

# The Study of Language

SEVENTH EDITION

GEORGE YULE



CAMBRIDGE  
UNIVERSITY PRESS

**CAMBRIDGE**  
UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

477 Williamstown Road, Port Melbourne, VIC 3207, Australia

314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre, New Delhi – 110025, India

79 Anson Road, #06–04/06, Singapore 079906

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[www.cambridge.org](http://www.cambridge.org)

Information on this title: [www.cambridge.org/9781108499453](http://www.cambridge.org/9781108499453)

DOI: [10.1017/9781108582889](https://doi.org/10.1017/9781108582889)

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First published 1985

Second edition 1996

Third edition 2006

Fourth edition 2010

Fifth edition 2014

Sixth edition 2017

Seventh edition 2020

Printed in Singapore by Markono Print Media Pte Ltd

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

*Library of Congress Cataloging-in-Publication Data*

Names: Yule, George, 1947– author.

Title: The study of language / George Yule.

Description: Seventh edition. | New York, NY : Cambridge University Press, [2019] | Includes bibliographical references and index.

Identifiers: LCCN 2019020553 | ISBN 9781108499453 (alk. paper)

Subjects: LCSH: Language and languages. | Linguistics.

Classification: LCC P107 .Y85 2019 | DDC 401–dc23

LC record available at <https://lcn.loc.gov/2019020553>

ISBN 978-1-108-49945-3 Hardback

ISBN 978-1-108-73070-9 Paperback

Additional resources for this publication at [www.cambridge.org/yule7](http://www.cambridge.org/yule7)

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## The Musical Source

Part of the problem with the discussion of natural sounds is the assumption that they were used to create “words.” However, before we utter words, we can produce a wide range of sounds that aren’t word forms at all. Let’s go back to the observation that human infants can process sounds early on, and then soon begin to produce sounds in a way that may provide some clues to how language developed. There is a prolonged period in early infant development during which adults and infants interact via single sounds then through more extended sound sequences as the child uses intonation as a means of non-verbal communication. For some scholars, this is consistent with the idea that musical ability developed before the ability to create words. One famous scholar, Charles Darwin, made the following proposal in 1871:

The suspicion does not appear improbable that the progenitors of man, either the males or females, or both sexes, before they acquired the power of expressing their mutual love in articulate language, endeavored to charm each other with musical notes and rhythm.

The idea that early humans spent their time trying “to charm each other” may not match the typical image that we have of our early ancestors as rather rough characters wearing animal skins and certainly not very charming. However, setting “charm” aside, we do have evidence that intonation, and hence the ability to create melody, develops in the human infant before other aspects of language. We might say that our first musical instrument was the human voice, or more specifically, control of the vibration of the vocal folds. Control of the respiratory system to produce extended sound was also required.

Studies of newborn infants have found that they can recognize the intonation of their mother’s voice and orient to that voice more than any other. They also show a preference for the intonation of their mother’s language, even when spoken by others. These observations suggest that early humans may indeed have learned and used melody to express themselves before they added words to their songs. However, other creatures, from songbirds to humpback whales, also produce songs. We have to wonder what prompted humans to go beyond melody and develop a more elaborated means of interacting with each other. One motivation may have been the need to cooperate.

### Teeth and Lips

---

Human **teeth** are upright, not slanting outwards like those of apes, and they are roughly even in height. They are also much smaller. Such characteristics are not very useful for ripping or tearing food and seem better adapted for grinding and chewing. They are also very helpful in making sounds such as *f* or *v*. Human **lips** have much more intricate muscle interlacing than is found in other primates and their resulting flexibility certainly helps in making sounds like *p*, *b* and *m*. In fact, the *b* and *m* sounds are the most widely attested in the vocalizations made by human infants during their first year, no matter which language their parents are using.

### Mouth and Tongue

---

The human **mouth** is relatively small compared to other primates and can be opened and closed rapidly. It is also part of an extended vocal tract that has more of an L-shape than the straight path from front to back in other mammals. In contrast to the fairly thin flat tongue of other large primates, humans have a shorter, thicker and more muscular **tongue** that can be used to shape a wide variety of sounds inside the oral cavity. In addition, unlike other primates, humans can close off the airway through the nose to create more air pressure in the mouth. The overall effect of these small differences taken together is a face with more intricate muscle interlacing in the lips and mouth, capable of a wider range of shapes and a more rapid and powerful delivery of sounds produced through these different shapes.

### Larynx and Pharynx

---

The human **larynx** or “voice box” (containing the vocal folds) differs significantly in position from the larynx of other primates such as monkeys. In the course of human physical development, the assumption of an upright posture moved the head more directly above the spinal column and the larynx dropped to a lower position. This created a longer cavity called the **pharynx**, above the vocal folds, which acts as a resonator for increased range and clarity of the sounds produced via the larynx. Other primates have almost no pharynx. One unfortunate consequence of this development is that the lower position of the human larynx makes it much more possible for the human to choke on pieces of food. Monkeys may not be able to use their larynx to produce speech sounds, but they do not suffer from the problem of getting food stuck in their windpipe. In evolutionary terms, there must have been a big advantage in getting this extra vocal power (i.e. a larger range of sounds) to outweigh the potential disadvantage from an increased risk of choking to death.



## Diphthongs

In addition to single vowel sounds, we regularly create sounds that consist of a combination of two vowel sounds, known as **diphthongs**. When we produce diphthongs, our vocal organs move from one vocalic position [a] to another [ɪ] as we produce the sound [aɪ], as in *Hi* or *Bye*. The movement in this diphthong is from low toward high front. Alternatively, we can use movement from low toward high back, combining [a] and [ʊ] to produce the sound [aʊ], which is the diphthong repeated in the traditional speech training exercise [həʊ nəʊ braʊn kaʊ]. In some descriptions, the movement is interpreted as involving a glide such as [j] or [w], so that the diphthongs we are representing as [aɪ] and [aʊ] may sometimes be seen as [aj] or [aw].

While the vowels [e], [a] and [o] are used as single sounds in other languages, and by speakers of different varieties of English, they are more often used as the first sounds of diphthongs in American English. Figure 3.2 provides a rough idea of how diphthongs are produced and is followed by a list of the sounds, with examples to illustrate some of the variation in the spelling of these sounds.

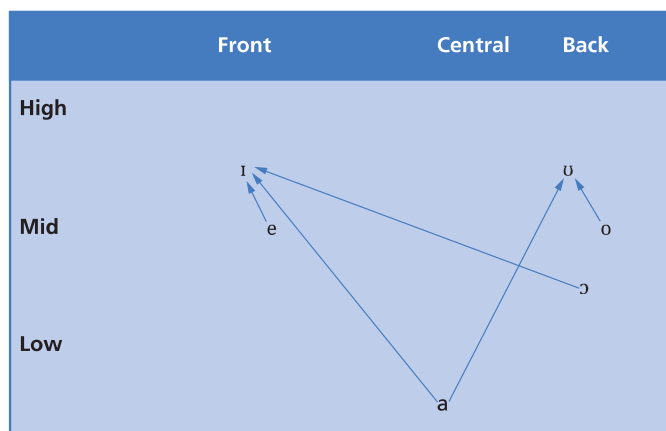


Figure 3.2 Diphthongs

[aɪ] *buy, eye, I, my, pie, sigh*

[oʊ] *boat, home, owe, throw, toe*

[aʊ] *bough, doubt, cow*

[ɔɪ] *boy, noise, royal*

[eɪ] *bait, eight, great, late, say*



Morphology

In many languages, what appear to be single forms actually turn out to contain a large number of “word-like” elements. For example, in Swahili (or Kiswahili, spoken throughout East Africa), the form *nitakupenda* conveys what, in English, would have to be represented as something like *I will love you*. Now, is the Swahili form a single word? If it is a “word,” then it seems to consist of a number of elements that, in English, turn up as separate “words.” A rough correspondence can be presented here:

ni-    ta-    ku-    penda  
I       will    you    love

It would seem that this Swahili “word” is rather different from what we think of as a written English “word.” Yet there clearly is some similarity between the languages, in that similar elements of the whole message can be found in both. Perhaps a better way of looking at linguistic forms in different languages would be to use this notion of “elements” in the message, rather than depend on identifying only “words.”

The type of exercise we have just performed is an example of investigating basic forms in language, known as **morphology**. This term, which literally means “the study of forms,” was originally used in biology, but is now also used to describe the study of those basic “elements” in a language. What we have been describing as “elements” in the form of a linguistic message are technically known as “morphemes.”

Morphemes

We do not actually have to go to other languages such as Swahili to discover that “word forms” may consist of a number of elements. We can recognize that English word forms such as *talks*, *talker*, *talked* and *talking* must consist of one element *talk*, and the other four elements *-s*, *-er*, *-ed* and *-ing*. All these five elements are described as **morphemes**. The definition of a morpheme is “a minimal unit of meaning or grammatical function.” Units of grammatical function include forms used to indicate past tense or plural, for example. So, we can take words apart, as shown in Table 6.1 with the verb *re-new-ed* and the noun *tour-ist-s*, to reveal the different elements in their morphology.

TABLE 6.1 MORPHEMES

Minimal units of meaning	Grammatical function
<i>re-</i> (“again”) <i>new</i> (“recently made”)	<i>-ed</i> (past tense)
<i>tour</i> (“travel for pleasure”) <i>-ist</i> (“person who”)	<i>-s</i> (plural)

- (1) \_\_\_\_\_ (“She loved you”)      (4) \_\_\_\_\_ (“We paid him”)  
 (2) \_\_\_\_\_ (“I will cook them”)      (5) \_\_\_\_\_ (“She will beat me”)  
 (3) \_\_\_\_\_ (“You will pass by”)      (6) \_\_\_\_\_ (“They left”)

**G** These examples are from Samoan, as reported in Yu (2007: 24), and based on Mosel and Hovdhaugen (1992). (The consonant represented by ʔ is a glottal stop, as described in Chapter 3.)

	Singular	Plural
(“love”)	<i>alófa</i>	<i>alolófa</i>
(“clever”)	<i>atamáí</i>	<i>atamamáí</i>
(“work”)	<i>galúie</i>	<i>galulúie</i>
(“brave”)	<i>tóa</i>	<i>totóa</i>

- (i) What is the morphological process involved here and where exactly does it take place in the word form?  
 (ii) What would be the plural of *avága* (“elope”), *má* (“ashamed”), *maʔalíli* (“cold”) and *toʔúlu* (“fall”)?

**H** Regular nouns in Tamasheq (spoken in north-west Africa) have different forms when they are singular or plural, masculine or feminine.

- (i) Using the general patterns in the examples listed here (based on Sudlow, 2001), fill in the missing words to complete the chart.  
 (ii) Can you describe the general patterns found here relating singular to plural forms of the same noun?  
 (iii) Are the affixes involved derivational or inflectional? Is there a special term for affixes that have the structure illustrated in most of the plural nouns here?

	Singular		Plural
<i>amadray</i>	(“younger brother”)	<i>imadrayan</i>	(“younger brothers”)
<i>amanokal</i>	(“chief”)	<i>imanokalan</i>	(“chiefs”)
<i>amawad</i>	(“adolescent boy”)	<i>imawadan</i>	(“adolescent boys”)
<i>amaqqar</i>	(“older brother”)	_____	(“older brothers”)
<i>amaraw</i>	(“parent”)	_____	(“parents”)
<i>anharag</i>	(“male neighbor”)	_____	(“male neighbors”)
<i>enhad</i>	(“craftsman”)	<i>inhadan</i>	(“craftsmen”)
<i>esed</i>	(“donkey”)	<i>isedan</i>	(“donkeys”)
<i>esen</i>	(“tooth”)	_____	(“teeth”)
<i>tabarart</i>	(“female child”)	<i>tibararen</i>	(“female children”)
<i>tagolayt</i>	(“stepdaughter”)	<i>tigolayen</i>	(“stepdaughters”)