

The Talking Heads experiment

Origins of words and meanings

Luc Steels

Computational Models of Language
Evolution 1



Computational Models of Language Evolution

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Luc Steels. 2015. *The Talking Heads experiment: Origins of words and meanings* (Computational Models of Language Evolution 1). Berlin: Language Science Press.

This title can be downloaded at:

<http://langsci-press.org/catalog/book/49>

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ISBN: 978-3-944675-42-8 (Digital)

978-3-944675-76-3 (Hardcover)

978-3-944675-77-0 (Softcover)

978-1-523743-45-2 (Softcover US)

ISSN: 2364-7809

Cover and concept of design: Ulrike Harbort

Typesetting: Felix Kopecky, Sebastian Nordhoff

Proofreading: Martin Hilpert, Felix Kopecky, Peter Petré, Daniela Schröder

Fonts: Linux Libertine, Arimo, DejaVu Sans Mono

Typesetting software: Xe_{La}T_EX

Language Science Press

Habelschwerdter Allee 45

14195 Berlin, Germany

langsci-press.org

Storage and cataloguing done by FU Berlin

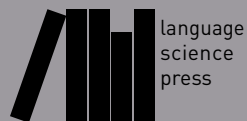


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The Talking Heads experiment

The Talking Heads Experiment, conducted in the years 1999-2001, was the first large-scale experiment in which open populations of situated embodied agents created for the first time ever a new shared vocabulary by playing language games about real world scenes in front of them. The agents could teleport to different physical sites in the world through the Internet. Sites, in Antwerp, Brussels, Paris, Tokyo, London, Cambridge and several other locations were linked into the network. Humans could interact with the robotic agents either on site or remotely through the Internet and thus influence the evolving ontologies and languages of the artificial agents.

The present book describes in detail the motivation, the cognitive mechanisms used by the agents, the various installations of the Talking Heads, the experimental results that were obtained, and the interaction with humans. It also provides a perspective on what happened in the field after these initial groundbreaking experiments. The book is invaluable reading for anyone interested in the history of agent-based models of language evolution and the future of Artificial Intelligence.

ISBN 978-3-944675-42-8



9 783944 675428