

# Higher Order Play and Its Role in Development and Education

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This paper focuses on the role of play in children's development and as a curricular strategy in an attempt to come to terms with the problem that play is increasingly seen as superfluous for learning, while increasingly viewed as vital for development. The author provides a critical analysis of Vygotsky's theory of play and the "common" view of the cognitive trajectory of play in development that all forms of play in early childhood lead to games and sports or better social skills in later life. An alternative, bilateral theory of play is presented, postulating that two types of play in early childhood, skill-based play and higher order play (sustained make-believe play involving roles, a scenario, and verbal/social interaction) each lead to different development outcomes: games/sports and higher order thinking respectively. An argument is made for higher order play as a key strategy for good teaching in any grade.

**Keywords:** play, make-believe play, dramatic play, preschool, cognitive development, self-regulation, Vygotsky.

While play is increasingly seen as superfluous in education, many developmental psychologists, educators, pediatricians, child advocates, neuroscientists, and others are providing compelling arguments that play has a fundamental and vital role in human development and the lack of play in early childhood is developmentally detrimental [4; 10; 13; 17; 24; 28; 52; 29; 33; 42; 43; 60; 50].

This paper presents an analysis of the causes for this discrepancy and a new conceptualization of play in development – based primarily on the work of Vygotsky and his pro-

tege's – to provide a stronger rationale for the centrality of play in the early childhood curriculum.

## **The Commonly Held View of the Developmental Trajectory of Play**

Most theories of the play in cognitive development plot a path from exploratory and functional play in infancy and toddlerhood, to constructive and socio-dramatic play among preschoolers, to games, sports, and leisure activities played by older children and adults [40; 54; 57].

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A number of theories, reviews, and texts on play also view play as leading to good social skills [5; 11; 38; 39; 46; 47].

This “common view” of play is found in most books on the topic and child development texts. While the primary focus of play in many texts is on its role in social development, all address the cognitive dimension, at least briefly. For example, Laura E. Berk’s widely used text (2006) delineates the developmental sequence of cognitive play categories [5, p. 599] within a chapter entitled *Peers, Media and Schooling*. She lists four categories in developmental sequence: functional play, constructive play, make-believe play, and games with rules, citing a 1983 book chapter by Rubin.

Doris Bergen states in Fromberg and Bergen’s 2006 edited volume, “Play forms become transformed throughout childhood as the forms are socially redefined as other than play, becoming the ‘recreation’ or the ‘leisure time activity’ of adults. Verbalizations and physical actions become increasingly internalized, and some types of play become more serious and competitive rather than playful” (p. xvii). A number of child development texts are silent on the developmental trajectory of play. For example, Robert S. Feldman’s *Child Development* (2007) says nothing about play before or after the preschool section, although it covers prenatal through adolescent development. The reader would likely conclude that play is only salient during the preschool years and has no developmental significance.

In an online survey to determine if this common view of play is held among professionals in the field in the U.S. (see appendix A), 168 professionals from nine states replied to the open-ended item: “For school-age and older children, play evolves into...” The most common response was that play becomes more social and/or it develops social skills (90 of 168 respondents). Sixty-five of the respondents believed that school-age play is the same as preschool play but is more complex or at a higher level. Games with rules and sports were mentioned by 58 and 40 of the respondents, respectively. Only 28 responded that play evolves into higher levels of cognition including problem-solving skills, higher or-

der thinking, and literacy skills. See appendix A (table 1 and figures 4–6) for more detailed results from the survey. Although play in early childhood is most widely viewed as leading to social development and more complex play, the third and fourth most common responses were games with rules and sports.

### Vygotsky on Play

Vygotsky had the same common view of the development of play in his essay, *Play and Its Role in the Mental Development of the Child* (2002). “The development from an overt imaginary situation and covert rules to games with overt rules and a covert imaginary situation outlines the evolution of children’s play from one pole to the other.” He also stated, “... for the schoolchild, play begins to be a limited form of activity, predominantly of the athletic type, which fills a specific role in the schoolchild’s development, but lacks the significance of play for the preschooler.” Others who have reviewed Vygotsky’s theories of play concur. Duncan and Tarulli restate Vygotsky’s conceptualization: “Early socio-dramatic play is a precursor to the development of games with rules in late preschool and early school years” (2003, p. 275). For Vygotsky, *rules* form the main thematic thread between play in early childhood and at school age. He focused on how they evolve from being implicit in the dramatic play of preschoolers to being explicit in a variety of activities among school-age children:

- “At the end of play development, rules emerge” [57, para. 78].
- “Consequently, toward the end of development in play, what was originally embryonic has a distinct form, finally emerging as purpose and rules” [57, para. 79].
- “At school age play does not die away, but permeates the attitude toward reality. It has its own inner continuation in school instruction and work (compulsory activity based on rules)” [57, para. 89].
- “Just as we were able to show at the beginning that every imaginary situation contains rules in a concealed form, we have also succeeded in demonstrating the reverse – that every game with rules contains an imaginary situation in a concealed form” [57, para. 35].

Additionally, Vygotsky wrote that play does develop higher mental functions: “Play is converted to internal processes at school age, going over to internal speech, logical memory, and abstract thought” [57, para. 57]. He also said, “The old adage that children’s play is imagination in action can be reversed: we can say that imagination in adolescents and schoolchildren is play without action” [57, para. 16]. And later in the essay, he reiterates: “From the point of view of development, the fact of creating an imaginary situation can be regarded as a means of developing abstract thought” [57, para. 84]. There appears to be no reconciliation in the essay between the developmental outcomes of games with rules and abstract thought in this essay.

To further understand Vygotsky’s view of the relationship between play and the development of abstract thought, we can turn to his 1930 essay (published in English in 1990), *Imagination and Creativity*, written three years before his essay on play, where he stated:

“Children’s play very often serves only to echo what they see and hear from adults, but these elements of previous experience are not always reproduced in play exactly as they occurred in reality. The child’s play activity is not simply a recollection of past experience, but a creative reworking that combines impressions and constructs from them new realities addressing the needs of the child” [56, p. 87].

Here Vygotsky acknowledges that the roots of imagination and creativity are in children’s pretend play, but that they are limited, still poorly formed, and embedded in reality.

Neo-Vygotskians, T. A. Repina (1971) and her colleagues theorized and conducted experiments that concur with and further explicate Vygotsky’s view of the development of the imagination in play. They wrote that imagination in the play of preschoolers is highly contingent on previous experiences and realistic play materials. Within the play scenario, young children tend to be inflexible in accepting ideas or actions that break the shared reality of the play scenario, such as an unwillingness to pretend to drive a car from the back seat (a covert rule). However, Repina was more emphatic than Vy-

gotsky about the importance of imagination in development. She confirmed Vygotsky’s view of the particular value of make-believe play in which engagement in an imaginary role creates a zone of proximal development for the child, and stated.

Toward the end of the preschool age, the imagination of the child becomes relatively independent of external activity, the basis from which it was formed. At about this time creative elements appear in imagination. These imaginative features of older preschoolers are of great significance preparing the child for school training, when it becomes necessary for him to form images of objects that he has not previously perceived on the basis of accumulated concepts [pp. 274-275]. Vygotsky, however, viewed the ability to adhere to rules as the key capacity for school preparedness, quite different than the ability to imagine.

A related problematic aspect of Vygotsky’s theory is that engagement in play that has implicit, internalized rules that can be negotiated among the players, requires a higher level of cognitive, social, and verbal functioning than following explicit, external and immutable rules. In addition, the use of the imagination in make-believe play is at a higher cognitive level, involving more complex and deeper thinking over a longer period of time, than the imagination used during rule-based play such as games and sports. Vygotsky used the example of the game of chess to explain that games include imaginary situations. However, it is unlikely that a battle between kingdoms is in the minds of players in the heat of a close match, if ever. If both rule related behaviors and imagining during play are at a higher level of functioning in younger children than older children, it is difficult to see how play, from this perspective, has a developmental function.

Rules predominate in Vygotsky’s argument, while the role of the imagination and the development of higher order thinking is secondary. Why did Vygotsky not make the imagination the main thematic thread, particularly if it affects higher mental functions, as he stated? I speculate that he believed that games/sports and schoolwork, the leading activity of school-age children according to Vygotsky, which require

adherence to many rules, had to evolve from the leading activity in early childhood, socio-dramatic play, and therefore, he felt compelled to explain how this might occur.

Vygotsky's essay on play ends with the enigmatic statement: "Superficially, play bears little resemblance to what it leads to, and only a profound internal analysis makes it possible to determine its course of movement and its role in the preschooler's development." This implies that he left more to be uncovered to fully understand play. Vygotsky's protégé Daniel Elkonin did pick up the charge in his work, *The Psychology of Play* (2005), in which he argued at length that the imaginary situation is the most prominent and vital aspect of play with the greatest impact on development. However, this view does not appear to be widely accepted and is not impacting practice. Nor has practice been impacted by the compelling arguments or research of many other more contemporary scholars who also link play in early childhood to the development of the imagination and abstract thinking [3; 26; 37; 49; 50; 51; 53, 54].

However, another outcome of socio-dramatic play, self-regulation—a range of generalized cognitive capacities (also referred to as executive function) that underlie the ability to learn effectively—is gaining traction in the U.S. as a central tenet of a preschool program developed by Bodrova, Leong, and Hensen, *Tools of the Mind* [9]. Drawing from Vygotsky's ideas, Bodrova and Leong [7; 8; 9] and their colleagues (Barnett et al., 2008; Diamond, Barnett, Thomas, & Munro, 2007) have made a compelling case for the importance of self-regulation for success in school and for the role of socio-dramatic play in promoting the development of self-regulation. Furthermore, Whitebread, Coltman, Jameson, and Lander (2009) argue that self-regulation underlies the "development of problem-solving and creativity" [p. 41].

### **Imagination**

Imagination is the central mental activity in solving math equations, pursuing scientific investigations, creating art, making decisions, solving problems, and more [14; 26; 30; 31;

34; 45]. Thomas Friedman [20; 21] and Daniel Pink [41] among others, argue that imaginative and creative thinking are the most important abilities for effectively negotiating the complex world we live in now and especially for the world of the near future. Playing grocery store in preschool is likely better preparation for understanding algebra in middle school than a rote counting activity.

Most socio-dramatic play among preschoolers reflects both their actual experiences and their imaginations. Susan Engel [19] captured this well in her characterization of children's pretend play as consisting of "what is and what if." Taking a cue from theory and research in the literacy development of young children [55; 59], imagination and creativity can be viewed as emergent in preschoolers. Like literacy, imagination and creativity appear in a very rudimentary form but are in the process of developing, and, being vital for later success in school and life, require nurturing by skilled educational professionals.

### **Why is the common theory of play so pervasive and enduring?**

I speculate that the persistence of the common view is due to two main factors that when taken together lead to the misconception that sports and games with rules evolve from all forms of young children's play. First, the same word, "play" in its verb form, in many languages, is used to describe the activities of preschoolers as well as engagement in sports and using board games by older children and adults. Although the same word is used to describe both, it does not necessarily mean they are the same or even similar activities. The word "play" has so many different meanings in English – non-work, frivolous behavior, what one does with a musical instrument – that common language usage obfuscates the meaning of play.

The second contributing factor to the misconception is that just as children begin to spend less time in socio-dramatic play, they begin to spend more time playing games and sports. However, these events are likely not directly or causally related. Children's increasing mental and physical capacities enable them to engage in and enjoy games and sports, and

these same increased capacities result in their ability to verbalize, write, draw, and think about what was once expressed (physically) through dramatic/imaginative play.

#### **A new conceptualization of play in development**

To make a strong case for the developmental and educational value of play and to resolve the ambiguities in Vygotsky's views of play, requires not only an alternative conceptualization of the common developmental trajectory of play, but a more specific and clearer description and categorization of the variety of things we call play. It is also necessary to determine the types of play that have educational value.

To address all of the issues described above, I propose a bilateral theory of play: higher order play on one hand and skill-based play on the other (see figures 1 and 2). Higher order play (also called creative, complex, or mature play) and skill-based play emerge from and lead to different spheres of development, although, like all human functioning they are by no means entirely distinct. Higher order play is largely in the sphere of abstract/reflective thinking and the imagination (primarily internal), while games/sports are for the most part in the sphere of skills (primarily external). The latter emerges from functional, practical play and motor activities such as running, chasing, climbing, tricycle/bicycle riding, doing puzzles, engaging in simple games, and the like. Combined play is quite common among preschoolers, where the two types of play overlap or alternate quickly. For example, a child starts building a house with plastic interlocking construction blocks by following a diagram but, after awhile, follows her own ideas for building a house (see figure 3). While in the short term, higher order play develops self-regulation, in the long term, higher order play among preschoolers primarily evolves into imaginative, creative, abstract, and inductive thinking and expression rather than games with rules or better social skills. Higher order play leads to higher order thinking. "Playing with ideas," is one of the few expressions in English that overtly connects play with higher mental functioning.

Of course, there are creative elements in games/sports – some of the most able players are those who are more creative than lesser players with the same athletic acumen. And advanced motor and cognitive skills are needed to express oneself creatively to the satisfaction of both "artist" and audience. Both spheres are also affected by innate or genetic predispositions – perfect pitch aids the musician and quick reflexes aid the athlete – although these can be nurtured or allowed to lie fallow.

There is strong evidence from brain imaging that creative activities and skill-based activities engage different areas of the brain [1; 6; 25; 27].

However, to determine if this bilateral theory of play has merit would require more specific empirical evidence. The most compelling evidence would likely come from a study of the areas of the brain that are active when children engage in higher order play, in other types of play, and in a variety of non-play activities to determine if and how they differ. Then compare those areas of the brain that are active during these activities with the areas that are active when older children engage in higher order thinking, sports, board games to determine if and where there are correlations.

Evidence could also come from a retrospective study of adults to determine if there is a relationship between those who spent a great deal of a time engaged in higher order play as preschoolers and their current abilities to think creatively and critically and to solve problems. After all, if the lack of play is damaging to children's development then extensive engagement in higher order play should be advantageous.

#### **Higher order play in education**

Not all make-believe play in early childhood programs is higher order play. It entails children collaboratively sustaining a coherent scenario, positive and productive interactions, the use of props and materials, verbal negotiation of roles and actions, and full engagement in the imaginary situation. Higher order play exists at the end of a continuum of play in early childhood that starts with simple and disorganized play, such as rough and tumble play.

Promoting higher order play requires skilled teachers who can recognize each child's level of play ability and encourage him or her to develop it further. It takes creative, well-educated, and experienced teachers to develop and facilitate meaningful play scenarios of high interest to children and to help them maintain and deepen the play, while still allowing children control over the play.

Promoting higher order play is the key to quality education, not just in early childhood but across the grade span, where it only looks different on the surface. As children get older the "play" is internalized and they mentally play with thoughts, ideas, concepts, visualizations – their own and those of writers, teachers, and peers. Higher order play is the strategy used by excellent high school science teachers to develop their students' deep understanding of physics through hands-on research projects. The goal of good teaching at every grade level is the same: to lead students to a state of play in which they are deeply involved in meaningful interactions with engaging ideas.

**Conclusion**

This paper attempts to help the early childhood education field affirm the educational value of play and put play-based curricula into practice that will find full acceptance both within the field and with the public at large. This can happen when preschoolers' higher order play is understood as leading to important higher mental and expressive functions that are useful, if not vital, for success in later schooling and life, rather than leading to games/sports (which are widely viewed as leisure, nonessential activities) and that this play is conceptually similar to good teaching and learning across the grade span.

This conceptualization of play should lead to a more thoughtful and intentional approach to play in early childhood, which would undoubtedly be to the benefit of children's development. Statements like "play is the work of children" likely hurts efforts to promote play in education because not all play has the same developmental value. Rather than being the work of children, play – promoting higher order play – is the work of teachers.

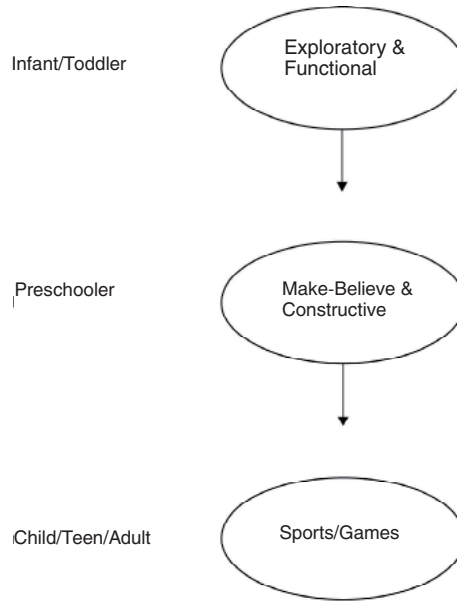


Figure 1. Common developmental trajectory of play

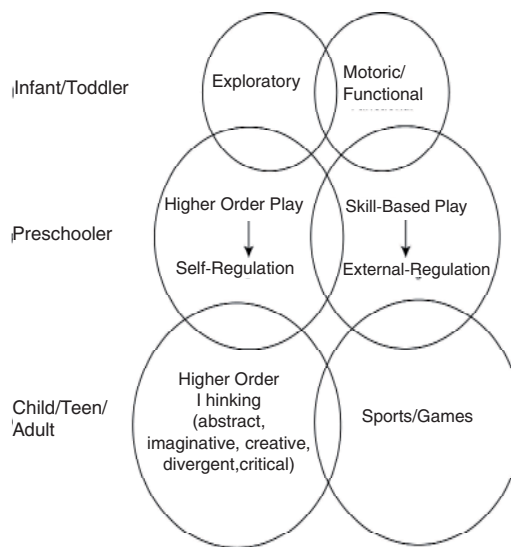


Figure 2. Bilateral developmental trajectory of play



High Order Play

- Primarily engages child's thinking and imagination
- Rules are secondary, implicit, internalized, unstated, and/or negotiated
- Exploratory (some types)
- Socio-dramatic, make-believe where there are clear roles and identifiable scenario
- Director (creating dramatic play scenarios with toys or objects)

Skill-based play

- Primarily engages child in exercising mental or muscle skills
- Rules predominate and are overt
- Riding toys (e.g. tricycles, scooters)
- Games / puzzles
- Acting out a script, story or folktale
- Organized sports

Combined play

- Contains elements of both high order play and skill-based play or alternates between the two
- It is often contingent on the way the child uses materials or tool
- A skill-based activity embedded in a dramatic play scenario (i. e., children riding bikes and pretending they are horses) is an example of combined play
- Construction play (e. g. Legos <sup>TM</sup>, blocks) if not following a pattern
- Improvising on a script, story or folktale

*Figure 3.* Key elements of the Bilateral Theory of Play

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## Appendix A

### View of Play Survey

I am interested in your understanding of play in children's development. This will help me with a paper I am writing on the topic. The survey is very short and will only take a few minutes. Thank you.

1. Infants and toddlers (ages 0 through 2) engage in exploratory/functional (feeling, banging, mouthing objects) and basic social play (peek-a-boo, chasing, which are simple games).

- I agree with the statement
- I disagree with all or some of the statement

If you disagree with all or some of the statement above, please explain:

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2. For preschoolers (ages 3 through 5), with their more advanced language and cognitive skills, play evolves into more complex, but still fairly simple, social games (hide & seek and Candyland), make-believe play (solitary with dolls or figures and acting out imaginary scenarios with friends), and constructive play (building with blocks or Legos).

- I agree with the statement
- I disagree with all or some of the statement

If you disagree with all or some of the statement above, please explain:

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3. For school-age and older children, play evolves into:

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4. Where did you your understanding of play in children's development come from? Choose up to two main sources.

- Classes or lectures
- Textbooks
- Professional books
- Journal articles
- Personal experience with children
- Other/Please specify

5. What is the highest academic degree you earned?

- High School
- CDA Associate's
- Bachelor's
- Master's
- Doctorate

6. What is your current position?

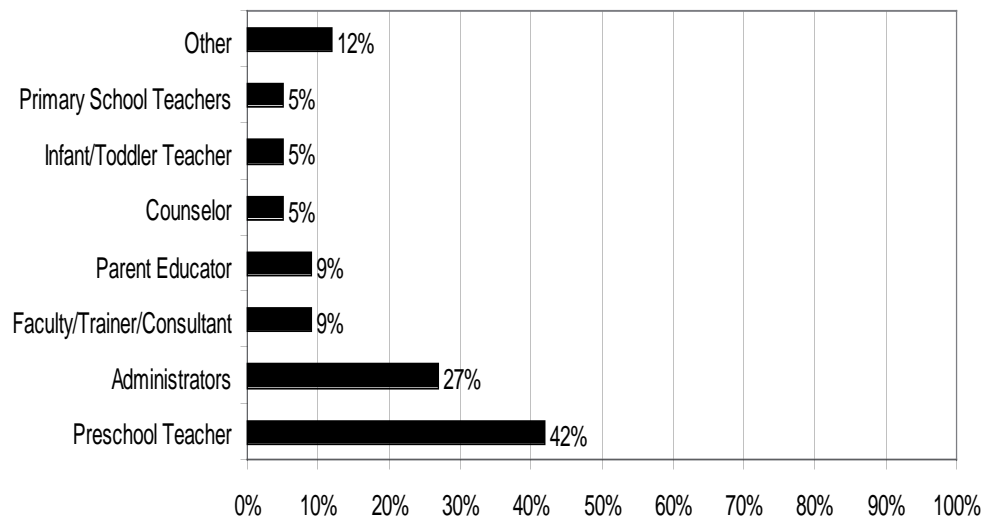
- Infant or Toddler Teacher
- Preschool Teacher
- Kindergarten Teacher
- Primary School Teacher (1st–5th)
- Administrator
- Faculty or Consultant/Trainer
- Researcher
- Other/Please Specify

Table 1  
 Respondents' Beliefs about the Evolution of Play When Children Reach School-Age (N = 168)

At school-age, play becomes:	N	%
More social; greater social skills	90	54
Same but more complex (higher level)	65	39
Games with rules	58	35
Sports	40	24
More physical	28	17
Cognitive development	28	17
Emotional development	26	15
Arts (music, drawing)	13	8
Higher order thinking (subset of cognitive development above)	10	6
Don't know, ambiguous	8	5
Imitative of TV, movies	8	5
More gender-based	6	4

*Note:* The total numbers and percentages are greater than 168 and 100 percent respectively due to many respondents providing more than one answer.

**Current Position of 168 Respondents**



*Figure 4.* Current Position of 168 Respondents to Survey

### Highest Academic Degree of 168 Respondents

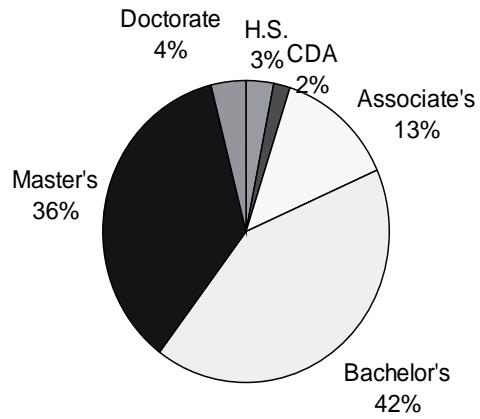


Figure 5: Highest Academic Degree Earned by 168 Respondents

### Where Did You Learn It From?

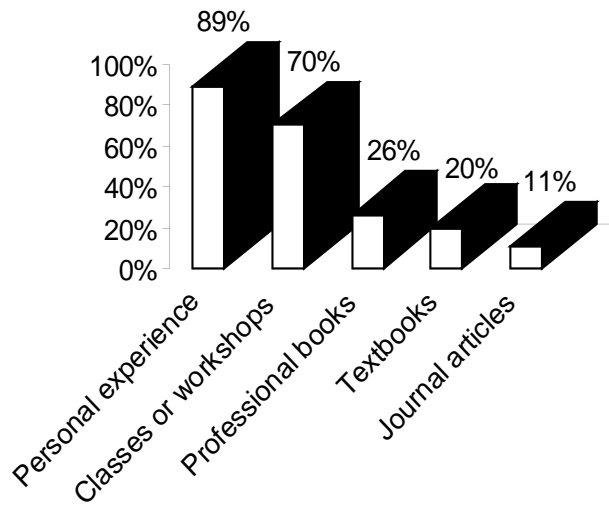


Figure 6. Sources of respondents' understanding of play in children's development

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Disclosure Statement

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