Dataflow Processes — A Special Case

- A firing function maps a finite number of input tokens onto output tokens.

- A set of firing rules specify when an actor can fire.

- A firing consumes input tokens and produces output tokens.

- A sequence of firings is a dataflow process, also called an actor.
• A dataflow process is $F = (\text{maps } f)$, where $f: S^m \rightarrow S^n$.
• $f$ is called the firing function.
• Choose $f$ so that $F$ is continuous.
• Vuillemin-sequential (blocking reads Kahn-MacQueen) is sufficient.
• This is not entirely satisfactory:

The identity firing function $f(x, y) = (x, y)$ does not yield an identity dataflow process.