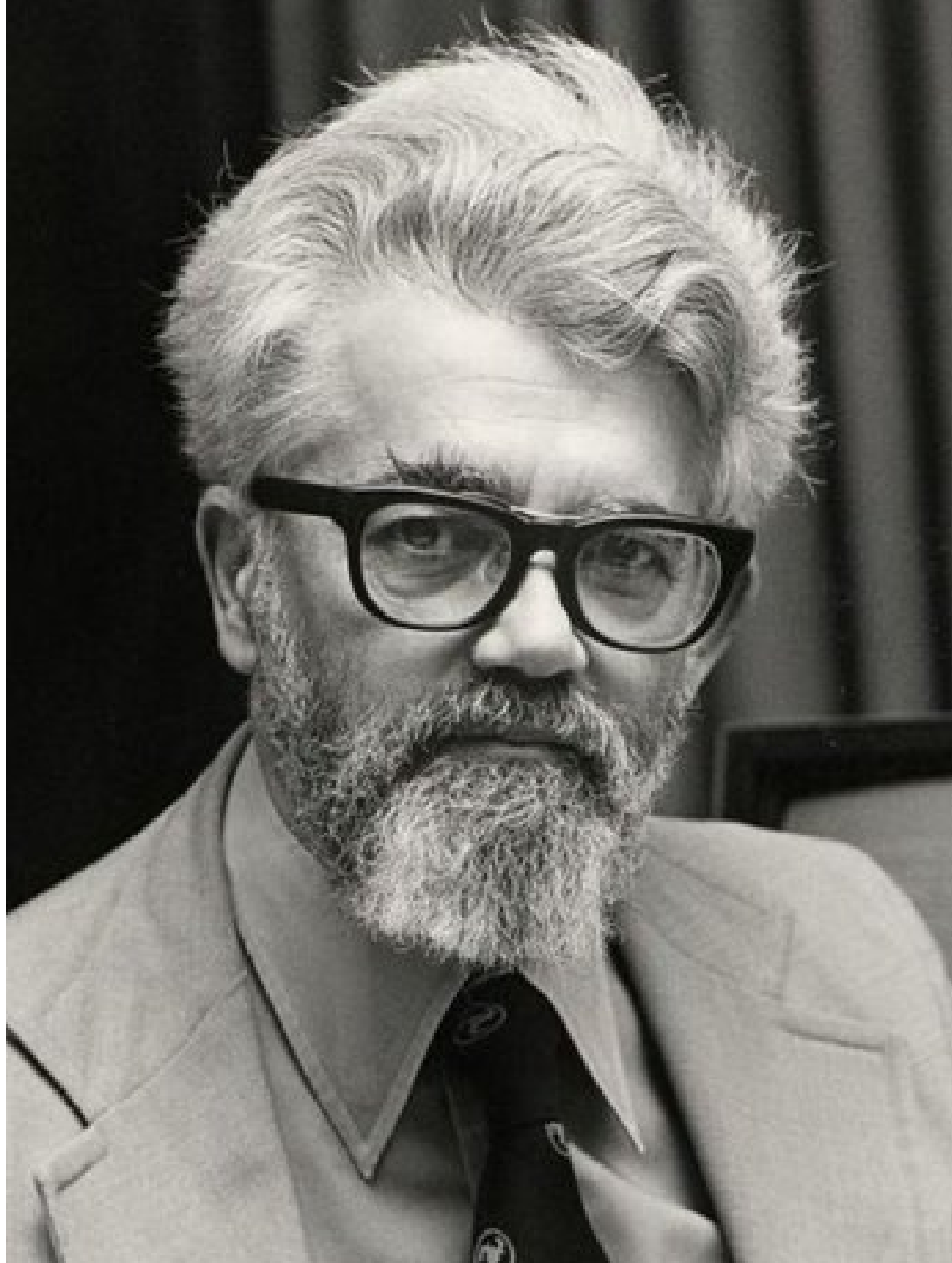


*It all began with darkness...*



*It all began with darkness,  
Cold, unforgiving, starkness.  
Life evolved,  
And creatures crawled,  
Till **Church** did Lambda Calculus.*



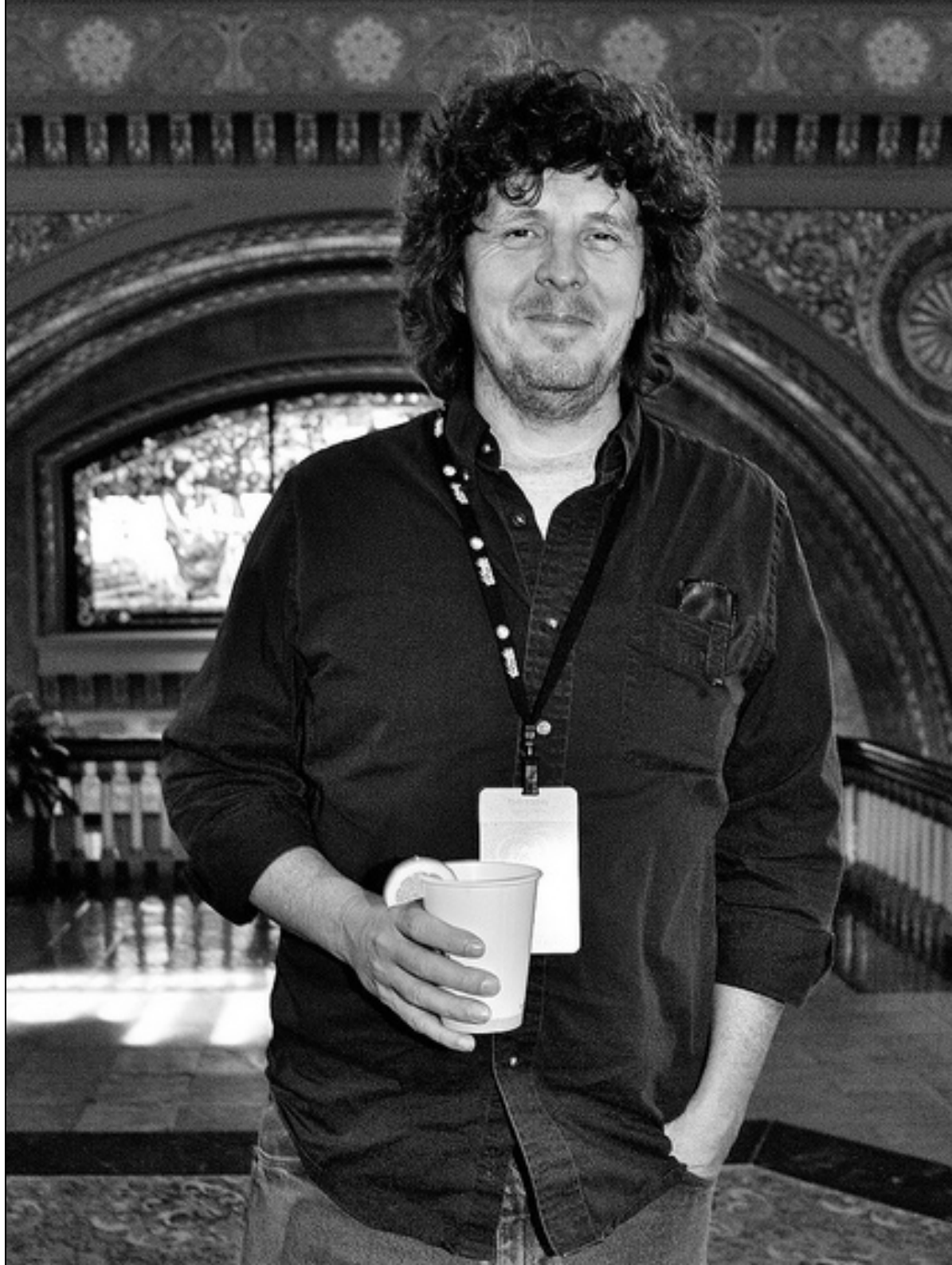
*Then came John **McCarthy**,  
Eyebrows thick and swarthy.  
Who's S-Expressions,  
Made lasting impressions,  
As LISP, before he was forty.*



*Friedman appeared left-field,  
Plus, a Guy who Steeled,  
They not only Schemed,  
They Virtual Machined,  
For with Java, also, they dealed.*



*Friedman appeared left-field,  
Plus, a **Guy** who **Steeled**,  
They not only Schemed,  
They Virtual Machined,  
For with Java, also, they dealed.*



*In continuation, here's Rich **Hickey**,  
A fellow fairly tricky,  
An errant C-sharp composer,  
Who since invented Clojure,  
Now Java keeps taking the mickey.*

# Clojure By Example

Adi

(Aditya Athalye)

# ToDo

- Get intuition going
- Acquire basic conceptual “hooks”
- Start small, but usefully
- Show where to go next



Demo

Recap

# Recap

## Concepts / Ideas

- Dynamism, “Liveness”
- Expressions --> Values
- Code is Data is Code
- Evaluate “inside-out”
- Model with pure data
- Generality, openness
- Composition
- A-la-carte

## Features / Techniques

- REPL workflow
- Functions are values
- Nil -> value, Set -> pred
- Lexical Scope rules
- Destructure collections
- Maps, Multimethods
- Pure core, I/O shell
- Specs, Meta-data etc.

# My favourite resources...

- Guides, Books, Libraries, Community, and much more [clojure.org](http://clojure.org)
- Community Docs [clojuredocs.org](http://clojuredocs.org), [clojure-doc.org](http://clojure-doc.org)
- Aphyr's tutorial [aphyr.com/tags/Clojure-from-the-ground-up](http://aphyr.com/tags/Clojure-from-the-ground-up)
- A master at work [tbaldridge.pivotshare.com/home](http://tbaldridge.pivotshare.com/home)
- Curated libraries [clojurewerkz.org](http://clojurewerkz.org)
- Talks [youtube.com/user/ClojureTV](http://youtube.com/user/ClojureTV) (esp. Rich Hickey Talks playlist)
- Also by Rich, on youtube:
  - *Clojure for **Java** Programmers, Clojure for **Lisp** Programmers, Clojure **Data Structures**, and Clojure **Concurrency***
  - *Expert to Expert: Rich hickey and Brian Beckman*

What now?

# Follow your curiosity...

- Make music [overtone.github.io](https://overtone.github.io), [onloop.net/tenor/](https://onloop.net/tenor/)
- Animate art [quil.info](https://quil.info)
- Design some [thi.ng](https://thi.ng)
- Write “fn” games [sekao.net/nightmod/](https://sekao.net/nightmod/)
- GPU all the things [dragan.rocks/software/](https://dragan.rocks/software/)
- Viz thy data [keminglabs.com/c2/](https://keminglabs.com/c2/) (like D3.js)
- Keep a live diary [gorilla-repl.org/](https://gorilla-repl.org/)
- Machine-learn [mxnet.incubator.apache.org/api/clojure/index.html](https://mxnet.incubator.apache.org/api/clojure/index.html)
- Meta-program Symbolic Compilers [nas.sr/talks/](https://nas.sr/talks/), [nas.sr/magic/](https://nas.sr/magic/)
- Find Cljobs at ClojureDocs.org, BraveClojure.com, RemoteOK.com, FunctionalJobs.com, Indeed.com and more...
- <Your flight of fancy> ...

Have fun; Live Long, and Prosper

$\vee_-$

$\wedge^-$