

Why Dependent Types?

- **Practical programming with graded modalities requires dependency.**
- **Extrinsic verification.**

Why Dependent Types?

```
map : forall {a : Type, b : Type}
     . (a -> b) []
     -> List a
     -> List b
```

```
map [f] Empty = Empty;
```

```
map [f] (Cons x xs) = Cons (f x) (map [f] xs)
```