



CARPENTERS

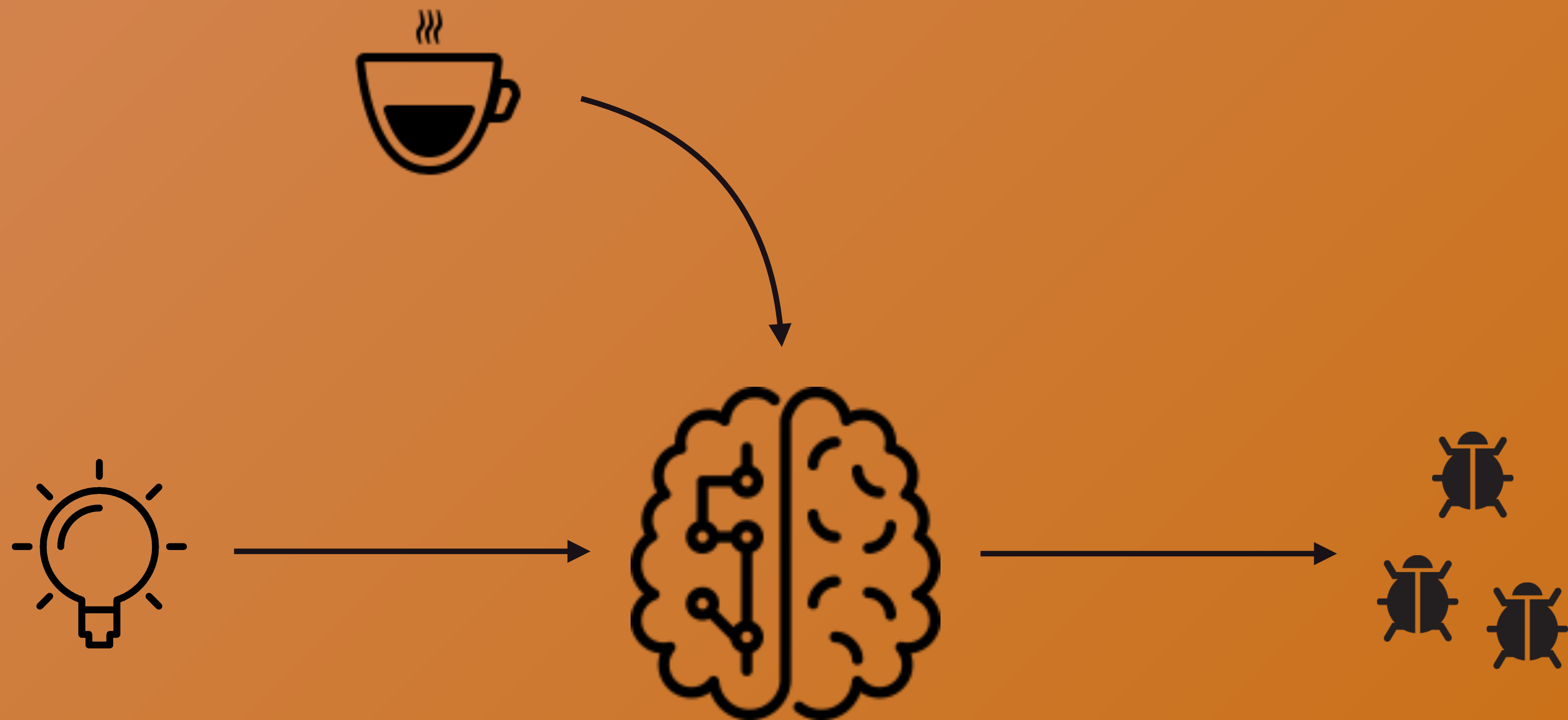
&

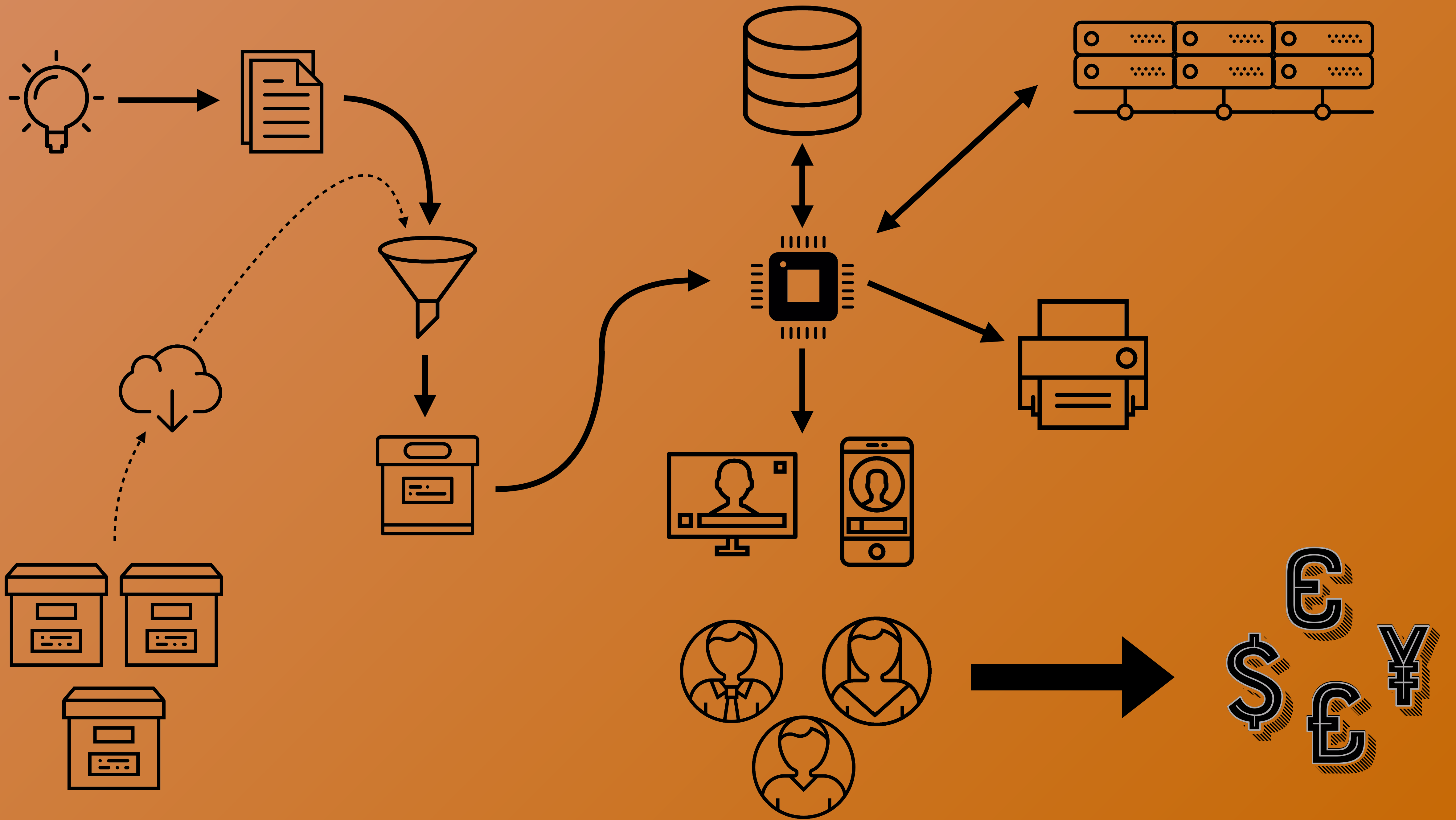
CARTOGRAPHERS

What is it

WE DO

as software developers ?





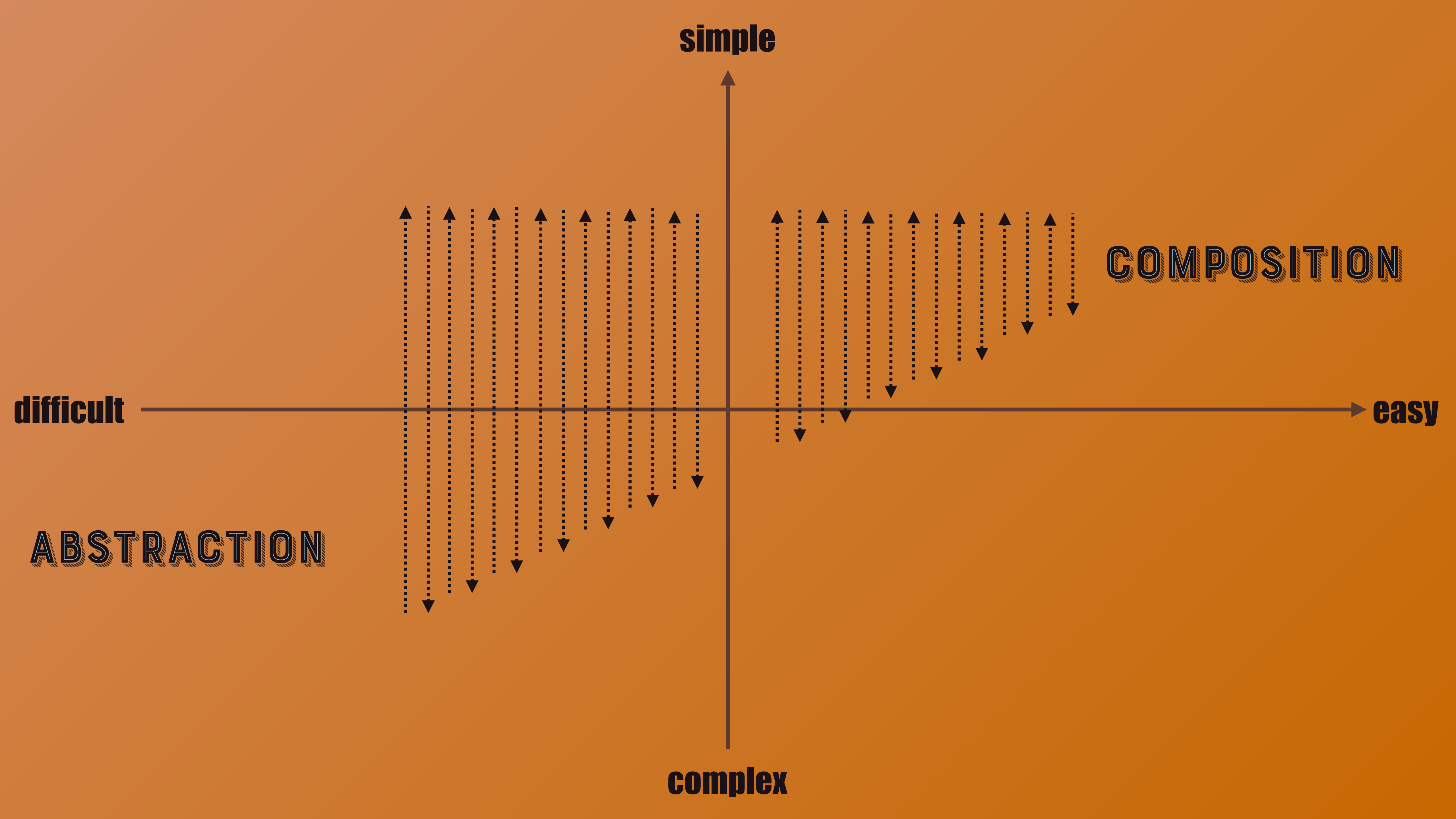
Stacking layer upon layer of

ABSTRACTION

is the only way we have

to cope with that tremendous

COMPLEXITY



Abstractions make complex things

SIMPLER

but mastering new ones is often

DIFFICULT

Sometimes a good

METAPHOR

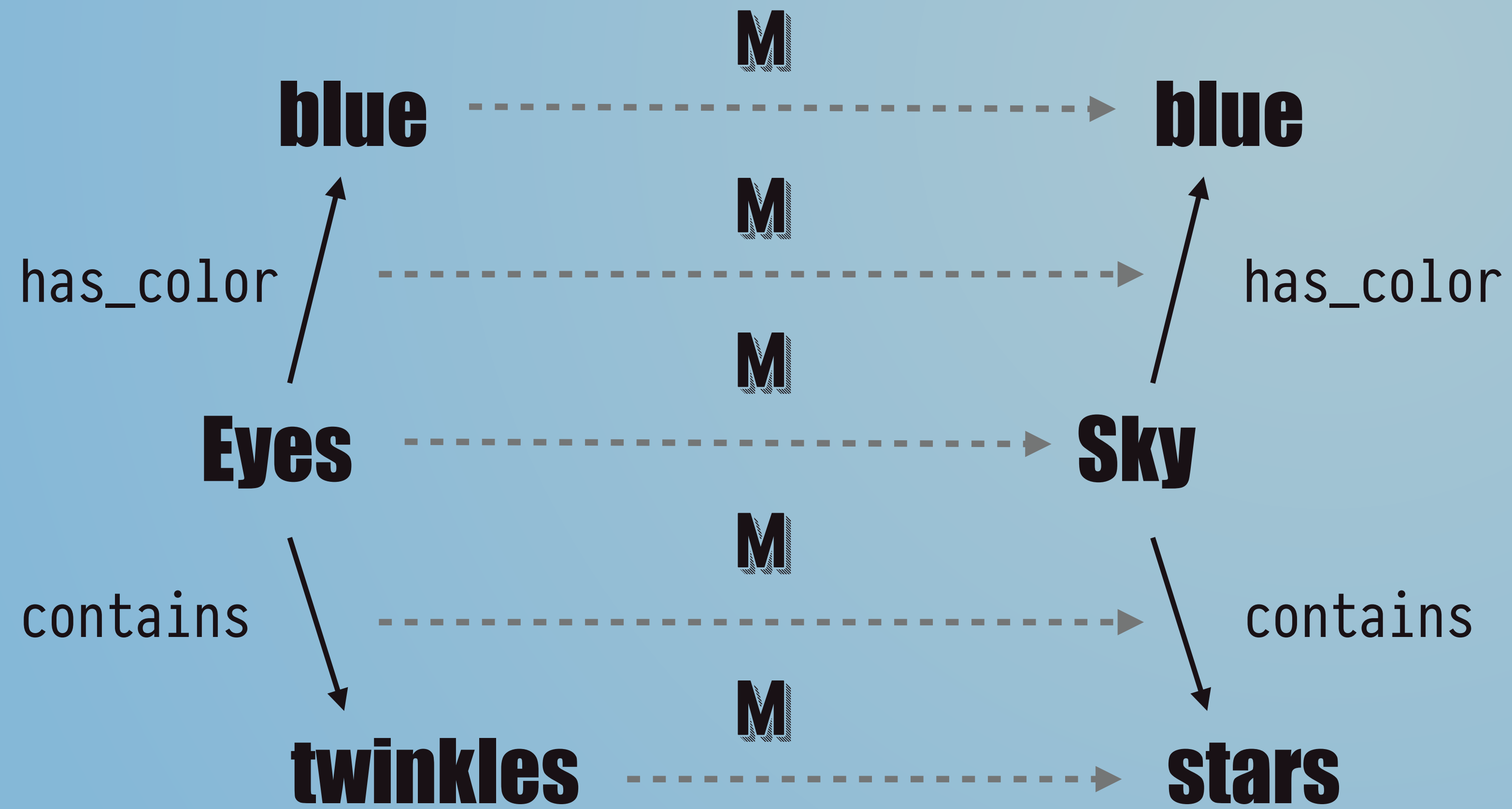
is worth a thousand words

METAPHORS

work by collecting a system of

ANALOGIES

from some things to other, better known things



Numbers are a difficult

ABSTRACTION

Children often count using their fingers as a

METAPHOR

Oh and by the way

« Digits » are called that way by

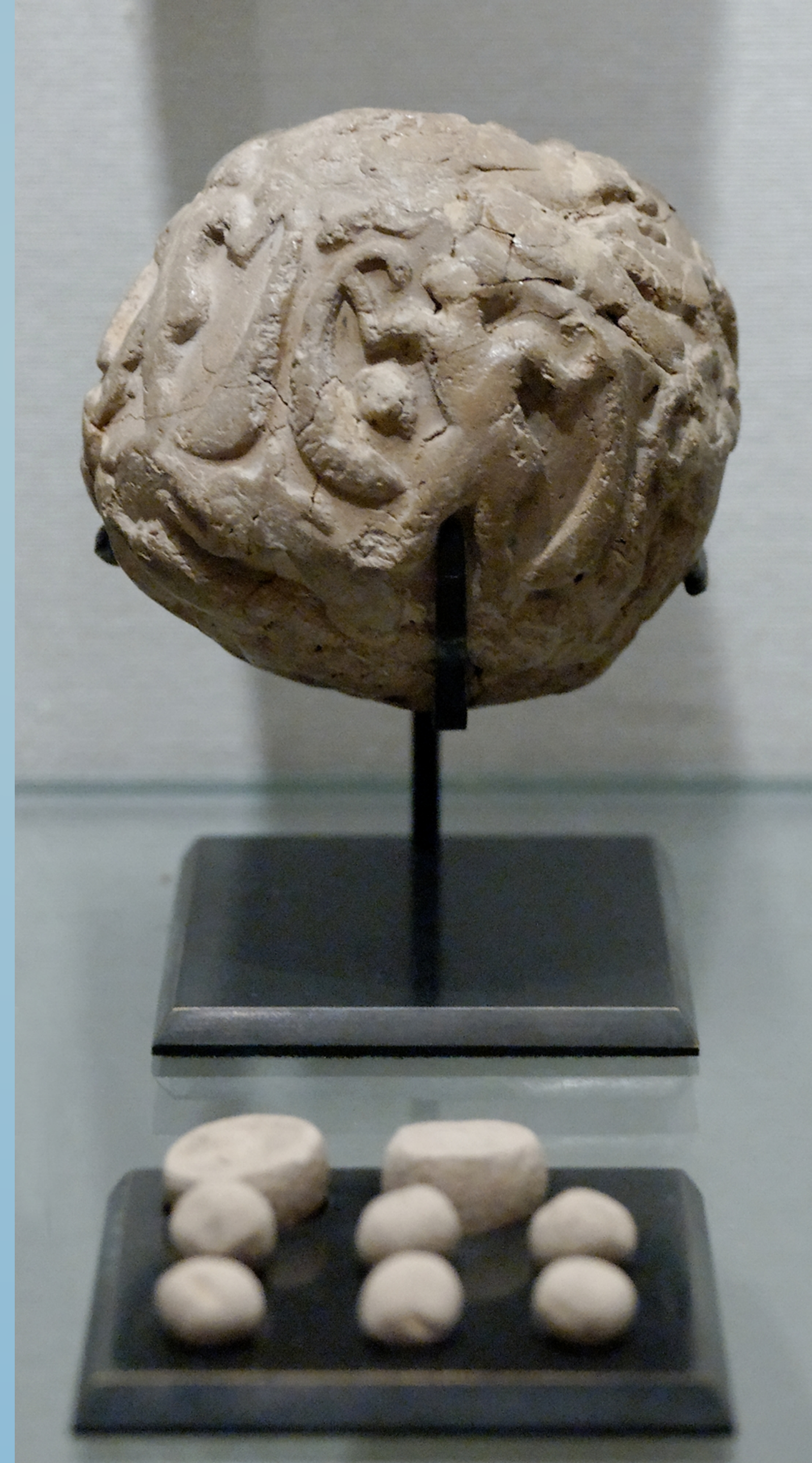
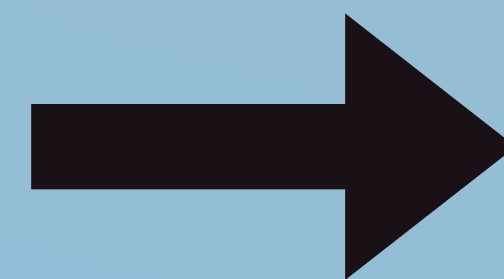
ANALOGY

with the word « digitas », which is latin for « finger »

The ultimate hipster

METAPHOR

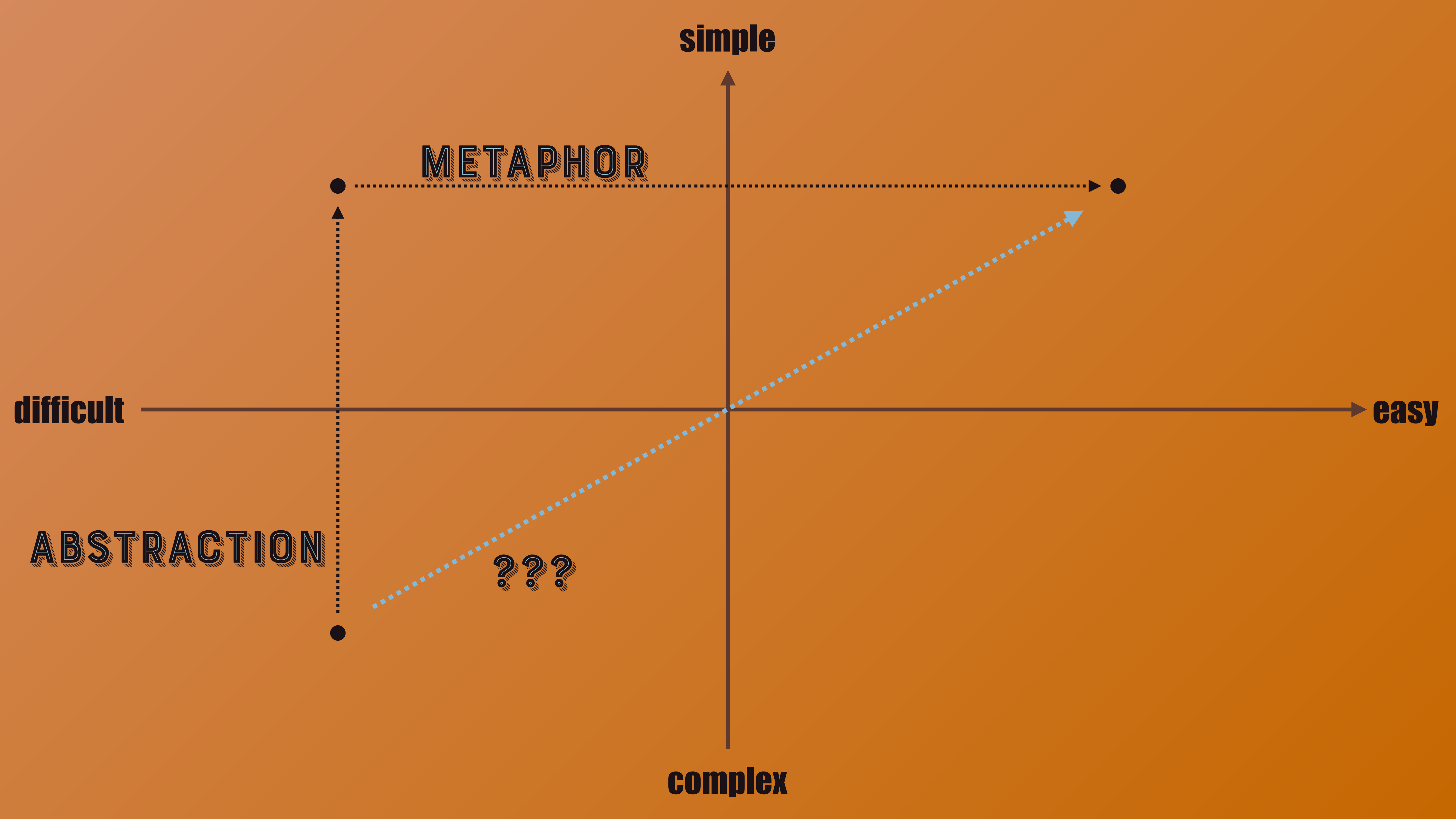
« Calculi » — 3000 BC





GEORGE LAKOFF

**Metaphors shape
the way we think**



There are PROBLEMS with
METAPHORS

UNLAWFUL

CULTURALLY

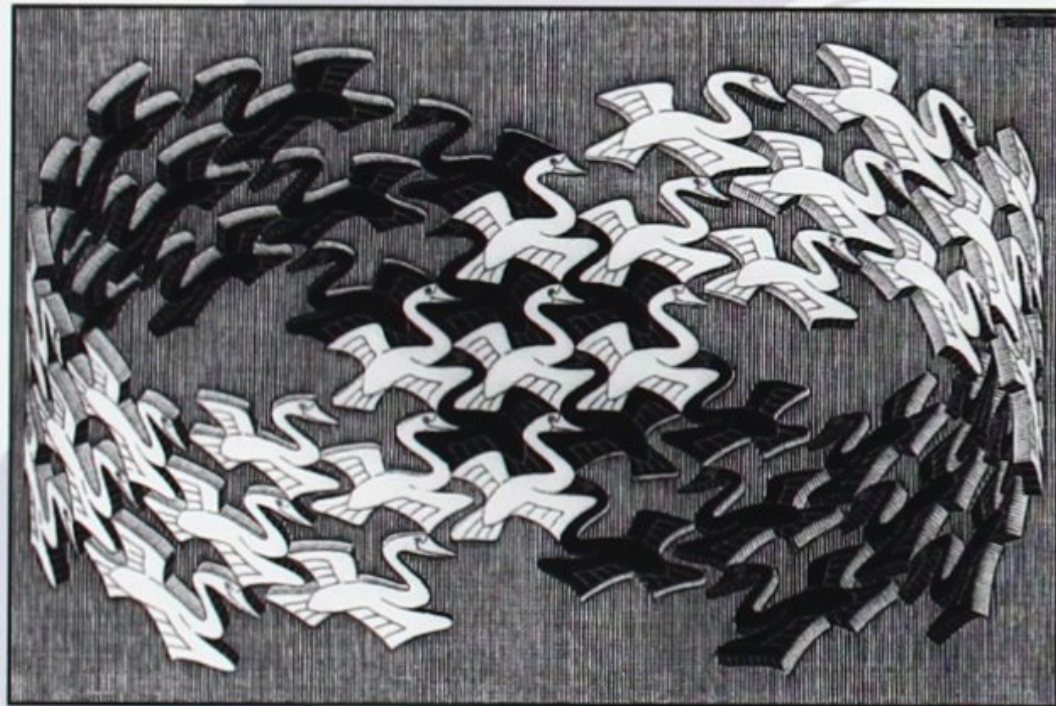
BIASED

PERSSISTENT

Design Patterns

Elements of Reusable
Object-Oriented Software

Erich Gamma
Richard Helm
Ralph Johnson
John Vlissides



Cover art © 1994 M.C. Escher / Cordon Art - Baarn - Holland. All rights reserved.

Foreword by Grady Booch



ADDISON-WESLEY PROFESSIONAL COMPUTING SERIES

Meet the (dreaded)

GANG OF FOUR

Horsemen

of Apocalypse

Design Patterns

Elements of Reusable
Object-Oriented Software

Erich Gamma
Richard Helm
Ralph Johnson
John Vlissides



ADDISON-WESLEY PROFESS

Design Pat

Elements of Reusab
Object-Oriented So

~~Decision~~



design | dizajn | [noun]

Conception of an objet that allies aesthetics
to utility.

transliterated from the French definition



Iterator, Proxy, DECORATOR, Observer
Template Method, BUILDER, Interpreter
Singleton, Adapter, BRIDGE, Composite
FACADE, Flyweight, Prototype
Command, FACTORY METHOD, Mediator
Observer, State, ABSTRACT FACTORY
Chain of Responsibility, Strategy, Visitor

**The « Carpenter »
sees his activity as
CREATIVE**

and becomes overly attached to his « creation »

The Carpenter

BUILDS

stuff and sometimes

FIXES

broken things

METAPHORS are only good

when they help us to grasp new

ABSTRACTIONS

which are THE REAL STUFF™

UNIVERSAL

PERMANENT

LAWFUL

**The « Cartographer »
considers is job to be one of**

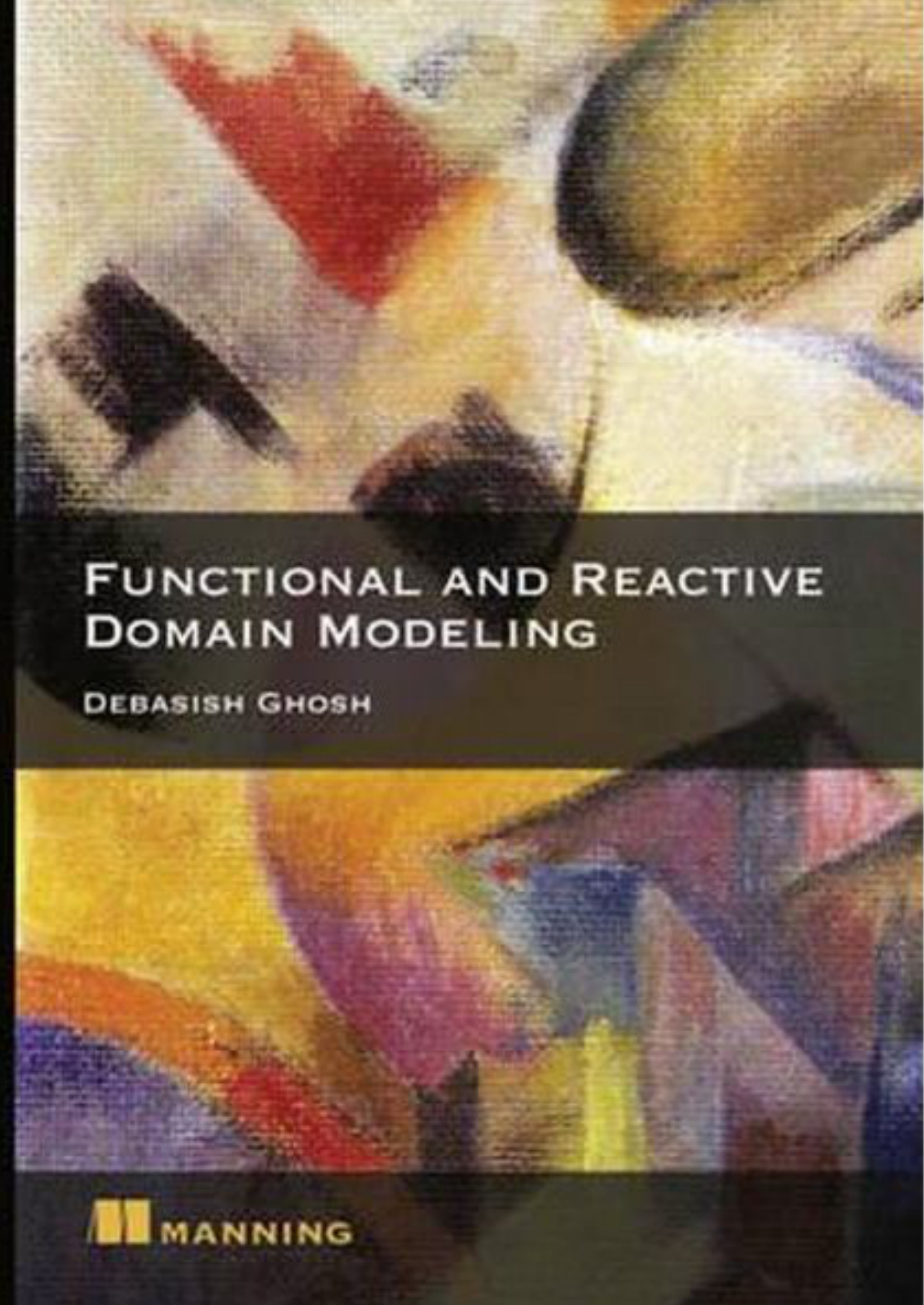
DISCOVERY

**He searches for the abstractions that are
hidden behind the business' requirements**

DEBASISH GHOSH

as the prototypal

CARTOGRAPHER



The Carpenter PROJECTS
order onto complexity

The Cartographer EXTRACTS
abstractions from complexity



**A MAP is not
the TERRITORY**

ALFRED KORZYBSKI

**When exploring a new territory
first send the CARTOGRAPHERS in**

**Only then send the CARPENTERS
once your map is precise enough**

THANK YOU !!



@ValentinKasas

<https://github.com/vil1>

<http://kanaka.io>



The Scala event in France!

November 2nd and 3rd, 2017 - **Lyon**, France



Scala**IO** is back again!

CFP coming soon

@ScalaIO_FR