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http://www.cyberlife.co.uk/steve/

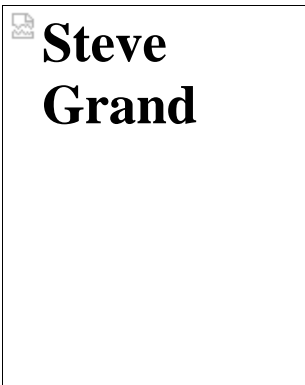
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7 mai 99 - 31 août 10

1998 1999 2000

Steve Grand



(The opinions expressed herein are my own, so don't go blaming CyberLife, okay?)

Job: I'm the Director of Technology (Chief Technology Officer, if you're American) at [CyberLife Technology Ltd.](http://www.cyberlife.co.uk), an Artificial Life company in Cambridge, UK.

Age: 40 (Jeez!); married to Ann, with one son (Christopher)

Address: I work from home in beautiful Wells, Somerset

Where to send the fan mail: steve.grand@CyberLife.co.uk

What I do: My main raison d'être is to set the technology strategy for the company. I also continue to build up the philosophical foundation behind the CyberLife approach. I then try

to ram these ideas down the unwilling throats of my co-workers. I'm also trying to do some of my own research towards developing future generations of CyberLife technology. That's the theory, anyway. In practice I mostly do email.

Interests: complex systems, applications of biological ideas to computer science, artificial life, artificial intelligence, aviation (except I had to give up flying because of pressure of work), flight simulators (on account of the aforementioned lack of any real flying), biology, geology, archaeology, local Dark Age history, photography, electronics, making the world a better place...

Who reads this crap anyway?...

Creatures

My claim to fame is that I was the architect and lead programmer for [Creatures](http://www.creatures.com), where I did what I could to bring a new form of life into existence. Since I'm their creator, you'd have thought they would repay me with a little respect, but oh no. Do they ever do as I tell them? Do they heck! Adam and Eve all over again...

CyberLife

I'm also to blame for inventing (or sometimes rediscovering) the concepts behind [CyberLife](http://www.cyberlife.co.uk). Click the link to find out more about it, as I can't do the subject justice in a page. Suffice it to say that I'm terribly interested in applying the tricks that Nature uses in biosystems to the philosophy and practice of computer programming and artificial intelligence. I'd also like to be the first person in the world to create a truly sentient synthetic life form and be insulted by it.

Background

Before being given a suit and told to be a businessman, I was an innocent programmer, latterly writing games but before that business and educational software. Published titles for which I was designer and lead programmer (sometimes also producer, artist and chief cook) include:

Prompt (probably the first ever word processor for infants!). *Core* (first integrated suite for children). *BigPlan* (time manager). *TimeOut* (yet another time manager - look, I need help to manage my time, alright?). *Hyperbook* (hypertext reader and search engine). *BBC Landmarks* (four historical adventures). *Robin Hood* (graphic adventure). *Rome AD92* (another adventure). *Creatures* (whatever that is). I was also the overall architect for *Origin*, CyberLife's modelling system.

I began programming in 1977, starting as I meant to go on by crashing the Physics Department's PDP8. I then generously splashed out my girlfriend's life savings on a single board computer called a Nascom1, and taught myself machine code. The first program I wrote was a learning Draughts (Checkers) program, which fitted into 768 bytes (couldn't do that now - they don't seem to make memory like they used to). I was training as a teacher at the time, but quickly realised that although I was fascinated by the way children's minds grow, I was totally useless at standing up in front of them to speak without becoming a nervous wreck. I left college too late to get a grant, so never graduated





of anybody trying to simulate brains or evolution on computers - they don't stock books like that in the "Parenting" section. I did manage to develop a small population of evolving, neural net-driven animats, and had a lot of fun evolving plant morphology, none of which was of any practical benefit to me until the time I started writing *Creatures*. At that point life started perking up and showing an interest...

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Qualifications and awards

No academic qualifications; not even a rotten swimming certificate. However I was thrilled to be given an honorary research fellowship at Sussex University for my A-life work, making me into a *proper* scientist (I almost bought a lab coat).

Creatures has won a number of awards (for which I'm only one of the people responsible, of course). Some I know about are:

The 1996 KPMG Anglia Enterprise Award for Innovation.

The 1996 International EMMA Award for Action/Simulation Games.

...although there are various odd-shaped bits of perspex hanging around the office that must mean something.

Recent papers and articles

[Creatures: Artificial Life autonomous software agents for home entertainment](#), S.Grand, D.Cliff, A.Malhotra. Proceedings of the First International Conference on Autonomous Agents. Ed. W. Lewis Johnson, ACM Press, 1997

[Where Newton Went Wrong](#), S. Grand, A shorter version of this article appeared in the Guardian, 1 October, 1998

[Creatures: An exercise in creation](#), S.Grand. IEEE Expert, Intelligent Systems and their applications, IEEE Computer Society, August 1997

[Three observations that changed my life](#), S.Grand. IEEE Expert, Intelligent Systems and their applications, IEEE Computer Society, October 1997

Creatures: Entertainment Software Agents with Artificial Life, S.Grand, D.Cliff. In *Autonomous Agents and Multi-Agent Systems*. Kluwer Academic Publishers, Boston. 1998. In Press.

[Anarchy in action](#), S.Grand. IEEE Expert, Intelligent Systems and their applications, IEEE Computer Society, ??? 1997

[Battling with GA-Joe](#), S.Grand. IEEE Expert, Intelligent Systems and their applications, IEEE Computer Society, March/April 1998

The Creatures Global Digital Ecosystem, D.Cliff, S.Grand. Submitted to *Artificial Life*.

[Curiosity Created the Cat](#), S.Grand. IEEE Expert, Intelligent Systems and their applications, IEEE Computer Society, May/June 1998

Confessions of a Cyber God. In "Flesh-eating Technologies". Edited by Sara Diamond and Sylvere Lotringer. In Press.

Talks (I still hate standing up in front of people)

Past:

Intelligent Agents workshop, Bristol; Agents '97 conference, Los Angeles; British Telecom Labs, Ipswich; Hewlett Packard, Bristol; Birmingham University; Virtual Humans conference, Hollywood; [Digital Burgess conference](#), Banff; Salford University.

Upcoming:

Keynote at [SAB](#) conference, Zurich - 17-21 Aug. Panel session at [ECAI](#) conference workshop, Brighton 25 Aug. Hosting

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My Soap Box - a place of my own to rant

Jeez I hate people who think everything's either black or white (in fact everyone who thinks that way is a total jerk, and everyone who doesn't is an absolute angel)! Let's hear it for shades of grey, I say! It strikes me that the world is an immensely complicated place and very few things are neatly compartmentalised into "black and white", "good and bad", "his 'n hers"...

Take "life", for example. People often assume that something is simply alive or not, but it's really not that easy. Is a virus alive? Is a baby alive before it's born? Before it is 2 days old? While it is still a single cell? While it is an egg and a sperm? What about when you remove someone's kidney - is that alive? How about jellyfish - they spend part of their lives as a single, large blob (the way we are used to seeing them) but then split up into thousands of free-swimming polyps - is that one creature or many?

Vegetarians irritate me. Not people who just don't like the taste of meat, but those who think they're being terribly moral by choosing to eat only plants. Why is that moral? Why draw the line there? What do they do about mushrooms, which are neither plant nor animal? I can see that eating other people is bad, and eating cows is not much better, but to sit back and munch complacently on a still-living lettuce, just because you can't hear it scream, is to make an arbitrary and irrational judgement about where to draw the line. A more responsible point of view would be to at least consider it an open question, or to make a judgement about what you're willing to eat dependent on how close to starving you are.

People draw arbitrary lines and cram things into arbitrary pigeonholes all the time, and it makes me sick. Politics, Ethics, Morals, racial discrimination, you name it and someone's drawn a line through it. Categorisation is perhaps the most powerful mental skill humans have, yet it is also our worst enemy. I know everybody has to make choices - when it's OK to have an abortion, when somebody's dead, which things it's OK to eat, which athlete won the race, but I wish people would more often appreciate how complex and difficult the issues are, rather than simply applying a judgement based on dogma, bigotry or ignorance.

Here endeth today's rant.

Other Links - some random favourite places

My friends and colleagues in the [Cognitive Science department](#) at Sussex University

[John Catalano](#), who runs an excellent Web site devoted to Richard Dawkins and all things biological

[Biota.Org](#), run by Bruce Damer who's co-organising [Digital Biota II](#) with us.

The [Digital Village](#) - check out what my favourite author, Douglas Adams, and his friends are up to.

A couple of my favourite Creatures sites (no insult meant to the other 200 or so - they can be found [here](#)):

[Slink's Burrow Online](#), [Creatures Information Exchange](#)

Assorted individual friends and colleagues (in no particular order): [Dave Cliff](#), [Aaron Sloman](#), [Bruce Damer](#), [Demetri Terzopoulos](#), [Kerstin Dautenhahn](#), [Larry Bull](#), [Larry Yaeger](#), [Sue & Bruce Wilcox](#)

Plus, of course, [CyberLife](#), the company I work for, in case you got here by a circuitous route.

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