



Convergent evolution of programming languages

Have you heard how crabs are convergent evolutions? Like there is no *thing* that developed into a crab. What happens is non-crab, crab like forms evolve into crabs[0]. This is true for trees as well. I'd imagine spiders too?

What's happen? As a layman... a form evolves on a certain path, taking advantage of certain parts of its environment. It might be rich in minerals and so there is extra material to evolutionarily try a harder cell wall. Then that evolves into a shell. That could be generally possible for different levels of minerals in many locations at different times as life evolves on the earth. These shelled creatures might have legs and 2 or 4 6 or 8 of em seem to be the a good ratio of legs to non legs.

And when it comes to small shelled creatures, 6 seems to be good. 2 or 4 or 8 requires different evolutionary paths/environment. Ants, beetles, lobsters (a prime pre-crab), etc all do pretty well in a lot of different environments. So eventually they all start to "realize" that 6 is good and we can devote some extra energy to specializing the extra two. A small one to get food and a big one to make people scared to touch them at the beach.

So over time, there are crabs everywhere. Not through reproduction, but through evolution. Something about the crab form is optimal! Amazing!

Here's a hot take: it's a lisp. The crab of programming language is a lisp.

That's a wild sentence. *The crab of programming languages is a lisp*. Both words and meaning. All languages bend towards a lisp.

That's too purist, though. I don't believe it myself. While every language is taking stuff from lisps (garbage collection, functional concepts, REPLs, etc), they are taking parts but not changing their underlying form. Example, most "REPLs" are more consoles you type into. They aren't the processes connected in the same hosted environment. There isn't wide support for REPL driven development.

So while I want it to be a lisp. I think it's more like python. The point of the crab evolution structure is that it's versatile. It can do a little bit of everything: locomotion, defense, offense. So I suppose, a more realistic convergence is a language supporting multiple paradigms and optional language features (like typing).

Maybe I'm wrong and confusing optimal with averaging. Possible. It does seem though that the technologies that get used are frankly, *not great but good enough*.

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