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# How Language Began

Human language is not the same as human speech. We use gestures and signs to communicate alongside, or instead of, speaking. Yet gestures and speech are processed in the same areas of the human brain, and the study of how both have evolved is central to research on the origins of human communication. Written by one of the pioneers of the field, this is the first book to explain how speech and gesture evolved together into a system that all humans possess. Nearly all theorizing about the origins of language either ignores gesture, views it as an add-on, or supposes that language began in gesture and was later replaced by speech. David McNeill challenges the popular "gesture-first" theory that language first emerged in a gesture-only form, and proposes a ground-breaking theory of the evolution of language which explains how speech and gesture became unified.

DAVID MCNEILL is Professor Emeritus in the Departments of Psychology and Linguistics at the University of Chicago. His publications include *Hand and Mind* (1992), *Gesture and Thought* (2005), and *Language and Gesture* (Cambridge, 2000).

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## Gesture and Speech in Human Evolution

DAVID MCNEILL

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University Printing House, Cambridge CB2 8BS, United Kingdom

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org
Information on this title: www.cambridge.org/9781107021211

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First published 2012

*A catalogue record for this publication is available from the British Library*

*Library of Congress Cataloguing in Publication data*

McNeill, David.
How language began : gesture and speech in human evolution / David McNeill.
pages ; cm
Includes bibliographical references and index.
ISBN 978-1-107-02121-1 (hardback : alkaline paper)
1. Language and languages – Origin. 2. Speech and gesture. I. Title.
P116.M455 2012
401 – dc23 2012021835

ISBN 978-1-107-02121-1 Hardback
ISBN 978-1-107-60549-7 Paperback

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*For Our Lucky Charm*

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# Preface – Out on a limb

This is my third book to focus on the nexus of gesture and language. Together, the three amount to a kind of unintended trilogy, what has turned out to be a sustained examination and ultimate explanation of a certain phenomenon. The first, *Hand and Mind* (1992), introduced what was then a newly discovered world of gesture, not the stand-alones (known as emblems) that have been acknowledged for millennia, but those overlooked but omnipresent gestures that wed themselves to speech itself. The second, *Gesture and Thought* (2005), developed an explanation of this wedding, the growth point. Now I tackle the origin of the growth point in evolution. By this third volume I am aware of having run far out on a limb. Out on a limb because in crafting the book I have followed a line of argument to its logical limit, or as close to a limit as I can get. The line is that language is more than the lexicosyntactic forms that one sees in written texts and the analyses of linguistics. It is also imagery. This imagery is in gesture, and is inseparable from language. The hypothesis of a growth point encompasses this idea. Taking seriously that language includes gesture as an integral component changes the look of everything. We see language in a new way, as a dynamic "language-as-action-and-being" phenomenon, not replacing but joining the traditional static (synchronic) "language-as-object" conception that has guided linguistics for more than a century.

One idea is more than one note, and in pursuing it I have discovered that it touches a wide range of other topics in language, children's development, brain, mind, and society. In this way, a great breadth of phenomena is linked. I cover, besides gesture and its binding power with speech, a specific mechanism for the origin of language, and the scenarios in which it could have arisen; an alternative, the "gesture-first" hypothesis, which fails both by predicting what did not evolve and not predicting what did evolve; the "equiprimordiality" of speech and gesture instead; a thought–language–hand brain link present in all humans but revealed directly in deafferentation cases where gestures occur normally but practical actions are impossible; phylogenetic echoes in ontogenesis of *two* language origins, one of which is extinct (which extinction is also echoed in ontogenesis); new forms of action of the hands and vocal tract orchestrated by significances other than the

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actions themselves; the origin of syntax, while biological, to make these new actions shareable and portable in encounters with others in socio-culturally maintained templates (constructions); psychological sources of linguistic diversity; parallels and non-parallels to human language in chimpanzee and other primates; the remarkable, still-emerging discoveries in comparative genetics of the two or three kinds of humans known to have existed and how they may have differed in linguistic capacities; how consciousness and memory were reshaped by the origin of language; gestures during musical performances and the possibility of gestures hidden in written prose on the page; the loss of language at points of vulnerability left over from the origin; and the unlikelihood of language evolving in any species that lacks hands.

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# Acknowledgments

For comments on the manuscript, I am grateful to Carolin Kirchhof, Liesbet Quaeghebeur, Kazuki Sekine, Randall L. B. McNeill, Frank Bechter, Jana Bressem, and above all Elena Levy, with whom years ago I started the serious study of speech and gesture and who has read and commented on the manuscript more than once. I have done my best to incorporate everything these responsive fellow gesture-world inhabitants have suggested.

My colleague, Susan Duncan, has played a huge role in the development of the growth point concept, and her many contributions are recognized throughout the text.

Many of the ideas developed here were first explored with my colleagues, Bennett Bertenthal, Jonathan Cole, Susan Duncan, and Shaun Gallagher (see McNeill *et al.* 2005, 2008).

I wish to acknowledge Michael Arbib for his spirited defense of "gesture-first" made in his editor's review of our McNeill *et al.* paper in *Interaction Studies* (2008), which has helped shape the discussion in Chapter 3.

Bencie Woll provided excellent feedback especially concerning Chapter 2, which is far more digestible as a result, and also for the precious Henry Sweet reference, quoted in Table 3.1.

Nobuhiro Furuyama made very helpful comments about the "supplantation" arguments of Chapter 3.

Sarah Thomason made saving comments about the "Psycho-Babel" section of Chapter 3.

Steve McCafferty's comments helped jell the discussion of metaphoricity in Chapter 4.

The title and subtitle emerged in interactions with Cambridge University Press.

I wish to thank both Susan and Elena for seeing that what started as notes had undergone a metamorphosis into this book.

For a second time Nobuko McNeill has inspired chapters with her amusing, pithy, clear-headed and invariably thought-provoking and (often) thought-shaking remarks.

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I thank my family, Nobuko, Cheryl and Randall, for their patience, laughter, encouragement, and suggestions as they combated my wavering determination to see this project through, and provided ideas that figure in several chapters.

The work tapped in writing this book has been supported over the years by research grants from NSF, NIH, the Video Analysis and Content Extraction (VACE) project (with Francis Quek and Mary Harper), The Spencer Foundation, and The Samuel Beck Memorial Fund of the University of Chicago.

I have lectured on the topics in this book at two International Society for Gesture Studies Conferences, in Austin and in Evanston, at the Chicago Linguistics Society, at the German Semiotics Society in Dresden, at the two *ORAGEs* (in Besançon and Aix-en-Provence), and at universities and research institutes in Denmark, France, Germany, Italy, Japan, Sweden, and the US.

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