Transferring Whole Theories

- `HOL2ST`, `ST2HOL`, `CTYPE` transfer theorems
- Can envision transferring whole theories
- Related to
  - Gunter-Windley abstract theories
  - IMPS-style theory interpretation
- Group theory as an abstract theory:
  - Declare a new type, G say.
  - Declare constants
    - $\bullet$: $G{\to}(G{\to}G)$,
    - $\sim$: $G{\to}G$
    - $\imath$: G
  - Assert as axioms:

$$\vdash \mathtt{x} \bullet (\mathtt{y} \bullet \mathtt{z}) = (\mathtt{x} \bullet \mathtt{y}) \bullet \mathtt{z}$$

$$\vdash \mathtt{x} \bullet \imath = \mathtt{x}$$

$$\vdash \mathtt{x} \bullet {\sim}\mathtt{x} = \imath$$