Can we improve analyses by transforming DNA ?

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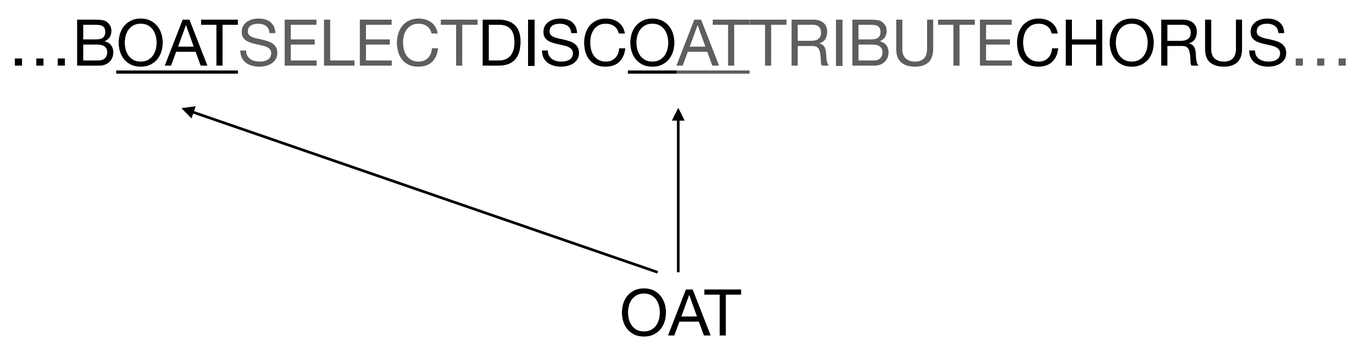
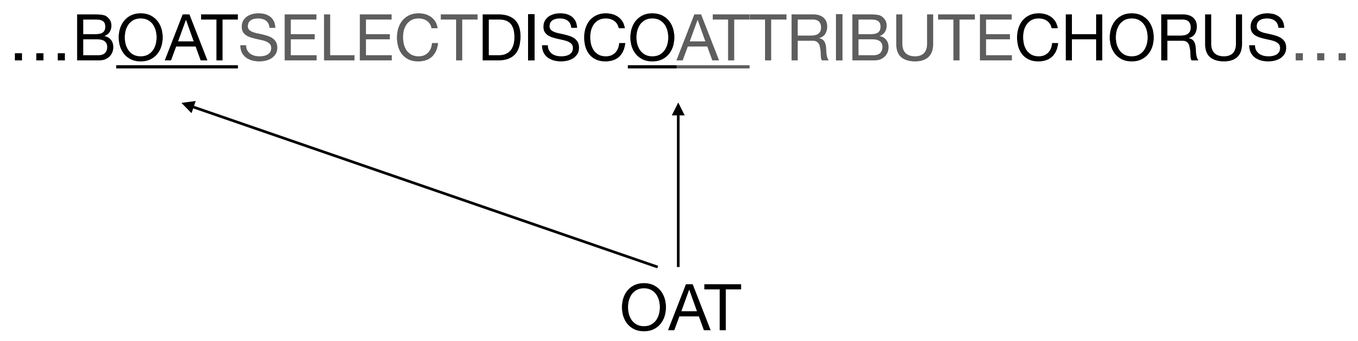
What ?

- **DNA** is like a **sentence** that contains instructions
- Machines start **reading** that sentence at a **random location**
- **Sometimes** the machine makes mistakes
- **Where** does what we **read come from** in the sentence ?



What ?

- Can we **transform the DNA** to **avoid mistakes** ?



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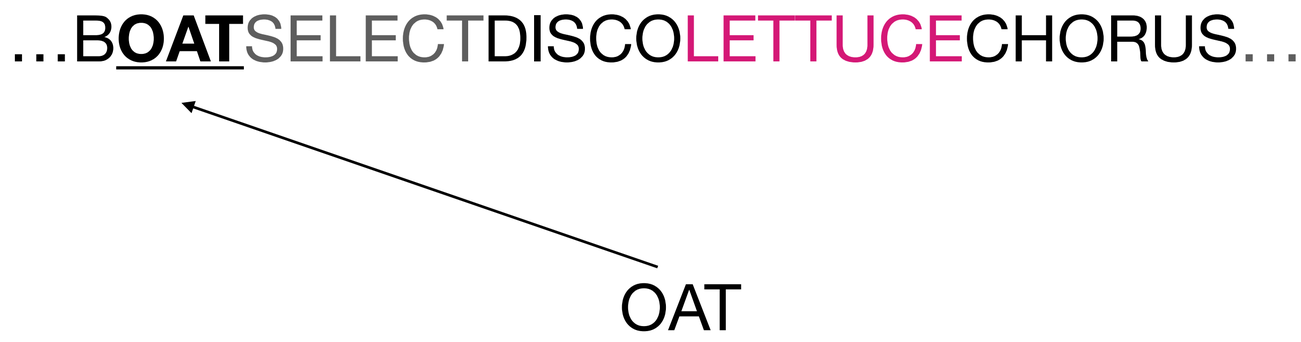

Why ?

- Finding out **where** a read comes from **is fundamental**
- A **mistake** can lead to **wrong conclusions**
- **Mistakes** are bad !

How ?

1. **Define** what a **transformation** is
2. Figure out **which ones are likely to be good**
3. **Generate** reads for which **we know the truth**
4. **Check if** transforming is **better**

Does it work ?

- We have found **several transformation** that **do better**
- In some cases, the **number of mistakes** is **1000 times lower**
- This is still the case when testing on **different organisms**

What next ?

- Explore a **larger set** of transformations. Either:
  - Find new ways to **guess which transformations are good**
  - **“Learn”** transformations directly with M.L. & A.I.

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