

7)

Control

- Faults
- Exceptions

F = "catch"-less eval-ctx

$E[\text{catch } F[\text{throw } V] \text{ with } \lambda X.M]$

→

$E[(\lambda X.M) V]$

- "Resumable" Exceptions = syscalls / page fault

$E[\text{catch } F[\text{throw } V] \text{ with } \lambda X. \lambda R.M]$

→

$E[(\lambda X. \lambda R.M) V (\lambda N. F[N])]$
 $(\lambda N. E[F[N]])$

(call/cc f) := catch (throw 0) with
call-with-current-continuation
 $\lambda X. \lambda R. (f R)$

- call/cc

$E[\text{call/cc } V] \rightarrow E[V (\lambda X. E[X])]$

if k doesn't \rightarrow

escape from E , then k is an "escape continuation"

