Creativity Research Journal
Volume 5 (1) 49-67 (1992)

A Reconstruction of Vygotsky's Theory of Creativity

Francine Smolucha
University of Chicago

ABSTRACT: In this article, Vygotsky's theory of creative imagination is reconstructed on the basis of Francine Smolucha's translations of three papers which Vygotsky wrote on that topic. The three papers are "Imagination and Creativity in Childhood" (1930/1967), "Imagination and Creativity in the Adolescent" (1931/1984), and "Imagination and its Development in Childhood" (1932/1960b). The three papers on creative imagination are discussed in chronological order with passages from other works by Vygotsky that place his statements regarding creativity into the larger context of his general theory. Vygotsky stated that early creative imagination is evident in the object substitutions that children perform during pretend play, such as the use of a stick as a horse. Creative imagination becomes a higher mental function directed by inner speech, and in adolescence it can be used together with conceptual thought. Creative thinking reaches its peak in adulthood as artistic, scientific, and technological innovations.

In this article, Vygotsky's theory of creative imagination is reconstructed on the basis of recent translations of three papers which he wrote on that topic. The three papers are "Imagination and Creativity in Childhood" (1930/1967), "Imagination and Creativity in the Adolescent" (1931/1984), and "Imagination and its Development in Childhood" (1932/1960b). All the passages cited in this paper are from my translations of those three papers, which were translated between 1984 and 1986. The three papers are discussed here in chronological order so that the development of the theory can be seen. Passages from other works by Vygotsky are included when it is necessary to place his statements regarding creativity into the larger context of his general theory. Vygotsky's theory of creative imagination has four main features:

1. Imagination develops out of children's play.
2. Imagination becomes a higher mental function and as such is a consciously directed thought process.

This article was originally Chapter 4 ("Vygotsky's Theory of Creative Imagination") in an unpublished manuscript titled *Vygotsky's Theory of Creative Imagination and its Relevance for Contemporary Research on Play*, written in fulfillment of a doctoral requirement at the University of Chicago in 1987. It was presented by Larry and Francine Smolucha at the 1986 National Convention of the American Psychological Association and published in Germany in 1986 (*SPIEL, 5*, 299-308).

Correspondence and requests for reprints should be sent to Francine Smolucha, Moraine Valley Cottage, 10900 S. 88th Ave., Palos Hills, IL 60465.

3. In adolescence, creative imagination is characterized by the collaboration of imagination and thinking in concepts.
4. The collaboration between imagination and thinking in concepts matures in the artistic and scientific creativity of adulthood.

The first reference Vygotsky made to creative imagination was in his 1925 paper "Consciousness as a Problem in the Psychology of Behavior" (1925/1979). In this early paper Vygotsky described three types of learning that are unique to humans. One of these types of learning is creative imagination, or *repeated experience* as Vygotsky called it in that paper.

According to Vygotsky, animals have only inherited instincts and individual learning through conditioning. Humans, on the other hand, have also the historical experience of previous generations, shared social experience, and repeated experience. In regard to repeated experience, Vygotsky said:

> Whereas animals passively adapt to the environment, man actively adapts the environment to himself. To be sure, in animals we encounter the rudimentary forms of active adaptation in their instinctual activity (making a nest, etc.)...the spider who weaves his web and the bee who builds his hive out of wax do this out of instinct, mechanically, always in the same way, and in doing so never display any more active involvement than they do in any other adaptive reactions. But the situation is different with the weaver or an architect. As Marx said, they first built their works in their heads; the results of their labors existed only in ideal form before this labor commenced. Marx's explanation, which is beyond dispute, refers to nothing more than a phenomenon that is unique to human labor, namely the repetition of experience. *In the movement of the hands and the changes produced in the material being worked on, labor repeats what had already been done beforehand in the worker's imagination with models, as it were, of these movements and this material.* It is this repeated experience that enables man to develop forms of active adaptation that do not exist in animals. Let us call this new kind of behavior repeated experience. (1925/1979)[1]

In "The Prehistory of Written Language" (1928-1929/1935, pp. 77-78), Vygotsky used the example of the child's use of a stick as a horse during play to illustrate the role of gestural depiction in play. Because Vygotsky later used this example again when he proposed that imagination develops from play activity (1930/1967, p. 7), it is important to include a passage from "The Prehistory of Written Language" here.

> It is known, that for the child during play some objects very easily represent others, they are used as substitutes, they become symbols. Also it is known, that in regard to this it is not important that a similarity exists between the plaything and the object which it designates. What is most important is its functional utilization, the possibility of executing with the plaything a representational gesture. Only in this, in our opinion, lies the key to explaining the entire symbolic function of children's play; in play a pile of clothes or a piece of wood become a baby because they permit the same gestures that depict holding a baby in one's hands or feeding it. The child's own movements, his own gestures are what assign a symbolic function to the corresponding object, that communicate meaning to it. All symbolic representational activity is full of such indicatory gestures; thus, *a stick becomes a riding-horse for the child, because it can be placed between the legs and it is possible to apply a gesture to it, which will indicate to the child, that a stick in this case designates a horse.* (1928-1929/1935, p. 77)

[1] All emphases in the quotations in the present article have been added.

In the last sentence, the phrase "which will indicate to the child" was omitted in the translation published in *Mind in Society* (1928-1929/1978). The use of the dative case in Russian "to the child" gives a nuance of meaning that suggests that someone else is indicating to the child that the stick can be used as a horse in play. There is a personal pronoun in Russian (*cebya*) that could have been used if the intention was to state that the child indicates this "to himself."

I interpret this passage as meaning that the child learns to do such gestural depictions through play interactions with caregivers, similar to the way that the indicatory pointing gesture is learned through social interaction during infancy and used to assist speech activities. This interpretation is supported by another passage from the same paper, in which Vygotsky referred to play as "a very complex system of speech with the help of gestures, communicating and indicating the meaning of different playthings" (1928-1929/1935, p. 77). These passages suggest that Vygotsky's theory proposes that creative imagination develops from children's symbolic play interactions with caregivers.

Imagination and Creativity During Childhood (1930/1967)

In "Imagination and Creativity During Childhood" (1930/1967)[2], Vygotsky specifically stated that creative imagination originates in children's play. Here again he used the example of the child's use of a stick as a horse during play. In his own words,

> One of the most important questions of child psychology and pedagogy is the question about creativity in children, its development and its significance for the general development of the child. Already at an early age we find children have creative processes, which are expressed in children's play. *The child who straddles a stick imagining that he is riding a horse*, or the girl who plays with a doll imagining herself the mother, or the child who in play changes into a highwayman, a Red Army soldier, or a sailor—all these playing children represent examples of early forms of creativity. Of course, in this play they reproduce a great deal of what they have seen. Everyone knows what a major role imitation has in children's play. Children's play very often serves only to echo what it sees and hears 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. (1930/1967, p. 7)

Besides stating that creative imagination develops from symbolic play, Vygotsky made several other statements in "Imagination and Creativity in Childhood" (1930/1967) that are of interest for the current discussion. First, he distinguished between *reproductive imagination*, which figures prominently in memory, and *combinatory imagination* which characterizes creative thinking.

In Vygotsky's words, reproductive imagination "is closely connected with our memory, its essence consisting in this that the individual reproduces an earlier behavior or resurrects traces from previous impressions" (1930/1967, p. 3). Combinatory imagination, on the other hand, is

> Any such human activity, the result of which is not reproduction of what happened in experience but the creation of new forms or activities, belongs to this second class of creative or combinatory behavior. The brain is not only an organ maintaining and

[2] An abridged translation of this article was published in *Soviet Psychology*, 1990, *28*, 84-96.

> reproducing our own previous experience but it is also an organ that creatively combines elements of previous experience into new situations and new behaviors. (1930/1967, p. 5)

Vygotsky went on to say that combinatory imagination is part of all cultural life, including artistic, scientific, and technical creativity. In Vygotsky's words,

> If human activity were limited to reproductions of the old, a person would, in essence, be attending only to the past and would be able to adapt to the future only to the extent that it reproduces the past. The creative activity of an individual does this, essentially; it attends to the future, creating it, and changing the view of the present.
>
> This creative activity, based on the combinatory ability of our brain, psychologists call imagination or fantasy. Usually, the term imagination or fantasy is not used the same as it is used in science. In common usage imagination or fantasy refers to anything that is not coordinated with reality and does not have any practical, serious meaning. In actuality, imagination is the basis of any creative activity and is equally part of all cultural life, including artistic, scientific, and technical creativity. In this sense all that is the work of the human hand, the whole world of culture, is distinguished from the natural world because it is a product of human imagination and creativity based on imagination. (1930/1967, p. 5)

Vygotsky also stated that the roots of combinatory imagination can be found in the play of animals, but that only in humans does it reach a high level.

> In all fairness, many authors have pointed out that the roots of such creative combinations can be discovered in the play of animals. The play of animals is very often a product of imagination. In the conditions of animal life, however, these rudiments of creative imagination do not receive any kind of stable and firm development. Only humans have developed these forms of activity up to a high level. (Vygotsky, 1930/1967, p. 8)

In "Imagination and Creativity in Childhood," Vygotsky did not specify what mechanism brings creative imagination up to a higher level. However, if one places the preceding statements within the context of the rest of Vygotsky's writings at that time, the conclusion follows that inner speech is the mechanism that raises imagination, like the other higher mental functions, to a higher level. This interpretation is consistent with Vygotsky's description of the role of inner speech in the regulation of higher mental functions as presented in the *The History of the Development of the Higher Mental Functions*, a book which Vygotsky was also writing in 1930 (see Vygotsky 1931/1960a, pp. 450-451). In his third paper on creativity, "Imagination and its Development in Childhood" (1932/1960b), Vygotsky specifically stated that speech was the mechanism that made imagination a higher mental function:

> Research demonstrates at each step that the path of the development of children's imagination, as well as the development of the other higher mental functions, is through existing forms connected with the speech of the child, with the basic psychological forms of his communication with his surroundings, i.e., with the basic forms of the collective social activity of the child's consciousness. (1932/1960b, pp. 342-343)

When Vygotsky's remarks about the relationship between speech, play, and creative imagination are juxtaposed, a theory emerges in which imagination develops from the collective social activity of children's play. In "Imagination and Creativity in Childhood," Vygotsky went on to state that imagination is linked to reality rather than being in opposition to it.

> In order to understand the psychological mechanism of imagination and the creative activity connected

with it, it is best to begin with the relation between fantasy and reality in human behavior. We already said that the common view that distinguishes between fantasy and reality is incorrect. Now we will attempt to show the characteristics of the basic forms which connect the activity of imagination with reality. This explanation will show that imagination is not an idle mental game, building castles in the air, but a vitally necessary function. (1930/1967, pp. 8-9)

Vygotsky identified two ways in which imagination is directly related to reality. First, imagination relies on elements taken from reality. Second, imagination is a necessary component of any creative activity thus enabling the individual to adapt to reality.

> The first connection between imagination and reality consists in this that any creation of imagination always comes from elements taken from reality and maintained in the previous experience of the individual. It would be a miracle if imagination could create from nothing or if it had another history for its creation besides previous experience. (Vygotsky, 1930/1967. p. 9)

In a later paper, "Imagination and its Development in Childhood" (1932/1960b, pp. 334-347), Vygotsky elaborated on the relationship between imagination and reality. He criticized Freud's concept of primary process thought for perpetuating the concept of imagination as exclusively an elementary, unconscious thought process serving only the pleasure principle. He also criticized Piaget for assuming that the psychoanalytic concept of autistic thinking, which is based on primary process thought, was the original form of thinking. Piaget's concept of egocentric thought as the transitional form between autistic and realistic thinking derives from Freud's concept of primary process thought; and it is heir to the same erroneous assumption that imagination is originally non-realistic thinking.

In regard to the second connection between fantasy and reality, the role of fantasy in creative adaptations to reality, Vygotsky stated that imagination is a necessary condition for survival (1930/1967, p. 6). In this regard, he quoted Ribot as saying that although creativity has often been viewed as the product of an individual's labor, any individual creative "genius" is actually building on the collective labor of other people throughout history.

The entire passage is reproduced below because it is a good example of how Vygotsky integrated concepts from non-Marxist writers that were compatible with Marxist theory but not necessarily a derivative from Marxism. In Vygotsky's words,

> "Any invention," Ribot said, "large or small, prior to its development, was an association in imagination—a construction occurring in the mind by means of new combinations. The vast majority of inventions are done by unknown people, only a few great inventors are known by name. *Imagination always appears as if solitary and does not reveal the influence of different personalities or the collective.* For example, the plough happened at first as a simple piece of wood and changed from this unsophisticated crude tool to what it has become now after a long series of changes in form, described in who knows how many different combinations in imagination. Similarly the match, at first, a crude wooden torch leads us along a series of inventions to electricity. All objects in common life appear, as they say, as crystallizing imagination."
>
> Still it is easy to see that our representation of creativity does not fully coordinate with the scientific concept of this word. The usual representation of creativity is that it is found in several given people, of genius, of talent, who create great artistic works, reach great scientific conclusions or make a technical invention. We willingly recognize and easily see creativity in the activity of Tolstoy,

Edison, Darwin; but it is usually represented to us that in the life of many humans creativity does not exist at all.

Though it is still said, this is not true. An analogy can be made with electricity. Electricity is not only present in a magnificent thunderstorm and dazzling lightning, but also in a lamp; *so also, creativity exists not only where it creates great historical works, but also everywhere human imagination combines, changes, and creates anything new.* Turning our attention to the collective creativity, which unites all these insignificant fragments, comes the realization of what a great part belongs to the collective creative work of unknown inventors.

The vast majority of inventors are unknown as Ribot says. The scientific understanding of this question compels us to look at creativity as a rule rather than an exception. Of course, the higher expression of creativity up to this time has been available only to a few selected geniuses of humanity, but *in everyone surrounding us creativity is a necessary force of existence.* (1930/1967, pp. 5-6)

Later in the same paper, Vygotsky continued with this theme,

Any inventor, even a genius, is always a plant growing in a certain time and environment. His creativity issues from needs, which are given to him. He operates on the possibilities that exist around him. This is because we can see a historical development in technical areas and the sciences. No inventions or scientific discoveries occur before the materials and psychological conditions necessary for their origins....This explains the disproportionate distribution of innovators and creative agents in different classes. Privileged classes give an immeasurably greater percentage of scientific, technical, and artistic inventors, because in these classes the conditions that are necessary for creativity are present....Ribot said, "Usually so much is said about the free flight of imagination, about the omnipotence of genius, that the social conditions are forgotten. It is as if there where no individual creativity; there is always a social coefficient. In this sense no invention is in the strict sense personal, there always remains something in it from anonymous co-workers." (p. 26)

In "Imagination and Creativity in Childhood" (1930/1967), Vygotsky also contrasted the imagination of children with that of adults:

What distinguishes the imagination of the child from that of the adult? And, what is the particular line of development of imagination in childhood? Up to this time there exists an opinion that the child's imagination is greater than the adult's. Childhood is regarded as the time when fantasy in general develops, and according to this view as the child develops, his imagination and the strength of his fantasy diminish....However, this view is not corroborated by a scientific examination of the question. We know that the experience of the child is poorer than the experience of adults. We know, further, that his interests are simple, more elementary, poorer. Finally, his relation to the world does not have the complexity and diversity which distinguishes that of the adult, and which is important in the work of imagination. It is clear from this that the child's imagination is not richer, but poorer than the imagination of an adult; in the process of child development imagination also develops, reaching its maturity only in the adult.

This is why the products of real creative imagination in all areas of creative activity belong only to already matured fantasy. To the degree that adulthood approaches so imagination begins to mature. In the adolescent, at the time of puberty, there arises a powerful imagination and the first beginnings of mature fantasy. Authors writing about imagination assert the close connection between puberty and the development of imagination. It is possible to understand this connection, if attention is directed to the fact that at this time the adolescent's experience matures and is summed up. The so-called constant interests ripen, quickly curtailing the child's interests; and, in connection with the general process of maturing, imagination receives its final form and activity. (Vygotsky, 1930/1967, p. 27-29)

In that same paper Vygotsky also stated,

The child is able to imagine much less than the adult, but he trusts the products of his imagination more and has less control over them; and therefore

> of course, the child has more imagination in the worldly, vulgar sense of the word than the adult. However, the child not only has less material than the adult from which imagination is constructed, but also lacks the combinatory ability that joins together this material; the quality and variety of these are significantly inferior to the combinations of the adult. From all the forms connected with reality that we previously noted, the imagination of the child only shares the first step with that of the adult, namely the elements of reality from which it is constructed. Perhaps the pronounced and real emotional roots of the child's imagination are as strong as in the adult. (1930/1967, p. 29)

In the next passage, Vygotsky introduced Ribot's developmental model of imagination. This became a central theme in his second paper on creativity, "Imagination and Creativity in the Adolescent" (1931/1984).

> In his research on creative imagination Ribot presented a curve, reproduced here [see Figure 1] which symbolically represents the development of imagination through childhood, adolescence, and adulthood, and that interests us now. The basic law of the development of imagination, that this curve represents, is formulated thus: in its development imagination goes through two periods, separated by a critical phase. Curve I-M represents the path of the development of imagination in the first period. It rises sharply and then levels off. Line R-O, the dotted-line, represents the path of the development of intellect or reason. This development, as seen in the diagram, begins later and is slower because it requires a much greater accumulation of experience and is more complex in its cultivation. Only at point M do both lines, imagination and reason, coincide. At the point M, where the two curves of imagination and reason meet line M-N denotes the further development of imagination directed by the line of development of reason X-O. The divergence, which was characteristic of childhood, disappears here and imagination now becomes closely united with thinking.

Ribot says, "Both of these intellectual forms now stand before each other as rivals." The activity of imagination continues "but it has been transformed; it is accommodated to rational conditions, no longer being pure imagination but a mixture." This does not happen in everyone. In many people development takes on another variation, which is symbolized by line M-N_1. Line M-N_1 quickly drops down, signifying the decline of imagination. According to Ribot, "Creative imagination starts to decline—this is the general case. Only the unusually rich, gifted imagination is the exception. The majority of people go little by little to the prosaic side of practical life, conceal the dreams of their youth, consider love a chimera, etc. This, however, is only a regression, but not an elimination, because this creative imagination does not disappear completely, but only happens by chance." (Vygotsky, 1930/1967, pp. 29-30)

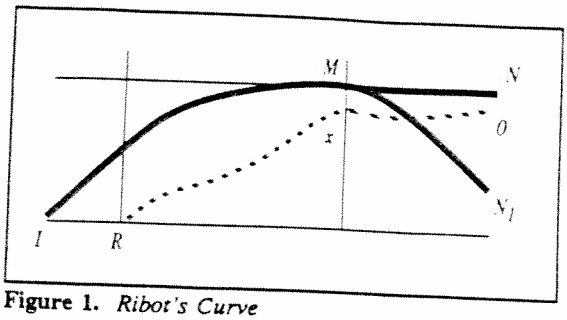

Figure 1. *Ribot's Curve*

Because Vygotsky further integrated Ribot's model into his own theory in his next two papers on creativity (1931/1984, 1932/1960b), relevant passages from these papers are included here to show the development of Vygotsky's thought. In "Imagination and Creativity in the Adolescent" (1931/1984), Vygotsky replaced Ribot's term "reason" with the phrase "thinking in concepts."

> We already said that in the convergence of fantasy and thinking the imagination of the adolescent begins to operate in concepts, and that this constitutes an essential part of adolescence. But this convergence does not mean a complete absorption of fantasy by thinking. Fantasy and the other

> function converge but do not fuse together. (1931/1984, p. 208)

In "Imagination and Creativity in the Adolescent" (1931/1984) Vygotsky cited Ribot's model again; however, he did not provide the diagram which he had previously discussed in "Imagination and Creativity in Childhood" (1930/1967).

> It could be said that the convergence of intellect and imagination is a distinctive characteristic of development in adolescence. These two lines of development, going separately up to this point, meet in adolescence at one point and go further closely interlaced, as T. Ribot says. But namely because of this meeting, this convergence takes place at first only in adolescence and does not carry straight away to a complete merger, to a complete collaboration of both functions. (1931/1984, p. 215)

In his third paper on creativity, "Imagination and its Development in Childhood" (1932/1960b), Vygotsky described the relationship between imagination and thinking in concepts as a psychological system. According to Vygotsky, a psychological system arises when two or more higher mental functions collaborate together on a given task. Thus, during adolescence, imagination has become a higher mental function as a result of the influence of inner speech, and collaborates with thinking in concepts to form a psychological system that organizes creative thinking. In Vygotsky's words:

> For such complex forms of activity, which are beyond the boundaries of these processes, which we have gotten used to calling "functions," the name PSYCHOLOGICAL SYSTEMS could truly be applied, having in view their complex interfunctional connections and relations....Analysis of the activity of imagination in its numerous forms and the analysis of the activity of thought shows that only by approaching these forms of activity as systems do we find it possible to describe the most important changes which happen to them. (1932/1960b, p. 346)

Returning to our discussion of "Imagination and Creativity in Childhood" (1930/1967), Vygotsky also described the tension that arises between the adolescent's increasingly self-critical attitude and the emotional vicissitudes of puberty. This overly critical attitude leads many adolescents to abandon their creative efforts. Also during adolescence, creative imagination is differentiated into *objective* and *subjective fantasy*. Objective fantasy focuses on elements of the external world, and subjective fantasy uses emotional experience as its subject matter. In Vygotsky's words:

> We know that adolescence is characterized by a whole series of related antitheses, oppositions, and polarities. Specifically this is because this age is critical or transitional. At this age there is a disturbance of the child's equilibrium, but the balance of the adult organism is not yet discovered. Here also imagination in this period is characterized by crisis, havoc, and the search for a new equilibrium. In this view, the activity of imagination, as it was manifested in childhood, is curtailed in the adolescent.
>
> It is very easy to note the fact that in the child of this age, like a mass phenomenon or rule, the predilection for drawing disappears. Only the exception continues to draw, for the most part specially talented in this regard, or motivated by external conditions such as special occupations involving drawing, and so on. The child begins to critically relate to his drawings and the child's sketches fail to satisfy; they appear to him too subjective. He comes to the conviction that he does not have to draw and he stops drawing. Such curtailing of children's fantasy we also see in the loss of interest in the naive play of earlier childhood, and in fairy tales and narratives. The duality of the new forms of imagination that are generated now, can be seen easily in the fact that the most widespread and massive form of imaginative activity at this age is literary creativity. It is stimulated by the strong

> rising of subjective experience and the growth and deepening of the intimate life of the adolescent; so that at this time his own internal world is created. But this subjective side strives to be embodied in objective form, in verse, narrative, in those creative forms, that the adolescent takes from the surrounding literature of adults.
>
> The development of this contradictory imagination goes along the line of the further dying off of its subjective features, and along the line of the growth and consolidation of objective features. Usually very soon as a rule, the interest in literary creativity is also curtailed in most adolescents. The adolescent begins to relate critically to writing, just as he had earlier related critically to his drawing. Thus, the rising of imagination and its deeper transformation is what characterizes the critical phase. (1930/1967, pp. 31-32)

Later in "Imagination and Creativity in Childhood," Vygotsky elaborated on the relationship between children's play and the development of artistic, literary, and dramatic creativity. In his words:

> We said earlier that the first form of children's creativity is syncretic creativity, i.e., separate forms of art are not yet differentiated and specialized. Thus, we spoke about the literary syncretism of children, which is not yet divided into poetry and prose, narrative and drama. But in children there exists a still more keen syncretism, namely the unification of different forms of art in one whole activity. Tolstoy described how children compose and depict what they are recounting.
>
> A child also simultaneously talks about what he draws. The child dramatizes and composes the verbal text of his role. This syncretism points to the general root from which all the different forms of children's art differentiate. This general root is children's play, which serves as a preparatory stage of his artistic creativity. However when different, more or less, independent forms of children's creativity (such as drawing and dramatic composition) are separated from this general syncretic play, each form is not completely separate from the others and readily absorbs into itself elements of the other forms. (1930/1967, p. 61)

Vygotsky continued,

> In one characteristic of children's creativity we find a trace of the play from which it arose. The child rarely works on his production long, more often he creates it in one motion. The creativity of the child reminds us of play which arises from acute needs of the child.... The second connection with play consists in this that the basis of children's literary creativity, like play, has not broken off the connection with the personal interests and experience of the child.... In regard to the subjectivity found in children, it was possible to separate two basic types of writing: subjective and objective writing. Both of these sides or traits of children's creativity meet in adolescence because they are a reflection of the crisis which at this time puts creative imagination to the test, by moving from the subjective to the objective type. (1930/1967, p. 62)

The passages from "Imagination and Creativity in Childhood" (1930/1967) were selected because they provide an overview of Vygotsky's theory of creativity, as of that time. In his next paper on creativity, "Imagination and Creativity in the Adolescent" (1931/1984), Vygotsky resumed his discussion of themes introduced in the 1930 paper.

Imagination and Creativity in the Adolescent

"Imagination and Creativity in the Adolescent" (1931/1984) is Chapter 12 of Vygotsky's book *The Pedology of the Adolescent*. The general theme of this book is the development of the higher mental functions, which include imagination, and the differentiation between world view and sense of self during adolescence. Imagination is important in this process because it is during adolescence that imagination differentiates into objective and subjective fantasy. According to Vygotsky, objective fantasy is

necessary for the construction of a world view which constitutes a conceptual model of reality. In Vygotsky's words:

> The false interpretation of fantasy consists in this, that it is regarded as one-sided, as a function connected with emotional life, with the life of impulse and mood. Its other side connected with intellectual life remains in shadow. As A. S. Pushkin so accurately said, imagination is as necessary in geometry as in poetry. Anything that requires the creative reconstruction of reality, anything that is connected with invention and the construction of the new, needs indispensable portions of fantasy. In this sense several authors contrast fantasy as creative imagination with memory as reproductive imagination.

> A new feature in the development of fantasy in adolescence is that the imagination of the adolescent enters into a close connection with thinking in concepts; it is intellectualized. It enters into a system of intellectual activity and begins to play a completely new function in the structure of the adolescent's personality. Ribot (1901) plotting the curve of the imagination of the adolescent showed that the curve of the development of imagination, up to this time going separately from the curve of the development of reasoning, now converges to a final passage parallel to it.

> If we accurately defined the higher development of thinking in the adolescent as a transition from rational to reasoning thinking, if we furthermore accurately defined the intellectualization of functions such as memory, attention, visual thinking, and volitional activity, then with this logical sequence we ought to come to the same conclusion regarding fantasy. Approaching it this way fantasy is not regarded as a primary, independent, or leading function in the development of the adolescent. Its development is a consequence of the function of the formation of concepts, a consequence which concludes and crowns a whole complex process of change, which all the mental life of the adolescent undergoes. (1931/1984, p. 203)

Although Vygotsky acknowledged that even in adulthood imagination retains some concrete features, he also stated that the process of abstract thinking characterized the maturation of imagination.

> As we see further, one of the essential changes that fantasy actually undergoes in adolescence is the release from concrete imagistic features and along with this, the penetration of elements of abstract thinking in fantasy....We already said that in the convergence of fantasy and thinking the imagination of the adolescent begins to operate in concepts, and that this constitutes an essential part of adolescence. But this convergence does not mean a complete absorption of fantasy by thinking. Fantasy and the other function converge but do not fuse together. (1931/1984, p. 208)

According to Vygotsky, the mental image serves that same role in imagination that playthings have in children's pretend play. In "The Prehistory of Written Language" (1928-1929/1935) Vygotsky described how a plaything, such as a stick, acts as a pivot for separating meaning from an object, such as a horse. In "Imagination and Creativity in the Adolescent" (1931/1984), Vygotsky described how the mental image functions in a similar way in imaginative activities. In Vygotsky's words:

> Imagination in adolescence is, from the developmental point of view, the successor of children's play. In spite of all their excitement, children can easily distinguish the world created by them in play from the real world; and, willingly look for support for imaginary objects and relations in the tangible objects of real life. The growing child ceases to play. He replaces play with imagination. When the child ceases to play he gives up the search for support in real objects. Instead of play he now fantasizes. He builds castles in the air; he creates daydreams.

> It is understandable that fantasy being the successor of children's play and only recently broken away from the supports which it found in the tangible and concrete objects of real life, so willingly searches for support in the concrete representations which replace these objects. Images, eidetic pictures, and

> visual representation begin to play the same role in imagination that a doll representing a child, or a stool representing a locomotive, fulfill in children's play. From here the efforts of adolescent fantasy are limited by concrete sensory material, thus the tendency toward imagery and visualization. It is significant that visualization and imagery have completely changed their function. They have ceased to be supports of memory and thinking, and have crossed over into the sphere of fantasy. (1931/1984, pp. 208-209)

Vygotsky's statement that the child's dependence on the tangible objects of play is replaced by the adolescent's dependence on visual images, suggests that sensorimotor manipulations of objects have been internalized as mental manipulations on images of objects. Thus, imagination is the internalization of children's play.

According to Vygotsky, during the development of imagination as a higher mental function, visual thinking is partly changed through the influence of abstract thinking.

> There is still a close connection of the fantasy of the adolescent to the concrete support that it finds in sensory representation. In this sense the developmental fate of visual or concrete thinking is especially interesting. Visual thinking does not disappear from the intellectual life of the adolescent in proportion to the appearance of abstract thinking. It only moves aside to another place, going to the sphere of fantasy, partly changing under the influence of abstract thinking and rising up like any other function top a higher level. (1931/1984, p. 210)

Thus, although imagination becomes more abstract and more objective during adolescence, it is not yet fully matured. It is not until adulthood that one becomes proficient at coordinating the iconic and conceptual, and subjective and objective, aspects of thinking in the production of creative works.

What is the essential difference between the fantasy of the adolescent and the fantasy of the child? What new features arise?

> We already showed the essential difference when we noted that children's play develops into the fantasy of the adolescent. In this way, in spite of its concreteness and realism, the imagination of the adolescent differs from children's play in this, that imagination is connected with realistic subjects. At the same time it remains concrete but less visual than in the child. We should also note the progressive abstraction of the fantasy of the adolescent.
>
> There exists a widespread opinion that the child possesses a great fantasy and that the time of early childhood is the blossoming of fantasy. In spite of its prevalence this opinion is wrong. As W. Wundt correctly said, the fantasy of the child is not at all as extensive as people like to think; the whole day is filled up with thinking about the horse that pulls the cart. With the imagining of this scene very little diverges from reality.
>
> In the adult a similar activity would signify the absolute lack of fantasy. The lively fantasy of the child depends on the richness of representations but has its roots in the greater intensity and excitability of his feelings. Wundt concluded that the child doesn't have a systematic fantasy at all. It can be contended that the child's fantasy is significantly poorer than that of the adolescent. The child's fantasy seems to us to be richer and stronger because of the greater excitability of feeling, the intensiveness of experience, and uncritical judgement. We see that the more abstract fantasy of the adolescent does not become poorer but becomes richer than children's fantasy.
>
> Wundt is right when he points out the extraordinary poverty of creative features in children's fantasy. The fantasy of the adolescent is more creative than the fantasy of the child. Buhler is also right when she asserts that the fantasy of the adolescent is not productive in the sense in which we use this word applied to the imagination of adults. One fact of later origins, artistic creativity, demonstrates this. (1931/1984, p. 214)

Vygotsky continued:

> We are not in opposition to the two assertions that were just cited. The fantasy of the adolescent is more creative in comparison with the child's fantasy but it is not productive in comparison with the fantasy of the adult. This happens because the creative feature only becomes a characteristic of fantasy in adolescence. From this it is understandable that this creativity has a rudimentary form and still is not an extensive creativity. The fantasy of the adolescent is closely connected, as Buhler said, with the new needs arising in adolescence due to which the images are limited and acquire emotional tone. Thus the adolescent creates fantasy. (1931/1984, pp. 214-215)

> It could be said that the convergence of intellect and imagination is a distinctive characteristic of development in adolescence. These two lines of development, going separately up to this point, meet in adolescence at one point and go further closely interlaced, as T. Ribot says. But namely because of this meeting, this convergence takes place at first only in adolescence and does not carry straight away to a complete merger, to a complete collaboration of both functions, and thus arises the estrangement of thinking and imagination that Buhler speaks about.... The most important change in the imagination of the adolescent is its convergence with thinking in concepts. *Like the other functions which we spoke about in the previous chapter, the imagination of the adolescent essentially changes and is reconstructed on a new basis under the influence of thinking in concepts.* (1931/1984, p. 215)

It is clear from the preceding statements that Vygotsky included imagination among the higher mental functions. One may wonder why Vygotsky emphasized "thinking in concepts" rather than "inner speech" as the mechanism that changes imagination into a higher mental function. This question is answered by the next passage, in which Vygotsky discussed the importance of speech in the development of thinking in concepts, and therefore in the development of imagination.

The internal dependence of imagination on thinking in concepts was illustrated in the examples of the behavior of aphasics in the first part of this chapter. *Together with the loss of speech as a means of forming concepts, imagination also disappears.* Particularly interesting is the following: we observe very often that aphasics have an inability to use and interpret metaphors, words with figurative meaning. The school age child still has great difficulty matching a proverb with a phrase having the same meaning. It is extraordinary that in the aphasic there begins a similar confusion. An older aphasic from our studies could not perceive any kind of symbolic expression at all. When they asked him what it means when it is said about a person "He has a golden hand," he answered "This means that he is able to smelt gold." The patient usually found expressions with figurative meanings to be absurd. He is unable to understand metaphor. Bringing together a proverb, or other allegorical expression, with a phrase expressing the same thought in direct form proves impossible for him.

Together with the disappearance of thinking in concepts, imagination also falls to the zero point. Imagination is also conceptual. We saw that the zero point of imagination, the absolute absence of fantasy appears in the following way: the individual is in a state where he is unable to abstract himself from a concrete situation, unable to change it creatively, to re-group signs to free one's self from under its influence.

Just so in the present examples we see, that as the aphasic is unable to free himself from the literal meaning of a word, so too he is unable to creatively unite different concrete situations with a new phrase. For in order to do this, freedom from concrete situations is necessary, but this freedom, as we saw earlier, is given only through thinking in concepts. In this way, thinking in concepts is a major factor related to creative fantasy in adolescence. *However, it would be a mistake to think that fantasy through its convergence with abstract thinking loses its visual character. Specifically, in the original alignment of abstract and concrete features, we see the major basis of fantasy in adolescence.* This can be explained thus, purely concrete thinking devoid of concepts is a thinking devoid also of fantasy. The formation of concepts at first brings with it a release from concrete situa-

tions and the possibility of the creative reworking and changing of its elements. (1931/1984, p. 216)

In the next passage, we can see Vygotsky's use of the concepts of internalization and externalization in his description of the movement of creative imagination from the concrete through the abstract and then back to the reconstructed concrete.

> Imagination does not stop its development with these features. Abstraction is for it only an intermediate link, only an episode on the path of development, only a turning point in its movement toward the concrete. Imagination, in our perspective, is a transforming, creative activity directed from the concrete toward the new concrete. Such a movement from the given concrete to the created concrete, such an accomplishment of creative construction, is possible only with the help of the abstract. *In this way, abstraction is a necessary feature in the activity of fantasy, but does not stand at the center of its activity. The movement from the concrete across the abstract to the construction of new concrete images is the path of imagination in adolescence.* In this regard, E. Lindvorsky demonstrates a series of features distinguishing fantasy from thinking. In his opinion, the relative novelty of the created results distinguishes fantasy. We think that it is not the novelty itself but the novelty of the concrete images arising as a result of the activity of fantasy, the novelty of the personified idea, that distinguishes this activity. In this sense, in our opinion, the definition of B. Erdman is correct, when he says that fantasy creates images of unperceived objects. (1931/1984, p. 216)

In the next passage Vygotsky resumed themes introduced in his first paper on creativity in 1930, "Imagination and Creativity in Childhood."

> Creative characteristics, personified in the concrete construction of a new image is what characterizes fantasy. *Its completed features are concrete but this concreteness is achieved only with the help of the abstract.* The fantasy of the adolescent moves from concrete visual images, across concepts, to imaginative form. In this regard, we can agree with Lindvorsky who sees the distinction between fantasy and thinking as being the absence of a defining problem in the activity of fantasy. He correctly makes a reservation that the absence of defining task should not be confused with involuntariness in fantasy. He shows that the activity of fantasy takes part in the influence of will at significant steps in the development of representation. *Namely, we think adolescence is characterized by a move from the passive and imitative character of the child's fantasy to the active and volitional fantasy distinctive of the adolescent*, as Meuman and other researchers have noted.
>
> *We think an essential characteristic of fantasy in adolescence is its separation into subjective and objective imagination. Strictly speaking fantasy first arises in adolescence.* We agree with Wundt's assertion that in the child, in general, there is no systematic fantasy. This is true in the sense that only the adolescent begins to select and recognize directed forms as a basic function. In the child there still does not exist a strictly defined function of imagination. The adolescent recognizes his own subjective fantasy as being either subjective or objective fantasy collaborating with thinking. He also recognizes that this is a real turning point.
>
> *As we have already said, the separation of subjective and objective features, and, the formation of the zones of personality and of world view, characterizes adolescence.* This same separation of subjective and objective features also characterizes the fantasy of the adolescent.
>
> Fantasy apparently divides on two paths. On the one hand, it comes to serve emotional life; the needs, moods, and feelings that are overwhelming the adolescent. It is a subjective activity reminiscent of children's play. As the psychologists we quoted earlier correctly said, the adolescent doesn't fantasize when he is unhappy but rather when he is unsatisfied. The unsatisfied wish is the initiating stimulus of fantasy. Our fantasy, the achievement of the wish, is an amendment to the unsatisfying reality. (1931/1984, pp. 216-217)

Vygotsky continued:

> In fantasy the adolescent finds also a lively means of directing his emotional life, of possessing it. In

a similar way, an adult by perceiving artistic works, let us say lyrical verse, overcomes personal feelings just like the adolescent who with the help of fantasy clarifies and explains his emotions and impulses to himself by embodying them in creative images.

In this way we can say that creative imagery, the creative fantasies of the adolescent, comprise for him the same function that artistic works have for adults. This is art for one's self. This is composing in the mind for one's self poems and novels; being carried away by drama and tragedy; putting down eulogies and sonnets. In this Spranger is correct when he contrasts the fantasy of the adolescent with the fantasy of the child. He says that though the adolescent is still half a child, his fantasy is more like an adult's than a child's. It gradually approaches the conscious illusions of the adult. Spranger formally says that the difference between adolescents' and children's fantasies is that the fantasy of the child is a dialogue with things, the fantasy of the adolescent is a monologue with things. The child does not yet distinguish his fantasy from the things which he plays with.

People with this course of fantasy operate primarily in the emotional sphere of the adolescent; but the adolescent's fantasy also develops along another path, that of objective creativity. *We already said that when in the process of understanding, or in the process of practical activity, something new is necessary, perhaps a concrete construction or a new image of reality or the creation of a new idea, then fantasy appears on the first level as a basic function. With the help of fantasy not only artistic works are created, but also all scientific inventions and all technical constructions.* Fantasy is one of the manifestations of human creative activity, and specifically in adolescence converging with thinking in concepts it receives a broad development in this objective sphere.

It would not be correct to think that both paths in the development of fantasy in adolescence are sharply separate from one another. On the contrary, like the concrete and abstract features, so too the subjective and objective functions of fantasy meet often in adolescence in a complex interlacing of one with the other. Objective expression is tinged with vivid emotional tones, and also subjective fantasy is often observed in the area of objective creativity. In regard to the converging of the two lines of the development of fantasy we can show that in fantasy the adolescent first discovers his experiential life. His achievements and efforts are distinguished in the form of defining images. In fantasy he anticipates his future and moves nearer to its construction and realization. (1931/1984, pp. 218-219)

Vygotsky concluded "Imagination and Creativity in the Adolescent" with the following statement.

We can close the circle of our reasoning in this, which leads us to adolescent psychology. We began with the consideration of the most serious change which begins along with adolescence. We established that on the basis of puberty arises a new and complex world of new impulses, aspirations, motives, and interests, and a new motivating force of behavior and a new direction. The new driving forces at first push the thinking of the adolescent as these new problems open up before him.

We saw further how these problems lead to the development of the central and leading function of all mental development, to the formation of concepts; and, how on the basis of the formation of concepts arises a series of completely new mental functions; how perception, memory, attention, and the practical activity of the adolescent are reconstructed on this new basis; how they are united in a new structure; how gradually the foundation of the higher synthesis of personality and world view is laid. Now with the analysis of imagination we see how these forms of behavior, bound by their origin in puberty and connected with its impulses, begin in the service of the adolescent's emotional efforts; how in creative imagination they find a complex synthesis of the emotional and intellectual sides of adolescent behavior; how in creative imagination they are a synthesis of abstract and concrete features; how impulse and thinking are complexly combined in a new activity, in the activity of creative imagination. (1931/1984, p. 219)

Imagination and its Development in Childhood

Vygotsky's third paper on creativity, "Imagination and its Development in Childhood" (1932/1960b), was one of of six lectures that he delivered in 1932 on the development of higher mental functions. The other five lectures were on the development of perception, memory, emotions, thinking, and will. In "Imagination and its Development in Childhood" (1932/1960b), Vygotsky expanded upon themes from his two earlier papers on creativity (1930/1967, 1931/1984).

He now included the theories of Freud and Piaget among those which erroneously assumed that fantasy and conceptual thought were inevitably opposing mental functions. According to Vygotsky, both Freud and Piaget regard imagination as "an activity not serving an awareness of reality but rather the receiving of pleasure, as an activity of a non-social, uncommunicable character" (1932/1960b, p. 338). This is basically a description of Freud's concept of primary process thought, which creates the dream-work and all other forms of fantasy (Freud, 1900/1965). This description also fits Piaget's concept of egocentric thought, and thus is based on the psychoanalytic concept of autistic thinking which is characterized by primary process thought. According to Piaget egocentric thought is a transitional stage between autistic thinking and realistic thinking (Piaget, 1923/1973, p. 65).

Vygotsky, on the other hand, proposed that imagination originates in social activity and matures into a consciously directed thought process as a result of the influence of inner speech, formal schooling, and thinking in concepts. According to Vygotsky, mature creative imagination functions as a consciously directed thought process that works in collaboration with thinking in concepts. In Vygotsky's words:

> Factual research not only does not confirm the fact that children's imagination is a form of wordless action, not directed by thought; but to the contrary, research demonstrates at each step that the path of the development of children's imagination, as well as the development of the other higher mental functions, is through existing forms connected with the speech of the child, with the basic psychological forms of his communication with his surroundings, i.e., with the basic forms of the collective social activity of the child's consciousness. (1932/1960b, p. 343)

Taken together with Vygotsky's earlier statements that imagination develops from children's play (1930/1967, pp. 7 & 62; 1931/1984, pp. 208-209) this last quotation supports the interpretation that Vygotsky's theory proposes that pretend play originates in social interactions. It is also clear from this quotation that Vygotsky regarded imagination as one of the higher mental functions.

In the next passage, Vygotsky described the three factors—speech, formal schooling, and thinking in concepts—that influence the development of imagination.

> *Speech frees the child from immediate impressions;* it assists the formation of his representation about a topic; it gives to the child the ability to represent to himself a subject that he does not see, and also the ability to think about this subject.
>
> With the help of speech the child receives the ability to free himself from the power of immediate impressions, thus going beyond their limits. The child can express with words that which does not coincide with the exact composition of real objects or corresponding representations. This gives the child an ability of extraordinary freedom to move in the sphere of impressions designated by words.
>
> Further research demonstrates that not only speech, but also other steps in the life of the child serve the

> development of imagination. *Such a role is played by school, where the child is able to think laboriously in imaginary forms prior to making something.* This undoubtedly lies at the basis of the fact that the first forms of day-dreaming, in the strict sense of the word, emerge during school age; i.e., the ability to more or less consciously produce mental constructions independently from the functions which connect them with realistic thinking. Finally, the formation of concepts which signifies the approach of adolescence, is a particularly important factor in the development of these early forms of complex composition, unifications, and connections which are positioned between the elements of experience in the conceptual thought of the adolescent. Sometimes it is said we see that, not only the appearance of speech, but also the most important stages in the development of speech are at the same time the stages in the development of children's imagination. (1932/1960b, pp. 342-343)

Vygotsky then reiterated his earlier statement (1930/1967, p. 5) that imagination is one of the basic functions in the creative activity of consciousness, including all artistic, scientific, and technical works.

> If at last, we turn to the so-called constructive imagination of the child, to all the creative activities of consciousness which are connected with realistic formulations, let us say, with technical constructive or building activities, we see here and everywhere how the inventor's imagination is one of the basic functions with the help of which he works; and also that in all cases the activity of fantasy is directed from the beginning to the end toward a specific goal, which the individual pursues....Based upon proven facts it is necessary for us to consider that all the basic features, which are advanced in the definition of the originality of children's imagination and its primacy, after rigorous checking, do not stand up to criticism and are demonstrated as incorrect. (1932/1960b, pp. 343-344)

Even though Vygotsky viewed imagination as developing into a higher mental function, he still acknowledged that imagination can be accompanied by strong emotions. However, he argued that this is not a characteristic unique to imagination, for even realistic thought can be accompanied by strong emotions. Vygotsky wrote:

> I would like to address the question of the emotional side of imagination...the combination with emotional features is not the exclusive basis of imagination, and imagination does not exhaust this form....The realistic thought of an individual, when it is connected with an important task for an individual, calls to life a whole series of emotional experiences by far of a more significant and genuine character than imagination and dreaming. If we take the realistic thought of the revolutionary, thinking about or studying some kind of complex political situation, we see that emotions connected with realistic thought are very often immeasurably deeper, stronger, and more significant than emotions which are connected with dreams....If we take the form of imagination which is connected with invention and the influencing of reality, then we see that here the activity of imagination does not serve the subjective caprice of emotion. (1932/1960b, pp. 345-346)

According to Vygotsky, the particular interaction of imagination, thinking, and emotions during creative thought is best regarded as a psychological system (1932/1960b, p. 346). Consider again the quotation (on page 56 of this article) from Vygotsky (1932/1960b).

Vygotsky finished by stating:

> In conclusion, please let me dwell on several deductions from what we have considered up to this time. First of all, it appears to me, that they touch on this, whether there really exists such an irreconcilable antagonism between the direction of realistic thought and dreaming, fantasy, and autistic thought. If we consider the verbal character of thought we see that it is possible for it to be equally inherent in both imagination and realistic thought. If we take so- called directive or conscious thought, i.e., motives or goals, we see that autistic as well as realistic thought can be equally directed processes. It should be possible to show the reverse, that in the process of realistic thought an individual may not

recognize until the very end his true motive, goal, or task. Finally, if we take the connection of both processes—imagination and thought—with affective features, the role of emotional processes in thought, we see that, like imagination, realistic thought can also have features of the highest emotionalism and that there is not an opposition between them. On the other hand, we see that there is a sphere of imagination which by itself is not at all under the command of the logic of emotions, the logic of feelings. Sometimes it can be said we see that all this touches on a metaphysical opposition which stands between realistic and autistic thought, which in fact is a fiction or error; deeper study leads to the conclusion that this matter of opposition is not by any means absolute but has only a relative meaning.

Together with all this, we still observe particularly important features which characterize the most interesting relationsh.ps between thought and imagination on the positive side and not just on the negative side.

These two features are the following. On the one hand, we note an extraordinary connection between the processes of thought and imagination. We see that both of these processes reveal their basic progress in one or another developmental features. *Just as in the development of children's thought, so to in the development of imagination a turning point coincides with the appearance of speech.* School age is a turning point in the development of realistic and autistic thought in children. Sometimes it is said that we see that logical thought and autistic thought develop in a particularly close interconnection. More thorough analysis should lead us to a a bolder formulation; we could say that both of them develop in unity, that is in essence saying that an independent life in the development of one or the other we do not see at all. Moreover, observing those forms of imagination which are connected with creativity, directed toward reality, we see that the border between realistic thought and imagination fades; that *imagination is a completely necessary, integral feature of realistic thought.*

Here arises a paradox. A true understanding of reality is not possible without a certain element of imagination, without a departure from reality, from those immediate concrete holistic impressions by means of which reality is represented in the elementary acts of our consciousness. Let us take for example the problem of invention, the problem of artistic creativity; here you see that the solution of a problem in large measure demands the participation of realistic thinking in the process of imagination, that they act in unity.

However, it would be completely wrong to identify one with the other or not see the real opposition which exists between them. Imagination is not more emotional, not a lower level of consciousness, and not less or more concrete; these characteristics also appear in distinct stages in the development of thinking. Essential for the development of imagination is the direction of consciousness, consisting in the movement from reality toward certain relatively autonomous activities of consciousness, which are distinguishable from the immediate knowledge of reality. Attired in forms that are constructed in the process of immediate knowledge of reality, the individual constructs a series of forms that are recognized as an area constructed by imagination. At a higher level in the development of thinking, there occurs the construction of images that we do not find in prepared forms in the surrounding reality. From here arises the idea that there is a complex relationship between realistic thinking and the activity of imagination in its highest forms, and at all stages in its development. Each step in the mastery of this deeper insight into reality is achieved by the child simultaneously with this, that the child to a certain extent is freed from the more primitive forms of knowledge of reality that were known to him before.

Any deeper insights into reality demand a freer relationship between consciousness and elements of reality, departing from the visible outer side of reality that is an immediate given in primitive perception. It demands more complex processes with the help of which knowledge of reality becomes more complex and vivid.

I wish in conclusion to say that the internal connections existing between imagination and realistic thought pose a new problem that is closely connected to the problem of arbitrariness or freedom in human activity, in the activity of consciousness. The possibility of free action, that arises in human consciousness, is closely connected with imagination, i.e., with a distinct state of consciousness asso-

ciated with reality that becomes possible thanks to the activity of imagination.

These three major problems of psychology, in particular of child psychology, are tied together in one knot. They are the problem of thought, the problem of imagination, and the problem of will. The problem of will is introduced in the next lecture. (1932/1960b, pp. 348-349)

Conclusion

Although Vygotsky's writings on the development of creative imagination have been overlooked for several decades, they offer many intriguing suggestions for contemporary research on creativity. For example, the possibility that creative imagination develops into a higher thought process that can be consciously regulated by means of internalized speech can be investigated with empirical research. The possible origins of creative imagination in object substitutions during pretend play can also be investigated (see Smolucha, 1992). These are just two hypotheses that can be derived from Vygotsky's theory of creativity; there are many more that are suggested by Vygotsky's life span developmental model of creativity. Ultimately the important thing is not whether or not Vygotsky's theory is correct but the usefulness of the research findings stimulated by his theory. However, if Vygotsky is correct, and it is possible to teach people to develop creative thinking through object substitutions in play, the internalization of speech, formal schooling, and thinking in concepts, then many more people may learn how to maximize their creative potential.

REFERENCES

Freud, S. (1965). *The interpretation of dreams.* J. Strachey (Ed. & Trans.). New York: Avon Books. (Original work published 1900)

Piaget, J. (1973). *The language and thought of the child.* New York: World. (Original work published 1923)

Smolucha, F. (1992). The relevance of Vygotsky's theory of creative imagination for contemporary research on play. *Creativity Research Journal, 5,* 69-76.

Smolucha, L., & Smolucha, F. (1986). L. S. Vygotsky's theory of creative imagination. *Siegener Periodicum Internationalen Empirischen Literaturwissenschaft, 5,* 299-308.

Vygotsky, L. S. (1935). Predistoria pesmennoy rechi [The prehistory of written language]. In *The mental development of children during education* (pp. 73-95). Moscow/Leningrad: Uchpedgiz. (Original work written 1928-1929)

Vygotsky, L. S. (1960a). Istoriya razvitiya vysshkih psikhicheskikh funktsii [The history of the development of higher mental functions]. In *Razvitie vysshkih psikhicheskikh funktsii* [The development of higher mental functions]. Moscow: Izdatel'stvo Akademii Pedagogicheskikh Nauk RSFSR. (Original work published 1931)

Vygotsky, L. S. (1960b). Voabraszeniye i yeva razvitie v destkom vozraste [Imagination and its development in childhood]. In *Razvitie vysshkih psikhicheskikh funkstii* [The development of higher mental functions] (pp. 327-362). Moscow: Izdatel'stvo Akademii Pedagogicheskikh Nauk RSFSR. (Originally a lecture presented in 1932)

Vygotsky, L. S. (1967). *Voabraszeniye i tvorchestvo v destkom vosraste* [Imagination and creativity in childhood]. Moscow: Prosvescheniye. (Original work published 1930)

Vygotsky, L. S. (1978). The prehistory of written language. In M. Cole, V. John-Steiner, S. Scribner, & E. Souberman (Eds.), *Mind in society* (pp. 105-119). Cambridge, MA: Harvard University Press. (Original work written 1928-1929)

Vygotsky, L. S. (1979). Consciousness as a problem in the psychology of behavior. *Soviet Psychology, 17*(4), 3-35. (Original work written 1925)

Vygotsky, L. S. (1984). Voabraszeniye i tvorchestvo v podrostka [Imagination and creativity in the adolescent]. In *Collected works of L. S. Vygotsky* (Vol. 4, pp. 199-219). Moscow: Izdatel'stvo Pedagogika. (Original work published 1931)

Vygotsky, L. S. (1990). Imagination and creativity in childhood. *Soviet Psychology, 28*(1), 84-96. (Original work written 1930)