green letters tumble against black glass and dim pizza filled rooms
tremble with heavy intonations, fingers drum whilst a single screen
reflects a bespectacled face on plastic rimmed spectacles, seeing
clearly four eyes doubled and redoubled by interactions of photons,
words form from the void within
for i =
it is done

language is the ultimate formalisation tying patterns of electrical and
chemical activation, spaghetti wrapped neurons,1 discretised to token
sounds, virtuosity to vocabulary; in writing digitised as fingers scratch
ink upon parchment or softly caress smooth worn key tops

before I continue let us reflect, for i can only tell my story, but the words
are our own, for eye to eye and voice to voice the tokens were formed,
even though sheet to sheet or screen to screen we use them now

and we have found ways to bare our soul and transport our listeners
through simple words, and to, in turn, reflect and talk about the talking,
formalising the understandings we have about words in words

the hard edged symbols cut upon stone, dark text stamped from lead,
and pixelated poetry touch our very heart

is it surprising that silicon and liquid crystal should be no less richly
understood

I called the chapter "deconstructing experience".2 And it felt so crude.
Can you deconstruct experience? Is it not a whole? Are not the parts
so finely interwoven that like a Celtic knot each part is intimately part of
each other? Not that I was talking about the things that are deep, of
grief or joy, love or violence, just frippery – electronic Christmas
crackers. And yet for a child is not that experience as precious as a
cantata played in a hushed concert hall? Certainly in email feedback
again and again people, especially those far from home, have said how
using these electronic crackers, poor imitations of the crepe paper and
plastic toys of the real thing, somehow have been able to recapture that
experience of childhood. A precious thing upon a web page.

I wanted to tell the story of how that experience was dissected and then
reconstituted in HTML. How the fine edge of intellectual scalpel could be
used elsewhere. But it sounds so implausible. Although the flesh once
severed may be sewn back together surely the life blood of the true
experience would be lost by the analytic surgery.

And yet my own experience said it could be reformed, not a
Frankenstein-like simulacrum or crude reshaping of the original, but a
new creature as natural on the web as torn crepe paper on the party
floor.
It was then that my wife showed me a quote from Ruskin that she had just read, itself quoted in a book by Madeleine l'Engle:³ “the cursed animosity of inanimate objects”. As I sought to understand the quote and the way the words at level upon level wrought their power to move, I realised that this literary textual analysis was of a similar kind to the analysis we had used on the crackers experience.

Indeed it is normal in literary and artistic fields to analyse the aesthetic, to make sense of the rich emotions evoked by words and paint in terms of formal categories of metre and balance. It is understood that this analysis is not a reduction to the components, nor a total explanation of the effects, but instead a partial unfolding of the artistry of the poet or painter.

Especially in the literary arts, where the media of intellectual and artistic activity are one, these analytic categories are themselves a resource for creativity. As you see the patterning of your own words and understand their effect you reinforce the strengths and repair the weakness of your prose. The honed ear and eye like a sculptor's chisel become themselves tools.

In music too it is when the nature of rhythm and pitch is fully understood, when the vocabulary of melody and harmony have been learnt, that these become both an implicit part of the musician's skill and an explicit part of the musician's knowledge, forming and informing the notes written and played. If taken as rules these are of course a limitation or straitjacket, but when used as guides they become a launch point.

Whether or not the details of analysis in the arts are directly useful, they are certainly an exemplar for how we can develop an analytic perspective on computer experience.⁴

written by words

I had an idea for this paper. I would write words of a poem or story and weave them around the margin, not part of the text but picking up images, adding a side comment, a parallel commentary. This is what I intended. And so I formed a first line "do you expect dreams and fire" – I'm not sure even then where from, but deliberately wanting a start point, perhaps thinking of words that would comment wryly back at themselves as well as pick up the text. But then it happened, as it has before, the words wrote me. They were not the words I wanted, not the words I intended, not the words I would have written. I had to abandon my idea for the poem and for this paper.⁵

In a recent SIGCHI Bulletin column⁶ I described this as readerly writing: the point at which you as writer become reader of your own text, not transforming ideas from your head onto the paper, but finding ideas forming out of the words which you are writing, ideas that you did not know before.

I find this most exciting when writing involves a character. A few months ago I was playing with metre and wrote a few words in the voice of a woman talking to her child, "Johnny get your friggin' shoes on quick", but as she scolded her child suddenly the words turned more tender, "I did you egg I know you like it best". Suddenly I wanted to know more about this woman, and the only way to know her more was to write more about her.

This is a common experience, and authors will often say how their characters take a life of their own. You cannot 'make' your characters do something they would not.
Evolutionary psychology views our cognition as consisting of various special purpose parts each tuned to different aspects of our lives. One of these is social intelligence, which tells us how we should behave with others and helps us to understand and predict how they will react. We are built with an innate ability to get inside other people's heads. Just as deep down we know we cannot make real people do what we want, but must let our expectations be shaped by our innate understanding of their character, so also our imaginary people are shaped by that innate understanding of human character.

This is used to good effect in the design practice of personae, rich pictures of typical users. When fully developed by a design team, they become a means to test potential designs: what would Johnny's mother do now? They also form a medium to communicate: "I think Johnny's mother would like this, what do you think?" Personae are written in far more detail than is 'necessary' – they are not demographic sketches. They have to be real enough so that our innate social understanding can 'know' them and hence tell us how they would act and react.

I briefly mentioned at the previous workshop how I had been seeking to understand the way imagination acts as the link point between different innate intelligences. As we bring situations to our imagination the scenes and sensations feed themselves out towards our perceptions and are then reperceived, so that, like life lived in the real world, the imagined experiences are available to the many parts that are us. We make use of this in scenarios in HCI as well as in day-to-day storytelling.

Creative play is widely understood to be a critical part of childhood development – imaginary situations and worlds to experience and investigate. However, play is perhaps also a crucial part of the history of cognitive development of species. It is in play that even simple animals can share their primitive imaginings and where children learn to learn from the vicarious. This is all we do as academics, pass on vicarious experience through words, sophisticated verbal play. Yet I find it surprising how few academics do play, really play. Perhaps they satisfy their playfulness through abstract musings or evening sports, but I wonder too whether this is a limitation for many.

Although some art is lost in its own self importance, many artists are still playful: the child caught in the wonder of the world, twirling grass around its fingers to see the patterns it makes. Although circus, Punch and Judy and pantomime are now largely relegated to 'entertainment', interactivity is deeply rooted in dramatic development from the mediaeval mystery play to Shakespeare. Although less rowdy than a sixteenth century audience, Puck addressing the standing crowd in the reconstructed Globe on the South Bank senses and reacts like a stand-up comedian. Midsummer Night's Dream has perhaps more in common with Morecambe and Wise than Waiting for Godot.

Installation and performance art in particular retains much of this exuberance, and several of the EQUATOR experience projects are focused on large scale dedicated public arts events. At Lancaster ..:thePooch:. have used performance art as a way to explore interactions that are not immediately 'useful'. One example is the Schizophrenic Cyborg. A member of thepooch wears a screen strapped TeleTubby-style to his waist that shows messages typed by another member, distant but just able to see. In a loud and busy arts event people encounter the cyborg and feel, even when disabused, that these messages are in some way coming from him. These asymmetric three-way interactions break and challenge normal interaction and for the cyborg cause a dislocation between 'I' and 'me'.
"spaghetti wrapped neurons" – Whilst our moment-to-moment memory and experience is a matter of electrical signals and chemicals washing our brain and bloodstream, our longer-term memories are encoded in the growth and decay of synaptic junctions between neurons, dendrites growing to meet one another.


www.hcibook.com/alan/papers/deconstruct2003
send virtual crackers from
www.vfridge.com/crackers


As well as the deconstructing crackers chapter, I've been working with Masitah Ghazali on similar deep analysis of engagement and fun, and with Fariza Hanis Abdul Razak and Barbara McManus on different deconstructions and reconstructions of the nature of m-learning and e-learning.

Some of the work with Masitah and also other related things are in my keynote for IDC2003:

See the poem that wouldn't stay in the margins at:
www.hcibook.com/alan/words/always.html
and the poem about Johnny's mother at:
www.hcibook.com/alan/words/new-school.html

www.hcibook.com/alan/hci-education


www.hcibook.com/alan/papers/liit-HCI2002

I explore the issues of imagination as cognitive integrator in more depth in an essay on "Imagination and Rationality"
www.hcibook.com/alan/papers/imagination2003

EQUATOR – www.equator.ac.uk
:::thePooch:: – www.thepooch.com

this paper is at – www.hcibook.com/alan/papers/xxxxx-2003.html