

Philosophical Influences in Developmental Psychology: Vygotsky, Piaget and the Question of Normativity

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Recent work in psychology has given particular attention to normativity arguing that developmental psychology ignores the role of norms in human cognition to its cost (Smith and Voneche, 2006). Traditional empiricism has been unable to do justice to the normativity of concept use and to its role in human awareness (McDowell, 1994; Brandom, 1996, 2000). But now development psychologists are to give normativity due recognition (Smith and Voneche, 2006).

In this paper I will use Donaldson's and Hughes' reproduction of the classic experiment (the three mountain task) designed by Piaget and Inhelder, in tandem with a particular reading of Piaget, to bring to light the distinctive philosophical underpinnings of Vygotsky's work and their relation to contemporary work on normativity. I will suggest that findings resulting from Donaldson's and Hughes' 'hide and seek' task, when interpreted in relation to normativity, have significant implications for education.

While comparisons between Vygotsky and Piaget are frequently made from the point of view of psychology, here attention is directed to the less well aired but no less important, philosophic differences between them. This paper will put these differences in context with reference to ideas of Spinoza and Hegel relevant to Vygotsky's conception of mind and world and its differences from that of Piaget. Both thinkers were fully aware of the philosophical context of their work. Brockmeier, who has pointed out how 'Piaget never lost sight of the philosophical dimension of psychology', comments on Piaget's retreat from the metaphysical issues of his youth (Bergsonian) and '...the emergence...of the omnipresence of reference to Kant (Brockmeier, 1996, p. 125). Bronckart explains that for Piaget 'the main issue...is nothing other than the construction of the categories of understanding in *The Critique of Pure Reason*' (Bronckart, 1996, pp. 92-93). Similarly, Vygotsky's debt to Hegel and Spinoza is fully recognised (Van der Veer and Valsiner, 1993, Kozulin, 1990). Crediting Spinoza, Vygotsky remarks; 'My intellect has been shaped under the sign of Spinoza's words' (Vygotsky, 1925/1971).

The argument here is that certain characteristics of the Piaget's three mountains task can be understood as a reflection of a presumed Kantian framework which contains the following elements: opposition as distinct and separate; the separation of different processes from one another and the supposition of an individual, mentalist model of development. This argument involves a particular reading of both Kant and Piaget, focussed on the early Piaget. The purpose is not to deny the existence of reference to norms in Piaget's work but it is a specific stance on the nature of normativity that is of interest here. The complexity of the nature of normativity is recognised and is still being worked out. The area covered by the topic is broad with work on normativity ranging from enquiries into moral norms, at a macro level (Korsgaard, 1996), to considerations of the distinctive nature of human awareness and

of responsiveness to reasons, at a micro level (Brandom, 2000). My concern here is not moral norms but norms in play at the level of awareness.

Attention to the role of normativity at the level of awareness has been given prominence in recent years by Brandom's work. Brandom argues that humans stand apart from animals and machines in that they respond to reasons as well as to causes.

He claims the representationalist paradigm, that is that awareness is understood in representational terms, has reigned supreme since Descartes. Countering this paradigm, he argues that to understand ourselves as knowers we need to reverse the conventional order of explanation which prioritises representation over inference. We should instead understand conceptual awareness in inferential terms i.e. in terms of the network of inferential relations (what is a reason for what) that constitute concepts in the first place. Brandom credits Hegel for inspiring his project. Both locate conscious awareness in social practices thus allowing for an account of the origin of cognition in sociogenesis.

Both Piaget and Vygotsky held to a form of genetic epistemology. Piaget, of course was responsible for establishing the phrase and for arguing that the study of psychogenesis should be an indispensable part of epistemological analysis. Epistemological analysis from the perspective of genetic epistemology concentrates on the practical aspects of concept formation rather than on conceptual analysis. But Vygotsky placed social interaction at the centre on his work and his emphasis on sociogenesis contrasted with Piaget's structuralist approach which viewed cognition as arising from the interaction between individual and environment. For Piaget the Kantian idea of receptivity is pivotal, receptivity being the idea that at one level a form of knowing arises merely by the mind interacting with the world. For Vygotsky who rejected the stark dualism of mind and world, all knowing (concept acquisition), occurs in a context/frame (the space of reasons) which is part of the world that humans inhabit, a world made significant by human activities. This includes both learning at the level of what Kant has called receptivity and at a deeper level where a more conscious construction takes place.

The question of how a child develops their cognitive faculties was of central interest to both psychologists. For Piaget the child operates according to her own logic in contrast to that of the adult. Piaget's experiments demonstrate stark differences in the mode of thought of pre-school children and Piaget discerns clear stages in their development. Of particular interest to Vygotsky was Piaget's account of children's egocentrism, a lack of ability to distinguish a perspective different from their own. (Piaget (1962) describes cognitive egocentrism as 'unconscious preferential focusing, or lack of differentiation of viewpoints'). Vygotsky discussed this aspect of Piaget's work and criticised him on a number of points but most specifically on his failure to recognise that 'the empirical laws and regularities [he] established in connection with the child's logic apply only within the domain of the child's unsystematised thought. They apply only to concepts taken outside of any system' (Vygotsky, 1987, p. 192). For Vygotsky the systemic nature of concepts play a significant role in the development of thought. It is the systemic nature of what he termed 'scientific' or academic concepts that led Vygotsky to place importance on instruction as leading development in contrast to the importance placed on activity by Piaget.

Vygotsky also took issue with the way that 'Piaget represents the child's mental development as a process where the characteristics of the child's thought die out' and he went on to explain that for Piaget:

The developmental process is not represented as the continual emergence of new characteristics of thought of higher, more complex and more developed forms of thought on the foundations of more elementary and primary forms of thought. Rather development is portrayed as a process through which one form of thought is gradually and continually being forced out by another (p. 175).

And he continued:

What is new to development arises from without. The child's characteristics have no constructive, positive, progressive or formative role in the history of his mental development ... it became clear that the relationship between instruction and development is presented as one of antagonism in the process of formation of the child's concepts...the child's thinking is placed in opposition to the adult's thought. One does not arise from the other; one excludes the other ... One must be done away with so that the other can take its place (ibid.).

Vygotsky's Hegelianism made him see the emergence of new forms of thought as inextricably connected with previous ones and his sense of the word opposition was different to that of Piaget. When Vygotsky wrote of 'opposition' he drew from the Hegelian tradition where the concept (*Aufhebung*) has a more complex meaning than distinct elements clashing as externalities. Inwood explains that Hegel uses the term *Aufhebung* in all three senses of its meaning at once—'to raise, to hold, lift up'; 'to annul, abolish, destroy, cancel, suspend' and 'to keep, save, preserve' (Inwood, 1995, p. 283). According to Inwood, '*Aufhebung* is similar to determinate [negation] that has a positive result. What results from the sublation of something, e.g. the whole in which both it and its opposite survives as moments, is invariably higher than, or the [truth] of, the item(s) sublated' (p. 284).

For Vygotsky, the development of scientific concepts is not one of separation, but of the *repositioning* that arises when a child uses a word for a different purpose and as a result, in a new sense. However as the old meaning is retained in the new, the new is therefore not entirely novel. Consequently what is involved is not only a merely different understanding of a new concept, but also crucially a new element of conscious awareness—an ability to act in the world in a new way. Vygotsky drew from Shif's research that showed that there is a higher level of conscious awareness in the use of scientific than in the use of everyday ones. In the child the weakness of the everyday concept is the child's inability to operate with it in a voluntary manner, its strength is its saturation with the immediate perceptual experience. For instance the concept *brother* can be used appropriately as a term of reference, but the child may not automatically be in a position to understand it as part of a system of other concepts which give it meaning. According to Vygotsky: 'The child formulates Archimedes' law better than he formulates his definition of what a brother is' (Vygotsky, 1987, p. 178). In this example Vygotsky argues that the concept *brother* and the concepts involved in Archimedes' law are learnt in different ways. The concept *brother* has already completed much of its developmental path and is saturated with the child's rich personal experience before the child has need to use the term in a scientific way (by defining it). In the case of Archimedes' law, the concept

has barely begun such saturation with content when the teacher starts to introduce it as a scientific concept.

The distinction between Vygotsky's and Piaget's notion of different kinds of concepts parallels the distinction between their philosophical approaches to the relation of theory to practice or of rationalism to empiricism. As already noted according to Vygotsky, Piaget separated the different kinds of concepts more starkly than himself. For him they have a much greater degree of co-dependence.

Piaget's Kantianism has quite different educational implications from the Hegelianism of Vygotsky. Moreover Kant's elaboration of the process of how knowledge is possible leaves terms separate and unrelated. Faculties of mind are distinguished in order to comprehend their different functions in thought. According to Kant these faculties are spontaneity and receptivity, concept and intuition. Each in its own turn explains a different mode in which knowing arises and distinguishes conscious knowing in the case of spontaneity from the passive reception of information in the case of receptivity.

An issue at the heart of the discussion of scientific and everyday (spontaneous) concepts is the way in which concepts (words) are understood. The creation of scientific concepts i.e. their systematicity, plays a direct role in the formation and development of spontaneous concepts since spontaneous concepts are deployed in an already existing space of reasons and not formed in a void. Van der Veer notes that when Vygotsky speaks of everyday/spontaneous concepts he understands a child being inducted into usage by an adult. The adult draws on a different conceptual structure and positioning from that of the child. Thus while the child may have his own relation within a 'space of reasons' in which to use the concept and within which the concept has meaning for him, he is drawing on a term that has meanings and locations of which he is not yet aware. Consequently, he moves within a domain (a space of reasons) that is not yet fully his own.

A 'historical' approach is evident throughout Vygotsky's writing. In his discussion of scientific concepts he criticises the view that scientific concepts may be learnt in a completed form, and emphasises that in such a view '*scientific concepts do not have their own internal history*' (p. 169). He notes that the development of scientific concepts is not accomplished simply by teaching them to the child and by the child's learning of them. He argues from research that it is known that the concept is not just a set of associative connections but a '*complex and true act of thinking*' (ibid.). Although educational research may take account of this point, it is difficult to avoid (particularly in the practice of teaching within mass state-funded schooling) the assumption that a concept has been taught if pupils claim that they have understood it. The process of development of taught concepts is not only difficult to take account of, in a system of monitorable results, but it is also possible that where such a system exists, with results sometimes being monitored even on an hourly basis, no development can take place at all. Pupils' apparent failures are attributed to a failure of ability to develop concepts rather than to the lack of opportunity for concept development. By the development of concepts what is meant here is not only a formal understanding of the concept but the ability to situate it within a system of concepts.

The tendency to abstract the concept of *thinking* from the world in which it takes place and the forms through which it is expressed finds its origin in Descartes' dualism. Vygotsky continually attempts to explain mind (thinking) and world in a different way. He uses the Hegelian terminology of *becoming* in an attempt to retain the complexity of what is easily misunderstood as a simple relation of representation between thought and word: 'thought is not expressed in word, but is completed in the

word. One might therefore speak of the becoming (the unity of being and non-being) of thought and word' (Valsiner & Van der Veer, 1991, p. 370).

Vygotsky's discussion of Piaget's work indicates the difference between their philosophical frameworks. Piaget's concept of opposition, expressed as part of his argument about the development of scientific concepts, is one in which the elements that comprise opposition are distinct and separate as opposed to moments that are mutually exclusive and mutually dependent at the same time. By contrast to Piaget, Vygotsky posits the formation (determination) of one concept as the negation of another (the meaning of one concept is dependent on its relation to another). Vygotsky remarks on how Piaget 'sees only the break, not the connection. As a consequence he [Piaget] views the development of concepts as a mechanical combination of two separate processes which have nothing in common and move as if they were along two completely isolated or separate channels' (Vygotsky, 1987, p. 174).

Piaget, who only had the opportunity to read Vygotsky's work, twenty-five years after its publication (discovering it after Vygotsky had died), asked himself whether or not Vygotsky's criticism were justified in the light of his later work. He wrote; 'The answer is both yes and no: on certain points I find myself more in agreement with Vygotsky than I would have been in 1934, while on other points I believe I now have better arguments for answering' (Piaget, 1962). In his discussion of Vygotsky's criticisms he, like Vygotsky, is limited by lack of access both to the author and also to the full work. The text Piaget read was an edited translation of a section of Vygotsky's work: the Hanfmann and Vakar (1962) translation of Vygotsky's *Thinking and Speech*, being the first English language publication entitled *Thought and Language*. Vygotsky only had access to the work of Piaget published before his death in 1934.

Turning now to the philosophical underpinnings of Vygotsky's thinking and the influence of Spinoza, Vygotsky's discussion of scientific concepts and their relation to everyday concepts cannot be separated from deeper questions of consciousness and in turn from the influence of Spinoza on his thought. Consciousness is a problematic concept which is understood in a variety of ways reaching from on the one extreme simply having the capacity to pay attention to metacognition on the other. For Vygotsky consciousness was an unsettled question, and, then as now, one on which researchers and commentators are still working. But one thing we can say here is that in keeping with his rejection of Cartesian dualism, he does not see consciousness as a state of mind apart from the objects and activities of consciousness. For Vygotsky to be conscious is to be conscious of something—either an object or an activity.

As part of the issue of consciousness Vygotsky is particularly concerned with 'conscious awareness', which he designates a level of consciousness arising as a distinct aspect of consciousness as an activity rather than a level present as a simple natural attribute. Vygotsky links conscious awareness to scientific concepts:

Scientific concepts have a unique relationship to the object. This relationship is mediated through other concepts that themselves have internal hierarchical systems of interrelationships. It is apparently in the domain of scientific concepts that conscious awareness of concepts or the generalization and mastery of concepts emerges for the first time. ... Thus conscious awareness enters through the gate opened up by the scientific concept (Vygotsky, 1987, p. 191).

By changing the relation to the object, new possibilities for action arise: 'To perceive something in a different way means to acquire new potentials for acting with respect to it. At the chess board to see differently is to play differently' (p. 190). Vygotsky remarks that in Piaget's thought, it is not possible to find 'the thought that "spontaneous" is a synonym for "lack of conscious awareness"' when referring to concepts. He continues:

Only within a system can the concept acquire conscious awareness and a voluntary nature. Conscious awareness and the presence of a system are synonyms when we are speaking of concepts, just as spontaneity, lack of conscious awareness, and the absence of system are three different words for designating the nature of the child's concept (p. 191).

This concept of conscious awareness is totally different from merely receiving stimuli: it is the capacity to reflect on the process of reflection. Ilyenkov discusses the capacity not just to 'experience' the rays of the sun on our eyeball, but to have a concept of the sun projecting the rays (Ilyenkov, 1977, pp. 38-39). In other words we can conceive the sun apart from the effect it has on the rods and cones at the back of our eyes, and thus 'see' the sun as more than what would simply be the experience of a biochemical process. This is the distinguishing feature of the human mind.

For Vygotsky 'at one and the same time, generalization implies the conscious awareness and the systematisation of concepts' (Vygotsky, 1987, p. 191). Vygotsky argues that what Piaget failed to see was that the empirical laws and regularities, which he drew from his work with children, only applied within the domain of children's unsystematised thought. Piaget had not appreciated the possibility that the child's lack of systematisation was dependent on the location of the child's thinking activity and was not a quality of the child's thought as such. For Vygotsky what Piaget saw as an indication of a child's egocentrism could not be explained simply by reference to the intrinsic logic of the child's thought. Rather, Vygotsky argued that 'the capacity for deduction is only possible within a definite system of relationships among concepts' (p. 192). Within a system, sensitivity to contradiction was possible.

Margaret Donaldson and her colleague's replication of Piaget's experiments (to demonstrate the conservation ability and egocentrism of the child) achieved different results to Piaget because they introduced what effectually was systematic meaning into the test. However, this was not exactly the way in which they interpreted the success of their results. In *Children's Minds*, Donaldson explains the success of Martin Hughes' redesign of the 'mountain task' in terms of the fact that it 'requires the child to act in ways which are in line with certain very basic purposes and intentions (escape and pursuit) ...' (Donaldson, 1978, p. 24). She saw it as introducing the motives and intentions of the characters involved in the task. However, it could equally be argued that Hughes' replication introduced not merely context that provided purposes and intentions but also the systematicity necessary to allow the child to make decisions according to a meaningful system of relations. If Brandom's point about the inferential character of any representation is taken seriously then what the children were offered in Hughes' task was the visibility of the 'reasons that follow from' and the 'reasons that are implied by', the task's events. The evidence in the Hughes' experiment indicated that the vast majority of children were able to 'de-centre', unlike the egocentric children evident in Piaget's experimental results.

Piaget's use of the category of egocentrism is profoundly conditioned by dualism and as Vygotsky rejects this dualism so also he rejects Piaget's use of egocentrism. Vygotsky's critique of Piaget's designation of egocentrism as evidence of a child's incapacity to think abstractly is based on his argument that conscious awareness is sustained by the location of concepts in meaningful relations to one another. In the case of scientific concepts, meaning is developed by the location of concepts to one another rather than simply by direct reference to the world.

Vygotsky used the systemic relation of concepts and the possibility of conscious awareness, to criticise Piaget's understanding of the relation between egocentrism and thought in the child: 'We found the source of the lack of conscious awareness of concepts not in egocentrism but in the absence of system in the child's spontaneous concepts' (Vygotsky, 1987, p. 193).

The point we need to stress now is that none of these concepts as Vygotsky understood them, that is: Consciousness, Free will, Science, Development, can be understood apart from one another. Each of these is related to the other three. For example consciousness is stimulated by externalities when our responses are not passive, that is to say when we act using concepts which have a systematic relation to one another. For Vygotsky systematically related concepts of this type are characteristic of science. The possibility of acting, rather than merely behaving, arises through the human capacity to formulate scientific (academic) concepts or to put it another way to develop what Spinoza called adequate ideas. Vygotsky's focus on systematicity can be traced to the influences of Spinoza on his thinking. It is from Spinoza that Vygotsky develops his idea of conscious awareness and will.

Spinoza's philosophy is difficult to comprehend and involves a number of elements unfamiliar to our modern way of thinking. These elements are: thought and extension as attributes of one substance; *causa sui*; adequate as opposed to inadequate ideas; and the distinction between passions and affects. Spinoza's treatment of theological questions led him to reject the dualist world view. He argued that as God (or Nature) is infinite he must be undetermined and, more than this, self-determined or *causa sui*. Through a lengthy argument, he concluded that there is only one substance (God or Nature) consisting of an infinite number of attributes of which thought and extension are part. Everything which exists has a degree of self-determination—human beings have the highest possible degree. It is in self-determination that human beings exhibit freedom. A free agent is not one whose actions are undetermined, but whose actions are self-determined and self-determination arises only when we are not controlled by our passions. A passion is what Spinoza calls an affect produced by external causes rather than by our own power; when we are not controlled by our passions, we understand the reasons of our actions. To be guided by adequate rather than inadequate knowledge is to be free from external determination.

For Vygotsky, following Spinoza, the basis of freedom is man's ability to separate himself from his passions, from the contingencies of nature, and to make for himself a space within which he can determine his actions. Such actions are determined, not by causes which are completely external but by ones which lie within his sphere of efficacy to which he has contributed by making significant i.e. made into reasons not merely causes (the causes have become normative).

Whereas for Piaget, consciousness occurs in the child once the bankruptcy of his own thinking is evident, for Vygotsky, consciousness arises by the subjects' changing location in relation to external forms of determination.

Vygotsky looks to the unfolding of consciousness rather than its arbitrary positing in terms of the bankruptcy of egocentric thought. Vygotsky finds the genesis of consciousness in the development of scientific concepts. This Spinozian account of consciousness contributed to Vygotsky's criticisms of Piaget's failure to understand that the child's lack of conscious awareness was affected by his position in relation to what he was asked to understand, rather than to a conflict between his own childish concepts and those which gave him access to reality.

Spinoza explains the relationship of will and conscious awareness as characteristic of concepts located in relation to one another, i.e. systemically. The more our actions are formed by adequate ideas (i.e. ideas where the genetic connections are understood explicitly) the more we are determinate of our own actions and we are said to be active. The more we act according to inadequate ideas (ones whose relations are unexpressed) we are said to be passive and as such our actions are not free:

The physical and mental behaviour of a human being ... may be active or passive to various degrees. The more it stems distinctively or creatively from its own conatus, the more active it is; the more it is merely acted on by external things, the more passive it is (Sprigge, 1995, p. 848).

Spinoza calls the active behaviour of the mind 'adequate ideas', the passive behaviour 'inadequate ideas'. Adequate ideas necessarily constitute more genuine knowledge:

Spinoza regards us in bondage so far as we are under the control of external things (in a sense which includes especially mental processes of our own that we do not properly understand) and as free to the extent that we meet life with creative understanding of what will best serve the purposes that adequate ideas will determine in us (p. 848).

Related to the Spinozist conception of freedom, gained by holding adequate ideas, is a totally different notion of truth from one that we commonly hold to (as the direct opposite of falsity and referring directly to something which is actual rather than actualising). Spinoza insists that:

error is always the privation of knowledge; to say that an idea or proposition is false is to say that it is relatively incomplete and fragmentary, and is therefore to say something about its lack of logical relation with other ideas; the falsity is corrected as soon as the idea is placed in connexion with other ideas in a larger system of knowledge (Hampshire, 1992, p. 87).

What we understand as false belief is a matter of incomplete knowledge (Hampshire, 1992). For Spinoza adequate ideas are true by virtue of their adequacy:

Adequate ideas are expressive, and inadequate ideas are mute. In other words, the distinctive character of an adequate idea is that it tells us something about the structure and connections of being (or at least the attribute of thought) through a direct expression of its efficient and formal causes. From an ontological perspective, the inadequate idea tells us nothing because we cannot recognise its place in the productive structure of thought (Hardt, 1993, p. 90).

Freedom for Spinoza is not a matter of choice or volition but of the mind's activity as opposed to its passivity. Activity for Spinoza concerned the quality of activity rather than its mere fact, i.e. the mind is active when its ideas are adequate and passive when its ideas are inadequate. For Spinoza we are said to *act* when we are the adequate cause of our actions that is when the ideas on which our actions are based on adequate ideas. This is a totally different sense of action from the common one which makes no such profound distinction. So many of the actions that we feel ourselves to be engaged would, if we take Spinoza's line of argument, be understood differently as vain less repetitions. Often such vain less repetitions perpetuate what they are intended to change. This, of course, is a standard psychotherapeutic position, where an action that is claimed by a patient to be effective, is revealed to be preserving the situation that the patient wishes to change. For Spinoza such activity, though it comprises concrete actions, is not really activity at all; or it is, to be precise, because it is driven by inadequate ideas—it is passivity. The mind becomes active in relation to these passive 'actions' once it is formed by adequate ideas and is the adequate cause of events. Action for Spinoza is restricted to what we are adequate cause of in the same way that we are active when our mind is composed of adequate ideas.

The idea of the possibility of consciousness and the notion of objectivity (truth) here is expressed in a different way from that in the work of Kant, the main influence on Piaget. The significance of systematicity for both Spinoza and Vygotsky, is that the meaning of individual concepts can be understood in terms of their place within a system of concepts i.e. what is a reason for what is made visible. The Donaldson/Hughes mountain task involves a systematic set of relations between the 'seeking policeman doll' and the 'hiding child doll'. What it is to see from another point of view to one's own is constituted by the very structure of the task as the meaning of each of its components is constituted, in part, by their relation to all the other components. Although Donaldson and her colleagues may have emphasised other aspects such as language, goal, orientation and context in their interpretation of the success of your children to decentre, what is crucial to the 'hide and seek' task is that it makes explicit normative elements (i.e. what is a reason for what) in a way that the three mountains task does not.

To educate is to relocate ideas and this is different from what are termed child-centered approaches or traditional didactic approaches. The attempt to grow a higher understanding exclusively from children's experiences fails as completely as the attempt to implant a higher understanding without regard to these experiences. But relocating the ideas of a child in the network of inferential relations which will give the child new meaning requires attending to the nature of normativity, to what is a reason for what and to the distinctive character of these relations in different knowledge domains.

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