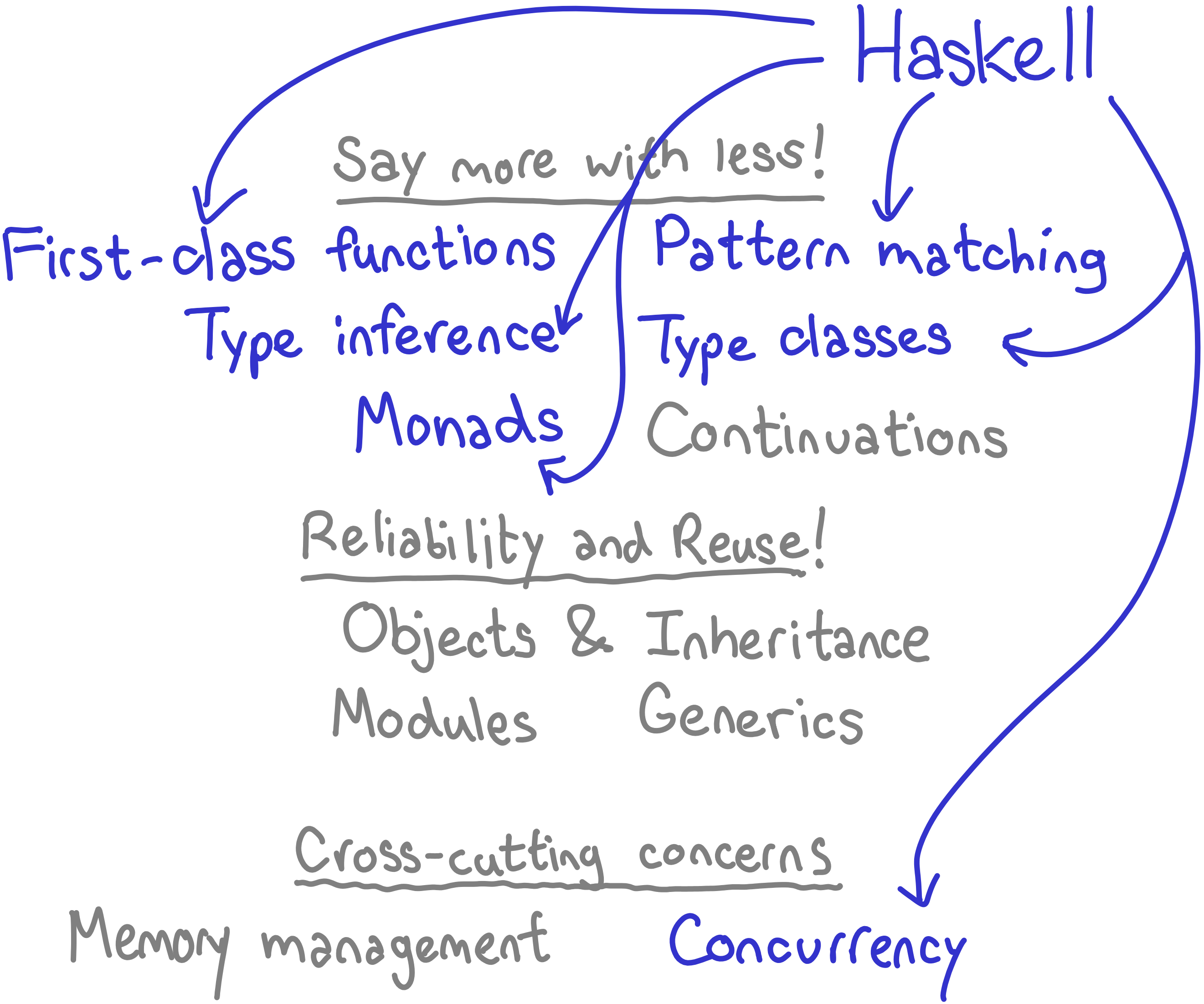
CS 242

Fall 2015

Haskell

Edward Z. Yang



Haskell

Say more with less!

First-class functions

Pattern matching

Type inference

Type classes

Monads

Continuations

Reliability and Reuse!

Objects & Inheritance

Modules

Generics

Cross-cutting concerns

Memory management

Concurrency

What is Haskell?

a typed, lazy, functional programming language

What is Haskell?

compositional programs

purity

functions first class

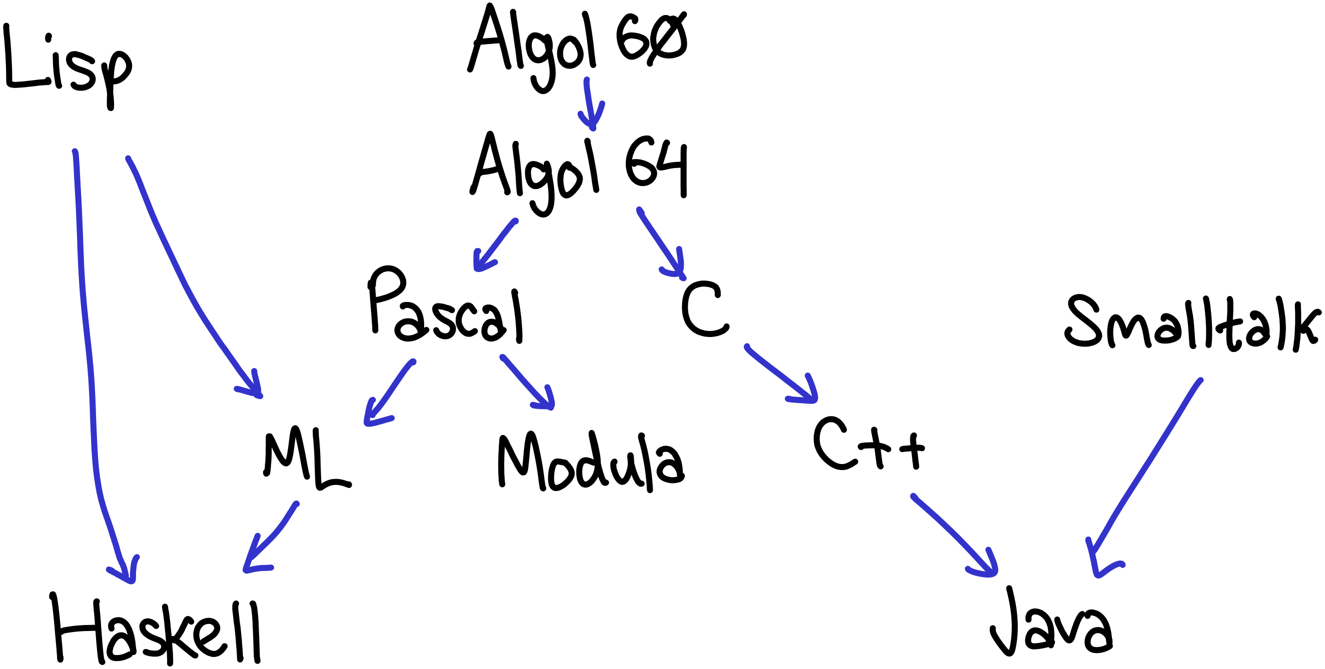
expression is king

a typed, lazy, functional programming language

strong types

type-directed programming

Where is Haskell?



~ many more ~

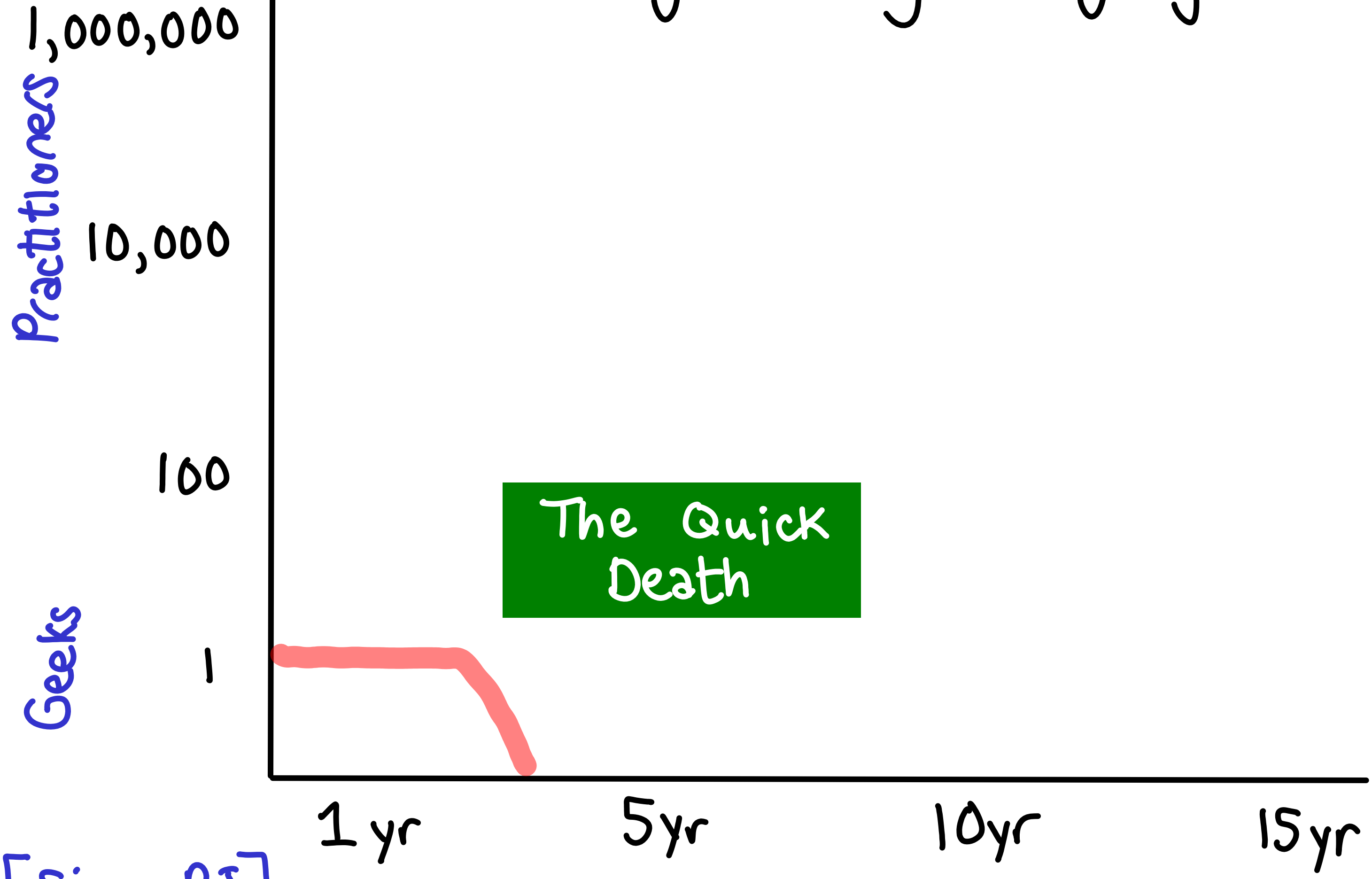
Why Haskell?

Types will change the way you think

Raise the level of abstraction

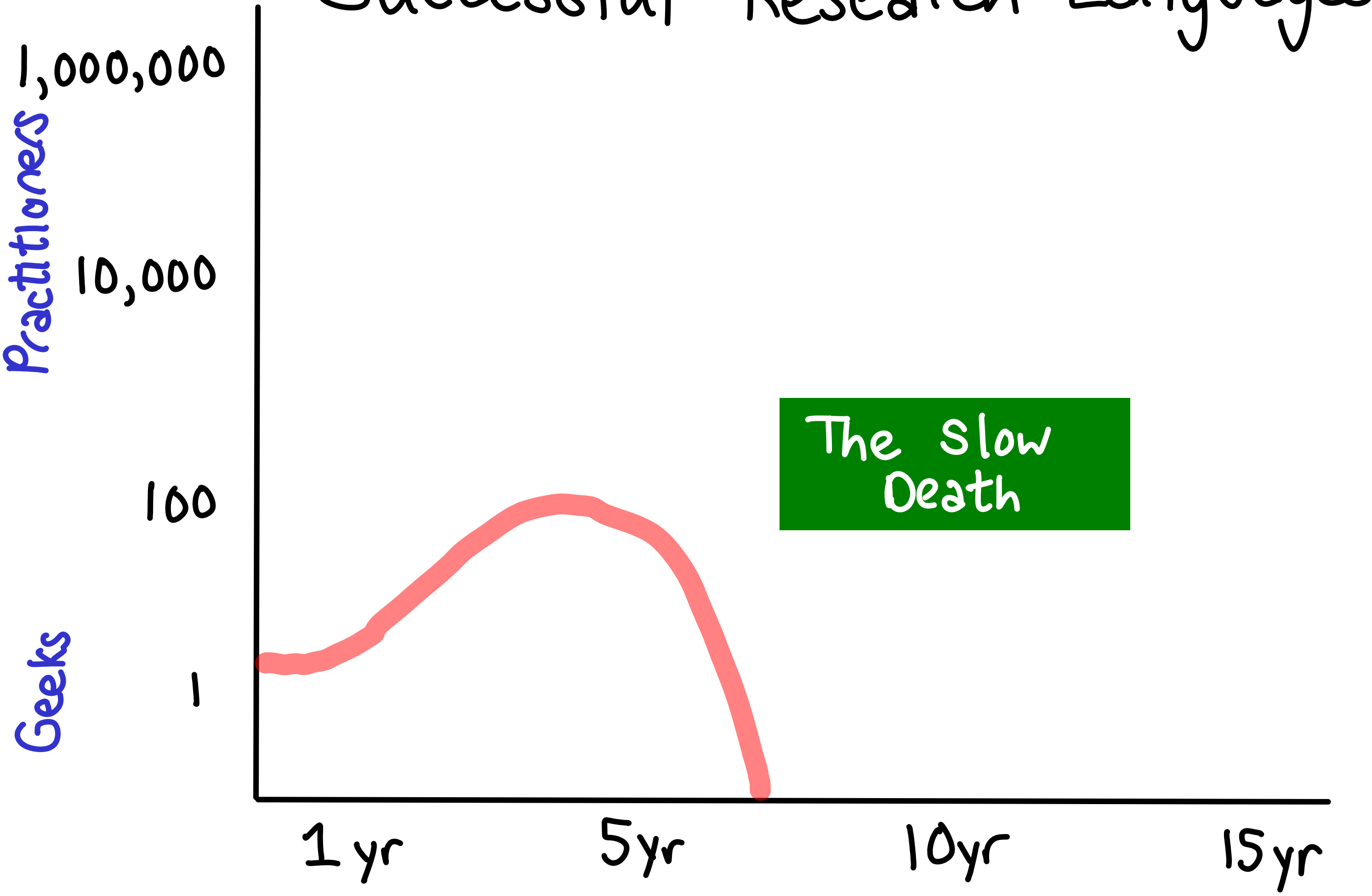
Purity to be essential for multicore

Most Programming Languages

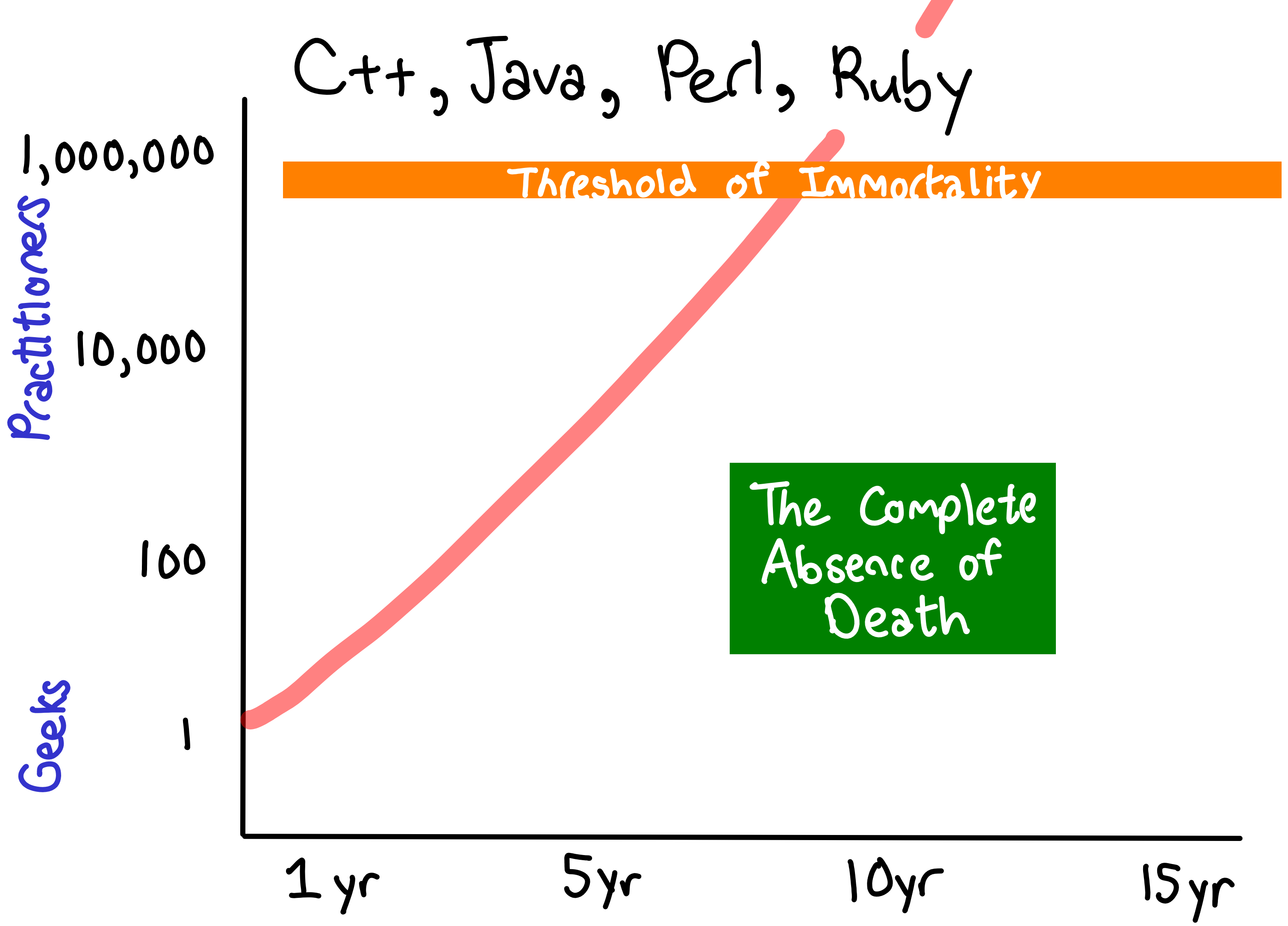


[Simon PJ]

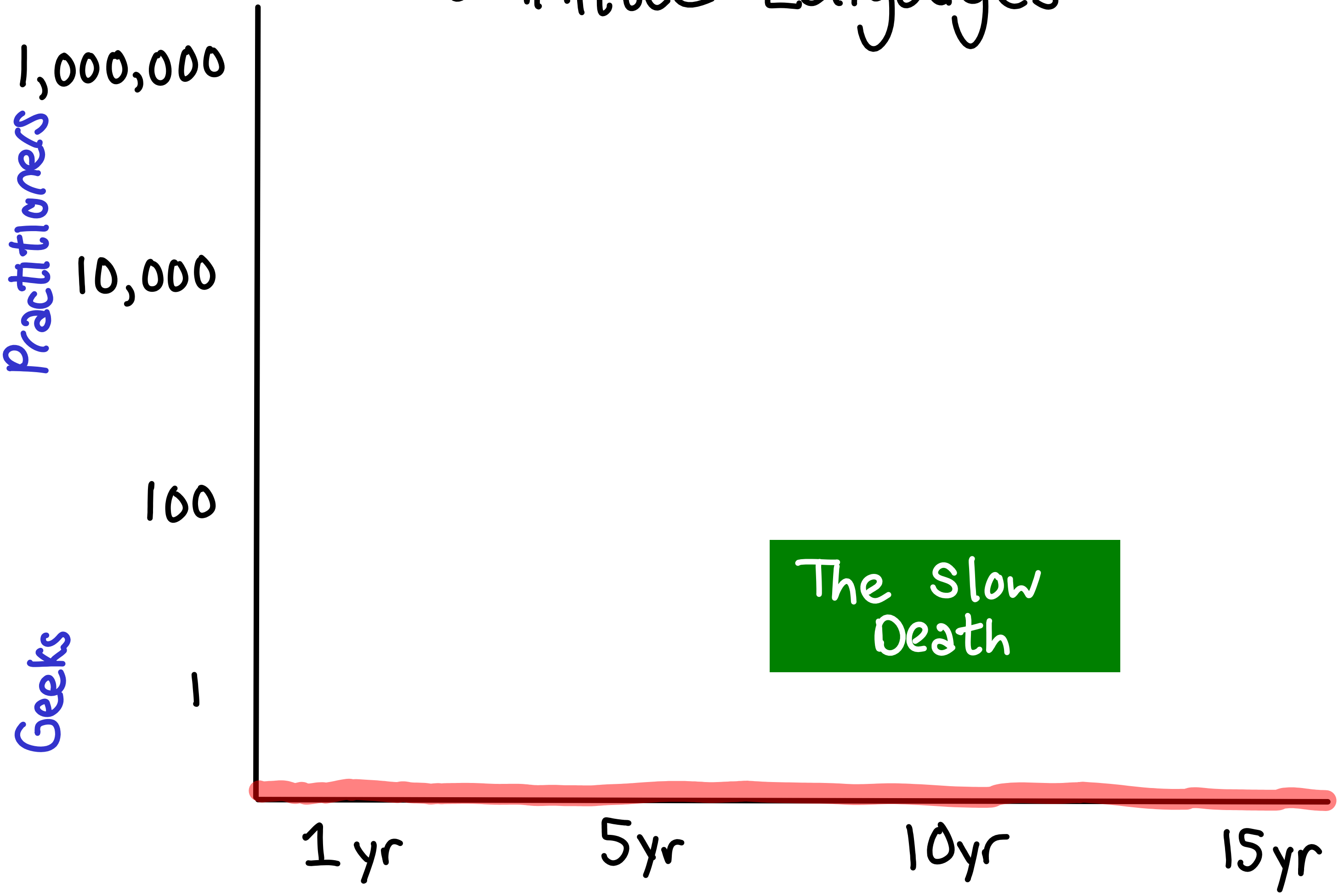
Successful Research Languages



C++, Java, Perl, Ruby

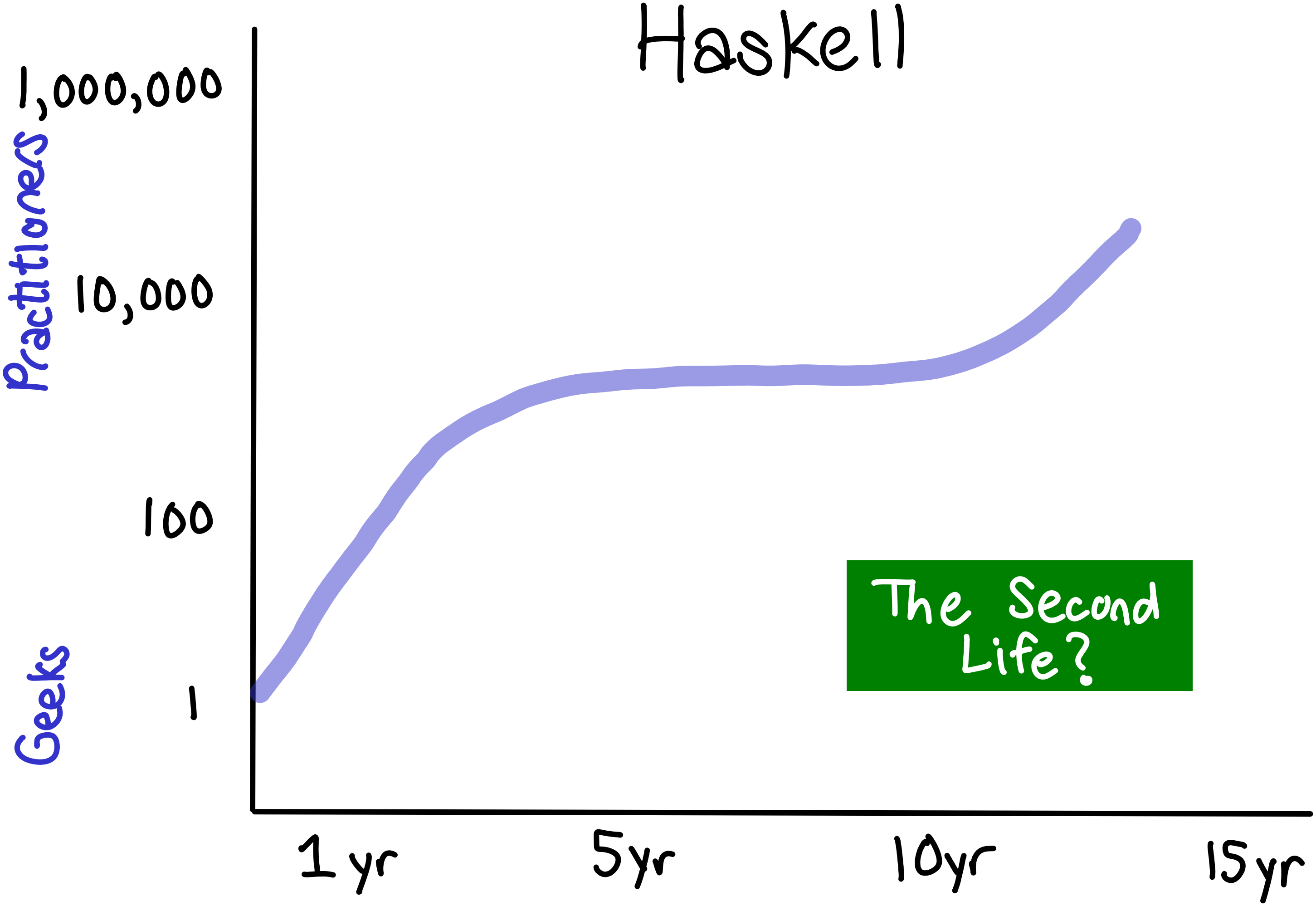


Committee Languages



The Slow Death

Haskell



The Second Life?

Announcements

don't forget to register!

Homework 1 is out on cs242.stanford.edu

Two labs: one JavaScript, one Haskell.
A lot of text and ideas, very little code.

We moved to Piazza!
piazza.com/stanford/fall2015/cs242/home