



CROW - A KNOWLEDGE-BUILDING PROJECT ABOUT BIRDS

I am sitting in a mini-meeting with some children (ages 4 to 5), taking stock of what occurred in our CROW project. The project has been under way for one year now and the time has come to wrap it up before the summer holidays. We are all curious to hear what the children think about what we learned and discovered together over the course of the year and, more importantly, *how* we learned what we learned. We also hope the children's input will give us, as pedagogues, ideas as to how we might conclude the project.

On the floor in front of us lies all our respective documentation. It consists of the children's drawings and paintings, our own notes, many of which include photographs from our bird watching expeditions in the forest, and research conducted by the children at the actual preschool. Other documentation includes birds the children fashioned out of plaster and clay. Overhead hangs a huge crow which the children constructed as part of a team effort during spring semester. Initially, only two children were involved in the project. The two eagerly set out to build the crow's body out of chicken wire, but, in no time, they realized this was both a bigger and more complex task than they had imagined. That being the case, they recruited the help of other children in the group. At the end of the day, all the children were involved, in some way or another, in the creation of the giant crow. Some worked at covering the wire mesh body with plaster of Paris; others either painted it or decorated it with feathers.

The floor is also covered with imaginative drawings and hand carved birdhouses executed by the children. They have spent long hours constructing and discussing different theories about what colours birds like best for their homes.

William : *I painted my birdhouse with a little bit of green, but mostly blue, because I think it's meant for a blue tit. I think blue tits prefer living in something blue.*

The “year of the crow” was outrageously entertaining and the kids have lots of memories they are more than willing to share. “*It was Jesper who figured out how to make a plaster bird*” says Gustav gazing at his own plaster blue tit. “*I got almost everyone excited about making plaster birds*” boasts Jesper with pride. The children talk at length about “plaster fever” and recall and marvel at the many small details of their days around the work table where the entire group became totally engrossed in building birds out of plaster.

The children also tried making birds out of other materials. When Linnea looks at her bird she remembers how “super hard” it was to stick the wings on the soft clay body. Jenny listens and looks surprised when she hears Linnea describe the difficulties she encountered.

Jenny : *I think that was the easiest thing in the world!*

Linnea : *So how did you do it then?*

Jenny : *I asked Emelie how she did it and I just watched.*

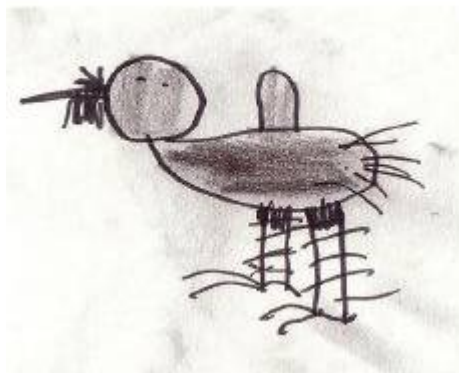
The children inspect both their own and each other's bird drawings produced over the past year. They readily distinguish the differences when we exchange drawings. The children's earlier drawings were distinctly different from the ones they produced later on in the project. In the very first drawings you can actually see how difficult it was for them to draw a bird. The drawings are lacking in detail and you can sense how many of the children were hurrying to complete a seemingly difficult, if not unpleasant task. In their later drawings we witness something entirely different. They communicate new knowledge, marked enthusiasm, imagination and growing involvement. They are remarkably rich in fanciful detail. The variety infinite. The differences in the children's work confirm how they continuously acquire new knowledge which they later apply to their drawings.

The children's drawings on the floor look almost like a film which, frame by frame, depicts how their curiosity shapes an ever more powerful relationship with the birds. The birds are no longer unknown entities flying overhead. They become the children's friends. And the children become extremely pleased with themselves when they discover the differences in their pictures over time.

Pontus : *Look, my first crow looks like a paper bag! But the second one has striped legs and a hairy beak. At first I didn't know that crows had striped legs and hair, so I couldn't draw that.*



Pontus' first bird



Pontus' bird with hair and stripes

Maja : *I remember I was really pleased with my first crow, but now I can draw what a bird looks like even better. I also know a lot more, of course.*



Maja's first bird



Maya's latest bird – A blue tit

By reviewing the earliest documentation together with the children we can observe the child's individual learning process. What is most interesting, however, is how apparent the importance of the group is to the individual in the learning process. We repeatedly hear the children give examples of how they use each other's diverse knowledge and skill sets to enhance their own understanding and learn something new. I'd like to quote Veia Vecchi who, in an article in *Modern Childhood* on both individual and group learning, maintains: "The group becomes something which drives each child further, further than he or she could travel as an individual." Joint reflection (evaluation) of the documentation gives both us and the children an opportunity to look at our experiences in a new and different light. Our common vision of project work expands and becomes increasingly richer each time we reflect together. By listening to both the children's ideas and our own, we, as pedagogues, continuously discover new ways of understanding and relating to the subject we

are working on. The children's diverse ways of understanding and thinking constitute a very important and powerful driving force in our teaching process. *"Documentation becomes pedagogical as soon as we, after individual and/or collective (adults or adults and children together) evaluation thereof, make that choice to continue the work with the group (of children). For children and adults alike, the focus of such work is the learning process rather than the actual goal/result. The objective is to challenge both the children's questions and modes of expression and the adults' uncontested way of understanding the world around them. All too clear goal-oriented content can counteract other pedagogical objectives such as participation, dialogue, confidence-building, imagination and creativity."* (Ingela Elfström, Modern Childhood No. 7)



Pondering diversity

This last year's work with pedagogical documentation has challenged my traditional understanding of my role as preschool teacher. The documentation process has enabled a new and different understanding of children and children's learning process which changes both my way of relating to the children and my vision of the role and responsibility of the preschool. As a result of the experiences I shared with children and colleagues in the pedagogical documentation process, we abandoned our old way of looking at preschool as a vicarious home and started appreciating the preschool as common ground for learning – as a democratic meeting place that celebrates diversity and listening. With pedagogical documentation as a working tool, we slowly but surely acquired greater ethical awareness that led to a more democratic work method. A work method that does *not* entail inscribing both oneself and the children in a deadlocked method, but aims at keeping the pedagogical practice in constant flux.

When we were working on the CROW project, I often wondered *how* pedagogical documentation impacted on the way we worked this time compared to past projects. When I think back on other bird-related projects over the years, I recall that we, as pedagogues, focused primarily on teaching the children basic bird facts. We were, for example, teaching the children the names of the most

common birds. In retrospect I ask myself : To whom were these names so important? And I wonder how meaningful it was for the children. Did they actually learn something that they thought was exciting to know about birds? I don't recall choosing bird themes because the children actually demonstrated an interest in or curiosity about birds. Birds were simply one of many important "categories" that we were supposed to look at with the children. In the CROW project, however, we wanted to listen to the children more consciously and proceed in a fashion other than our conventional way of thinking about and understanding a science project. Our aim was not to impart to the children any scientific truths about birds. Instead, we wanted to understand how we might shape a meaningful context for the children's keen interest in crows that we had observed. This time, with documentation as a work tool, it became feasible for us to make the children's own natural science-building process visible and focus on their questions. As a result, we discovered that the children learned many things about birds we had not considered. For example, the majority learned the names of the most common birds that visited our bird table. It was also evident, by the end of the project, that the children, at their own doing, had learned the names of the most unusual birds and any other number of facts by either looking them up in a book or in some other way.

Once we decided to strive to make the children's thoughts and questions visible, it became self-evident to begin with what the children already knew. We were curious to understand the different ways children perceive nature/crows. Proceeding from what children already know in a pedagogical project is not only democratic. It is highly ethical in nature. It suggests I am interested in what you think and know; I respect what you think and I take that into account when I challenge you. This is, as I suggested earlier, a different approach from the one we normally take as pedagogues, built on what we think is important for children to learn about a subject and then proceeding on the basis of what we know and understand about that subject – our own context and our own meaning-making process. Let me give you an example. In several instances in the CROW project the children were given the opportunity to meet so-called "bird experts" who had come to pay us a visit. Several of our bird-loving guests had prepared themselves to reply to questions they normally had answers to. For example: What are our most common birds? Which birds spend the winter in Sweden? But we, as pedagogues, want to build on the child's own curiosity and therefore decided to ask the children to prepare themselves for the meeting with the "expert" by thinking through the questions they were keen on pursuing. When the focus is the child's own curiosity or sense of wonder, the questions become something far from the ordinary. Here below are some examples of questions posed by the children.

How do birds kiss?

*Can birds fart?
Do birds think?*



Even experts have difficulty answering these questions with all certainty. Not even an ornithologist can be one hundred per cent certain as to whether or not birds “think”. I cannot help but wonder what would have happened if we had asked our guests to share their knowledge of birds, rather than listening to the children’s questions. Perhaps that would have been exciting for the children too, but the content of the conversation would not have been anywhere near what the children were most interested in. In fact, the children did not get many answers to their questions. Instead, a series of new questions were sparked, setting in motion an animated discussion between the children and our guests. The children listened attentively to all the different theories about birds and they were not always convinced that the expert necessarily had the right answer. On that occasion Philip (age 5) posed a question to the expert and when he heard the answer he looked so doubtful and responded : *“But that’s not necessarily so; it can also be the other way round.”* Our efforts to value children’s thoughts and to consistently take their theories seriously, in my opinion, explain how Philip, so naturally, could dare to question the expert’s answer to his question. As a result of this stance, the children, in practice, feel they have the same right as adults to think differently. Philip was confident about this own theories and was convinced that they were no less exciting than those of the expert.

“Another aim of pedagogical documentation is to attempt to understand and render visible the social and societal constructions we have created that govern how we see children /.../ And to do so in order for the teacher to open up to new constructions. It is all about a changing practice.” (Ingela Elfström, *Modern Childhood*, No. 7)



Documenting in smaller groups to breed curiosity

Our decision to dig a little deeper and focus on the children's own questions proved to be what planted the real seeds of our work. From the very outset, the children's questions did not deal with any old crow, but rather our own crow. That plump crow with white-speckled tail feathers we used to encounter every week in the forest when we picnicked on the rock. A personal and meaningful context was obvious. The question was how we could go further. We started the project by compiling the children's own questions and thoughts about crows. We listened carefully and documented their prior experiences and knowledge. A little further down the road, the very first documentation exercises provided an extremely valuable source of material with interesting questions from which we drew ideas throughout the project period.

Our "own crow" in the forest – the protagonist of our project - had disappeared by the time we returned to preschool after summer vacation. Fortunately, we eventually found other crows in a neighbouring playground. Our task as pedagogues, during our first crow watching expedition, was to determine which children appeared the most curious about the crows. Our objective was to start a project with a small group of children clearly exhibiting great interest. Our experience from past projects taught us that focusing on a small interest group from the start would make it possible, in a fascinating way, to inspire other children later on. We identified five to six children who were particularly keen on studying the crows in the park. The following day we invited a small group of children to return to the park on a second crow expedition. But before we set out, we had a little meeting with the children and asked them to think of questions about crows they hoped to solve. Here are some examples of the questions we documented.

I wonder how they fly.

I want to see what their feet look like.

I wonder what their eyes look like.

When we arrived at the park the children swiftly proceeded with their research. Since their questions required seeing the crows at close range, we enticed the crows to come closer by feeding them bread crumbs we had taken along. We documented what occurred on camera and in note form. When we returned to preschool, we congregated the children again to address their questions and reflect on our discoveries. Did anyone find the answer to his/her question?

Maja : *I saw that their feet were a little black and a little grey, almost like baby birds.*

They had long small claws, I replied.

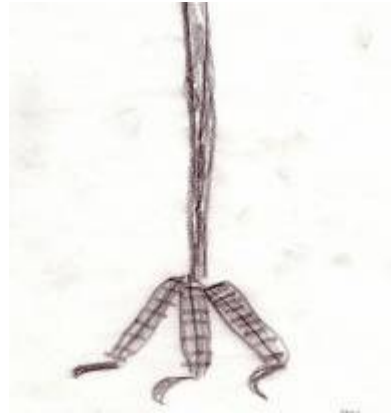
Philip : *You know what I saw? That they could glide. They didn't need to flap their wings all the time. Sometimes their wings were perfectly still.*

The children talked at length about their crow investigation in the park. And since our intention was to spread the discoveries of the little group, we asked the children to decide what discovery they wanted to talk about with the other kids. After a brief discussion, they chose to show the others how they discovered that crows can glide. Later that same day we invited the rest of the children to an altogether different air show. This was where our conscious “contagion” began. We returned to the park, on several occasions, with all the children (in smaller groups) to watch the crows. We chose to focus our documentation process on the little group, but that is not to suggest that we ignored the other children’s discoveries. Quite the contrary. We documented the little group’s discoveries to give the others the opportunity to be infected by their enthusiasm. The children in the little group were given the task of inviting some of the other children to a meeting after each time they met, in order to share documentation and talk about their exciting discoveries. As there was already much interest in the crows among the majority of the children, the little group’s inquisitiveness spread with relative ease. Our mini-meeting was a fantastic meeting place for spreading joy and curiosity. After each such meeting we could observe at once how the invited children showed great interest in either testing something they had heard or conducting their own research.

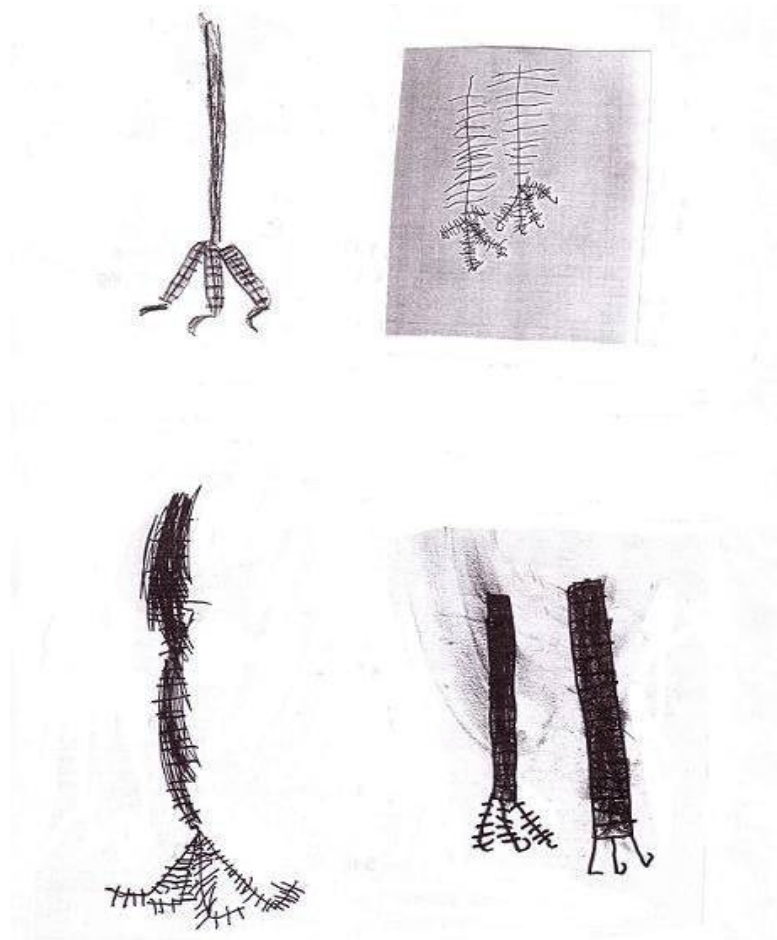
On one such occasion, at the beginning of the term, when the little group had drawn crows together, Moa lingered a moment at the table. She wanted to do another drawing. She bends forward to take a close look at the stuffed crow standing on the table. Suddenly she discovers something new.

Moa : *But, hello, now I see something odd. The crow has striped legs!*

She becomes totally enthralled with her new discovery and straight away wants to attempt drawing a crow with striped legs.



Moa had made an exciting discovery - the type of discovery we hoped many of the other children would experience. The following day we asked Moa to open the meeting of the little group by showing her picture and describing her discovery to the other children. That made for a thrilling start. Her story inspired the others in the group and infected them with much enthusiasm, joy and curiosity to investigate and draw crows with striped legs. Curiosity spread like wildfire throughout the group when Moa also got the chance to address the other children in a mini-meeting. Later that same afternoon, we could see traces of contagion at the large drawing table. There were countless drawings of crows with striped legs.



Moa's drawing infected several children with curiosity and delight

Listening for meaning

This development influenced how we subsequently organized our meeting in the little group. We decided to introduce each case by revisiting the previous outing. We focused on something the child said or did and the child had the opportunity to reflect one more time, together, on his/her experience. As a result of this joint reflection process, both the children (and the pedagogues) continuously gained insight into both their own and others' ways of thinking and acting which, in turn, sparked new ideas and exciting questions. We laid the children's pictures, our notes and photographs from the previous day on the table and we saw how the children's curiosity and interest grew each and every time. There was a major difference compared to our earlier project work where we often encountered problems trying to sustain the children's interest in the subject we had chosen. So now, after the fact, I can understand what occurred. We, as adults, were obsessed with playing knowledge brokers. It was our own ideas

about what was interesting that dictated how we planned the content of our work. We failed to listen to which questions the children were most interested in exploring and, as a result, I believe it was hard for us to sustain the children's interest. But when we use documentation as a point of departure in our conversation with the children we are always able to understand what fascinates them most and that enables us to persevere and delve deeper like engaged children. This time the children were the protagonists, not the category. We adults did not become centred on brokering our knowledge to the children. Instead, we became absorbed in attempting to understand what they were trying to understand and then, as a next step, to use their questions as a driving force in the project. We focused on the children's questions. That does not mean that we stuck exclusively to the children's questions. Naturally, we were forced to continuously think how we, as pedagogues, might challenge the children when they could not recall. We listened to the children, but it was our ongoing responsibility to consider what we, as pedagogues, could add, and how, to shape a meaningful setting which challenged the children's thoughts and actions.

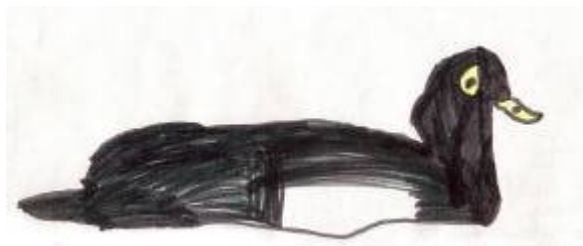
"Drawing on the children's reflections helps the teacher understand things in a light other than the obvious. More specifically it enhances the children's participation in the group learning process by building on and tapping into their thoughts and actions. Pedagogical documentation ... and teachers read it alongside children, colleagues, even parents on occasion. This paves the way for any number of different routes the learning process can take. But it is the teachers who are ultimately responsible for adhering to the subject they have chosen to work with. This is vital if the learning process is to become more profound and not dissipate, particularly in the case of those subjects we barely..." (? berg, Lenz-Taguchi, Lyssnandets pedagogik, Liber 2004)

Interest in the birds continued to grow stronger throughout the entire group of children each time the little interest group was invited to the mini-meeting and shared its experiences. After one half autumn semester it was impossible to say that some of the children were more interested than others. We thus decided to make the little group a flexible group. We wanted to have an open group for all the children, but we also wanted to maintain a certain structure. We felt it was important to stick to our idea of a little group and, above all, it was vital that one or more of the children who had participated previously be present as motors in the process to "retell" or "revisit" what had occurred. Retelling was important for many reasons. Largely because we wanted to avoid the risk of our group work becoming a series of disjointed events. With the help of these storytellers we hoped to create a meaningful context in which the children could explore a little deeper and weave together and develop their own experiences by reflecting as a group on their respective experiences. In these sessions we managed to capture several ideas about new challenges. The sessions further served as an

ongoing evaluation of the project work together with the children. In conversation with and among the children, both our own picture of the project and that of the children changed, enabling us to discover new and exciting stepping stones in our work.

In the beginning we worked on the project three mornings a week with a little group of children, but occasionally, in the middle of the term, the project consumed our entire day and, to the greatest possible degree, all the children in the group were both involved and engaged in a variety of ways. Furthermore, over the course of the year, the parents became more involved in our work with birds.

"Inquisitiveness, curiosity and desire to learn should constitute the foundation of pedagogical work. It should build on children's experience, interest, needs and opinions. The flow of children's thoughts and ideas ...learning process."
(Lpfö-98)



Striped legs, hairy beaks and back claws

The children were fascinated by several different aspects of the project work. But there was something they continuously revisited throughout the year. That was discussing and testing several different theories and possible explanations as to why crows have hairy beaks, the function their back claw serves, and the function of the hair on their beaks. Here below are some of their observations.

Question : Do you ever wonder why crows have back claws?

Johan : *I think they're like brakes. I think crows like to brake on the ground.*

Moa : *I think it helps them walk.*

Sofia : *Hmm, if they didn't have back claws they would fall backwards.*

Pontus : *Nah. I think it gives them that extra push when then fly.*

Jonathan : *I see it like this. That back claw is for sitting still in the woods when they don't want to fly.*

William : *It's to scoop up food.*

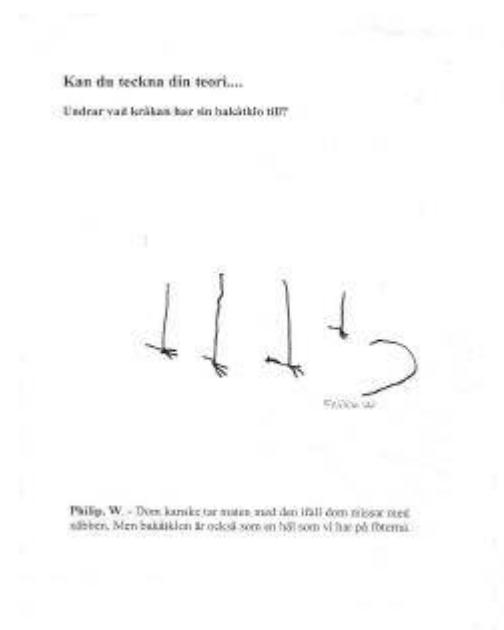
Philip : *Precisely. Just in case they miss it with their beak. That back claw is also like the heel we have on our feet.*

The discussions were never about who was right or wrong. The contrary. The children seemingly enjoyed listening to each other's interpretations. They drew both their own and each other's theories and tested their different theories on the entire body. They were not at all interested in finding out whether or not there was a scientific explanation. They simply derived pleasure from listening to and testing each other's theories.

Picture of children's theories in sketches

Can you draw your theory?

Ever wonder why crows still have back claws?



Question : Ever wonder why crows have striped legs?

Jenny : *They like to dress up too from time to time.*

Jonathan : *It's like this. The stripes shine in the dark at night. One night when I was out I saw a crow with shiny legs.*

To find out what it looks like when the crows' stripes light up at night, the children taped reflectors on their legs, switched off the lights and then lit up

each other's legs with flashlights. It was a thrilling experiment which the children loved testing over and over again. Here below are two different theories about why crows have hair on their beaks.

Danielle : *They have hair so they won't freeze.*

Pontus : *Naa. The hair is like feelers. If they can't see something, they can feel it.*

By listening to the children's conversations, we, as pedagogues, naturally picked up many new ideas we could draw on to challenge the children in exciting and different ways.



When, at the end of the project year, we looked back at this very part of the documentation, the following reasoning took place.

Elsa : *Do you remember how we ran around with the flashlights and lit up everybody's legs? That was so much fun.*

William : *It was a little scary, because it was so bloody dark in there.*

Moa : *Maybe not so many people know that crows have striped legs. Imagine we're the only ones in the world who know that!*

Jonathan : *Yeah. And we even know that crows can use the hair on their beaks as landing gear.*

Johan : *I remember thinking that crows use their back claws like brakes.*

Emma : *Yeah, they hold onto the ground with that claw too; otherwise they would be flying up in the air all the time.*



"When their learning is documented, children can revisit and thereby interpret their learning experiences and also reflect on how to develop their experiences further /.../ Documentation is not limited to making visible what already exists; it also makes things exist precisely because it makes them visible and therefore possible". (*Making Learning Visible: Children as Individual and Group Learners, Reggio Children 2001, p. 17*)

Winding down and gearing up together

At the start of the project we documented the children's own questions and ideas about crows. When we set to compiling the year's discoveries just before summer, naturally we were curious about revisiting these same questions to see if we could detect any differences in the way children think. When we read the documentation the children became visibly surprised.

Jesper : *I knew so little then!*

Linnea : *Oy, oy, oy. Now we know tons more.*

The children's revisiting the documentation material made visible the differences that fascinated them and sparked many new and exciting questions. Moreover, we pedagogues got a clear picture of how the children's own questions drove the project forward. At the beginning of the project the children barely had a single question. Suddenly the entire room was swimming with new and engaging questions.

Emma : *I actually wonder how they protect themselves from dangerous animals.*

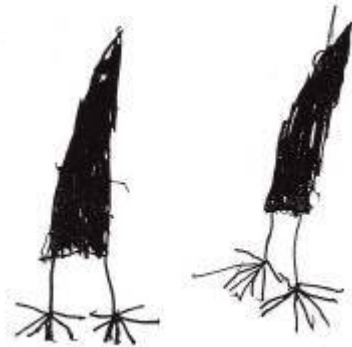
Philip : *Yeah, and I wonder why they lose their feathers.*

Sofia : *I wonder how they find food in the forest. How do they know where the food is in the summertime, because no one puts out any food in the bird feeder? I've thought a lot about that.*

Upon revisiting the documentation the majority of the children discovered that over the course of the past year they indeed got the answers they sought to their

first questions. But the children also realized that there was so much more left to explore. Indeed the more they discovered, the more questions they wanted to explore. When Philip at the beginning of the project was asked: *What more would you like to know about crows?* “*One doesn’t really know what one wants to know*” he replied. “*Maybe what they look like when they fly?*” At a mini-meeting, a half year later, Philip said: “*I want to know more and more all the time. Now I wonder how birds can see their prey on the ground when they fly so fast. I also wonder how hair can grow on a crow’s beak*”. And, upon revisiting the documentation at the end of the project, Philip said: “*It’s crazy how much we know about birds now. But I still wonder why they have feathers and whether birds can talk to each other. Maybe crows can only talk to crows. Maybe blue tits can’t talk crow talk*”.

As Philip developed a closer relationship with the birds, his interest in them also grew and his questions increased in number. When we listened to the children’s reflections while revisiting the documentation, it also became apparent to us how we might end the semester. When the children described their experiences we heard a lot of new questions come up. Accordingly, we decided to add the children’s new ideas and questions as the conclusion to the existing documentation. We ended our project work by documenting the children’s answers to the question: *What have you become curious about now?* In that way the project did not actually come to an end. Our thinking was that documentation of this kind could inspire the children to continue their investigation.



Learning for life and for later

In addition to gaining new insight into how we, as pedagogues, created a more democratic work methodology, we also discovered that we became more curious

about nature in a more intimate manner than before. I personally remember reading articles that might not have caught my eye in the past. I even saved an article from a newspaper that I could use later in our CROW project. The article looks at the fact that we, in Sweden, are less and less interested in knowledge about nature. According to biologist Fredrik Sjöberg:

“In Sweden we often talk about our feelings and sensitivity for nature. About how we Swedes have a particularly warm relationship with nature. I believe that the power of seeing a redstart again has a lot of bearing on how that love story has unfolded. When biological illiteracy spreads, those feelings fade. Nature becomes a green curtain. Incomprehensible and, therefore, difficult to relate to on the whole. This can make it more difficult to make headway with questions concerning nature conservation.” (ICA-Kuriren 2003).

In our CROW project I feel that together we built an inquisitive and loving relationship with nature which, in all likelihood, will shape how the children identify with animals and nature in the future.

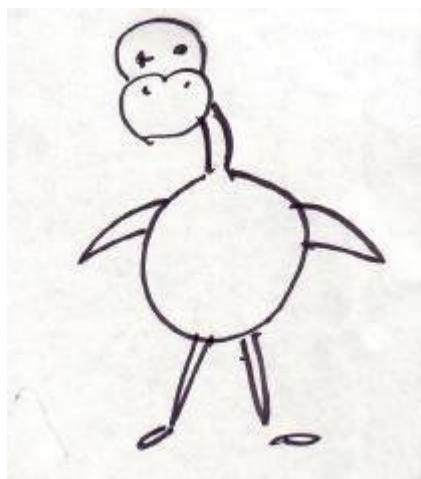


The adults’ “take” on the project

When we adults evaluated the CROW project, we could see that we gained new insight into how we created a more democratic work methodology. With the children’s questions as a driving force, we succeeded in creating a meaningful context which enabled both children and adults to learn from and with each other. We had an exciting and entertaining year and felt satisfied with the project, but not so satisfied that we ignored thinking about how we might have proceeded differently. During the course of the year the children demonstrated great enthusiasm in reproducing both the crow’s calls and movements. From these observations we could choose to work with the crow in an entirely different way. We had also wanted to focus on light, dance and drama. We saw and heard the children’s interest, but we chose not to do so on this occasion. We also wanted to try working with the younger children in the adjacent section.

We noticed that the very youngest children were infected by the older children's interest in birds. This clearly led to exciting cooperation between the youngest and the oldest preschoolers. Naturally, there were many routes we could have pursued. When we revisited the documentation it was interesting to attempt to interpret together what we did, but it was equally interesting to examine what we chose not to do. What ideas did we discard and why, and which of all the discarded ideas might we use the next time round? We called this project CROW, but naturally the project didn't only deal with crows. If it had it would have become terribly tedious. For children and teachers alike the project dealt with so much more – discovering the joy of learning together and the dialogue with other investigators, thinkers and researchers. It was about experimenting with several different languages. About listening, discussing, imagining and asking ourselves questions. About examining and calling into question conceptions of the pedagogue's role in enabling children to not only partake more in their own learning process but to give parents the opportunity to participate in the pedagogical process. It dealt with learning to feel and shape an intimate relation with animals and nature and challenge and question scientific truths. With the help of our documentation work concerning the children's own curiosity, we could create a meaningful context and exciting exchange amongst the children where both children and pedagogues were able to discover each other's differences as a valuable resource and a driving force in our group learning process.

“Pedagogical documentation is intended as much for teachers as it is for children. As teachers we can equally ask ourselves: Where do I stand now? What is the next step? We can also follow our own learning curve or process. Pedagogical documentation constitutes a type of relationship and communication in itself. It is an active meaning-making process and not only a cognitive one. The aim of pedagogical documentation is to use several different theories to understand children's behaviour and challenge not only the children but ourselves, if not the scientific notions of the content children work with /.../ child's development and learning.” (Lenz-Taguchi, Varför pedagogisk documentation, HLS Förlag 1997).



And the group hugs the individual

In some way each new project is invariably connected to a project which already exists in the child's memory and experience. The child deposits each new project in his/her knowledge bank which he/she can access and naturally relate each new problem to. In the CROW project we saw how the children were interested in differences in size. That led us the following year to a project on how children understand and approach mathematics in their everyday life. A math project, with a major dose of birds, for obvious reasons. We had no doubts about the importance of giving the children the opportunity to reflect together on the CROW project. But the following gave us an even more convincing opportunity to recognize the importance of enabling children to understand the value of learning from and with each other. In the math project the children were inordinately interested in different ways of measuring. In one case, Alva (age 5) had a question which she shared with my colleague Carina. Her solution to how she should go about finding the answer astonished us.

Alva : *I wonder how far it is to all the children's homes?*

Carina : *Yeah, how can we find out?*

Alva : *Well, we can get a bunch of children in a little group to see what we learn.*

“We can get a bunch of children together in a little group and see what we learn” says Alva. That speaks volumes about how she perceives the importance of the group in her own learning process. Alva (and naturally her classmates) has experienced thinking together with others and believes, to a large extent, that ideas multiply if there are several persons thinking together. She has become curious about how others think and is perfectly aware that others contribute to her happiness because she learns or understands in new and different ways.

“The learning process should be based both on the interplay between adults and children and on the children learning from each other. The group should be

acknowledged as a vital and active component in the child's development and learning process."
(Lpfö-98)



crow, crow

Making children visible beyond preschool walls

A little more than two years after we concluded our bird project we had the opportunity to congregate our old "crow kids" (who by now had started school) and their parents and together attend an extraordinary event. We were invited to the opening of a permanent art exhibition of a different ilk. In a huge office building, right in the heart of central Stockholm, there is a dizzying, dazzling light well. In the midst of that light well is a glass elevator. On both sides of its glass walls, on several landings/shelves, hang 37 original drawings of birds created by children in our bird project.

It all began when the drawings ended up in the hands of architect Harald Zetterstrom who became terribly fascinated with the children's pictures. To quote Harald : "I was looking for a special motif. Something that could add a human dimension to this huge chequered building. When I saw the children's drawings I knew immediately that I had found it." At his initiative the children's drawings eventually came to be used as decorative art in a part of the building that Harald had designed. At a meeting which took place before the construction was under way, I had the opportunity to describe how the children worked with birds to some of the office management. The fact that they were privy to the work behind the children's pictures, in my opinion accounted largely for the highly respectful way in which they welcomed and thanked the children at the inauguration. When the addition was complete, a large party was organized at

the office for the children and their families, and all those who had been involved in the CROW project were invited. The guests constituted a large gathering of interested parents, siblings and pedagogues. Some took the opportunity to take along both a grandfather and a grandmother. We were some 60 to 70 persons, running up and down the stairs in this twelve-storey office building to see all the birds on the glass walls. Even though much time had passed since the drawings were made, the children could still recognize and identify both their own and each other's pictures. The children recounted with much enthusiasm memories from the project period. We were then invited into a room with a long, beautifully set table with juice, cakes and candy for the children. Two directors delivered fantastic thank you speeches to the children and each child received a diploma as a souvenir and token of appreciation. I am convinced that the children will always remember that special day. It was a day ripe with respect for the children, in all earnestness, from adults far beyond the preschool walls.



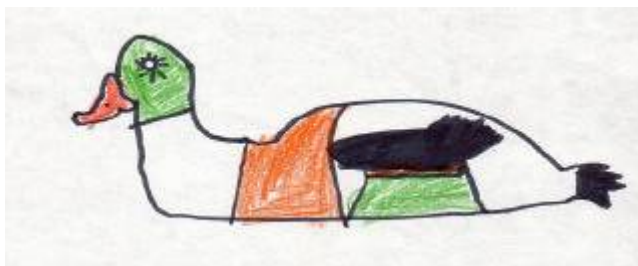
Learning with and from each other – co-building new knowledge

Documentation is one way of understanding the world in a different light and making listening visible. Where there is both the desire and the will to listen to the children, I, as their teacher, have the opportunity to practise, together with the children and my colleagues, an ongoing process of knowledge-building, not only about what child and teacher can be and become, but what preschool and I as a pedagogue can become. But in order for this to occur, we, as pedagogues, must naturally be aware of the value that underlies what we are proposing to the children. Those of us fortunate enough to work closely with children have the opportunity to discover both the children, ourselves and the world in a new a different light over and over again. That is a great, great privilege. It follows that we must also recognize the tremendous responsibility we have for how we

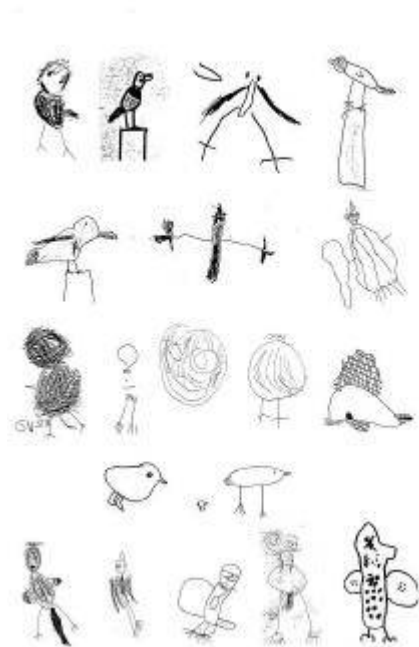
interact with and relate to the children, how we relate to our task as pedagogues, and how we perceive the role of preschool today and tomorrow.

Stockholm, May 2005, Anne ? berg

"We must continuously try to understand the meaning of our curricula in relation to our changing times and possibilities. Just like laws are not ..."
(? berg, Lenz-Taguchi, Lyssnandets pedagogik, etik och demokrati i pedagogiskt arbete, Liber 2004)



The children's first bird drawings



The children's later bird drawings



