

For each  $e \in E$ , define  $\{\{e\}\} \subseteq M$  such that:

1.  $\forall s \in M, s \in \{\{s\}\}$ .
2.  $\forall s, s' \in M$  if  $s' \in \{\{s\}\}$  then  $s' = s$ .
3. if  $e \notin W$  then  $\{\{e\}\} = \emptyset$ .
4. Special case 1, the Zugzwang paper stream:
  - i.  $e \supseteq s \Rightarrow s \in \{\{e\}\}$ .
  - ii.  $e \subseteq s \Rightarrow s \in \{\{e\}\}$ .
5. Special case 2, Levenshtein distance:
  - i. We know that  $x_0 = \min\{d_L(s, s') : s, s' \in M, s' \neq s\} > 1$ . But need to prove.
  - ii.  $\{\{e\}\}_x = \{s \in M : d_L(e, s) \leq x\}$ .
  - iii. For  $x = 0$  we get a distribution with all mass in  $M$ ; what “others” are doing when define a probability on  $M$ .
  - iv. We can set

$$\{\{e\}\}' = \{s \in M : d_L(e, s) = \min d_L(e, M)\}$$

and then consider two cases:

- If  $\{\{e\}\}'$  has more than one element,  $\{\{e\}\} = \emptyset$ , or not.

6. Is there any relation with the Hamming distance and code correction?