This paper describes the creative activity of two first graders and identifies moments of creative activity that reflect the integration of strands of experience. Children's and adults' creativity are compared. Topics include: (1) the role of novelty in art; (2) the creative act as an interaction of individual, product, and culture; and (3) the influences of the teacher on children's creativity. The two children studied were observed in their class weekly over a 6-month period. The attention of the first child, Ingrid, to stories and pictures, and the manner and nature of her artistic creation in response to her experience are described. The learning and social style of the second child, Lincoln, are discussed, and his drawing and painting in response to classroom discussion are described. The observations of the children support a view of the young child as an artist whose work reflects cognitive and affective development and possesses aesthetic merit. The observations suggest that children experience change in the creative mode in fits and starts. A list of five references, and color prints of the children's artworks, are provided. (BC)
CHILDREN'S BURSTS OF CREATIVITY

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."
When a young child experiences a moment of artistic insight or a burst of creativity it may be more fleeting, and may take place on a smaller stage than those of adult artists. Yet amidst the chaos and flow of a child's daily life there are moments of creative insight and change that are significant, both for the child and for the child's development. What are these moments like and how did they happen?

In Franklin's case study of a sculptor, Melissa Zinc, she showed how a variety of experiences and circumstances came together to produce a dramatic change in Zinc's work. (Franklin, 1989) Franklin calls this a convergence of streams. This coming together of seemingly diverse or unrelated circumstances and processes is what characterizes interesting changes in children's creative work as well (and may also be a profoundly generative way of describing development in general). This paper describes the creative activity of two children. Moments in their creative work that reflect the coming together, or integration of various strands of experience, are identified.

Many agree that for a person or activity to be called creative it must be novel and significant. Gruber says that a psychological account of the individual's creative process must describe the pattern of knowledge, purpose and affect. (Gruber, 1989) This presents some possible guidelines and also special
problems for the study of children's creativity. The adult's definition of herself as an artist may contribute to the purpose of her work, and may give direction to the experiences leading up to the creative leap or invention. Yet young children rarely reflect on themselves, and few would talk about whether they felt artistic. Moreover for most young children creative activity is a form of play where the activity itself is the goal. In this sense making a painting or telling a story is an intrinsically satisfying or exciting experience for the child, where for the adult artist the process might be experienced as frustrating, painful, etc. but the imagined goal of a significant expression or creation is sustaining. Finally as Duckworth (1987) among others has shown us, a child may invent something that has been invented millions of times before. The experience of invention is powerful even though it is not a novelty for the culture at large. Anyone who has seen a child discover that when they put blue and yellow paint together it makes green will understand why the experience of invention for a child can be as intense as when the adult artist discovers something that is novel to the whole world. This analysis uses the following guidelines: a child is considered to be engaged in a creative process when they use materials (including language) to express a feeling, image, experience or idea. While they need not invent a genuinely novel technique, the experience of discovery or exploration must be apparent in their activity.

The children's work and activity are described in the
context of their classroom experiences. Csikzentmihalyi (1989) argues that a creative act is neither in the individual, the product or the culture but is a phenomenon that arises out of the interaction of these three domains. The adult in the classroom may serve the function of the culture in at least two important ways: 1) the adults may set goals that encourage, constrain, shape or influence the child's creativity by setting tasks, providing materials, limiting space and time and defining goals, 2) the adult may provide feedback and reflection that is internalized by the child and thus contributes to the evolution of the child's work in a given domain much as the social and cultural milieu of the creative artist may encourage, discourage, provide roles to be broken, etc. In several recent case studies of creative adults the analysis describes a setting, sometimes actual such as a studio, sometimes intellectual such as a community of scholars in which the creative person moves about choosing ideas, materials, pieces of conversation. The classroom may be this setting for the young child.
Method

This paper includes case study material on two children from a first grade classroom. These children were chosen by their teacher who collaborated in collecting material for this study. They were chosen because they were bright active children. The material was collected over a 6 month period. They were observed in their class once a week for 2-3 hours. The teacher was interviewed twice, once at the beginning and once at the end of the six months. The teacher collected the children's writing and drawings. In addition observations were done during the children's special art class and their art teacher was interviewed about them. The method used here is modelled after the case study approach described in Wallace and Gruber (1989). Two features of that method warrant mention here. First, the material is presented as a narrative in the sense that Franklin (1989) describes it. The analysis constructs meaning by identifying and integrating information in order to reveal an underlying idea or thesis. Moreover, the idea that these narratives are phenomenological is important. The experience of the creative person is taken seriously. In describing the experience of children the teachers insights and characterizations are meaningful in two ways: they have a continuous and close view of the child that offers insights not available to the periodic observer. In addition, the teacher's view influences the child's sense of his or her work. Csikzentmihalyi's emphasizes the individual's experience of self in a social context, and the
influence this then has on the creative process itself.
(Csikzentmihalyi, 1989) The teacher not only has an idea of a child that affects the child's self image but also may determine the possibilities, activity, materials the teacher makes available to the child and thus the potential for creative activity.

The analysis describes the two children's overall ways of working and also pinpoints specific moments of creative activity. The focus will be on showing how those moments are the expression of a weaving together of strands of experience. For the first child these moments remained somewhat non progressive. She did not reach a new level of working. These occasions were however the only experiences she had during my observation, of focused integrated work, where the product seemed to fit the process. In a sense these moments were for her, moments of opportunity where she could experience a new level of synthesis. The second child experienced a moment of emergence or, a convergence of streams. In both cases specific examples of creative work will be used to explore the streams or strands in a child's life that can come together in a creative process.
Ingrid

Ingrid is a slender pale child whose mobile face and inscrutable expressions attract the attention of adults. All of the adults who work with her say that she is creative and also that she is not working up to potential. When these adults are asked to describe what it is that makes them think she is creative they have a hard time pinning it down. Her classroom teacher says: She always sees things differently than the other children. You would show a picture to the class and everyone would say "oh look at his red shirt and Ingrid would say but look at his shoelaces. It is probably herself that she is pointing out. She is suffering for attention. She is the different drummer." In describing Ingrid's under achievement the teacher says "She is capable of much more than she is producing". The teacher describes Ingrid's personal life as both disorganized and also in some sense constantly disappointing. "Ingrid always has a set of unfortunate circumstances - she gets on the bus one day and locks out the window and sees her cat being run over by the bus. Her parents keep forgetting to send in a book order, send in special things for class projects. When all the other girls decide to wear dresses to school Ingrid doesn't have a dress to wear. Her lunch is never right."

Although Ingrid is often distracted or out of synch with the group, she is able to focus in on artistic activities.

Her teacher says: "She builds blocks with a great number of details, and decorates them very ornate. But her moods get in
the way of her creativity, ... she knows she's good at art. She's the only one to use the easel. Sometimes she misuses it. She loves to paint, weave pot holders." Her interest in art extends to language as well as visual and tactile arts. Her teacher says "She loves to be read to. She loved The Lion, The Witch and The Wardrobe. She puns. Everything she says is cryptic." And yet even with her love of language and fantasy her characteristic lack of follow through and slight chaos influences her experience of text. Her teacher says she brings in huge stacks of books and then never gets around to reading them. Her art teacher says about her "She loves textures and materials. She loves to leaf through my wallpaper sample books. Then I always expect her to make something wonderful with the pieces she cuts out... but she never does really." Now I would like to describe three instances in which Ingrid was able to pull together strands from a rather tangled situation and weave something new. These examples suggest that for Ingrid creative work appears like bursts or sudden moments amidst a flow of disorder and inattention. The fact that her teachers feel she is creative probably contributes to Ingrid's tendency to zero in, or pull it all together during art activities. Two features characterize her most creative moments: they are preceded by visually powerful experiences or inspiration, and she seems to require interesting unpredictable media in which to restructure or process the powerful visual experience. The element of surprise in her use of media seems to keep her involved in artistic activity.
Ingrid's class took a trip to the Clark Art Museum to see the Impressionist collection. Her teacher says about her behaviour in the museum "she was vague and tuned in to the pictures at the same time, as only Ingrid can be. She wandered around like a blythe spirit. She didn't listen to the guide who was talking to us. She was absorbing not hearing."

When the class came home they were asked to paint using water colors based on what they had seen at the Clark. Figure 1 shows Ingrid's painting. The colors, subject matter and use of the paint have the overall quality of the impressionist collection, without being similar to any one of the paintings Ingrid saw. Like impressionist paintings, these flowers lack the sharp borders and outlines that children of this age most often use. The sense of color rather than of shape is part of the impressionist style. Ingrid internalized the visual qualities of the painting even though she did not study them in anyway or even seem to focus on them. In painting this she appeared much more absorbed by the paint than by thinking about what she had seen at the museum. She was particularly taken with the way the paints looked layered upon each other. Two months later, in art class the teacher showed the children some different paintings of flowers including a photograph from the White Flower farm catalogue a Georgia O'Keefe purple iris. Again during this introduction Ingrid was inattentive. She was frowning at some of the other children, humming a tuneless song, and letting her eyes wander around the room. Once settled at one of the small art
tables she spent a few minutes on the edge of some conversations among the other children. Then she picked up a brush and dipped it quite heavily in to the blue and glopped quite a bit onto one half of a piece of white paper that was sitting in front of her. She proceeded to add some other colors and by this time was quite absorbed in her own activity and the look of the paper. She then folded the piece of paper in half and began smoothing her hand over the folded paper. When she opened the piece of paper back up she was both interested and delighted with what she saw. Figure 2 shows Ingrid's flower painting. It resembles a Georgia O'Keefe painting both in form and in color. The shape of it is much closer to an iris than Ingrid could have made using free hand drawing or painting. A strong visual experience converged with the availability of a material that Ingrid liked, and her tendency to focus on process with a growing detachment from the children around her to allow for a moment of aesthetic emergence. Ingrid's teacher described her as a child who zeroed in on an unusual detail. Her ability to zero in after or amidst what seems like an unfocused milling around characterized her way of working in art as well.

In contrast Figure 3 shows a painting that Ingrid did using magic markers. It demonstrates that the creativity is not in the child, but represents the convergence of situation with impulse, method of work and material. This picture is much more typical of a six or seven year old, with a series of conventional symbols like the rainbow and an emphasis on clarity and boundary.
A third example of Ingrid's integration between spheres of experience occurred one Monday when the children were asked to write about what happened over the weekend. Ingrid wrote:

"I got the Rhubarb. I got the Rhubarb. My Mom made the Rhubarb pie."

This poem is similar to her paintings in certain formal ways: the creative moment drew not on a powerful visual experience but on a powerful emotional experience (doing something special and alone with her mother). As with her paintings the medium is interesting and important to Ingrid, words become opaque. Ingrid's proclivity to integrate her material with specific content, and with her emotional concerns seems to underlie her creative works.
Lincoln

Lincoln is a bright active little boy who expresses physical, social and intellectual confidence. He is a leader in his classroom but does not associate with one best friend. Lincoln is competent in all areas of school work, and appears to enjoy his competence. He likes to accumulate and demonstrate bodies of knowledge, for instance about sharks, robots or endangered species. Lincoln's interests during this year included Robots, Nintendo and computers. He seemed especially interested in parts, patterns and complex structures made of parts and pieces. His interest in Leggo building is an example of this. He enjoyed spending a long time putting Leggo pieces together to make detailed complexly structured robots, machines, and battle-ships. His teacher says about him "his favorite activity is Leggo, and transformers. He loves anything that involves transformation." In his discussions of Nintendo and computer games he also spoke in clear detailed ways about the rules, the routes and procedures of the game. He did not apply a similar attention to his school work which he performed well but perfunctorily. His way of working and using the classroom as an environment for development bore interesting formal similarities to his interest in parts and the structuring of parts. Often having listened to the morning meeting where ideas, choices and plans were made for the group, Lincoln would not go directly to his seat to begin work but would amble about the room tinkering with some small toys, stopping by a group of kids and making a few comments,
humming a bit of a song, walking over to the computer and pressing a few keys, maybe playing one step of a math game on the screen, and then seemingly abruptly would turn to his seat and quickly do his work; almost as if he was collecting bits and pieces of experiences, and then constructing them and pulling them together into a structure, in this case his work. For instance, he often incorporates whatever joke or song he was singing into his drawing or story, and often incorporates them as from the computer games into his 'seat work'. Similarly his quick and often disruptive social interactions seem to be used as material for the language or themes as of the stories and drawings he does as seat work. His teacher says about him "Lincoln loves to tell little stories about everything, extending beyond the information and creating a scenario in which things come together." For instance she had showed them several pictures of animals who build their homes under the earth. He took his finger and used it to trace over the picture telling the story "you see a little rabbit could build his home over here and then he would make a path and then he could go like this...over to visit the mouse in his home over here." In drawing an Eskimo, Lincoln explained, while pointing to each part of the picture, that the Eskimo is holding a white shield for camouflage in hunting, but his face is brown as camouflage for hiding behind a brown wreck. The Eskimo has his hind hood up because he is going hunting a long way from his igloo. In general, however, Lincoln's creative writing and drawing seemed perfunctory and
inexpressive. Figure #4 shows a typical drawing by Lincoln.

In May his teacher found he had undergone some kind of remarkable change and that suddenly he was investing himself a lot more in to his work and that the quality of his work had changed. His interest in structuring of pieces and complex parts had become integrated into his writing and painting and that this was precipitated by the class's focus on American Indians. The teacher took a trip to the southwest in April, and upon her return the class embarked on a module on American Indians in the Southwest. They talked about Indian life, looked at pictures, listened to stories and drew their own pictures and told their own stories based on what they were learning. Among the things they learned about were Indian Homes, Indian patterns and designs, Cocina dolls, war rituals and Indian names. Lincoln's teacher said that characteristically of him, he would often stop in the Indian corner before school started each day or at lunch and leaf through some of the Indian books or peruse a picture. He would never spend long or really read the stories, just kind of sample them. Right from the beginning she said Lincoln seemed captivated by the material. He was eager to demonstrate his accumulation of information regarding American Indian life. He chose Chief Sitting Bull for his Indian name. The children were exposed to the complex, often intricate structuring and patterns of Indian architecture, art and war rituals.

The change the teacher saw and that is evident when early works are compared to later works suggests that when these
strands came together Lincoln experienced a creative leap. Figures 5 and 6 are pictures Lincoln made towards the end of the Indian module. These paintings are dynamic in a new way for Lincoln. They draw on Indian material and employ the rich architectural detail and structure that Lincoln likes. They express danger and power, themes that Lincoln previously only expressed through disruptive social interactions. Lincoln's early writing was also competent but brief and devoid of the richness of his play, both in content and form. But the following is an example of what he wrote towards the end of the six months, soon after the Indian project was completed.


Lincoln seemed to discover this powerful form of writing suddenly one day when he sat down to write a story. He used pure dialogue (no narrative voice) to convey meaning. The arrangement of utterances is complex, and represents a transformational restructuring of sentences and words. This writing style is structurally similar to his Leggo pieces in which many parts came together to make a whole. For Lincoln, a continued interest in form and structure converged with a symbolically and affectively rich body of material to create a new level of artistry.
What do the experiences of Ingrid and Lincoln tell us?

These along with similar case studies of young children support Gardner's emphasis on viewing the young child as an artist, whose work reflects her cognitive and affective development and has aesthetic merit. But the almost chaotic and scattered seeming progress of Lincoln and Ingrid's creative work suggests that children do not develop smoothly or in a linear fashion. Nor is the creativity simply a characteristic within a given child. Instead, children experience change in the creative mode in fits and starts. But these moments have a history that makes them possible. The strands of experience leading up to creative insight or change come from many aspects of a child's life and are both internal and external. In the cases of Lincoln and Ingrid these strands included personal concerns and feelings, characteristics of home life, general styles of thinking and learning, particular ways of relating to materials, exposure to visual models, the acquisition of new bodies of knowledge, and access to appropriate materials.
REFERENCES


