



This file is

<http://www.cs.bham.ac.uk/research/projects/cogaff/misc/AREADME.html>

-- Beware the "Books LLC" Scam on Amazon and elsewhere --

## PARTIAL GUIDE TO CONTENTS OF

<http://www.cs.bham.ac.uk/research/projects/cogaff/misc/>

(And some other things listed at the end)

Aaron Sloman

School of Computer Science, University of Birmingham, UK

**Installed:** Feb 2009

**Last updated:** 10 Nov 2009; 6 Jan 2010; 1 Feb 2010; 4 Feb 2010; 14 Apr 2010; 19 Apr 2010; 23 Apr 2010; 27 May 2010; 23 Sep 2010; 9 Oct 2010; 3 Nov 2010; 15 Nov 2010; 26 Dec 2010; 23 Jan 2011; 25 Jan 2011; 6 Feb 2011; 14 Feb 2011; 28 Feb 2011; 11 Mar 2011; 17 Mar 2011; 10 Apr 2011; 4 May 2011; 10 Jun 2011; 1 Aug 2011; 17 Oct 2011; 25 Dec 2011; 8 Jan 2012; 30 Apr 2012

Most of the contents are html files. Some are PDF and some plain text (.txt).

(This list will be extended and reorganised from time to time.

Until I devise a better structure for the list I'll re-order the items from time to time.)

## JUMP TO CONTENTS LIST.

### Other sources

- <http://www.cs.bham.ac.uk/research/projects/cogaff/talks/>  
Presentations (mostly detailed enough to be self-contained for reading), mostly in PDF format, since about 2000.  
About philosophy, biology, psychology, animal cognition, language, mathematics, AI, robotics, evolution (e.g. of language, mathematical competences, information processing architectures, consciousness), development, vision, the nature of science.
- <http://www.cs.bham.ac.uk/research/projects/cogaff/>  
Originally the site for the Cognition and Affect project (started with Glyn Humphreys in 1991), but now includes most of my formally published papers, and some unpublished ones, 1978 book, 1962 DPhil thesis, and other things.
- <http://www.cs.bham.ac.uk/research/projects/cosy/papers/>  
The repository for some of the Birmingham-produced papers, discussion notes and presentations for the EU-funded cognitive robotics project CoSy
- <http://www.cs.bham.ac.uk/~axs/my-doings.html>  
An attempt to organise the work I have done since about 1960 in terms of topics -- provoked by an interview by a journalist. Occasionally updated. Usually incomplete.
- <http://www.cs.bham.ac.uk/research/projects/poplog/freepoplog.html>  
<http://www.cs.bham.ac.uk/research/projects/poplog/examples>  
Free open source materials related to research and teaching in AI, Cognitive Science, Philosophy

of Mind, and other things, based on use of programming to develop, test and communicate ideas.

- <http://www.cs.bham.ac.uk/research/projects/cosy/papers/>  
Papers and presentations written during and for the EU CoSy Robot project.
  - This directory: <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/>  
Discussion notes, draft papers, relics of discussions on usenet, proposals, and other things -- mostly either plain text or html (some converted into rather messy PDF).  
Some of the materials are listed (chaotically) in:  
<http://www.cs.bham.ac.uk/research/projects/cogaff/misc/AREADME.html> (this document).
- 

#### DISCLAIMER:

Neither the University of Birmingham nor the School of Computer Science should be held responsible for any of the content of this web site.

This is a university that supports freedom of expression and public debate (as far as I know).

Everything I post on this web site is licenced under a [Creative Commons Attribution 3.0 License](https://creativecommons.org/licenses/by/3.0/), and may be used without charge or permission.

---

## CONTENTS OF THIS WEB SITE -- LATEST ADDED/MODIFIED FIRST

(A partial list -- to be extended and reorganised.)

### Full alphabetic list of contents of this directory

**Selected contents (recently added or modified items are near the top):**

(I occasionally bring old things to the top of the list.)

- [The Internet and Information Suction Engines](#)  
Thoughts provoked by the flotation of facebook 19 May 2012
- [IRLAB Seminar abstract on Meta-Morphogenesis 30 Apr 2012](#)
- [Rules For The Application Of Rules](#)  
Response to a philosopher's question posted in 2009.
- [Varieties of Meta-Morphogenesis in the Bootstrapping of Biological Minds.](#)  
Draft Abstract For Invited Talk at [AISB/IACAP World Congress 2012 -- Alan Turing 2012](#)
- [The Mythical Turing Test](#)  
It is widely believed that Turing proposed a test for intelligence. This is false. He was too intelligent to do any such thing.
- [Notes on a possible Artificial Intelligence/Cognitive Science GCE/A-level syllabus](#)
- **Overviews of aspects of Meta-Morphogenesis**  
(To be expanded.)
  - [The Meta-Morphogenesis \(MM\) Project \(or Meta-Project?\)](#)
  - [Meta-Morphogenesis and Toddler Theorems: Case Studies](#)  
[Basics of the theory.](#)
  - Coming: Meta-morphogenesis and information-processing architectures
  - Possible domains for research in MM
    - Seeing a toy meccano crane:  
<http://www.cs.bham.ac.uk/research/projects/cogaff/misc/crane>
    - <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/polyflaps>

The Domain of Polyflaps and Other Domains for Acting and Learning  
(Originally written 2005, based on discussion with Marek Kopicki)

- Reflections on **Beyond Modularity** by Annette Karmiloff-Smith (1992)  
A very personal (and favourable, but disorganised and growing) review.  
(Work in Progress)
- Short-Term Memory and Programming  
(Reflections on an aptitude test for programming)
- Abstract for invited talk at PT-AI  
Philosophy and Theory of Artificial Intelligence, Thessaloniki, October 2011  
<http://www.pt-ai.org/>
- Education Grand Challenge: A New Kind of Liberal Education  
Making People Want a Computing Education For Its Own Sake  
Also available in PDF format.  
(Originally posted here in 2004)  
See also
  - Summaries of Marvin Minsky's essays for the OLPC (One Laptop Per Child) project
  - Comments on Lecture by Eric Schmidt (Google)  
MacTaggart lecture Edinburgh Festival 2011  
(Criticising computing education in the UK)
- A partial review and critique of "Zen and the Art of Consciousness"  
(previously published as "Ten Zen Questions") by Susan Blackmore.
- Can a Robot Grasp Grasping? How can a robot understand what's going on when it grasps something?
- Simplicity and Ontologies  
The trade-off between simplicity of theories and sophistication of ontologies  
Arguments against treating learning as dimension-reduction -- with examples of benefits of **adding** a dimension.  
(Updated 10 Apr 2011)
- Why Academic Research Communities Should Switch to Post-Publication Reviewing  
Thoughts on blind reviewing vs post-publication reviewing
- Why scientists and philosophers of science should teach intelligent design (ID) alongside the theory of evolution  
If we don't present and analyse examples of mistaken theories, we'll fail to teach our students how to identify and criticise them.  
(Originally written around 2006. Link added here 8 Apr 2011),
- Evolution of language and creativity  
Notes on evolutionary precursors to human language and creativity.  
Inspired by a seminar presentation by Rustam Stolkin on the work of Derek Bickerton on evolution of language.  
See also <http://www.cs.bham.ac.uk/research/projects/cogaff/talks/#glang>

- A (Possibly) New Kind of Euclidean (or nearly Euclidean) Geometry Based on an idea by Mary Pardoe.  
Do we need to assume the parallel postulate in order to reason about moving, rotating rigid objects, or line segments?
- Dynamical Information-Processing Systems in Animals and Machines  
(Notes on varieties of dynamical systems)
- Notes for a seminar on Piaget's last two books, on Possibility and Necessity
- The biological bases of mathematical competences: a challenge for AGI  
Notes for Invited talk for The Fourth Conference on Artificial General Intelligence  
Google, Mountain View, California, USA, August 3-6 (Wed-Sat) 2011  
<http://agi-conf.org/2011/>
- **DRAFT: Evolved Cognition and Artificial Cognition**  
Some genetic/epigenetic trade-offs for organisms and robots  
Or: Notes on how to do AI-Inspired Biology (AIIB)
- **Added 25 Jan 2011: Energy and Other Costs of HTML in Email**
- Bateson did not define "information" as "a difference that makes a difference"  
(And would have been silly if he had done so.)
- Computing: the science of nearly everything  
The Science that's being left out of discussions of computing education.
- Open source and Public Funds  
(A different reason for the benefits of open source: How to promote public, collaborative, mutually informative problem solving.  
(See also the iSoft/NHS document below.)
- The iSoft/NHS affair: Open Letter to my MP about government IT procurements  
(Is the EU about to make the same mistake about a monolithic global healthcare system? See <http://health.parlicentre.eu/>.)
- Can a robot design a humane mouse trap?  
What competences would it require?
- Reflections on Kinds of Value  
OR: What's the point of being (financially) rich  
.... if you can't have a good philosophical discussion, or appreciate music, or poetry, ...?
- "The Self" -- A bogus concept  
Originally written in anticipation of a debate at the AAI'08 Workshop on Meta-reasoning.
- Getting Virgin Media V+ Controller to Control Volume on Sony Bravia TV  
Using HDMI Connection
- Some AI links I have found useful in the distant past.

- [Understanding how search spaces explode, defeating parallel computation.](#)  
(How to take 30,000 decisions when designing something big.)
- [KINDS OF STUFF](#)  
Learning about them, exploring them, seeing them...
- Discussions on ontologies and an ontology for questions
  - [Towards an ontology for factual information for a playful robot](#) (PDF)
  - [Towards an ontology for factual questions.](#) (PDF)
- [Why I hate using Microsoft Windows](#)  
(most recently Windows 7, which came with [my Dell Latitude E6410](#))
- [Misrepresenting Einstein's Views on Religion](#)
- [Yet Another Singularity: The Singularity of Cognitive Catch-up](#)
- [Use Free Open Access Journals](#)
- [Sorites -- A New Analysis Based on Context](#)  
The paradox of the heap and related paradoxes resolved by showing how context determines what is a heap, or a pile, or a long piece of string.
- [The Design-Based Approach to the Study of Mind](#)  
(in humans, other animals, and machines).  
(The "designer stance". McCarthy.)
- [What is it like to be a rock?](#)  
(Originally written January 1996 making fun of some discussions on the Psyche-D list.)
- [A demonstration of unconscious seeing \(20 Oct 2009\)](#)
- [Possibilities \(proto-affordances\) Between Form and Function](#)  
Draft abstract for Dagstuhl Seminar October 2009.
- [Messages about types of emotion posted to the discussion list of The International Society of Research on Emotion \(ISRE\) in 2005, in response to a question from Kristjan Kristjansson.](#)
- [Letter to Stephen Fry \(20 Aug 2009\) sent via BBC but bounced.](#)
- [Survey questions about scope and prospects for AI \(Computational Cognitive Science\)](#)
- [Architecture-based vs reward-based motivation and learning](#)
- [Notes on research funding \(19 Mar 2009\)](#)
- [A Better Idea than Language Universals](#)
- [Vision and Action: Requirements for seeing the real world](#)
- [asimov-three-laws.html](#)  
Why Asimov's three laws of robotics are unethical

- [clark-dennett-realisation.html](http://www.cs.bham.ac.uk/research/projects/cogaff/misc/clark-dennett-realisation.html)  
REALISATION AND VIRTUAL MACHINES  
Provoked by my reading a letter to the New Scientist by Andy Clark and Daniel Dennett, published on 13th December, and available online [here](#).
- [embodiment-issues.html](http://www.cs.bham.ac.uk/research/projects/cogaff/misc/embodiment-issues.html)  
Computation and Embodiment: Three issues, not two  
Some notes on good and bad reasons for thinking embodiment is relevant to intelligence (or human-like intelligence)
- Discussions of supposed problems of "Free Will"
  - <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/four-kinds-freewill.html>  
Four Concepts of Freewill: Two of them incoherent
  - <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/freewill.disposed.of>  
HOW TO DISPOSE OF THE FREE WILL ISSUE  
(Originally posted on Usenet in 1989. Later published in AISB Quarterly)  
In the framework of analysis of different sets of requirements for animals and robots, and different possible designs of varying complexity, the pre-theoretical concept of freedom of the will needs to be abandoned and replaced with a host of different technical concepts corresponding to the capabilities enabled by different designs.
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/logical-geography.html>  
Two Notions Contrasted: 'Logical Geography' and 'Logical Topography'  
Variations on a theme by Gilbert Ryle:  
The logical topography of 'Logical Geography'.
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/varieties-of-atheism.html>  
VARIETIES OF ATHEISM  
What is analytical atheism?  
(Including a tutorial on how to use conceptual analysis to identify disguised nonsense.)
- GOOD AND BAD ELITISM  
<http://www.cs.bham.ac.uk/research/projects/cogaff/misc/elitism.html>  
In Defence of a Variety of Elitism (not understood by British (Labour) Government Ministers).
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/whats-information.html>  
What is information? Meaning? Semantic content?  
Later revised and published as a book chapter.
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/meta-requirements.html>  
A First Draft Analysis of Some Meta-Requirements for Cognitive Systems in Robots  
(An exercise in logical topography analysis. )
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/actual.possibilities.html>  
ACTUAL POSSIBILITIES (PAPER FROM KR'96)  
We have an intuitive grasp of a family of related concepts of "possibility", "causation" and "constraint" which we often use in thinking about complex mechanisms, and perhaps also in perceptual processes, which according to Gibson are primarily concerned with detecting positive and negative affordances, such as support, obstruction, graspability, etc.

- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/compedu.html>  
Why Computing Education has Failed and How to Fix it  
An alternative vision of computing in education.
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/cs-future.html>  
The Future of Computer Science  
(Peering into the murk)
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/cs-research.html>  
TYPES OF RESEARCH IN COMPUTING SCIENCE  
SOFTWARE ENGINEERING AND ARTIFICIAL INTELLIGENCE  
The Five Categories of Research distinguished
  1. *The study of what is possible -- and its scope and limits*  
Including both mathematical and less formal modes of theorising.>
  2. *The study of existing (naturally occurring) information-processing systems*  
E.g. animals, societies, brains, minds, ....  
Sometimes described as "Natural computation".
  3. *Research involving creation of new useful information-processing systems*  
I.e. research directly related to engineering applications.
  4. *The creation and evaluation of tools, formalisms and techniques to support all these activities.*
  5. *Research on social and economic issues*  
Including studies of the social and economic impact of computing and AI, ethical issues, changing views of humanity, etc.
- [defining-cognition.html](#)  
Answer to circular question on how to define "cognition". Answer: from the design standpoint, the question is misguided.  
(Also on the [euCognition](#) web site)
- QUESTIONS ABOUT EMOTIONS  
<http://www.cs.bham.ac.uk/research/projects/cogaff/misc/emotions-questions.html>  
In December 2005 I was invited by a well known researcher, Carrol Izard, on emotions to contribute to a discussion by answering a few questions as briefly as possible. He asked for 'one-liners', but I was not able to comply with that condition. However, the answers were short for me!  
Having taken the trouble to provide him with answers I thought I might as well put them here, in case anyone is interested.
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/forms-of-representation.html>  
What is a Form of Representation?  
(Stub, to be expanded, regarding the different ways information can be encoded so as to be of practical use to someone or something.)
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/evo-prob.html>  
Some thoughts about evolution and probabilities

- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/hawkins-numenta.html>  
RESPONSE TO QUESTIONS ABOUT JEFF HAWKINS  
(Not very well informed)
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/language-of-thought.html>  
Evolution of minds and languages.  
What evolved first and develops first in children: Languages for communicating, or languages for thinking (Generalised Languages: GLs)
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/nature-nurture-cube.html>  
Rotating necker cubes and nature-nurture debates.
- MULTI-LEVEL VISION: POSSIBLE EMPIRICAL TESTS  
<http://www.cs.bham.ac.uk/research/projects/cogaff/misc/multi-vision.html>  
In an email discussion Alain Berthoz asked me to suggest experiments that might be done on humans or other animals to test some ideas, instead of relying so much on analysis of design requirements.
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/online-and-offline-creativity.html>  
Online and Offline Creativity
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/orthogonal-competences.html>  
Orthogonal Recombinable Competences Acquired by Altricial Species  
(Blankets, string, and plywood)
- BILL GATES ON ROBOTS IN SCIENTIFIC AMERICAN  
<http://www.cs.bham.ac.uk/research/projects/cogaff/misc/sciam-robots-gates.html>
- <http://www.cs.bham.ac.uk/research/projects/cogaff/misc/synthetic-biology.html>  
Synthetic Biology: Information Engineering  
A major challenge for engineering, science and education.
- **Other stuff**  
<http://www.cs.bham.ac.uk/research/projects/cogaff/misc/>  
A complete directory-listing of this directory, warts and all!  
Later I'll add more of them to this list, and impose some structure.

## Other collections

(Including papers by colleagues and collaborators and joint papers.)

- Cognition and Affect (CogAff) project  
<http://www.cs.bham.ac.uk/research/projects/cogaff/>
- [Various online presentations, including tutorial lectures \(PDF\)](#)
- [Papers, discussion notes and presentations written for the CoSy project.](#)
- Software: [Poplog](#) and the [SimAgent Toolkit](#)
- [A first draft attempt to organise the material into topics](#)

- Notes on Boden: Mind as Machine
- 

Maintained by Aaron Sloman  
School of Computer Science  
The University of Birmingham