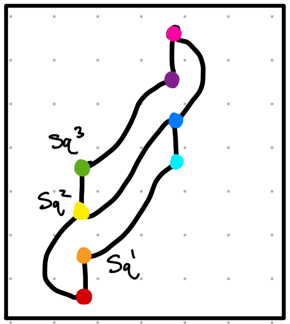
The E_2-page $\mathrm{Ext}^{s,t}_{A(1)}(\mathbb{F}_2, \mathbb{F}_2) \Rightarrow \pi_* ko^\wedge_2$

(An $A(1)$-resolution $\cdots \to P_1 \xrightarrow{f_1} P_0 \xrightarrow{f_0} \mathbb{F}_2$)

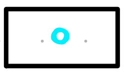
KEY



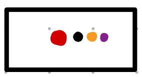
↙ depicts the subalgebra $\langle Sq^1, Sq^2 \rangle = A(1) \leq A$, $A =$ mod 2 Steenrod.

Each element has a unique colored dot;
$\bullet = 0$, $\mathbb{F}_2\{Sq^1\}$, $\mathbb{F}_2\{Sq^2\}$, etc.

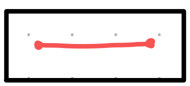
Copies of the diagram depict shifts of copies of $A(1)$'s
e.g. $P_1 = \Sigma A(1) \oplus \Sigma^2 A(1)$.



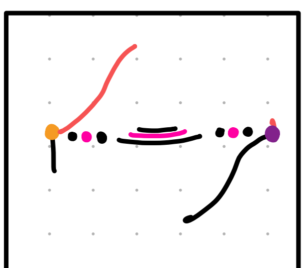
A hollow dot means is in the kernel; e.g. $f_1 : (0, Sq^2 Sq^1) \mapsto 0$



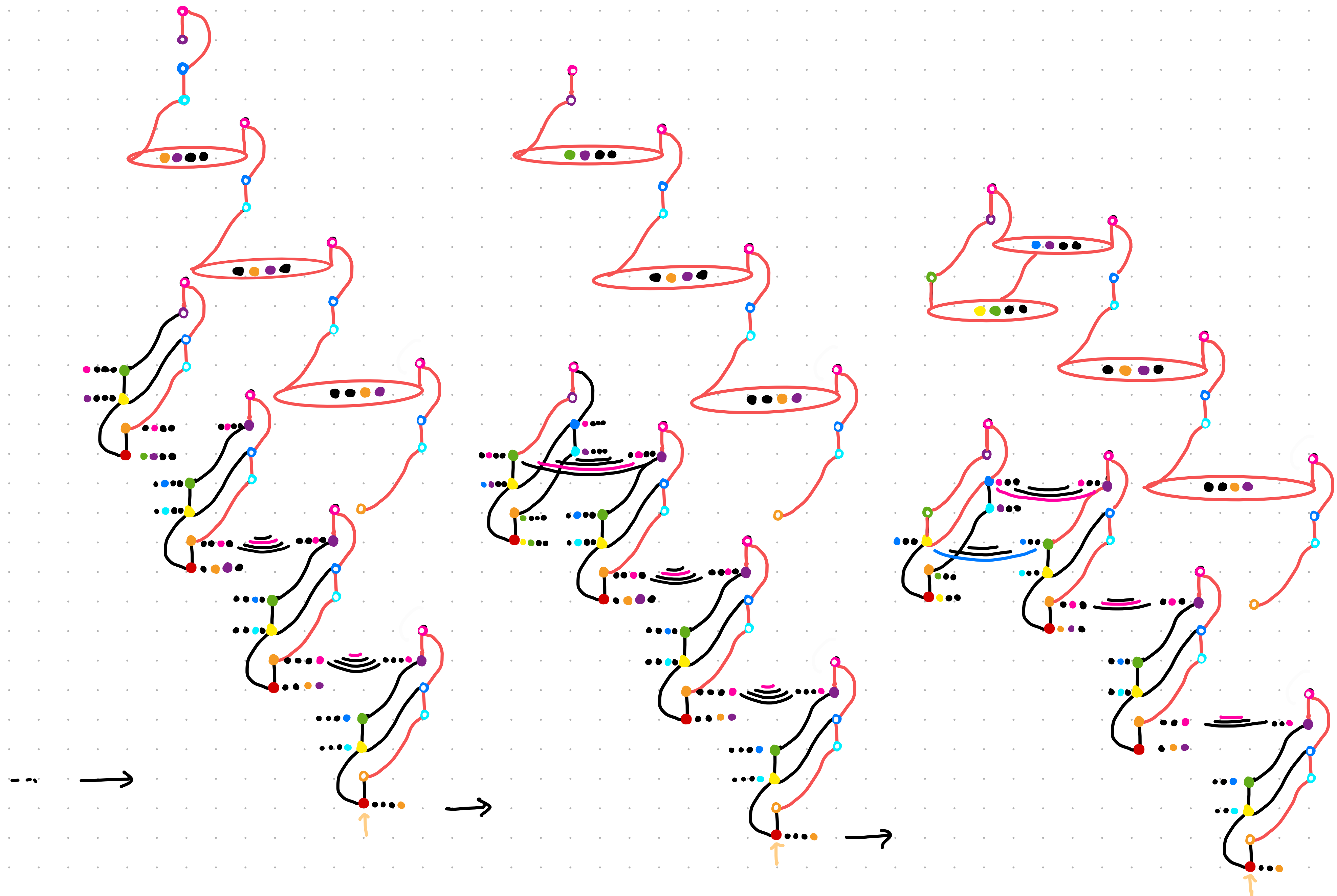
Adjacent smaller dots denote the image e.g., $f_5 : (0,0,1,0) \mapsto (0, Sq^1, Sq^2 Sq^3)$



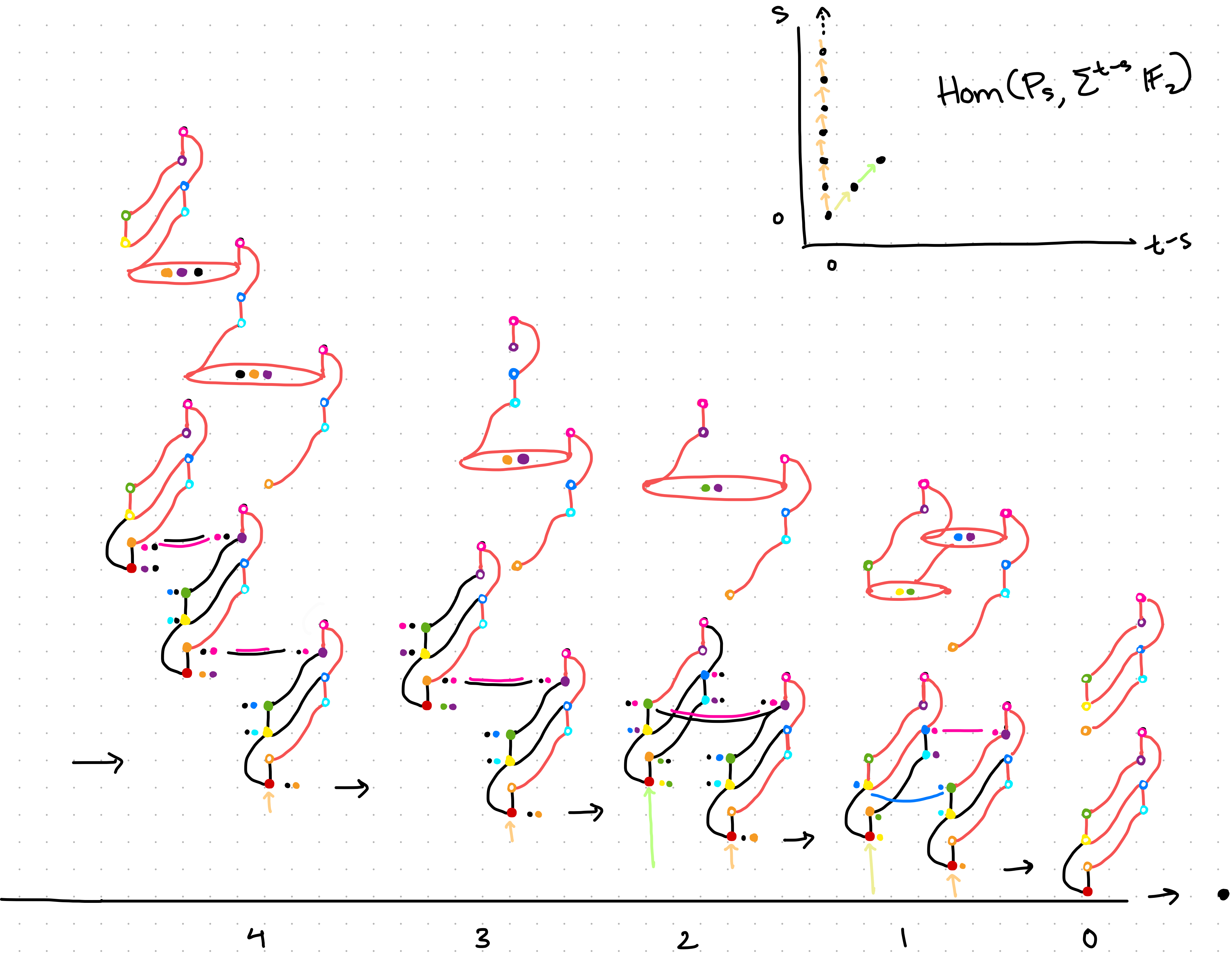
The kernel is also depicted by pink lines, and is redrawn above the resolution for clarity.



Lines linking 2 copies of $A(1)$ indicate the sum is in the kernel
e.g. $f_5 : (0, Sq^1, 0, 0) + (0, 0, Sq^2 Sq^3) \mapsto (0, Sq^3 Sq^3, 0) + (0, Sq^3 Sq^3, 0) = 0$



7 6 5


4
3
2
1
0
s
0
0
t-s
Hom(P_s, Σ^{t-s} F_2)