

The Cultural Meaning of Programming Languages

csv,conf,v5

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Librarian for Research Data Management and Reproducibility

University of Oregon Libraries

Biases about Spanish language and literature (that it was feminine or racially “tainted”) sometimes suppressed the translation and publishing of Spanish and Latin American literature in the 20th century.



Beinecke Library, Yale University

Michael Kastelic - Own work, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=58368791>

human languages < - > programming languages

Programming languages, like human languages, are social

- embedded in existing hierarchies
 - human languages -> empires/colonies
 - programming languages -> pay differentials
- opportunities for solidarity or division

“FORTRAN . . . was only for sissies!”

“[Assemblers were] a waste of a valuable scientific computing instrument to use it to do clerical work.”

-paraphrase of von Neumann

“The use of COBOL cripples the mind”

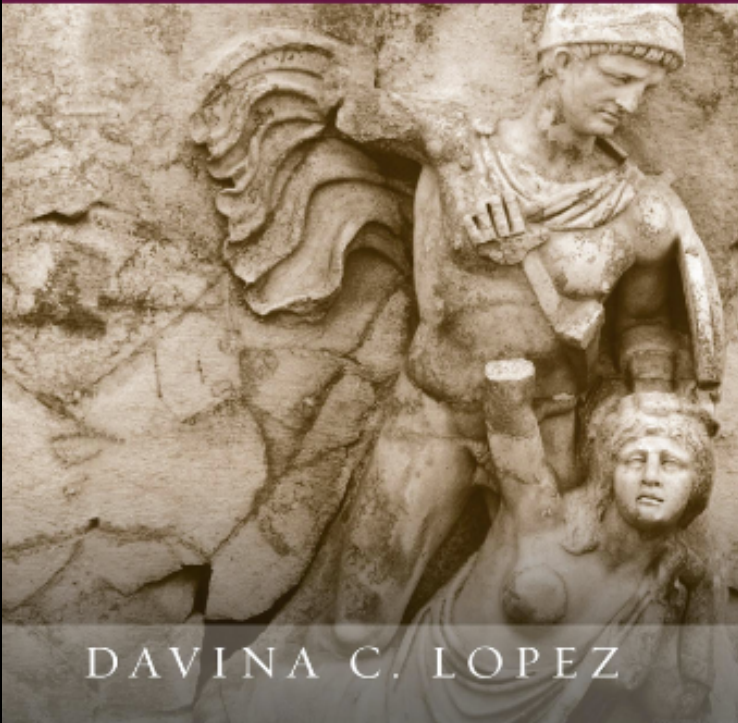
- Edsger W.Dijkstra, 1975

“Python is for n00bs”

“Javascript is for girls”

APOSTLE TO THE CONQUERED

REIMAGINING PAUL'S MISSION



Imperial conquest and
languages == masculine

Conquered lands and
languages == feminine

“les dialectes africains ne sont pas des langues de civilization [African dialects are not civilized languages]”

- André Davesne, 1933

“Spanish literature declined with Spanish world power”; Spanish associated with “early [A]frican Christians” and “florid” (i.e., feminine) language.

- Ezra Pound, 1921

But aren't some programming languages
better than others?

Aren't some programming languages better than others?



Who cares about the answer to this question?

1. Brogrammers on the interwebs masking their inferiority complexes.
2. People who design and write programming languages.

PROGRAMMING

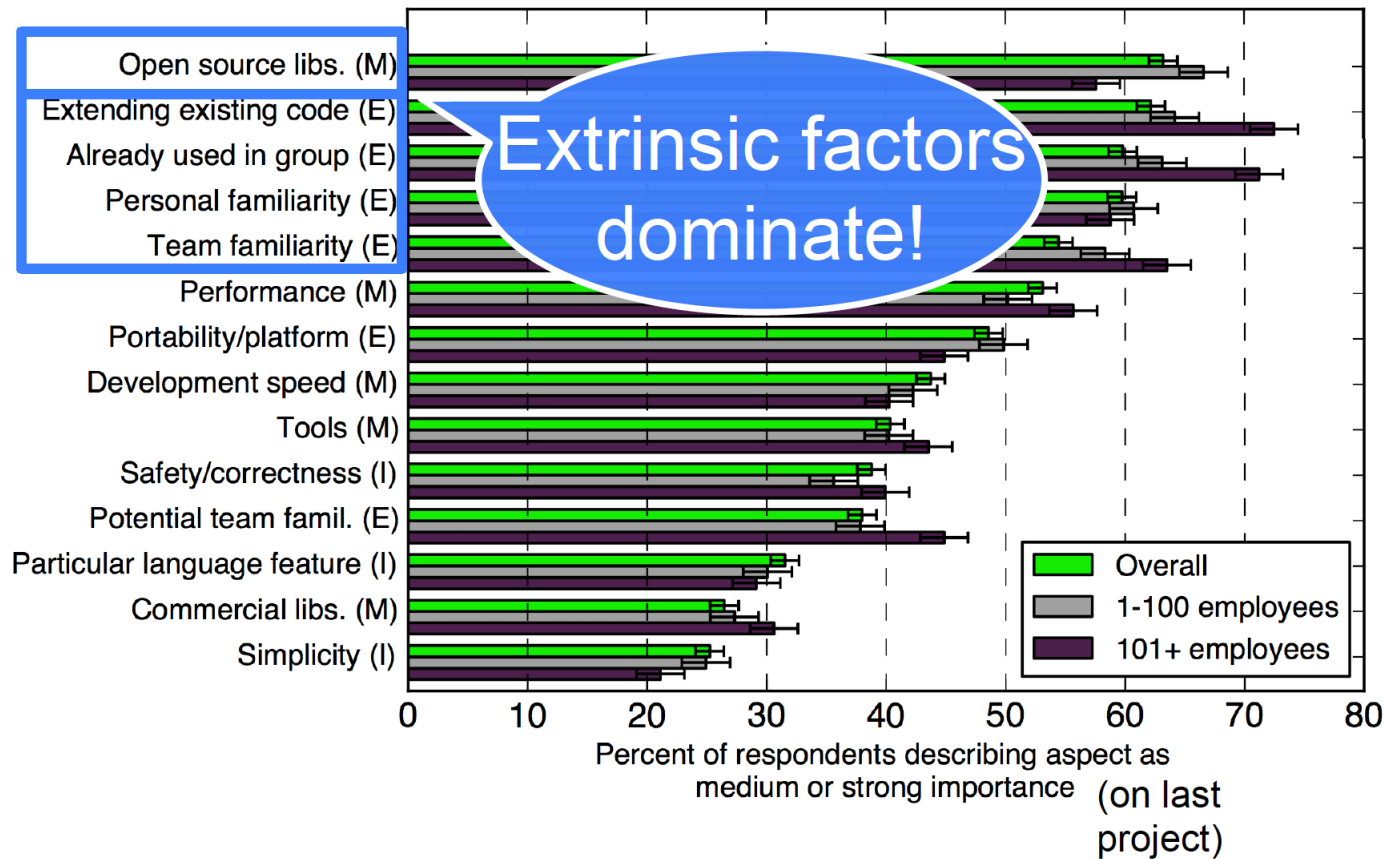
C is Manly, Python is for “n00bs”: How False Stereotypes Turn Into Technical “Truths”

We need to question our “objective” and “technical” opinions about programming languages.

—by [Jean Yang](#) & [Ari Rabkin](#) on January 20th, 2015

Published in *Model, View, Culture*

Survey of 1,679 Developers



Leo A. Meyerovich & Ariel Rabkin, "Sociology of Programming Language Adoption," 2012

German Romanticism: language reflects the
“spirit” of a people

>

Sapir-Whorf hypothesis: structure of language
influences how we think



Computer programming languages can impact science and thought

Knowledge Lab project to investigate programming features and data science environments

For decades, fierce debates have raged over the benefits of different programming languages over others: Java vs. C++; Python vs. Ruby; Flask vs. Django. While often waged with fervor by computer scientists and programmers, these debates tend to rely on anecdotal evidence, with very little rigorous comparison of programming approaches or the larger question of how software may augment human thinking.

Languages influence human thought.

If programmers think in programming languages, they must influence thoughts as much as natural languages do.

-Yukihiro Matsumoto, “The Power and Philosophy of Ruby (or, how to create Babel-17),” OSCon 2003



To what degree are programming languages
also *in English*?

Python <- the Netherlands

Ruby <- Japan

But now...,

I have to stand before you. No interpreter. Poor English.
Because

- I speak English.
- Most non Japanese don't understand Japanese.
- Japanese-English interpreter is too expensive.

English speakers are lucky.

I need to suffer just because I born in Japan. Life is unfair.

-Yukihiro Matsumoto

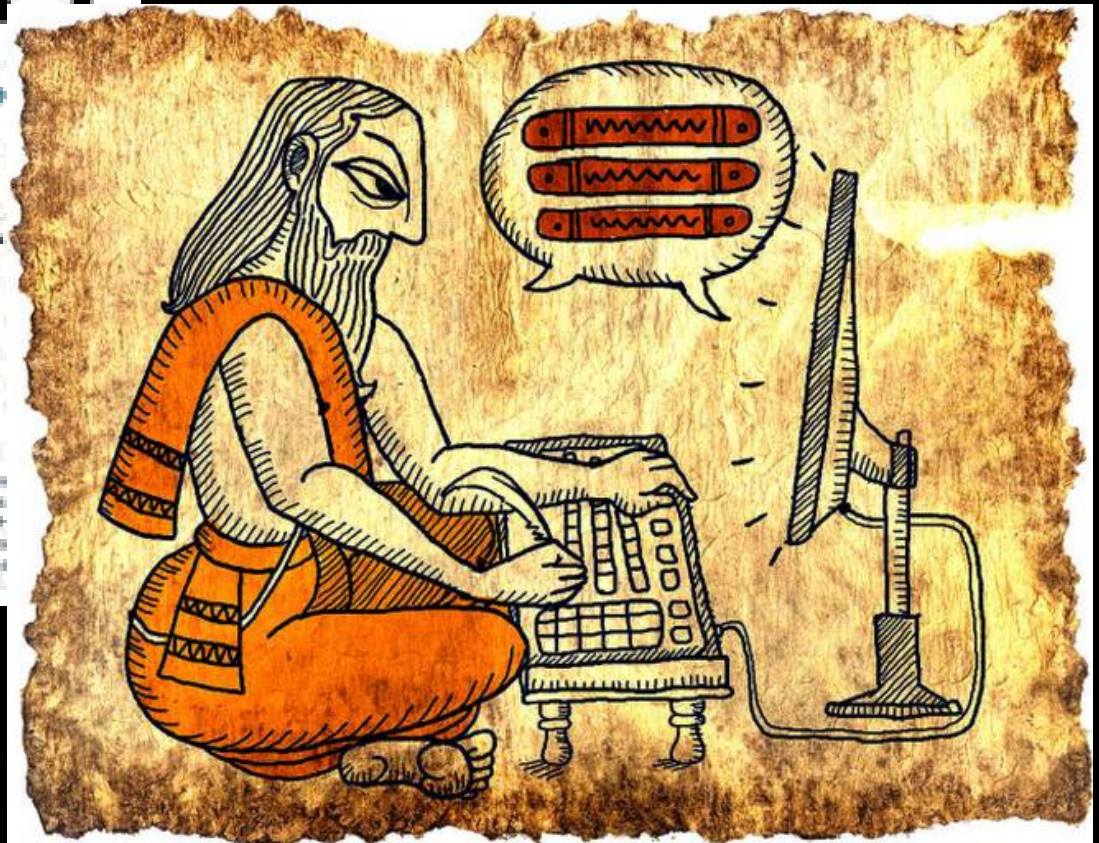
GEEK SUBLIME

The Beauty of Code, the Code of Be

VIKRAM CHANDRA

"Chandra... is
what he breaks rules
follow them... [?]
in the way he trusts
-Los Angeles

Pāṇini, Sanskrit grammarian,
4th c BCE, portrayed as a
programmer



CRITICAL CODE STUDIES

Mark C. Marino



FLOW-MATIC

(by Grace Hopper) >

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·

COBOL

(common business-
oriented language) >

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Excel

- Has language posturing/chauvinism affected your relationship to particular programming languages or your access to opportunity?
- If your first language is not English, do you feel that the fact that programming languages are based in “English” affects your work?
- What strategies have you found helpful for interrupting language chauvinism?

Thank you!

@reprofan