

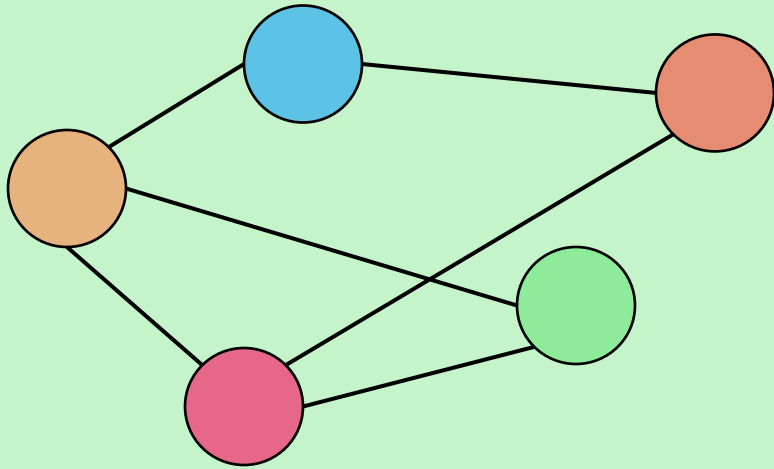
More than just hierarchy: a novel classification representation outside of decimal systems

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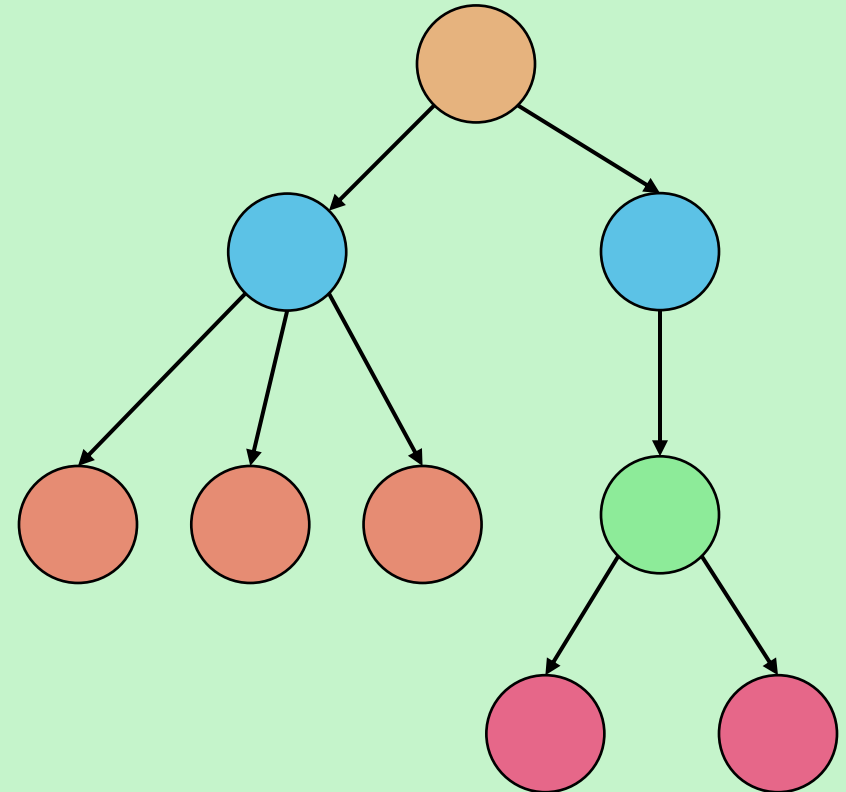
MLIS Capstone 2022

the problem

the universe of knowledge



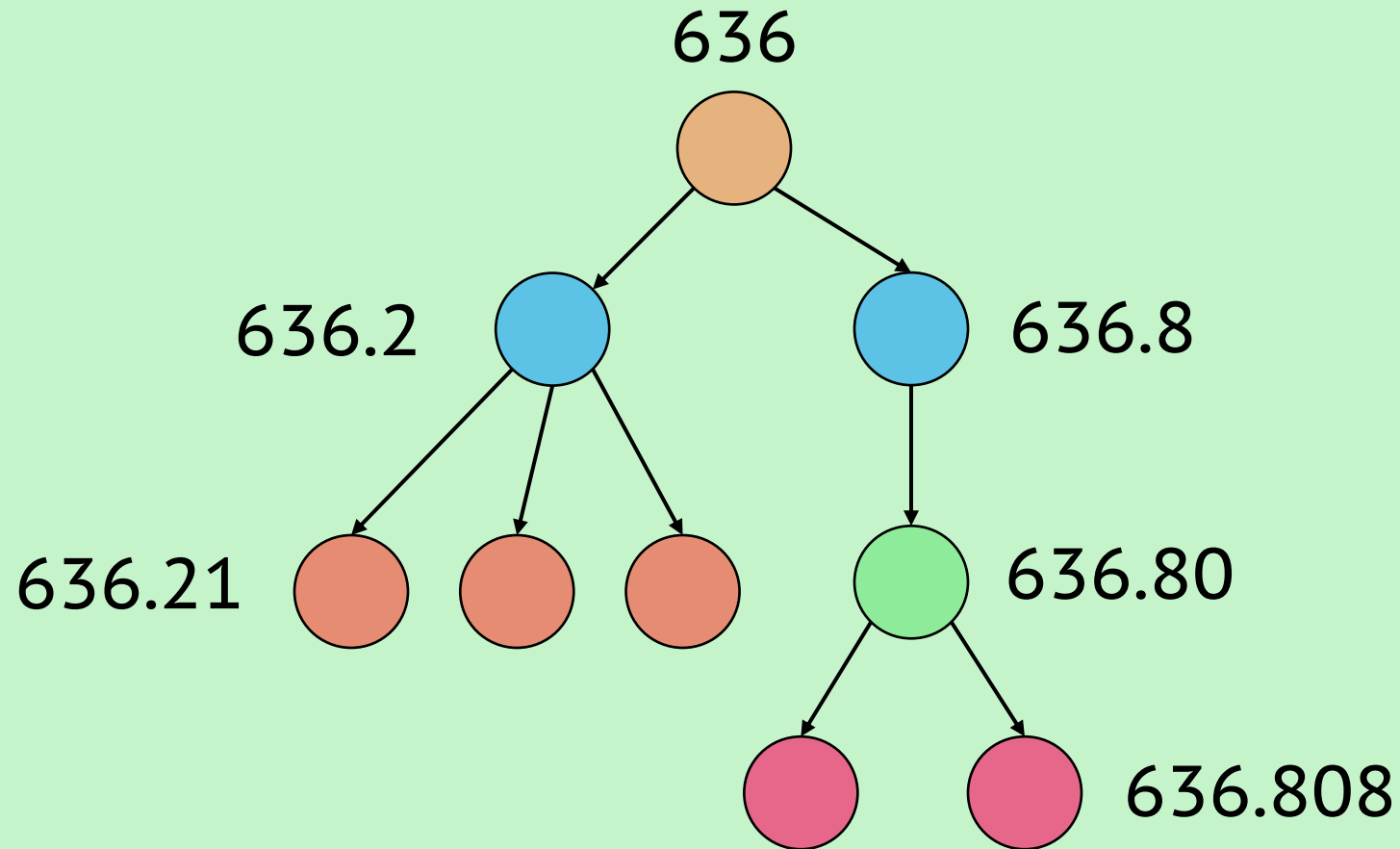
classification schemes



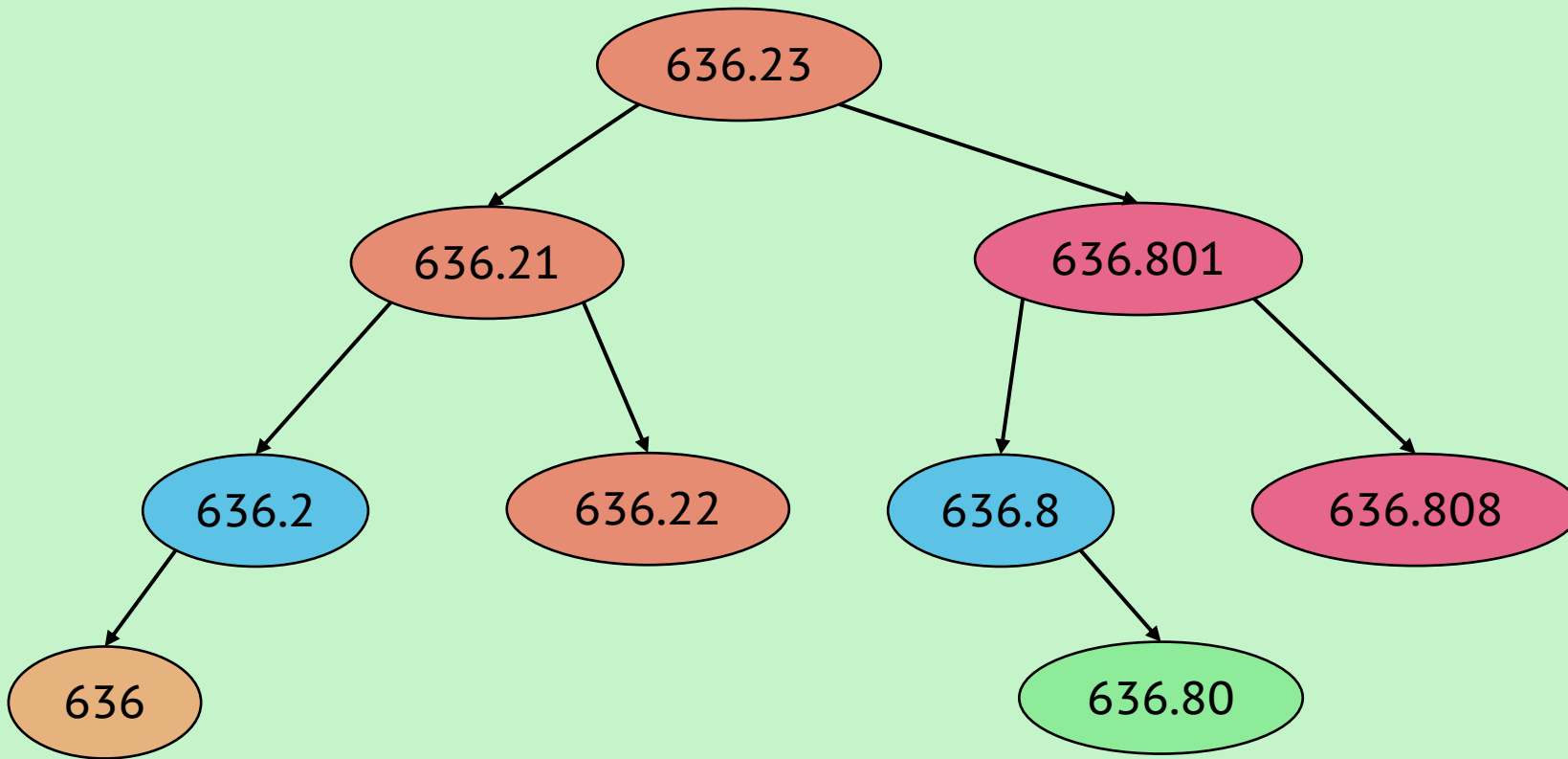
the approach

use graph theory to transform typical classification schemes to solve the pain points that result from the mismatch between the epistemology and the scheme

decimal systems = tries



self-balancing binary search trees



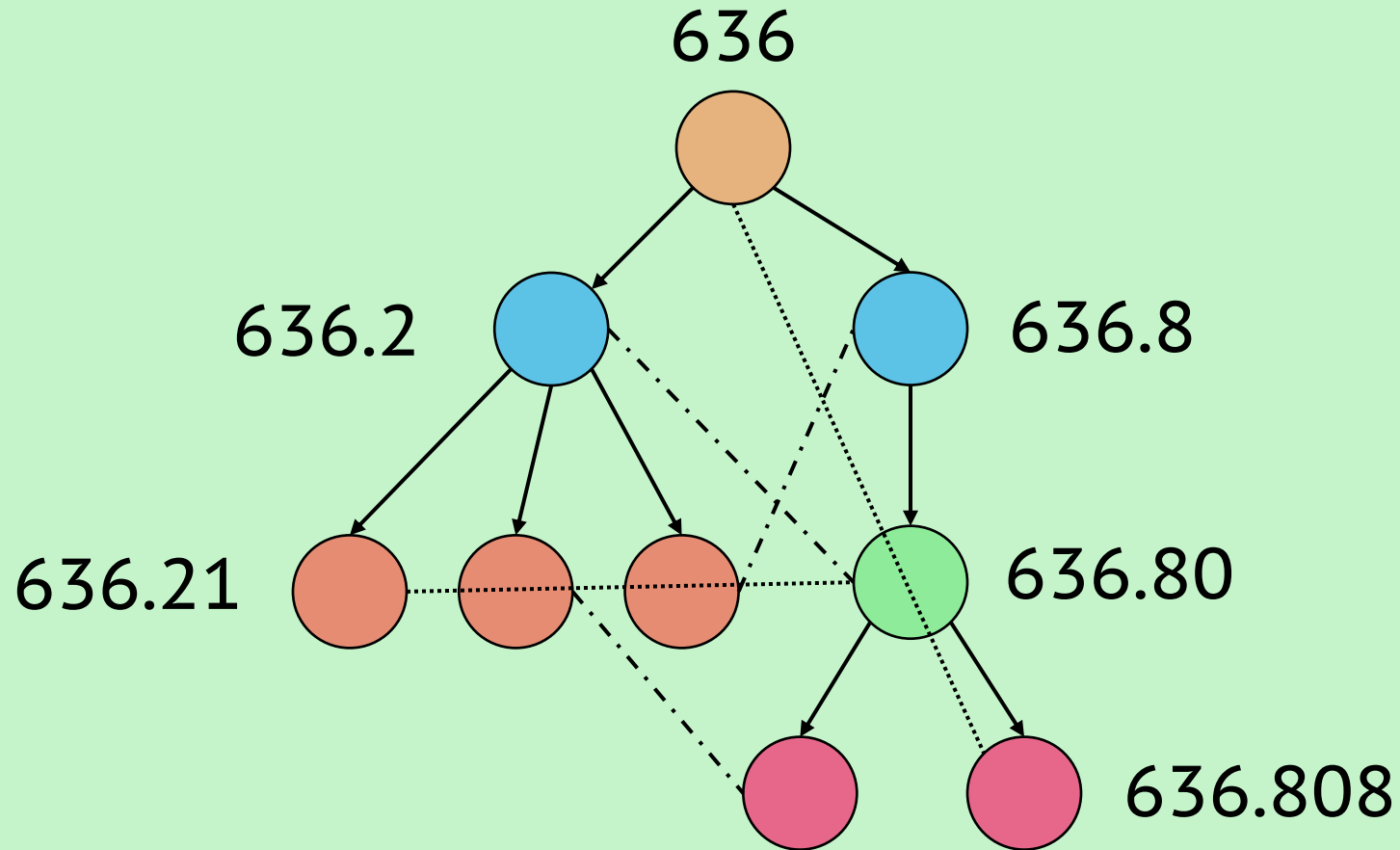
pros:

- average call number length goes down
- clustering roughly maintained

cons:

- average path length goes up
- some notable exceptions to clustering maintained
- doesn't help with the epistemology problem

“ontology trie”



pros:

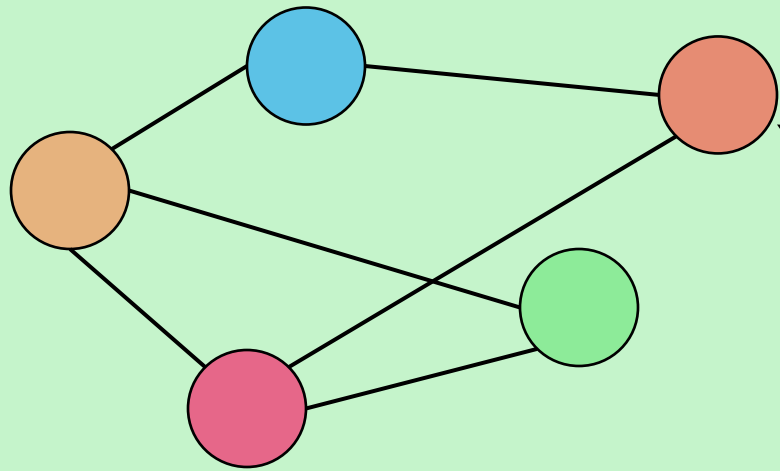
- average path length goes way down
- clustering as before
- closer to universe of knowledge

cons:

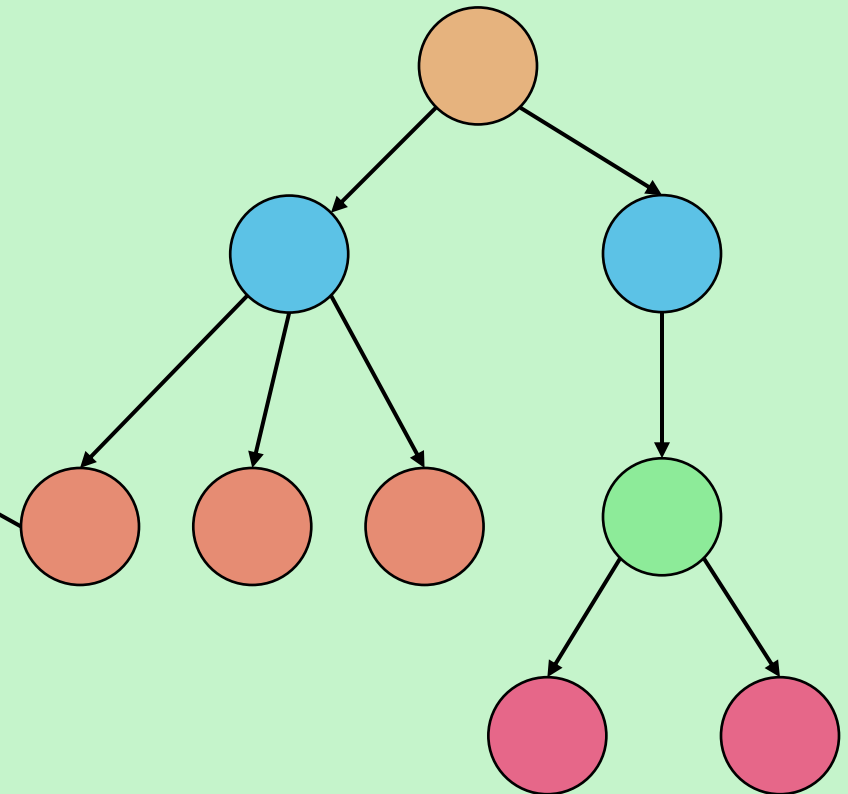
- the graph doesn't change very much at all

best of both worlds

the universe of knowledge



classification schemes



example: color

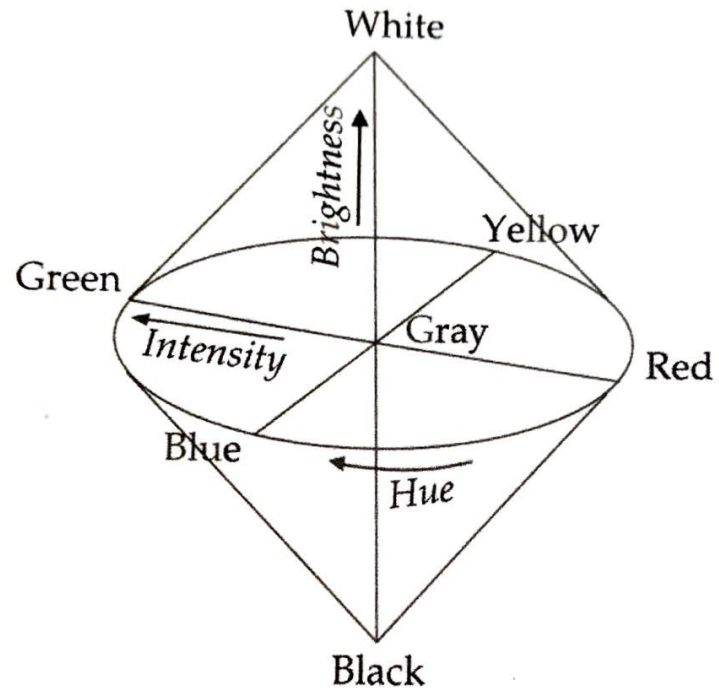
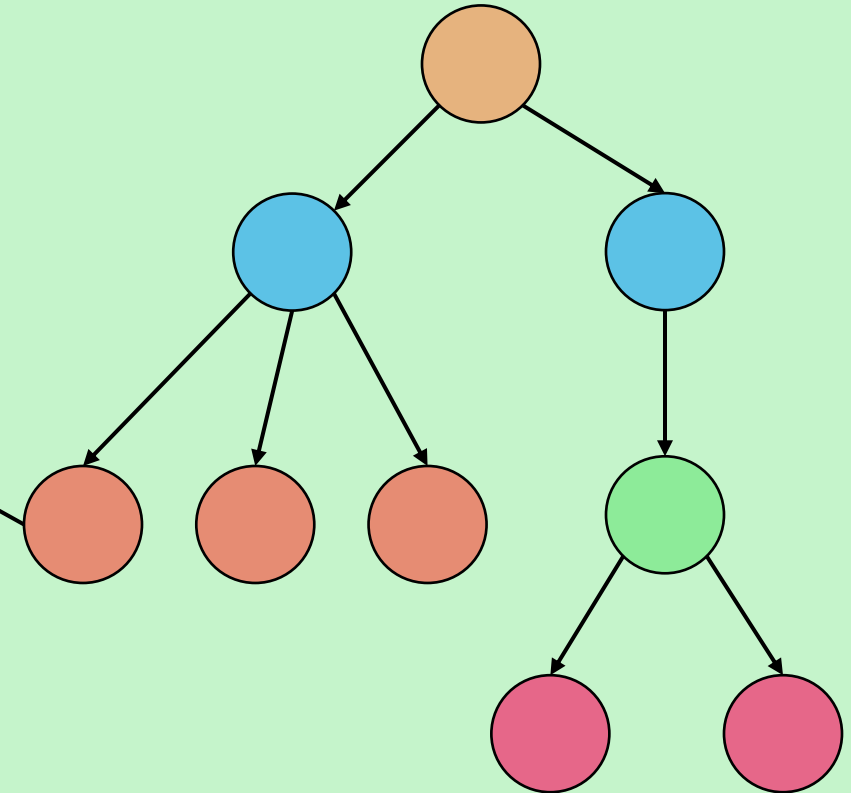
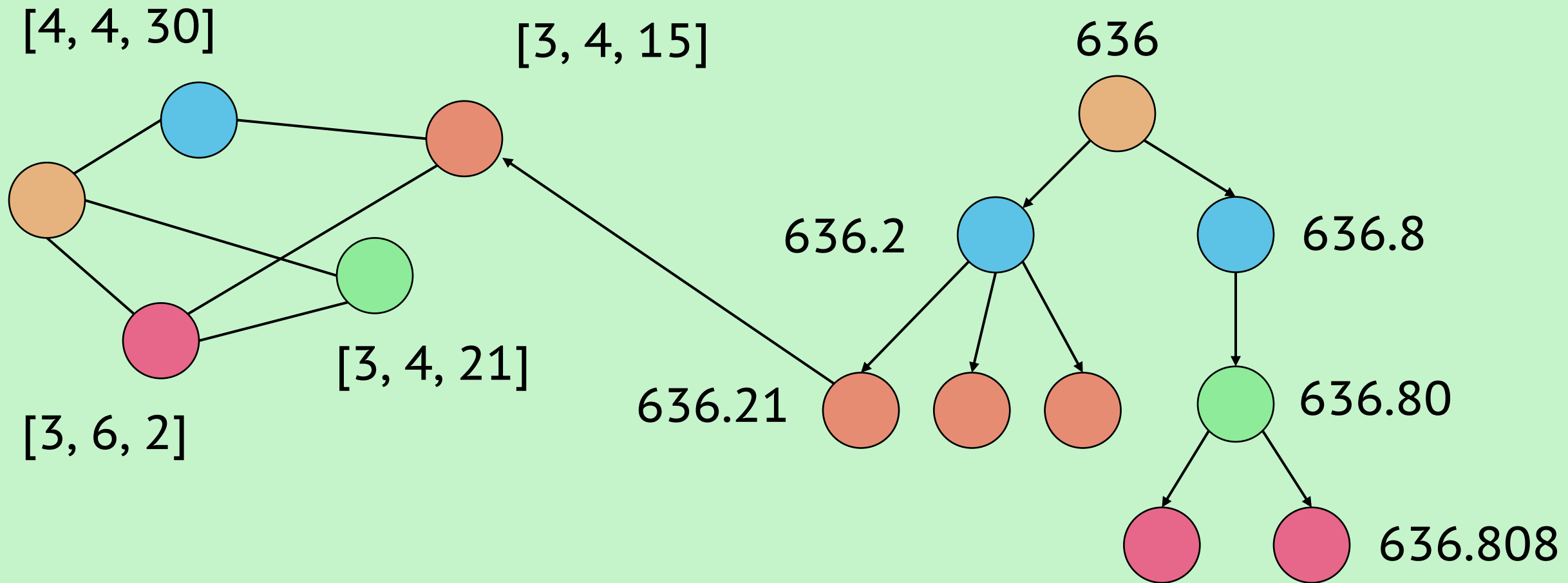


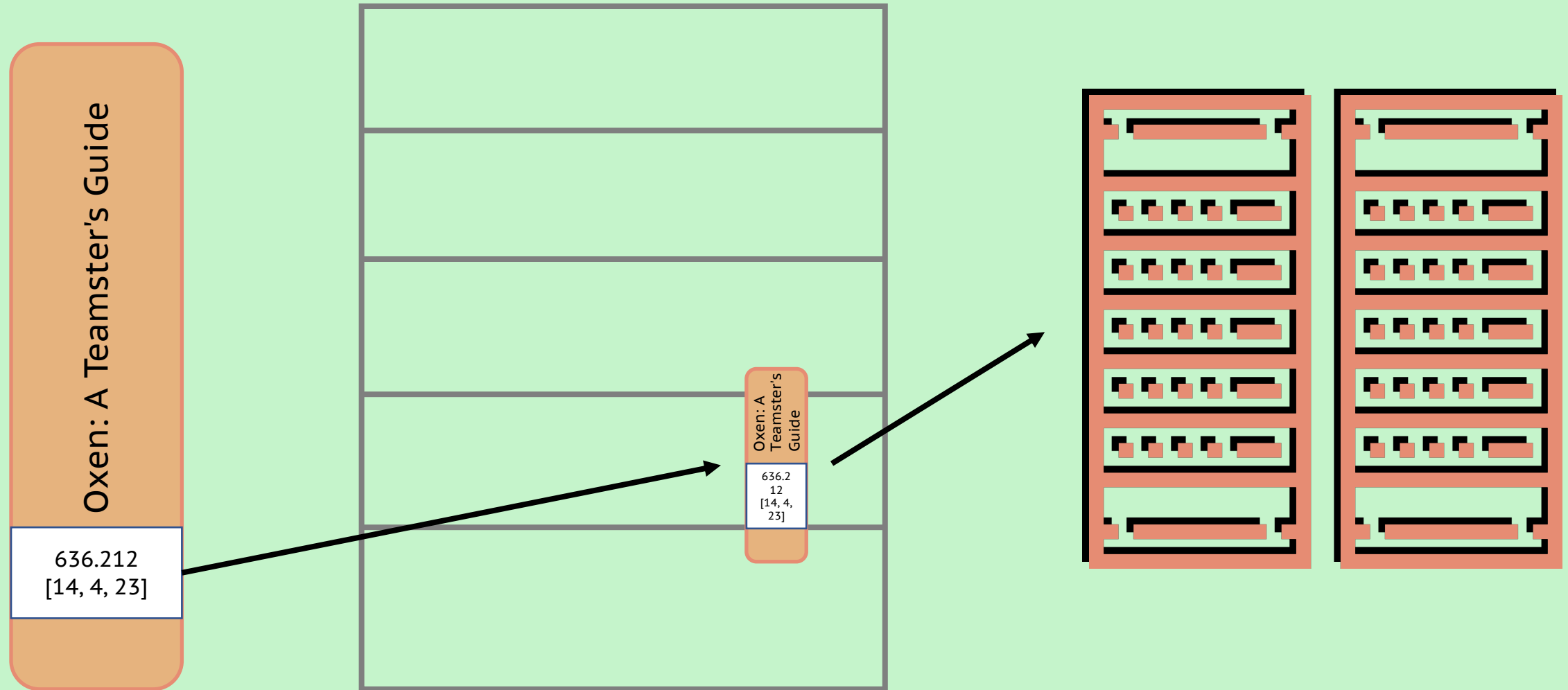
Figure 2.1
The color spindle.



encoding



encoding in the real world



drawbacks of encoding the real world

- moving a file's location is far easier than moving a book's location
- re-encoding a collection entails re-labeling every book
- patrons who rely on muscle memory to arrive at the correct location get switched up on

upsides of encoding the real world

- many libraries already support RFID checkout, easy to convert to RFID shelving
- re-labeling entire collections is a known, doable process and likely necessary for only big changes to the universe of knowledge
- generic algorithm to *any* collection

outstanding questions & experiments

- running trials on real decimal systems
- running UX experiments on redesigned schemes
- prefix- or suffix-absent labeling schemes

acknowledgements

- Mom, for giving me a “shrug n sigh” when I quit my fancy tech job to join library school
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- Dr. Joseph Tennis, for infinite resources, exceptional guidance and not laughing in my face when I presented this wacko project