

# Curriculum Vitae

Harry Halpin

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## Degrees

**Ph.D. in Informatics** (Current) Expected Graduation: Oct 2007. Advisors: Henry S. Thompson and Andy Clark.

**MSc. in Informatics** with Honors. Major Specialism: Learning from Data. Minor Specialism: Natural Language Processing and Engineering. Thesis: "The Plots of Children and Machines: Statistical and Symbolic Analysis of Narrative Texts." Advisor: Johanna Moore. Oct 2003. University of Edinburgh. (Best MSc. Prize)

**B.S. Mathematical Sciences (Computer Science)** with Honors and Highest Distinction. Minor in Cognitive Science. Thesis: "Models of Topic Segmentation: Computational, Cognitive, and Behavioral." Advisor: Peter C. Gordon May 2001. University of North Carolina at Chapel Hill.

## Research Interests

**Topic:** For my Ph.D. thesis, I am currently investigating the foundations of Web architecture and a new approach to information aggregation via improved pipelining (called FunctionalXML) with Henry S. Thompson that combines vernacular XML and Web Services seamlessly within a single XML document, relying on the Semantic Web as a type theory and based on pure functional subset of Scheme. With Andy Clark, I am trying to articulate a "philosophy of the Web" in the spirit of Brian Cantwell Smith that provides a lucid and clear definitions of terms commonly used in Web architecture (with help at a distance from Pat Hayes). I also manage the Infosed Space and administrate Scotland Indymedia.

Founded and organizes **Philosophy, Psychology and Informatics Reading Group** that meets bi-weekly at the Uni. of Edinburgh to discuss papers of broad relevance to artificial intelligence and surrounding fields.

Co-chair of **Identity, Reference, and the Web Workshop at WWW 2006** with Pat Hayes. Bringing together researchers in artificial intelligence and philosophy with Semantic Web and Web specialists

## Publications

### Papers

- Harry Halpin and Henry S. Thompson. (2006) **One Document to Bind Them: Combining XML, Web Services, and the Semantic Web**. Forthcoming in *Proceedings of the World Wide Web Conference (WWW 2006)*, Edinburgh, UK.
- Harry Halpin (2006) **Representationalism: The Hard Problem for Artificial Life**. Forthcoming in *Tenth Conference on Artificial Life (ALife X)*.
- Harry Halpin (2006) **Automatic Evaluation and Composition of NLP Pipelines with Web Services**. Forthcoming in *Proceedings of Language Resources and Evaluation of Corpora Conference (LREC 2006)*.
- Harry Halpin (2006) **Digital Sovereignty: The immaterial aristocracy of the World Wide Web**. Forthcoming in editor Ed Emery, *Immaterial Labor, Multitudes, and New Social Subjects: Class Composition in Cognitive Capitalism*, Cambridge, UK.
- Harry Halpin (2006) **Reinventing Technology**. Forthcoming in *Constituent Imagination*, editors S. Shukaitis and D. Graeber. AK Press: 2006.
- Fiona McNeill, Harry Halpin, Ewan Klein, and Alan Bundy (2006) **Merging Stories with Shallow Semantics**. Forthcoming in *Knowledge Representation and Reasoning for Language Processing Workshop at the European Association for Computational Linguistics (EACL) conference (KRAQ 2006)*, Genoa, Italy.
- Harry Halpin (2005). The Semantic Web as Types, Web Services as Functions: Ten Points on a Semantic Framework for Web Services. W3C Workshop on Frameworks for Semantics in Web Services Innsbruck, Austria.
- Harry Halpin (2005) **Rules: Enabling Data Integration using the Semantic Web**. In *W3C Workshop on Rule Languages for Interoperability*, Washington D.C., USA.
- Harry Halpin and Henry S. Thompson. (2005) **Web Proper Names: Naming Referents on the Web**. In *Proceedings of Semantic Computing Workshop of the World Wide Web Conference (WWW 2005)*, Chiba Japan.
- Harry Halpin (2005) **Examining the Architecture of the Web: Social Implications of a Universal Information Space**. *International Journal of Technology, Knowledge, and Society*.

- Harry Halpin (2004) **The Semantic Web: The Origins of AI Redux**. In *Proceedings of History and Philosophy of Logic, Mathematics, and Computation* (HPLMC 2004), San Sebastian, Spain.
- Harry Halpin, Johanna D. Moore and Judy Robertson. (2004) **Automatic Analysis of Plot for Story Rewriting**. In *Proceedings of Empirical Methods in Natural Language Processing* (EMNLP 2004), Barcelona, Spain.
- Claire Grover, Harry Halpin, Ewan Klein, Jochen L. Leidner and Richard Tobin. (2004) **A framework for text mining services**. In *Proceedings of the Third UK e-Science Programme All Hands Meeting* (AHM 2004). Nottingham, UK.

### Teaching Experience

- Independent Project**, University of Edinburgh (2004) with Phil Wadler. Marked assignments and dealt with students on Web Services project dealing with an implementation of the MIT Chord system.
- Language Semantics and Implementation**, University of Edinburgh (2004) with Gordon Plotkin and Colin Stirling. Tutored and marked assignments on formal programming language semantics for functional programming.
- Enterprise Computing**, University of Edinburgh (2004) with Stephen Gilmore. Tutored sections and marked assignments on XML, Java, and Javebeans.
- Database Systems**, University of Edinburgh (2003, 2004) with Peter Buneman. Marked assignments and helped grade final exams.
- Software Engineering with Components**, University of Edinburgh (2002) with Stuart Anderson. Tutored sections and marked assignments on UML and software design.
- Introduction to Programming**, Dept. of Computer Science University of North Carolina at Chapel Hill (2000). Helped teach an introductory course to college students in C++ through helping them create a video game. Created and graded homework assignments. Gave help sessions and substitute taught.

### Work Experience

- Scotland Indymedia and Infoseed** (2002-onwards). Wrote non-profit constitution, helped raise funds through grant writing, and administer a physical space (Infoseed) and co-ordinate tutorials on software and hardware. Helped maintain several web-sites involving multimedia content management, including heavy use of digital audio, video, and open content.

**Digital Literacy and Web Developer** (2001-2002) Netcorps, Durham NC.

Designed and created web-pages and web-enabled software, including a on-line computer literacy course for the Durham Literacy Council and helped set-up a wireless router for disadvantaged families.

**Research Assistant** L.L. Thurstone Psychometric Laboratory (2000-2001).

Created and maintained set of tools for computational linguistic corpus work and processing, ran psychological experiments.

**Systems Administrator** (1998-2000) Dept. of Computer Science, University

of North Carolina at Chapel Hill. Specialized in computer networking, helping maintain a network of hundred of computers and supercomputers.

**Honors and Awards**

Overseas Research Scheme Award (2003-2007)

Complex Systems Summer School (2006)

European Summer School for Language, Logic, and Information (2005)

Best MSc. Thesis Prize. (2003) School of Informatics University of Edinburgh.

St. Andrew's Society Scholarship. (2002)

American Friends of the University of Edinburgh Grant. (2002)

Phi Beta Kappa. (2001)

Cognitive Science Grant. (2000) Cognitive Science Program, University of North Carolina at Chapel Hill

Indiana University Summer Research Program. (1999) Cognitive Science Program, University of Indiana at Bloomington.

**References**

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