

global < local

Locality
future

- local SAFETY: will not outlive its region, may be stack allocated
- local REQUIREMENT: do not escape region
- In function type, local parameter isn't a requirement, it's a guarantee
- global function can't capture local values
- No heap to stack pointer
- XING: Applies to non immediate data

Uniqueness
past

unique < aliased

many < once

Affinity
future

- unique LINEAGE: has not been aliased
- unique ENTITLEMENT: may be overwritten
- XING: Applies mutable and mutable containing data

- once SAFETY: function will not create an alias
- once REQUIREMENT: zero or one call allowed
- many function can't capture unique values
- Function capturing unique is once
- XING: Applies to functions and function containers

Contention
past

uncontended < shared < contended

portable < nonportable

Portability
future

- Non contended LINEAGE: value retains access lock
- ENTITLEMENT:
 - uncontended: may be read or written
 - share: may only be read
- XING: Applies mutable and mutable containing data

- nonportable SAFETY: function will not break captured non contended lineage
- nonportable REQUIREMENT: ...
- portable function can't capture non contended value
- Function capturing non contended is nonportable
- XING: Applies to functions and function containers

unyielding < yielding

Yielding
future

- yielding SAFETY: function will not perform effect handled in parent stack
- yielding REQUIREMENT: ...
- XING: Applies to functions and function containers

Visibility
past

read_write < read < immutable

stateless < observing < stateful

Statefulness
future

- Non immutable LINEAGE: value ...
- ENTITLEMENT:
 - read_write: may be read or written
 - read: may only be read
- XING: Applies to mutable and mutable containing data

- SAFETY:
 - observing: will not W on captured read_write data
 - stateful: will not read or write over captured non immutable data
- REQUIREMENT:
 - observing: no write
 - stateful: value ...
- XING: Applies to functions and function containers