Coupling, cohesion and connascence

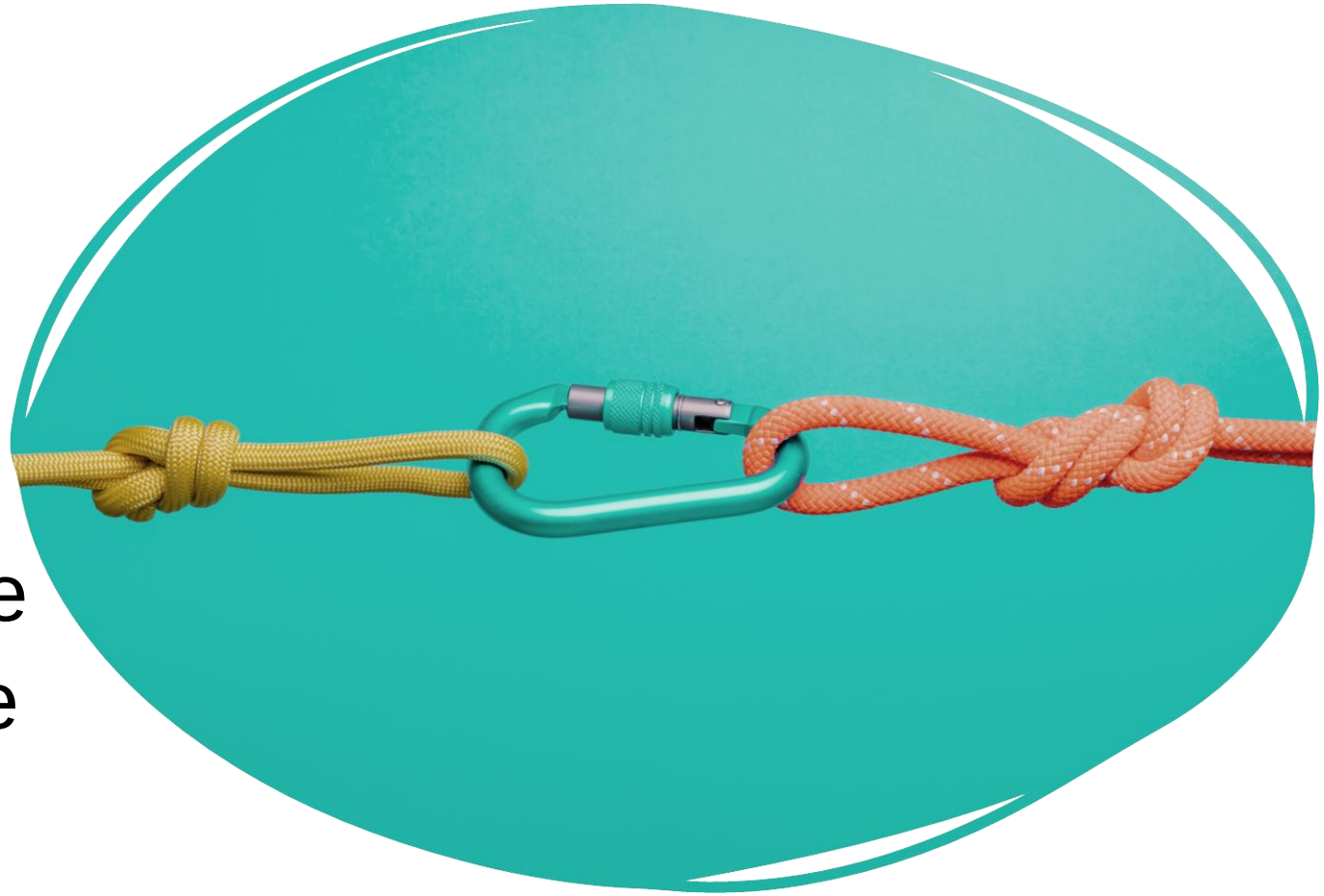
By Olga McIntosh

Coupling

Is the degree of interdependence between software modules

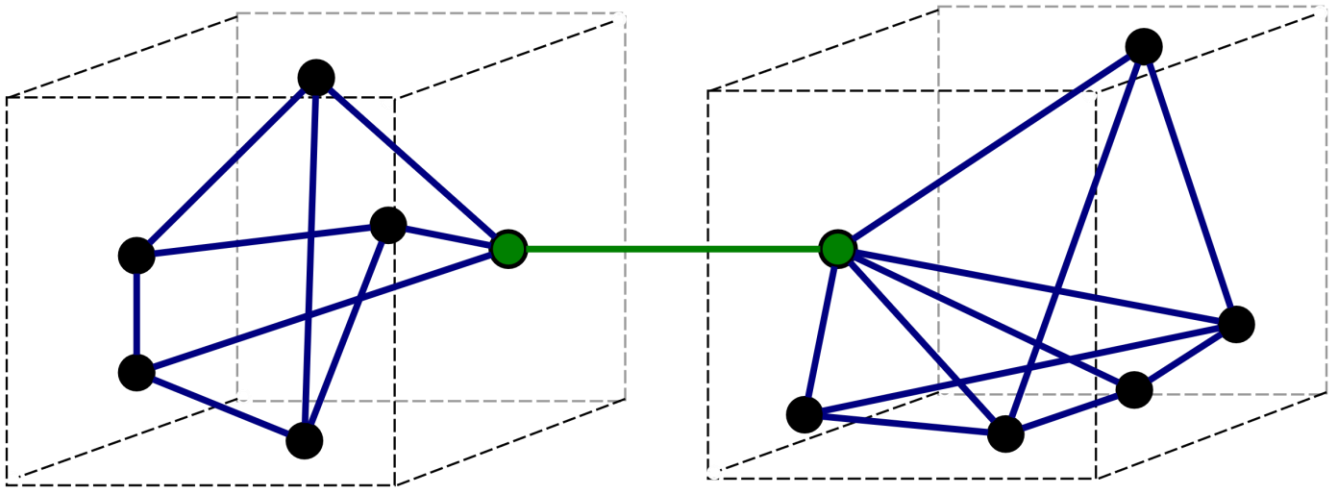
We want it as low as possible

Cohesion

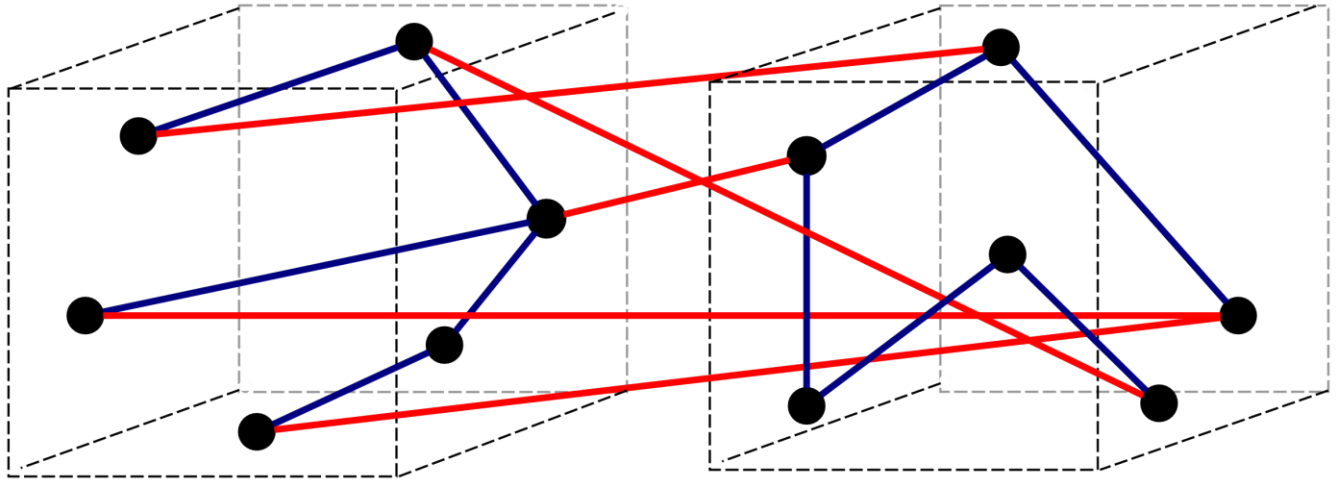


Is the degree to which the elements inside a module belong together

We want it as high as possible



a) Good (loose coupling, high cohesion)



b) Bad (high coupling, low cohesion)

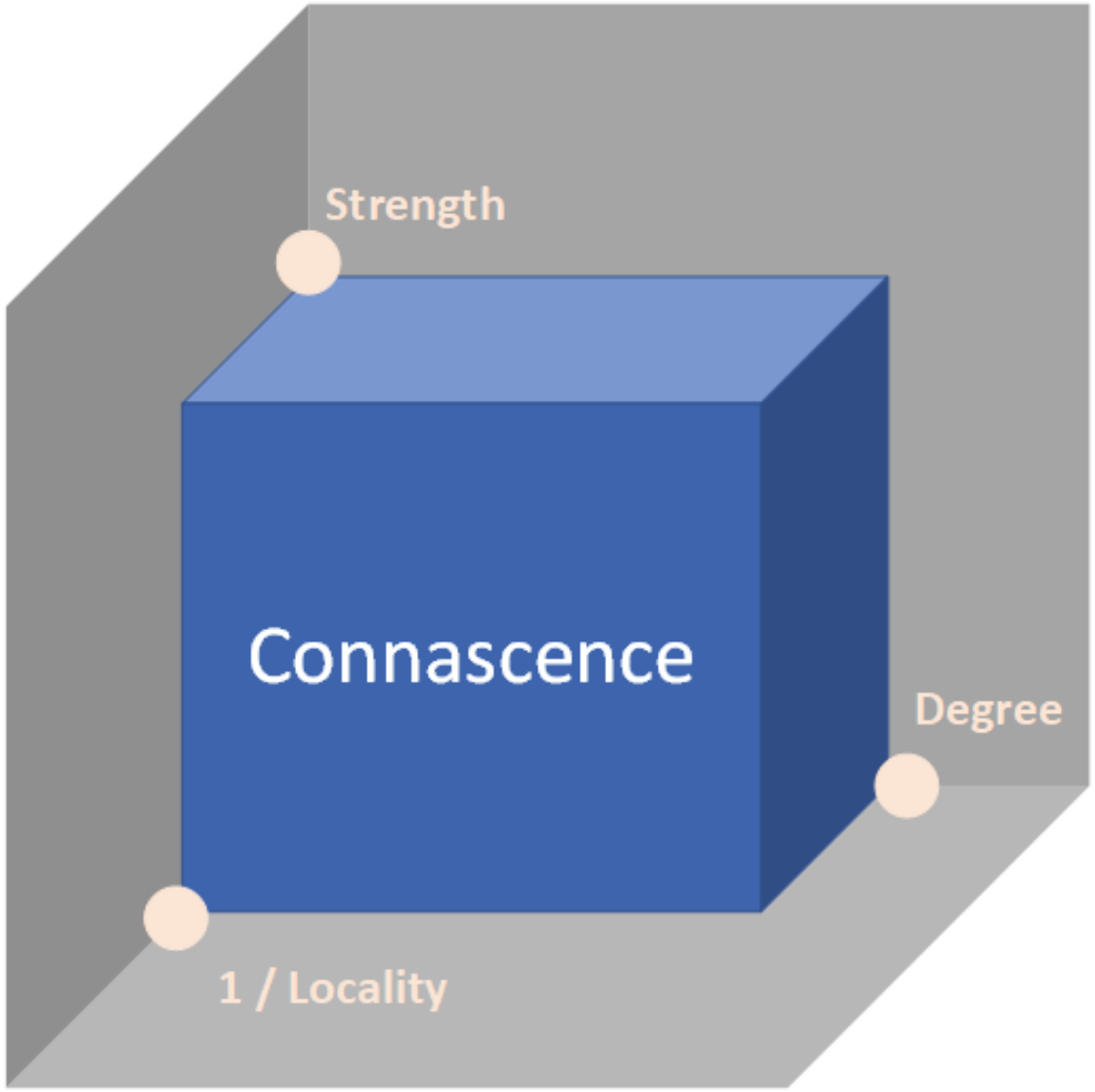
The secret to great design is finding a good balance between Cohesion and Coupling

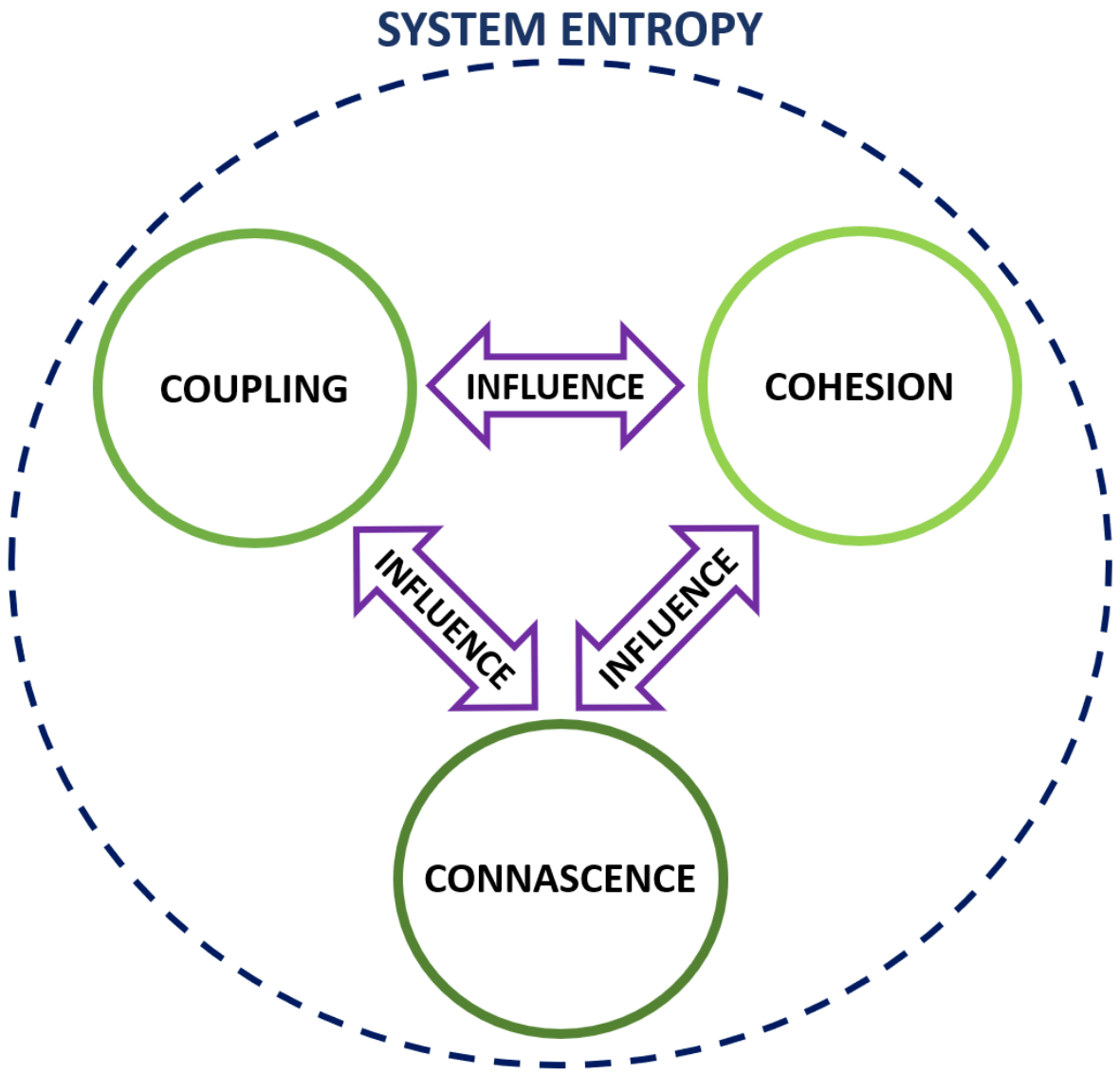
CONNASCENCE

Two or more elements are connascent if a change in one element would require also a change in the others

three properties:

1. **Strength**. The higher level of connascence, the higher the strength. Example, the strength of connascence of Name is lower than the strength of connascence of Algorithm.
2. **Locality**. It describes how close the coupled components are. The higher connascence locality, the better. Coupled methods that are in different modules are much worse than coupled methods within same module.





From a higher perspective, Cohesion/Coupling/ Connascence are measures of different aspects of the
Entropy of the system.

Questions?

Thank you

- “Agile Technical Practices Distilled” Pedro M. Santos, Marco Consolaro, Alessandro Di Gioia
- https://en.wikipedia.org/wiki/Coupling_(computer_programming)
- https://codesai.com/2017/01/about-connascence
- https://programhappy.net/2020/06/22/connascence-why-is-it-so-important/
- https://en.wikipedia.org/wiki/Entropy_(information_theory)

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