vygotsky, “This is something for which there is no analogy in animal perception. Essentially it lies in the fact that I do not see the world simply in colour and shape, but also as a world with sense and meaning” (2016, 9). Verbal imaginative play, therefore, serves to aid the child in her future task of conceptual thinking:

To separate the meaning of 'horse' from a real horse, and to transfer it to a stick (which is the necessary material pivot to keep the meaning from evaporating), and then to act with the stick as if it really were a horse, is a vital transitional stage to operating with meanings alone (15).

In the course of development, such play comes to introduce rule-based behavior, which further drives the self-regulation of affective drives: “by subordinating themselves to rules children renounce what they want—since subjection to rule and renunciation of spontaneous impulsive action constitute the path to maximum pleasure in play” (loc. cit.). In effect, Vygotsky is describing the role that play has in the creation of deontic sources of action, where a more immediate physical desire is supplanted with one imposed “from without,” based on the regulative normative nature of a social activity:

In short, play gives the child a new form of desires, i.e., teaches him to desire by relating his desires to a fictitious “I”—to his role in the game and its rules. Therefore, a child's greatest achievements are possible in play—achievements that tomorrow will become his average level of real action and his morality (16).

This is remarkably close to what Searle calls the creation of deontic power through the imposition of status functions, i.e., the “matters of rights, duties, obligations, etc.” that come to define the specifically human forms of social life (2005, 11-12). For Vygotsky, the genesis of institutional reality and the deontic powers residing therein is explained by the gradual internalization of meaningful determinants of action, whereby the “leading aspect” of such internalization is childhood pretense play (Vygotsky 2016, 17).³

Tomasello most directly discusses play and its role in *ontogenesis* in his paper with Rakoczy (2007). There they argue that joint-attentive pretense activity makes way for developmentally later arbitrarily symbolic social-ontological procedures and practices. They suggest that in spontaneous joint-pretense play, one sees an *X* term being used to denote some *Y* phenomenon by virtue of a proto-performative declaration. In such cases, the context conditions that govern the performative’s intelligibility and felicitous execution are also spontaneously generated by virtue of some of joint intentional convention. And though they lack the stability of a proper social institution (Sawyer 2005), they do have a normative and deontic dimension (however temporally contingent that may be) which can authorize further signifying acts.

However, as concerns play and *phylogenesis*, Tomasello (2014) suggests that the advent of iconic gestural communication has the effect of developmentally grounding joint pretense activity. Through its combinatorial potential to represent nearly anything removed from the immediately perceived situation, such gestural communication serves as the basis for the imaginative joint intentional pretense activity that comes to underwrite the imposition and recognition of status functions. In other words, this type of communicative activity marks a transitional stage of proto-institutional recognition, which can come to modify behavior either negatively in prohibiting certain actions or positively in creating the conditions that call forth and legitimize further activity. Joint intentional pretense play for Tomasello thus serves to circumscribe the conditions upon which Searle’s “status functions” may be said to “function.”

Vygotsky can flesh out some of the details here insofar as he shows that in childhood play socially meaningful potentials of activity are gradually separated from environmentally determined courses of action. In the transition to rule-based imaginative play, social meanings become internalized and the child learns to act not according to her immediate impulse but rather in the service of fulfilling a cultural norm. The child, that is, acts according to spontaneously and imaginatively generated rules of the play activity. The coordination between external (social) and internal (personal) intentional states comes to further the development of abstract thought and the realization and acceptance of cultural norms. To apply this back to Tomasello, the implicit speculation is that in phylogenesis progressively more stable pretense frames emerge as such joint intentional interactions

³ Veresov and Barrs (2016) contend that although the concept of a “leading activity” itself remains underdeveloped in Vygotsky’s work, it serves as a general concept of development for Leontiev, who utilizes it to describe the “activity the development of which brings about major changes in the child’s mind and within which mental processes occur that prepare the child’s transition to a new and higher stage of development” (Leontiev 1983, 306; as quoted and translated in Veresov and Barrs 2016, 29).

transition to full-fledged collectively intentional interactions. These then go on to simultaneously constrain and enable certain courses of socially legitimate activity on the part of the participants insofar as such fall under some normative description.

Tying Up Loose Ends

This mention of Searle brings me to another issue with Potapov's reading. Potapov claims that Tomasello's centralization of *intentionality*—a concept about which Searle also writes—makes it so that Tomasello somehow inherits Searle's metaphysics of mind and perception (which seems to include a commitment to naïve realism and some kind of dualism).⁴ I'm afraid I don't follow Potapov here, both with respect to his reading of Searle and how it applies to Vygotsky and Tomasello. But I won't get into parsing what I think Potapov means because Searle's metaphysical baggage (whatever that may be) is not relevant one way or another for Tomasello's account.⁵ Tomasello also uses the language of “propositional attitudes,” a favorite of Davidson, yet this hardly commits Tomasello to Davidson's “anomalous monism.” Whether Searle is a dualist or naïve realist—it doesn't matter for Tomasello. For all it's worth, Searle could be an eliminative materialist who has concocted a useful vocabulary of folk psychological states just for fun. That wouldn't make Tomasello an eliminative materialist just because he uses those intentionalistic terms.

However, I will concede to Potapov that Searle's notion of collective intentionality is indeed “frictionless.” (Potapov 2021, 24). Potapov is not the first to point out that Searle's account of collective intentionality *is* somewhat lacking (see e.g., Wilson 2007). I won't defend Searle here but I will point out that Tomasello likely *agrees*. His entire project in *A Natural History of Thinking* is to show the phylogenesis of collective intentionality and norm-governed behavior. Joint intentionality in this account is taken as a transitional, prehistorical, cognitive phenomenon that seeks to explain just how it is that humans can be born into a world of rules, norms, and obligations. Potapov (2021) misses this aspect of Tomasello when he claims that:

Tomasello takes from Searle the assumption of a ready and stable subject who can recognize “common goals” in engaging in an activity. Common goals are at the heart of the theory of joint intentionality. But positing such goals is neither justified nor necessary, as Brandom's Hegelian account of deontic scorekeeping demonstrates (25).

⁴ It would be nice to know what kind of dualist (substance? property? epistemological?), but Potapov doesn't say.

⁵ While it would be rich if Searle spent his career combating substance dualism only to end up a substance dualist, I doubt this is the case. To the question of whether Searle is a *property* dualist—maybe (though see Searle 2002), but this still doesn't matter for Tomasello. Moreover, Vygotsky's early polemics against psychophysical parallelism and (what we now call) eliminative materialism aren't fine grained enough to really apply to contemporary discussions of perception (e.g., Genone 2016). Was Vygotsky a direct realist? A representationalist? A disjunctivist? I don't think there's a clear answer, though perhaps Potapov could try to work one out. Moreover, Vygotsky's comments here are directed to the problem of mental causation, not perception per se. Regarding this (separate) issue, Vygotsky had no positive account, though he did claim that we should strive “to state the problem correctly and in a timely manner, and then the solution will sooner or later be found (1997a, 46). I'm afraid we're still waiting on that solution.

Tomasello does not inherit a “precritical rationalism” from Searle (loc. cit.). His object is to explain the phylogenetic transition from apes, who have neither deontic commitments nor collective goals, to humans who do. His account of joint intentionality is hardly cribbed from Searle (or the many other authors who work on the notion) but is an original contribution to explaining the prehistorical development of uniquely-human consciousness.

I don’t have the space to give full justice to Tomasello here, but to put it briefly, Tomasello explains that in addition to socially recursive inferences and primitive self-reflection, joint intentional collaboration and communication allows for two important advancements in the self-monitoring available to early (proto) humans. Whereas the individually intentional creature may monitor her own behavior “including its psychological underpinnings with respect to such things as memory and decision making,” joint intentional humans begin to engage in both cooperative and communicative self-monitoring (Tomasello 2014, 74.). As Tomasello claims:

Early humans’ concerns for how their collaborative partners viewed them—and their active attempts to manage this impression—provided a new motive for actions, namely, to coordinate with the evaluative expectations of potential partners. Individuals thus began to cede power over themselves to the second personal evaluations of others because these evaluations determined their future collaborative opportunities (75).

Communicative self-monitoring concerns the active monitoring of an agent’s own communicative acts “in anticipation of how they might be comprehended and/or interpreted by the recipient” (75). Maximizing the intelligibility of the communicative act was the goal of early human communicators, and such could be accomplished insofar as deictic (ostensive pointing) and symbolic (pantomime) communicative acts were overt and thus able to be perceived and altered by the communicator as she saw fit. The acts themselves were comprehended perspectivally, from the point of view of the recipient. For Tomasello, this motive for communicative intelligibility comes to constitute what will later develop as the “social norms of rationality” (76).

In effect, the collaborative social arrangement moved the individually intentional agent beyond the egocentric self-monitoring of the previously competitive social model, and the “I” for the first time considered itself from the point of view of the second-personal social other. While this is still far from the abstract third-person normativity of fully human, collectively intentional, agents, it does represent for Tomasello the first step in the origin of the social norms of morality.

This doesn’t seem to be an instance of “assuming a ready and stable subject” (Potapov 2021, 25). But it does exemplify Tomasello taking pains to show how such a stable subject phylogenetically emerges. I’ll admit that this idea of *perspectival* cognition, or “second personal self-monitoring,” does address the origin of the higher mental functions in a way that Potapov might be more comfortable with—in Potapov’s words, “it is not... a ‘dominant/subordinative dialectic’ as it does not say anything about the use of misuse of power” (loc. cit.).

By Way of Conclusion ...

A final remark—Potapov claims that I along with Tomasello engage in “flattening of higher and lower psychological functions to one plane” (2021, 28). Maybe I wasn’t clear when explaining that:

The apprehension and utilization of the sign marks a transformational leap between unmediated affective communication as exhibited in apes and the mediated linguistic communication of early humans. Such a phylogenetic transition is illustrated in the movement from a stage of (a) “receptive” self-monitoring (affectively based on situationally bound stimuli) to a stage of (b) cognitive, conceptual, self-monitoring (where the individual can take on the perspective of *another* in relation to her own cognitive states) (Drain 2021, 9).

It’s true that I introduced this transition from lower to higher mental functions as “Vygotsky’s,” and perhaps that’s where the confusion lies. But Tomasello’s language is present throughout this formulation, especially with respect to “self-monitoring.” Just to drive the point home, Tomasello does clearly recapitulate Vygotsky’s distinction between higher and lower mental functions, and in a way totally amenable to Potapov’s emphasis on how social activity can free the human from affordance-based “stimulus-response relations” (2021, 26). However, considering that my discussion concerns the phylogenesis of human cognition, the lower/higher binary can double as the distinction between non-human/human intelligence.

I noted Tomasello’s account of “lower” (non-human) mental functions mostly in my earlier response to Azeri (Drain 2020, 22), but it suffices to say here that for Tomasello, lower mental functions are characterized as those mental states of the individually intentional agent. This includes imagistic representations that are situationally bound, causal and intentional inferences, and primitive self-monitoring. Higher mental functions (those bound by normative self-governance, reflective inferences, and objective/conventional representations with propositional content) are only available to those hominids who have passed through an intermediary stage of joint intentionality.

It is this phylogenetic middle ground of joint intentionality where evolutionarily urgent collaborative practices (in response, Tomasello notes, to new foraging ecologies in the late Pliocene) began the transition from lower to higher mental functions (Tomasello 2014, 78). This notion of transition is pivotal for Tomasello’s “Vygotskian” project, and it fills out the void in the phylogenetic application of Vygotsky’s more rudimentary higher/lower distinction. Appealing to norms and deontic scorekeeping, as Potapov suggests, isn’t much of a help when one’s object is the phylogenetic emergence of deontic sources of action.

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