Play and Self-Regulation
Lessons from Vygotsky

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The authors consider the analysis of the literature on play research by Lillard and others in the January 2013 *Psychological Bulletin*, an analysis that questioned the prevailing assumption of a causal relationship between play and child development, especially in the areas of creativity, reasoning, executive function, and regulation of emotions. The authors regard these connections as critical for teachers in early-childhood classrooms and for other advocates of child play. They claim that the conclusions of Lillard and her coauthors place these professionals in a difficult position because they already face sharp pressure to replace play with academic activities. The authors suggest that the difficulty researchers have in linking play to development partly results from a failure to account for both cognitive and non-cognitive developments across a complex trajectory. To help see the problem more clearly, they argue for a return to the Vygotskian and post-Vygotskian theories that differentiate between immature and mature play. The authors then describe their creation, an observational tool based on such theories, that helps researchers and practitioners judge the quality of pretend play. **Key words:** Lev Vygotsky; mature play; Mature Play Observation Tool; play and child development; self-regulation

It may sound counterintuitive to turn to theories now almost a century old to answer questions about the current state of knowledge about play, but these long-standing insights first advanced by the Russian developmental psychologist Lev Vygotsky in the early twentieth century now help us understand the role of play in child development in general and the development of self-regulation in particular. As we developed, implemented, and evaluated Tools of the Mind, the Vygotskian-based, early-childhood curriculum, we often found it necessary to defend the major role awarded to make-believe play in this curriculum (Barnett et al. 2008; Diamond et al. 2007). That we should even need to defend play

arises from recent social changes, which we discuss later. But prevailing rules of educational research—today's allegedly practical approaches—now assume that the measurement of isolated skills over discrete intervals of time will accurately reflect the mechanisms of development. This assumption imposes high expectations on any play-based intervention, however, because it presupposes that a successful intervention will produce immediate results measurable by standardized instruments. Vygotsky, in contrast, took a longer view and also took account of the cultural setting of the classroom, including the relations between students and teachers.

In 1927 Vygotsky explored the limitations of narrow empirical approaches in his foundational work *The Historical Meaning of the Crisis in Psychology* (Vygotsky 1997). Post-Vygotskians today maintain that the difference in methodologies underlying the design of Vygotskian-based interventions and the methodologies often now used to evaluate their effectiveness make it difficult to provide a definitive answer about which components of play do have an effect on specific areas of development.

The familiar Vygotskian contention that in play a child becomes "a head taller than himself" has, over the last half century, been applied to a wide range of play and playful behaviors. Yet the basic question remains: how do we know if a child in fact functions at a higher level when engaged in play? Further, to understand the importance of play, we need to ask if Vygotsky's optimal zone of proximal development requires a specific kind of play. And if it does, we need to find which characteristics of play will prove most beneficial for child development. In this article, we examine the main principles of the Vygotskian and post-Vygotskian approach to play and focus on the relationship between play and self-regulation. We introduce the concept of mature make-believe play and attempt to measure "levels" of play based on Vygotsky's theories. Finally, we discuss the implications of the Vygotskian approach to play for future research and classroom practices.

Increasing academic demands make it harder for preschool and kindergarten teachers who recognize the value of make-believe play as a "childhood-specific" activity (Zaporozhets 1986) to advocate for playful formats. Part of the present problem arises because today's researchers only vaguely define play. Following Kurt Lewin's adage often cited by Vygotsky that there is nothing more practical than a good theory, we propose to use Vygotskian theories of play to help us find answers to today's challenges.

Play and Its Role in the Mental Development of a Child: The Vygotskian Perspective

We need to remember that the Vygotskian tradition defines play very specifically; the theory that describes the relationship between play and the development of young children is very specific, too. For preschoolers and children of primary school age, Vygotsky limited the scope of play to typical dramatic or make-believe play, and he did not include many kinds of other spontaneous activities such as movement, object manipulations, and explorations that most scholars refer to as play. "Real" play, according to Vygotsky, features three components: children create an imaginary situation, take on and act out roles, and follow a set of rules determined by these specific roles. As Vygotsky put it, "The role the child plays, and her relationship to the object if the object has changed its meaning, will always stem from the rules, i.e., the imaginary situation will always contain rules. In play the child is free. But this is an illusory freedom" (Vygotsky 1967, 10).

Thus, engaging in self-regulated behaviors in play becomes possible because an inherent relationship exists between the roles children play and the rules they need to follow when playing these roles. For preschoolers, play becomes the first activity in which children are driven not by the need for instant gratification—prevalent at this age—but instead by the need to suppress their immediate impulses. In play Vygotsky observed, ". . . At every step the child is faced with a conflict between the rule of the game and what he would do if he could suddenly act spontaneously. In the game he acts counter to what he wants . . . [achieving] the maximum display of willpower" (Vygotsky 1967, 14).

Play requires that players observe and restrain themselves. Vygotsky's student, Daniel Elkonin (himself a primary school teacher and later a professor at Moscow University), expanded the theory about the role of play in supporting the development of self-regulation. Elkonin attributed the power of play to support the development of intentional behaviors to several factors. To sustain play, he said, children must act deliberately, inhibiting behavior that is not part of the specific role. They first must voluntarily follow rules that dictate which actions are consistent or not with each specific role. For example, a child playing patient will resist the temptation to play with an attractive toy such as a stethoscope because using this toy is a part of a doctor's repertoire and not a patient's. Second, Elkonin observed that to agree on the details of

a play scenario or on the specific use of play props, children needed to spend some time prior to play in discussing their future actions. Essentially, they needed to plan their play.

For example, before starting to play "car shop," children might talk about the kinds of cars that need repairs, the nature of the repair, who will play the owner of the car, who will act as the receptionist, and who will play the mechanic. Such play planning serves as the precursor to reflective thinking, another aspect of self-regulatory behavior (Goldberg 2009). Finally and crucially, during their period of "mature play," (more on this later), older preschoolers will mostly assume the roles of adults (doctors, drivers, or chefs, for example) who engage in socially desirable behaviors. By imitating these figures and behaviors in play, children learn to adjust their actions to conform to the norms associated with the behaviors of these role models, thereby practicing the planning, self-monitoring, and reflection essential for intentional behavior (Elkonin 1978).

Elkonin's students, in their turn, demonstrated the unique role of play in the development of intentional self-regulated behaviors through a series of experiments that compared children's performance on various tasks in play and nonplay situations. In these experiments, the tasks themselves remained the same, but the children were asked to perform their tasks under different conditions, some that included elements of pretend play and some that did not. For example, Z. V. Manuilenko (1975), another Vygotskian, found higher levels of self-regulation of children's physical behaviors in play than in nonplay contexts. In her experiments, children asked to act as a "lookout" remained at their posts and did not move for a longer period of time than they did when the experimenter asked them simply to stand still without providing them any play task. (The different instructions resulted dramatically in a mean of twelve minutes versus four minutes!) Notably, this gap between play and nonplay performance opened widest among five-year-old children whom the researchers assumed to be at the peak of mature play. At the same time, this gap was virtually nonexistent both for three-year-old children who had not yet developed advanced forms of play. At the other end of the scale, seven-year-old children (who no longer needed the support of play to regulate their behaviors) likewise showed almost no gap.

Researchers found similar results in another study focusing on children's ability to persist in moving matches one by one from one pile to another—a decontextualized and monotonous task. Here again, the youngest children could not sustain the activity for more than a couple of minutes, and the oldest

children could sustain the activity for much longer. As for the children in the middle, they were able to perform at a level similar to the older participants only when researchers added play elements to the situation—an imaginary character watching to see whether they followed the directions, for example.

These findings supported Vygotsky's view that play "is the source of development and creates the zone of proximal development," further demonstrating that new developmental accomplishments do become apparent in play far earlier than they do in other activities. Vygotsky's (1978) description of new developmental accomplishments emerging within a child's zone "under adult guidance, or in collaboration with more capable peers" (86) has been mostly applied in the literature to the conditions of one-on-one teaching or peer tutoring. At the same time, post-Vygotskian studies of play expand our understanding of what "assisted performance" means in the context of the zone of proximal development to include assistance provided by specific activities such as play.

From Isolated Pretend Episodes to Mature Make-Believe Play: Levels of Make-Believe Play

Do children need to reach a certain level of play to benefit from it? Vygotskians say they do. Elaborating on Vygotsky's insights on the nature of play, Elkonin (1978, 2005b) introduced the idea of mature play, emphasizing that only this kind of play can be a source of development in early childhood. Elkonin used such terms as "advanced" or "fully developed" to call out mature play as a "unique form of children's activity, the subject of which is the adult—his work and the system of his relationships with others" (Elkonin 2005a, 19), thus distinguishing this form of play from other playful activities in which children engage.

Vygotsky and Elkonin and their students identified several components of mature play (Bodrova and Leong 2007). First, in mature play, children use object-substitutes that may bear little if any resemblance to the objects they symbolize. They will use a pipe cleaner as a stethoscope or a box as a boat; it only matters that these substitutes can in some way perform the same function as the object-prototype. As play continues to advance from less mature to more mature, these object-substitutes eventually become unnecessary because most of the substitution takes place as the child uses gestures or words to invoke imaginary objects.

Second, children are able to take on and sustain a specific role by consistently engaging in pretend actions, speech, and interactions that fit their particular character. For example, two children, one pretending to be a teacher and the other a student, will portray completely different manners of walking, talking, and using props. The choice of vocabulary and speech register used in these two roles will differ as well. The more mature the play, the richer the roles and the more complex the relationships between them. Mature players usually go beyond simple reciprocal actions such as feeding-eating or buying-selling, but they also engage in these actions in a manner they associate with a particular role in a given scenario. For example, a child acting as a receptionist in the doctor's office may start with a formal "we do not have any openings this week, please make an appointment" but will change her tone and say "the doctor will see you right now" after seeing the "parent" concerned with the health of her "baby." Children exhibit another sign of mature play when they become able to follow the rules associated with the pretend scenario in general (playing restaurant versus playing school) and with a chosen character in particular (playing a chef versus playing a teacher).

Mature play also characteristically produces high-quality play scenarios that integrate many themes and span the time of several days or even weeks. Such scenarios may combine themes such as family, transportation, and restaurant, as children perform the events of a family on vacation. Finally, as play becomes more mature, children progress from extended acting out preceded by rudimentary planning to extended planning followed by rudimentary acting out. Elkonin summarizes this change, pointing out that "the more general and abbreviated the actions in play, the more deeply they reflect the meaning, goal, and system of relationships in the adult activity that is being recreated" (2005b, 40). A younger child pretending to feed a baby will take particular care not to miss a single step in the process; in contrast, an older child may reduce the entire procedure to a couple of symbolic gestures—with or without a spoon—and proceed to the next episodes by taking the baby to the doctor or to the playground.

Changes in the Social Situation of Development— Changes in Play

Evidence sampled from early-childhood classrooms across the world supports the observation that mature play no longer prevails (Gudareva 2005; Levin

2008). Even five- and six-year-old children who, according to Vygotsky and Elkonin, should have reached the peak of their play performance, often display signs of the immature play more typical for toddlers and even younger preschoolers. The school-aged children may play only with realistic props, enact stereotypical and primitive play scenarios, and display a limited range of themes and roles (Miller and Almon 2009; Smirnova and Gudareva 2004). While children in years past enjoyed acting out complex events such as a moon landing, an Arctic exploration, or the Olympic games, it is easy to observe today's children playing at a single theme for months on end with little variation. In addition, teachers in early-childhood classrooms now often will not provide much needed support for play; as a result, children not only fail to make progress but even regress to more primitive forms of play. Consequently, children playing at the higher "associative" level in the beginning of the year may revert to less mature parallel play by year's end (Farran and Son-Yarbrough 2001).

With the main elements of the imaginary situation remaining underdeveloped and roles and rules remaining less specified, this "immature" play no longer matches the kind of play that Vygotsky and his students once identified as a fertile source of child development. Consequently, we conclude that present-day play at this low level can no longer foster skill development in the child's zone of proximal development. Today's player may no longer grow a head taller. A Russian study replicating Manuilenko's experiment (Elkonin 1978) found that preschool children no longer demonstrate superior self-regulation in play the way past generations have (Smirnova and Gudareva 2004). In addition, the ability to follow directions at all ages and in all conditions has generally declined in comparison to the l940s study. For example, seven-year-olds of today exhibit self-regulation levels more like those of the five-year-old children of the 1940s in that they are not able to control their physical actions in following the directions of an adult. Researchers have attributed this phenomenon to the decline in both quantity and quality of play that preschools and kindergartens now offer. In fact, in one recent study, only 10 percent of observed six-year-olds demonstrated a mature level of play and 48 percent of the five-year-olds demonstrated the lowest (toddler) level of play (Gudareva 2005). Examples of such toddler play included children engaged in disconnected and repetitive actions like putting dress-up clothes on and taking them off, taking shoes out of the boxes and placing them back, and pretending to "chop" plastic vegetables. They played alone or in parallel without attempting to communicate with their peers

about the role they were playing or about the props they were using. Researchers found similar results in studies conducted in the United States in which they noted positive correlations between levels of play and self-regulation (Berk et al. 2006; Germeroth et al. 2013).

In a worrisome trend, many signs indicate that today's make-believe play does not simply differ in content from play of the past but that it has declined in both quality and quantity (Johnson et al. 2005; Karpov 2005; Russ and Dillon 2011). We find this qualitative and quantitative decline of play even more troubling when viewed in light of declining self-regulation in young children that puts them at risk of later cognitive and social-emotional problems (Blair 2002; Blair and Razza 2007; Raver and Knitzer 2002; Rimm-Kaurfman, Pianta, and Cox 2000).

Assessing Mature Play

Our review of existing play assessments revealed several deficiencies. None of them addresses the very features of play that Vygotskians have considered critical, such as the level of child's engagement in role planning. Similarly, none of the existing play assessments includes the precise features of mature play that make it possible for children to practice self-regulated behaviors when playing—play planning and "meta-play"—those out-of-role comments that children use to manage the play (Christie and Roskos 2009). Current assessments lack an instrument capable of capturing make-believe play in its entirety, which in turn frustrates accurate assessment of the level of play in regard to its possible impact on self-regulation. Additionally, current play assessments omit the adult's role in supporting children's play, and these assessments focus solely on the behaviors of an individual child or a group of children. Thus, existing instruments reflect the prevailing view of play as a child's activity that spontaneously "emerges" or "unfolds." This view of play incorrectly assumes that adults need only to provide children with time, space, and props, and children will engage in play on their own. Those who hold this view reserve explicit adult support only for those children who experience difficulties owing to cognitive or social-emotional disabilities. In contrast, Vygotskians view play as an imminently cultural activity with adults assuming a critical role in engaging children in play and in supporting and scaffolding play as it develops.

To address these missing elements in current play assessments, we devel-

oped our own play instrument—the Mature Play Observation Tool (MPOT)—that we based on levels of play identified in Vygotskian and post-Vygotskian tradition. This tool addresses specific behaviors and components that define mature play, including both teacher and child dimensions, and contains detailed and tiered items to provide a systematic means for observing the complexities of mature play (Germeroth et al. 2013). The child dimension includes children's use of self-created props, engagement in meta-play, role playing, the use of role-specific speech, and the nature of play interactions. To measure role-specific speech, we noted the number of theme-related words and phrases that described a child's own role or the roles of her peers ("I will be the doctor, and you will be the nurse"), pretend actions ("I am fixing the car"), or words describing the meaning of a prop ("This is my scanner"). We observed and included the teacher dimension as well, noting such factors as a teacher's management of play in centers, the amount of time a teacher allotted for play, a teacher's modeling of play scenarios, and teacher interventions during play.

Recently researchers pursuing a larger efficacy study in a large urban district used MPOT to assess children's play and teacher scaffolding of play in preschool classrooms randomly assigned to treatment and control conditions (Germeroth et al. 2013). Treatment classroom teachers received training in a Vygotskian-based instructional approach emphasizing teacher scaffolding of make-believe play; control classroom teachers either received no additional training or received training in instructional strategies not focused on play.

Preliminary data demonstrated that the MPOT has high overall reliability (Cronbach's α = .909). Additionally, the MPOT demonstrates high content validity, as we observed significant differences between treatment and control classrooms on components of play. Specifically, treatment classrooms exhibited significantly more key components of mature play—child-created props, more instances of role play, and role speech. Additionally, teachers in treatment classrooms were more likely to intervene in play briefly and specifically to encourage continued play, and they were less likely to intervene exclusively to manage child behavior. Teachers in the treatment classrooms were also more likely to use a center management system that involved color-coded center signs and coordinated clothespins and picture cards. The use of these simple "tools" made it easier for children to regulate themselves prior to and during make-believe play.

Promising preliminary results of MPOT assessments used in multiple efficacy trials demonstrate the relationship of play components to child outcomes

and classroom quality. Thus, the MPOT may soon provide teachers and researchers with a tool that effectively measures play. Because the MPOT measure takes social context into account, we may also soon identify the type of play that promises the greatest developmental impact.

Conclusion

That today's young children do not seem to reach the same levels of play as their peers of past decades may mean it is time for us to revisit our ideas about the impact of play on various areas of child development. Instead of stating in a general way—as we had for many years—that play is essential in child development, we need to look closely and specifically at types of play and their potential benefits. From a Vygotskian perspective, we find it evident that to enable child development—in other words, to create the zone of proximal development—play itself must not remain frozen at the same level throughout early-childhood years, but instead it needs to evolve to reach its most mature level. This more differentiated view of play may shed some light on the recent—somewhat disappointing—findings of the studies that failed to show a positive correlation between children's play and the development of specific competencies, namely self-regulation (Lillard et. al. 2013). While the concept of mature and immature play may very well apply to many forms of playful behaviors such as building with blocks, movement games, as well as board games and computer games, it seems logical to explore first the relationship between levels of play and childhood outcomes in the context of play that Vygotskians declared the leading activity of early childhood: make-believe play.

Research conducted in the Vygotskian tradition in Russia and in the West reveals challenges as well as opportunities for future studies designed to assess the relationship between make-believe play and self-regulation. Some of the challenges to our understanding stem from the differences in research methodologies employed by post-Vygotskians and the narrower methodologies that still dominate Western educational research. In particular, we expect that taking a broader, long-term view of the development of self-regulation (where the outcomes are not limited to a set of standardized measures but involve more ecologically valid classroom-based observations) may provide valuable information about the mechanisms of the development of play itself and a view of the dynamics of its effects on self-regulation. Finally, when assessment

tools prove least suited to measuring the very types of play that hold the greatest developmental potential, they prevent us from learning if or in which way play may enhance education. Instead, we conclude that determining the causal relationship of play to development will depend on formulating definitions precisely, framing theoretical questions usefully, and pursuing different and more appropriate and productive methodologies. And for this we look back nearly a century to the practical benefits of a clearer theory.

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