DSLs - power & challenge

The underestimated need for design

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DSLs are powerful but come at a cost

- With great power comes great responsibility
- "A well-designed language is its own Heaven; a poorly-designed language is its own Hell." *
- Designing a language isn't easy
- Design is a valuable skill
  - … and it takes time and effort

* me, inspired by The Dao of Programming

The underestimated need for design in Forth

- Design is essential in almost every word
  - or else the stack will devour you
  - In Forth I need to think carefully about things I just write down in C or Python

- Impact of design effort:
  - If done well: exceptionally expressive code
  - If not done: write-only code pain

- Beginners should be told this
  - or they will be frustrated
  - for they'll discover the costs anyway

Thoughts on things to acknowledge wrt beginners

- absence of syntax handrails
  - needs design work to mitigate
- absence of type check etc. guard rails
  - needs more testing to mitigate
- freedom and flexibility can be a challenge
- Forth is easy in some ways and hard in others
  - and a great design training field