

# Beyond Productivity: Children as digital artists

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## 1 Background

There has been a long tradition of interest in children's drawings as a mirror of their minds; the literature about children's use of digital media and new media technologies is not extensive yet. Human Computer Interaction [HCI] starts with yHCI, young humans are an indication of future use of creative software tools and the nature of the relationship between machine and human intelligence.

## 2 Research Programme

Work started with the Creativity and Cognition Research Studios at Loughborough University in 2000 on aspects of children's digital art. In particular the key question was 'What are the influences of new media technologies on children's creativity?'

A series of digital art projects were developed in locations throughout the UK, but centering on the digital city of Brighton and Hove and the digital village of Trimdon, the second home of Prime Minister Tony Blair.

The main themes were Sci-Art: Eternity [a piece of music to last forever], Zoo, Flutes [replicating the sound of the world's oldest known musical artifacts] and finally C60 [the sound to accompany artists impressions of nano-technology]. Most of the projects were sound or music based.

## 3 C60 Sample Image



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## 4 Creative Tools

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Children aged between seven and seventeen are not necessarily able to use sophisticated software packages. MS Paint, MS PowerPoint and SSEYO Koan X the generative music programme were the main tools, none of which require prior knowledge or detailed training, yet can enable children to make sound or sound with graphic imagery work.

## 5 Research Methods

In the end Talk Aloud protocols were used, when children are asked to verbalize their thoughts and creative processes as they worked with other children or directly with the computer. A conversation analysis system based on the Jefferson notation enabled themes and patterns to be discovered. In addition parents, teachers and other adults were interviewed about the project process and artistic outputs and a Discourse Analysis approach was used to analyze answers to similar pre-set questions.

## 6 Results

Children take an exploratory approach to sound art when given the opportunity and develop a close relationship with the music intelligence built into Koan. Some children appear to attribute a theory of mind to the system. Adults' discourse is about the value of the microskills in computing, starting to reflect the value of IT being to provide efficiency savings rather than enhance human intelligence. The poster is accompanied by a series of PowerPoints with the sound art matched to the image sequences in a generative form.

## 7 References

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