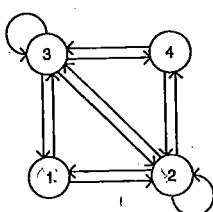
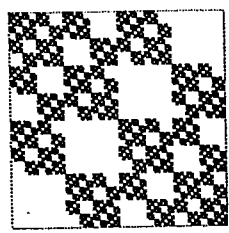


Driving an IFS
by iterating a
function

to
from

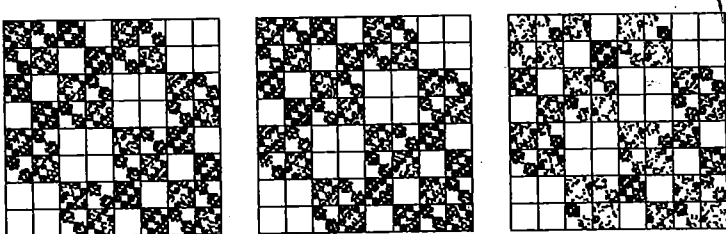
1 $\rightarrow$ 2, 3
2 $\rightarrow$ 1, 2, 3, 4
3 $\rightarrow$ 1, 2, 3, 4
4 $\rightarrow$ 2, 3



IFS with memory
transition graph

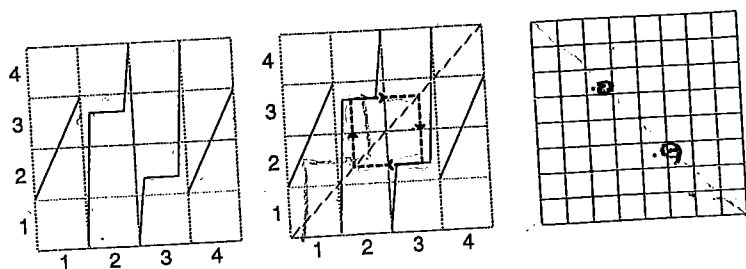
IFS with memory

IFS driven by iterating
these three
functions



Eventually, all three will fill up the
IFS with memory graph.

Is it always true that different functions,
with the same allowed transitions, will
fill in the same IFS, but not uniformly?



to

from

 $1 \rightarrow 2, 3$ $2 \rightarrow 1, 2, 3, 4$ $3 \rightarrow 1, 2, 3, 4$ $4 \rightarrow 2, 3$

The driven IFS
settles down to
a stable 2-cycle.

Fractals $\rightarrow$ patterns in space

Chaos $\rightarrow$ patterns in time

Cellular Automata (CA) $\rightarrow$ patterns
in space and in time.