## Formalized Move Semantics

## Programming Research Group, Fall 2015 Michael McGirr

## Oregon State University

## Graduate School of Electrical Engineering and Computer Science

- 1. There is only ever exactly one binding to any given resource.
- 2. A variable owns what it is bound to.
- 3. When a variable's lifetime goes out of scope the bound resources are freed.
- 4. We may transfer ownership to something else. The moved values are then owned by something else.
- 5. A binding may be able to borrow a resource from another binding and use it before it returns it to the original scope.
- 6. A binding may be able to mutate a resource that it borrows as long as it has not been lent out to more than one binding.
- 7. More than one binding may borrow a resource but they may not mutate it.