Reasoning with Kio and Gus

TOPICS

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I. *The child's right to inquiry and the child's right to know*

> "He looks angry - I don't know why."
> "Suki says, 'Brad, it's not fair! You should tell us what to expect! You should share what you know with the rest of us.' "
> All Brad says is "You'll find out soon enough."
> " ' What is it?' I beg Suki to tell me. 'What is it?' "

The question of what rights children have or even whether they have rights at all has always been an issue of legal, sociological and philosophical debate. Hobbes held that children and other dependents, whom he considered incapable of reason, have no power to make contracts and hence have no rights. Locke and Mill alleged that children have rights to adequate subsistence, i.e., nutrition, shelter, clothing and care, but that they have no right to decision. The assumption seems to be that rights belong to those who reason and that rational behavior comes - perhaps naturally - with age. To this effect, Locke holds that parental authority is temporary and ceases when children grow up. Mill claims that liberty rights are restricted to those who are in the maturity of their faculties. Hence, one may conclude that 1) rights are tied to reasoning capabilities; 2) children are incapable of reasoning; and 3) maturity of reasoning faculties is to be naturally expected to be the outcome of maturity of years.

The polar opposite of these positions is the one expressed by the U.N. Declaration of the Rights of the Child: a child is entitled to "all the freedoms set forth". including that of the "full and harmonious development of his personality." There is no mention of connecting rights to reasoning powers.

In his article in *Thinking*, entitled "The Child's Right to Inquire", Bandman offers an alternative to the above positions. The author holds that Hobbes', Locke's and Mill's positions are untenable since any kind of right that may be attributed exclusively to any one group is unfairly distributed. Under these circumstances, they would not be rights at all, but powers. As to the position of the U.N. Declaration of the Rights of the Child, Bandman argues that if by unrestricted rights, one means unrestricted freedoms, then such rights leave the child "in some way free to harm itself without adequate adult guidelines." Thus, the enjoyment of rights and freedoms are connected to the development of the corresponding responsibilities, both on the part of the child, and more particularly, on the part of the adults to whom its education is entrusted. Bandman claims that the task of education is to recognize at least one liberty right of the child: the right to inquire, if the child is to develop the capacity for thought and mature, rational action. As opposed to a view in which development of rational faculties would be a "natural" outcome of chronological maturity, the author holds that inquiry and reasoning should be fostered from an early age. He cites Dewey in this connection, according to whom the way to teach freedom and the closely related concept of respect for rights is to practice these rights, for "rights are learned, asserted, and protected by being attributed to people, by being honored and respected in practice and public condemnations of their violations". Unless a child is allowed the right to ask, to practice inquiry - which also implies the obligation of adults to answer and to take the child's questions seriously - there is little likelihood of a child growing into a free and thoughtful adult. The ultimate task of any kind of home or school education is, of cause, to prepare children to be responsible adults in the future, for, as Bandman says, the future belongs to the children.

What and how much a child should know, or can know; what, if anything, should be withheld from a child, and under what circumstances, are important but often difficult questions. The author offers some guidelines for decisions in such cases, always emphasizing that the right to inquire is basic to the "realization of the child's life expectations and a fundamental condition for the development and fulfillment of the child's projects," and that while the child is dependent on the parents for sustenance and care, he or she should never be reduced to unquestioning subservience. On the other hand, complete independence does not prepare a child to respect the rights of others and could easily, in the end, bring harm to the child. Hence, the concept of interdependence should be developed so that a child will become sensitive to the limits of the right to inquire, taking into consideration the feelings and reasons of other people. Bandman suggests that the principle of good and harm be applied as criteria to guide responses to a child's questions. Sometimes actual harm might come to the child itself or to others if its question is fully answered. Although it does not preclude the child's right to ask a question, Bandman holds that an adult may be justified in evading it or giving a non-serious answer. The author seems to assume here that every question asked by a child necessarily involves a clear-cut answer. It is my own opinion that this is not always the case, for there are many occasions on which a child's questioning is more an attempt to understand and to find meaning than to simply get answers as such. The adult's attitude of attentiveness and serious consideration would be of key importance in such cases, for the child may then always feel secure that his or her inquiries are respected, whether a "full answer" is supplied or not.

The right to inquire and the right/obligation to answer children's questions impose moral obligations on both child and adult. Actually, it forms the basis of moral responsibility itself, for as the child asks and learns more about things and people, the increased knowledge places upon him or her the

obligation of learning how to discern when and how to use this knowledge, as well as when and how to take others' rights and obligations into account when so doing. Classroom discussion of the good or harm that could come from informing other people about one's thoughts or feelings ("He looks angry - I don't know why.") might shed some light on an area which frequently creates resentment and conflict in relationships not only among children, but between children and adults as well. Reasoning and understanding in this area are not likely to emerge spontaneously in maturity unless children are helped to gain insight into potential mutual benefits that might be gained if thoughts and feelings were sometimes more freely shared, as well as into the kind of respect involved on other occasions when it may be preferable to "leave well enough alone." Discussing these things might help children to cope better with situations that are often the cause of unhappiness and bewilderment.

Discussion of when it is good, harmful or useless to share what we know (Suki says, " . . . You should tell us what to expect! You should share what you know with the rest of us.") can be extended from the Leading Idea 20 manual exercise to a variety of situations in which the children may perceive many different kinds of considerations that must be taken into account in order to decide when sharing of knowledge is appropriate. The situation in the story would be a good one to begin with, for while Brad probably wanted to treat the group to a surprise, it is quite possible that something too unexpected could perhaps turn out to be a terrifying experience for a blind girl and a small boy.

An adult may frequently disregard or fail to answer a child's question due to what appears to him or her to be either obvious or trivial. But it is not always easy to determine what is and what is not obvious or trivial, for what is unimportant to an adult may be of profound significance to a child ("What is it?" I beg Suki to tell me. "What is it?", and afterwards, "Funny - I didn't feel it earlier, before I knew it was an owl."), so that a generally serious and sensitive attitude should be developed towards children's questions. Otherwise, there is not much chance of a child developing the same kind of attitude towards others. Talking about things in a caring, sensitive way is certainly a promising means of developing a child's own social and moral sensitivity. In Bandman's words, "the child's learning of the right to inquire, limited by available adult wisdom as to what causes good or harm may result not only in children learning to inquire about what is relevant, significant and morally worthwhile, but may result also in the improvement of life in this and succeeding generations."

II. *Peer Teaching, Peer Coaching and Peer Learning*

> "There was a time when Brad would lead the horse around the corral for me, but he doesn't have to do that anymore."
> "But I still think I should give him a few pointers. After all he's just a beginner."

Although there may be some overlapping in both the terms themselves and the actual processes involved, teaching may be understood as "causing someone to learn" whereas coaching would be the process of directing, or prompting. Teaching, then would be concerned with developing a student's cognitive processes; coaching, with practicing and perfecting a skill. Insofar as learning involves both developing faculties and practicing skills, a student needs coaching as well as teaching in the educational process. Experience and research indicate that peers may be very valuable in this process, particularly as coaches.

Aristotle is reported to have used peer teaching, employing archons or student leaders who took care of many details for him. Several experiments were carried out in the 19th century. In England, Lancaster evolved not only a new kind of teacher but a new kind of school management, using boys who knew a little to teach boys who knew less. In his Madras experiment, Bell saw Indian children in a native school sitting outside and tracing their letters on the ground. He found this system more interesting and more convenient and decided to adopt it in his own school. Eventually, he dismissed his teachers entirely and organized the whole school under boy-instructors who were themselves taught by the superintendent. Bell took issue with Pestalozzi, claiming that "it seemed impossible to give him as much as an idea of the truth, for he seemed so boxed up in his own system" that he failed to understand that "instead of giving his pupils an immense number of receipts, it was immeasurably better to develop their thinking power and power of application." During this experiment, the educator found that peer teaching/learning was beneficial to both the tutor and the student (tutee), stating that, by this means, "the mind of the child would be exercised, his memory improved, and the scholar constantly busy and happily so. The system aids students in acquiring good habits of method, order and good conduct, and allows them to work to their fullest capacity."

In the last two decades, many experiments in the U.S. have been made in which students have both tutored and been tutored by peers and by students somewhat older. In most cases, reports are that the results are highly beneficial, particularly in coaching situations. Findings reveal that the academic skills of the tutor are improved as he uses them to teach others. Tutoring helps to develop attitudes and character, aids in students becoming better adjusted and feeling more adequate as persons, and discovering new interests and commitments in their lives. Peer tutoring may be particularly valuable in today's highly complex society as it aids in meeting individual needs in an increasingly impersonal educational setting.

One of the interesting findings is that peer teaching/learning situations tend to foster attitudes of cooperation rather than competition. In such situations, real teaching of life attitudes occurs instead of simple coaching of skills, since in cooperative situations every person is involved as a learner. Cooperative goal structures encourage positive interpersonal relationships characterized by mutual liking positive attutudes, mutal concern, friendliness, attentiveness, feelings of obligation to other students, and desire to win the respect of other students. These are exactly the attitudes fostered by children involved in the philosophical community of inquiry, suggesting that peer teaching might be investigated as a promising avenue in some difficult classroom situations, particularly in multilingual and/or overcrowded classes.

In the two episodes in this chapter, there is peer learning.

Although the "showing" what has to be done and how to do it are most characteristic of coaching, I think that, as Gus coached Kio, she was also trying to teach Kio to try to "feel" the horse instead of merely coaching him in the correct outer procedures involved in learning how to ride. I also think that, as she is closer to Kio in age, she is probably more sensitive to the things that would make sense to Kio, such as acquiring empathy for the animal. On the other hand, Brad, who is much older and presumably has either acquired this sensitivity so long ago that he has forgotten its importance, or has never acquired it at all, restricts his coaching to leading the horse around the corral. In this case, it is conceivable that Tchaikovsky, being already accustomed to Brad, perhaps would never have had to relate to Gus at all if she herself had not been so keen both on learning to ride and learning to relate to the animal. In her words, this act of relating is letting him "know" what to do, which implies both understanding and being understood.

Discussions with the children on this theme could be centered around things that they know how to do well, or reasonably well, and how they would go about teaching and coaching someone else in the same skill, what things they think are important, etc., and what special sensitivities are involved. Beside the discussion, children could actually teach each other how to do some specific thing and discuss afterwards how it was done, how they felt about teaching/learning from each other in this way.

Another point to be brought out here is the quality of learning. In the two episodes mentioned above, the children may discuss which kind of teaching/coaching would be most likely to promote the best kind of learning. Would it be Brad's leading Tchaikovsky around the corral or Gus' pointers on talking to, "feeling" and trying to understand him and trust him? Thinking about the things that distinguish between a person's being less skilled or highly skilled will help children learn to concentrate on practice, attention to detail, style, etc. They will naturally find it easy to relate to this topic regarding sports and, probably, breakdancing stars; it may be carried over into the area of studies.

III. Animals

Several animals appear in Chapter 6 of *Kio and Gus:* Tchaikovsky, the horse; the whale; the owl; Roger, the cat; the mole and the beaver. Of these, horses and cats are the ones most likely to be familiar to the children, although city children may not know much about horses except from TV.

It is important to explore the theme of animals in as many ways as possible for several reasons. Animals are the life form that has always been closest to humans, serving them in work, as clothing and as food. Humans and animals have affinities for each other, and many animal characteristics have been imitated and admired by humans over the ages. These characteristics are present in myth, legend, fairy tales, symbols, beliefs and dreams. Throughout history, some animals have lived so close to man that they seem to have humanlike characteristics of intelligence, empathy and understanding, and whether near to or apart from man, the entire question of animal intelligence is far from being resolved.

Animals deserve respect from human beings as do all forms of planetary life, as each form contributes to the richness of the whole of life on earth. Disrespect or elimination of some life forms impoverishes the quality of every other, particularly that of human beings.

It is improbable that we can respect and care for anything that we do not know. Hence children should be afforded every possible opportunity to learn about other forms of life - especially animals - not only in a scientific way, but also in affective, artistic, ethical and philosophical ways.

Here are some suggestions as to how the theme of animals and their relationship to humans could be developed, using the animals in this chapter.

1. Tchaikovsky

Horses have been present in the lives of humans since time immemorial - taking part in their wars, adventures, travels, work and play. Children will enjoy hearing or reading stories like *Black Beauty, My Friend Flicka* and *The Black Stallion.* They will laugh at tales like *Don Quixote,* in which the steed takes on the characteristics of his master. Pictures, drawings and documentaries may be presented in the classroom and discussed. Children may identify horses' characteristics.

Many musical compositions evoke the sound of horses' hooves. They may be played in the classroom and children can act out and make drawings of what the music suggests to them. Particularly appropriate might be the *Ride of the Walkyries,* by Wagner and *March of the Dragoons,* by Bizet. Ibert's *Little White Donkey* would also be interesting. Many western songs have instrumental accompaniments suggesting trotting, cantering or galloping. All of these (and many others, that both teacher and children could bring to class) will help the children to get the "feel" of horses.

As the children learn more about horses by hearing and talking about them, seeing pictures of them and listening to music that brings horses' characteristics to mind, they may be asked to imagine that they are some kind of horse. They could talk about and draw themselves as horses. What color? kind? Are they free-roaming or do they belong to someone? Where do they live? What do they like about their lives as horses? If they belong to someone, what is their owner like? The children may talk with their owners about their mutual helpfulness, their care, etc. If they are free, they can talk with other free horses about the advantages and disadvantages of not belonging to anyone. They may choose music that would suit their horses.

As in Leading Idea 1 manual exercise, they can consider what characteristics a horse named Tchaikovsky might have. They may also name their own horses and explain the names they give.

2. Roger

What kind of general characteristics do cats have? Using pictures, art books and objects, if possible, children may bring out cat-like characteristics. Using pictures and documentaries of other, wild felines, children can compare, contrast and draw them. Children may act out how they move and behave. Appropriate music for this activity might be the *Carnival of Animals,* by Saint-Saens. *African Fantasy,* by Anton Rubinstein,

would be good for the children to feel the wildness of the jungles where many felines live. What similarities and differences can they find in tame and wild cats?

In this chapter, Roger catches a mole, and plays with it. Ask the children to imagine that they are some kind of small animal that has to keep on the lookout for some big cat which might catch them. They can think of different skills that they might need to protect themselves and to evade and outwit the cat. Children can act this out, with or without music. They will certainly enjoy this activity and will probably draw a good deal of their inspiration from comics and TV cartoons that explore this kind of situation.

Both Roger and Tchaikovsky have names. The children can talk about whether or not naming an animal makes any difference in the way we relate to it, giving reasons for their answers. Remind them that the whale also has a name. The question of what relating to an animal might mean may be discussed, bringing out the ideas of attention, understanding, care and respect. The children may be asked to imagine a world in which every animal had a name; they may discuss and draw pictures of what such a world would be like.

3. Leviathan, the whale

I think that the children should have an activity centered around whales in every chapter of Kio and Gus in which Leviathan is mentioned. As above, pictures, drawings and documentaries may be used as well as recordings of the sound of whales and music that suggests the sea and the underwater world. Whenever the children draw Leviathan, they should depict him in his world as they imagine it.

The teacher can tell some whale tales, such as the story of Jonah, the whale episode in *Pinocchio,* some of the episodes in *Moby Dick.* They can act out some of these stories. To develop the idea of understanding between humans and animals (" 'It's not the same thing, boy, . . . The horse didn't understand.' "), ask them to act out an individual or class conversation with a whale. What could the whale tell or indicate to them? What could they tell and indicate to the whale? Can they imagine circumstances when a whale could help them or when they could help a whale?

4. Owl

As with the other animals, the use of pictures, drawings, documentaries, etc., may be used to bring out owlish characteristics. The most famous "owlish" characteristic, i.e., wisdom, may be identified in many fairy tales as well as in stories such as *Winnie the Pooh* and in poems such as *The Owl and the Pussycat.*

Children can create stories of their own in which they may tell about a meeting with a wise old owl in which they asked it for some kind of advice or information. In creating owl stories, the nocturnal forest atmosphere should also be described.

Would an owl be a good pet? Children can talk about this, finding reasons for their answers and using the information acquired through pictures, documentary descriptions and/or research in animal encyclopedias.

5. Moles

The Wind in the Willows tells about a mole who lives with his companions in a tunnel under the earth. One of his companions is a rat who always plans to go to sea, but who is finally convinced by his mole friend to stay home where it is comfortable and secure.

After showing the children pictures of moles, the teacher may tell them parts of this story. The children may be asked to find out certain mole-like characteristics which might explain why it feels so secure under the earth and why the outside world might hold scant interest for it.

The children may be asked whether they think that the mole displays the characteristics they identified as necessary to escape from the cat (above, 3.). How do they think that the mole could have escaped from Roger? They may discuss various means of animal self-defense, such as those of the skunk, the porcupine, the mouse, the bird, etc. Would Roger have been able to catch the mole if it weren't blind? What means would a blind animal have to find in order to protect itself?

Both Gus and the mole are blind. However, Gus has several advantages over the animal; certainly superior intelligence is one. Children may discuss why intelligence is an advantage. Using the children's suggestions, a list of mental acts may be made on the board that they are capable of thanks to their intelligence.

Besides intelligence, what are some of Gus' other advantages over the mole?

6. Beavers

The same means as described above may be used to identify beaver-like characteristics and activities.

At the end of the lesson, when all of the animals' appearances, manners and characteristics have become familiar to the children, the class may make up an animal fairy tale. In this story, the children might go into the jungle or woods and ask the King (the lion, of course) to grant them a characteristic of one particular animal, such as the swiftness of the horse, the industriousness of the beaver, the courage of the lion himself, and so on. They would have to give reasons for their requests and state what they will do with this attribute. Mother Goose Suite, by Ravel, would be appropriate background music as this story is made up and acted out.

IV. Knowing and Knowledge

"I just <u>know</u> Kio is dying for a ride."
"I don't mean to sound like a know-it-all."
"Funny - I didn't feel it earlier, before I knew it was an owl."
"He looks angry - I don't know why."
"I don't say anything, because I don't know anything to say."
"Tchaikovsky knows by my <u>feel</u> where I want to go."
"I think Tchaikovsky <u>knows</u> I can't see."

Before discussing the question with Socrates, Thaetetus had been sure that he knew what knowledge was: science, geometry, crafts, etc. He also assumed that those who had knowledge of something knew what they knew. However, in their lengthy

discussion, Socrates and Thaetetus explored various possibilities, such as knowledge as sense perception, knowledge as true rather than false opinion, criteria for truth, knowledge as being made of those things of which a rational account may be given, the problem of knowing the whole and its parts, of knowing as definition and explanation, and of distinguishing one thing from another. When the midwife, Socrates, succeeds in bringing forth nothing but "wind" as the offspring of the young man's brain, the hapless Thaetetus confesses that he has no idea of what knowledge is after all. However, Socrates consoles him, saying that " . . . you will be all the better for the present investigation, and if not, you will be soberer and humbler and gentler to other men, and will be too modest to fancy that you know what you do not know." Thus the exploration of the nature of knowledge is not fruitless. It has a softening effect while at the same time, enabling those who seek after knowledge to become more critical of faulty reasoning and pretense. We may be comforted with Thaetetus, who heard Socrates say that he himself " . . . knew aught of the things which great and famous men know or have known in this or former ages," and yet be encouraged to follow the example of this great philosopher whose wisdom was forged in the unceasing search and examination of self and the world. For apparently there is no final resolution of the mighty question of knowing and knowledge. Perhaps it is too great, like the legendary elephant, for blind humans to grasp. Or perhaps it does not exist at all, but is ever coming into being through the serious efforts of the human mind in its eternal quest for meaning.

Since the search for knowledge is perhaps endless by its very nature, many a brave explorer has been daunted by the ever-cleared perception of the improbability of reaching a final goal. Not without reason, Plato describes the would-be philosopher as a very unusual kind of person who must develop the virtues of persistence and endurance in order to continue the quest for knowledge and meaning. While it is very possible that the open and unpretentious mind of the child may have the "divine gift" of natural simplicity which is afterwards attainable only by the greatest philosophers and saints, and which gives them the power to look into the unknown with intent curiosity and candor, the teacher must exercise great care in exploring the question of knowledge so that young students may feel continually encouraged rather than dismayed.

As the children discuss how someone can <u>know</u> what someone else wants ("I just know Kio is dying for a ride.") the need to develop sensitivity to others may be brought out and more fully appreciated. The possibility of exploring knowledge of animals and of understanding between animals and humans ("Tchaikovsky knows by my <u>feel</u> where I want to go"; "I think Tchaikovsky <u>knows</u> I can't see"; "It's not the same thing, boy . . . The horse didn't understand.") may also provide them with new dimensions in their relationships with non-human forms of life. As they describe ways and give reasons for being able to know what animals like and do not like, know and do not know, understand and do not understand, through discussing Tchaikovsky, Roger and the mole, Leviathan and their own pets, their empathy with and awareness of these other realms of planetary life will increase; they will begin to perceive that we are all traveling companions on the Earth spaceship and that those who travel together should know and respect each other. As they eagerly formulate in words what they know, and afterwards reflect on their own behavior and claims to knowledge ("I don't mean to sound like a know-it-all."), examining other aspects of a question and listening to others' perceptions of it, they may learn the excitement of unending discovery. As they discuss how knowledge creates and changes meaning and perception of situations ("Funny - I didn't feel it earlier, before I knew it was an owl."), they may learn to enjoy giving full attention to people and situations in order to create fuller and deeper meanings in their experiences. Finally, they learn to recognize and talk about those occasions in which their lack of knowledge hinders communication ("I don't know anything to say"; "He looks angry - I don't know why."; "I start to giggle. I don't know why."), and learn that, while they are sometimes placed at a disadvantage on such occasions, far from implying stupidity on their part, their recognition shows them more clearly in which directions they may go to increase their learning. Such perceptions and discoveries about themselves and the world will go far in developing keenness of mind and gentleness of heart, making children fit to join other, more seasoned explorers in the exciting quest for knowledge and meaning.

V. Beauty

> "An owl!" I say. "Wow! Great!"
> "He must have been just beautiful."
> "He was, Gus," Kio Says. "Just beautiful."
>
> When Kio says this I get a tingling feeling down my spine. Funny - I didn't feel it earlier, before I knew it was an owl.

Since Gus cannot see, her perception of the owl as "beautiful" brings implications of esthetic experience to the scene beyond the ones which would have been immediately available to her if she had been able to perceive it visually. Her perception of the beautiful owl was a spontaneous one in which the mood of expectation, fear, and the feeling of the unknown were resolved in the brief instant in which the others glimpsed the big bird as it swooped out the window and flew away. Gus was filled with admiration, wonder, amazement. Totally absorbed in the moment, she was enveloped within an esthetic experience of unexpected beauty.

Dewey tells us that the esthetic experience integrates sense and thought, matter and form. It is an intimate relation of "under-going and doing in interaction of a live creature with the world of nature and man": a oneness of subject and object, in which meaning is revealed. Rather than a unity of subject and object, or a unifying of otherwise opposing dichotomies, it is a oneness that defies expression in words or explanation in logical terms. Although beauty can be "prepared" by an artist, the esthetic experience of beauty cannot be contrived. It requires a special openness of the beholder, an intense act of merging "into the common world in its fullness" for beauty to realize itself. Beauty is thus a creation, a spontaneous mutuality of subject and object which sets an experience of beauty apart from matter-of-fact everyday perception of the world. The be-

holder beholds beauty only insofar as there is this spontaneous, vital interaction between him and the object beheld.

In Gus' experience, we must think of the nature of the atmosphere that surrounded the haunted house, the ways in which each sound mounted the excitement and suspense, as well as the powerful presence of the bird itself, which joined together the various energies into a single one which the blind girl perceived as beauty. The tingle down her spine was one of intense esthetic enjoyment rather than of fear, for the owl, while still in itself a mystery, had removed the vagueness of the unkown by revealing itself, thus allowing perceived knowledge to complete the wholeness of the experience.

The integrity of esthetic experience does not permit itself to be fragmented and isolated into component parts. Although this can be done afterwards through reflection, the reflection itself cannot create the quality of the experience through which it has been perceived as such. It is not the mere juxtaposition of chosen parts that creates beauty, however perfect they may be. Rather, in Dewey's terms, it is a "unique transcript of energies of things in the world that imparts the esthetic quality, not which we recognize, but rather that permits a kind of perception which totally includes ourselves and through which we are also transformed, or transposed, as it were, into the wholeness of esthetic meaning."

As the teacher works with the children on the concept and experience of beauty, it is important that he or she bear in mind the spontaneous nature of esthetic perception. While as many means as possible should be provided to facilitate esthetic experiences, the teacher should avoid describing and prescribing them for the children. Beauty should be perceived rather than merely talked about. The teacher has many means at hand: music, pictures, poems, stories, dance. The children should be provided with opportunity for creating their own beauty through drawing, working in clay and other materials (in Kio and Gus, the more they make animals out of these materials, the better), coordinating their visual and auditory perceptions into expressions of movement and dance, etc.

It is very natural for all of us to rely greatly on our sight for perception of beauty. However, through Gus, we are given insight and inspiration as to the possibilities of exploring other, less familiar paths to esthetic experience. Young children will enjoy blindfolding themselves and learning to relate to their environment and objects in it through their other senses. Touching small animals and feeling their fur (or feathers), their warmth, listening to their heartbeats, can provide unsuspected perceptions of life and beauty. Walking outside and being led by another, unblindfolded classmate, who attentively guides and provides an assurance of safety, can allow a child to discover beauty in smelling, touching and feeling otherwise familiar objects such as grass, flowers, tree trunks, stones, etc., perceiving them in a new way. The experience of listening to music, birdsongs and other sounds of nature while blindfolded can also awaken greater awareness to the wealth of sound in the world.

VI. Time and Space

> One grain at a time. Each grain of sand takes up space. But if you take them one grain at a time, is that time? . . . If nothing moved there'd be no time. But there is time. So it must be because things move.
>
> Does that mean time is what happens when things move? Or is time what we get when we measure how fast things move?

For Kant, space and time are presented to us by means of "a priori intuition", and our sense perceptions have both temporal duration and spatial location; they could not otherwise have the sensory character that they do in fact have. Kant is concerned with the "metaphysics of space", i.e., with the intuition of space and time as argument concerning the certainty of our knowledge of the phenominal world, with the source of our certainty about the *world of nature.* Thus Kant is more concerned with the application of geometry, i.e., as science of space, rather than with its content. For Kant, perceptual space and time are "required" for the consciousness of the subject; consciousness is essentially temporal. The continuity in time of consciousness as perceived by the subject, and through which one remembers and recognizes one's own sensations, is a logical premise if we are to explain or understand the possibility of sensory perception. Thus time and space are the only forms in which we can perceive or conceive things, unconsciously giving shape to what we perceive and conceive through the mental frames of the categories.

The exploration with children of the concepts of time and space through the thesis and antithesis of the antimonies would provide insight into the question of whether space and time are or are not properties of the world in itself, but only forms in which we perceive the world. The children would enjoy imagining and acting out their imaginings of the world "empty" of time and space. In this connection, the story of Prometheus' experience as related in *Arts of Prometheus*, by M. Lipman, could be told; they could act out his feelings and actions from the first moment of nothingness through his attempts to "recreate" the world in movement/form until his ultimate success in esthetic creation. They could relate Prometheus' with their own imagined experiences of "nothing to touch or hold to, . . . having neither memory (of time and experiences in space/time) not environment (objects and experience in space), being able to think and perceive but with nothing to think about and nothing perceivable." In the Promethean experience/play, the children could also be guided back into the world of things, first through the structuring of acts into configurations, making movements into patterns that presuppose relationships of actions, but which are distinct from the actions themselves; these patterns in turn may be perceived as the foundations upon which experience is grounded and built. As children act out their perceptions of time (as continuity and duration) and space (not only "outside" extension but also the locus of sensed objects, which "hold" these objects through time), they may gain sensitivity of time/space as basis for experience.

The Promethean play/experience may also provide insight into the fact that without the active intervention of thought, i.e., of the mind, it is difficult to conceive of space at all. Bergson states that ". . . even if we assume that extension is

nothing but a relation between inextensive terms, this relation must still be established by a mind capable of thus associating several terms." The act of the mind which takes in *at the same time* the various inextensive and extensive perceptions, creating the co-existence that gives rise to space, is the intuition or conception of an empty homogeneous medium, a reality without quality."

Bergson holds that Kant regarded both space and time as homogeneous mediums. Bergson argues that real duration (time) is made up of moments inside one another; a qualitative multiplicity within us. Moments of inner duration are not external to one another.

Without us, duration is the present, i.e., simultaneity. External things change, but their moments do not succeed one another, except for a consciousness which keeps them in mind. Thus in consciousness we find states which succeed, without being distinguished from one another; and in space simultaneities which, without succeeding, are distinguished from one another in the sense that one has ceased to exist when the other appears: "Outside us, mutual externality without succession; within us, succession without mutual externality."

Bergson conceives of time as the condition of human freedom rather than the prime factor of human limitation. He states that if we "carry ourselves back in thought to those moments of our life when we made some serious decision, moments unique of their kind, which will never be repeated . . . we should see that if these past states cannot be adequately expressed in words or artificially reconstructed by a juxtaposition of simpler states, it is because . . . they are phases of our real and concrete duration, a heterogeneous duration and a living one . . . (and that) if our action was pronounced by us to be free, it is because the relation of this action to the state from which it issued could not be expressed by a law . . ." We should understand, according to Bergson, that some feel compelled to deny freedom because the transition is made by imperceptible steps from concrete duration whose elements permeate one another, to symbolical duration, whose moments are set side by side, and consequently from free activity to conscious automatism. He claims that we are free whenever we are willing to get back into ourselves, which we generally do not do, but prefer to consider ourselves conditioned and/or determined because we confuse the moment something is thought with subsequent moments in which it has already been thought or outwardly manifested in action, for " . . . even when the action is freely performed, we cannot reason about it without setting out its conditions externally to one another, therefore in space and no longer in pure duration."

Bergson holds that speculation on the relation between the possible and the real can be a preparation for the art of living. Through perception of time as a flow of unforeseeable novelty, we may feel that we are participating in the great work of creation and are indeed creators of ourselves. There is, in time, a hesitation that permits continuous elaboration of what is new, and there can be no elaboration without searching, no searching without groping. For Bergson, time is something; it acts. What is it doing? It is retarding, hindering everything from being given at once. Hence time is the vehicle of creation and choice; it is indetermination itself.

Activities in which children are required to focus their full attention on counting something, perhaps replicating Gus' counting of the grains of sand (it could be coffee grounds, tea leaves or even bits of earth) will be fruitful for their exploration of time. How many thoughts go through their minds as they count the grains? Where are their thoughts? Can they change the thoughts they have already had? The children may look at the class clock before they begin their counting and again at the end of the activity. How much time has elapsed? Where is it? If the grains are there, where are the minutes? Are grains and minutes the same kind of thing? Manual exercises 33 and 36 may be followed by exercise 33, to which minutes, thoughts and ideas may be added to the list of items.

As they explore time as the medium of change, they may discuss how long it takes them to think of two different things to change their mind? their clothes? How long does it take for the weather to change? the seasons? Do trees change? How long does it take? Is the change a change in time or in space?

Time and freedom may be explored through activities in which the children decide to do something (such as give something to someone) and then discuss whether their choice was free or conditioned, as well as whether one can undo an action which is done. Children might well be helped to reflect on the relative ease of changing their minds and compare it with the difficulty or impossibility of reversing their actions.

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SUGGESTED MUSIC FOR CHAPTER SIX

Bizet, *March of the Dragoons.*
Ibert, J., *Little White Donkey.*
Ravel, M., *Mother Goose Suite.*
Rubinstein, A., *Africa Fantasy.*
Tchaikovsky, P., *Nutcracker Suite.*
Tchaikovsky, P., *Swan Lake.*
Saint-Seans, C., *Carnival of Animals.*
Wagner, R., *Ride of the Walkyries.*
Wilder, A., *Children's Suite: Effie the Elephant.*