CURRY-HOWARD

Theorem (Curry-Howard)
If we consider properly labelled proofs in the implicational fragment of propositional logic (i.e. the only connective is implication), then the following is true:

- *From a constructive proof of A from starting assumptions Γ, one can extract a term M such that $\Gamma \vdash M : A$.*
- *From each term M such that $\Gamma \vdash M : A$, we can extract a constructive proof that A follows from assumptions Γ.*

(This requires we accept that $\rightarrow$ is an equally good way to write implication.)

PROOFS AS PROGRAMS

Types	$\longleftrightarrow$	Formulas
Programs	$\longleftrightarrow$	Proofs
Inhabitation	$\longleftrightarrow$	Provability