Open Source
&
Pandemic Influenza

common success strategies
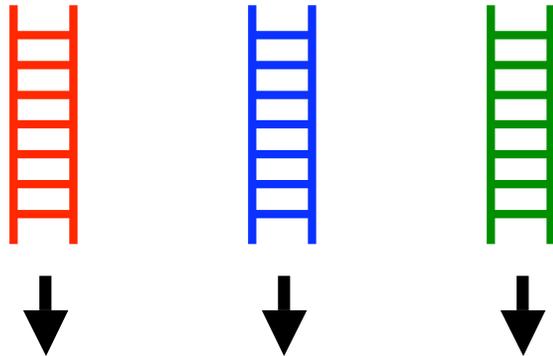
by

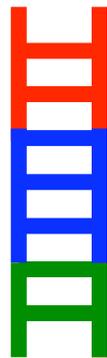Florian Burckhardt

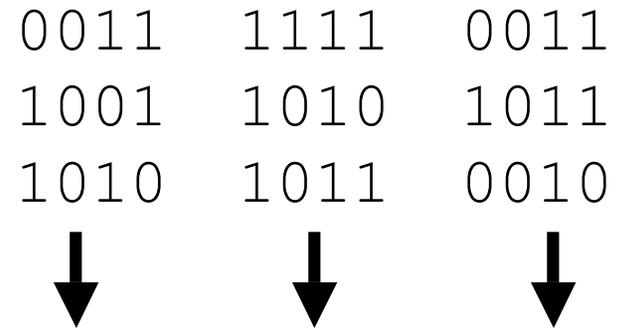http://www.burckhardt.de/22c3

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Meatspace

Genetic Code

Cyberspace

Program Code

```
0011   1111   0011
1001   1010   1011
1010   1011   0010
```

SEXual reproduction

Code Sharing

Open Source

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Open Source & Pandemic Influenza   http://www.burckhardt.de/22c3

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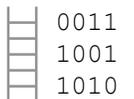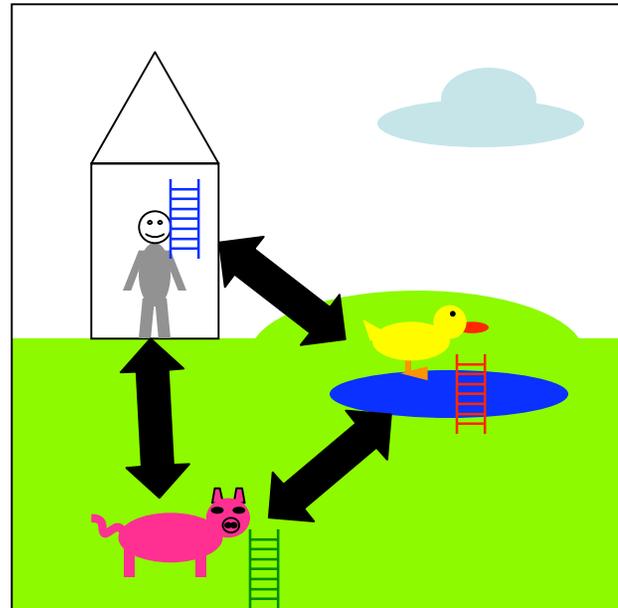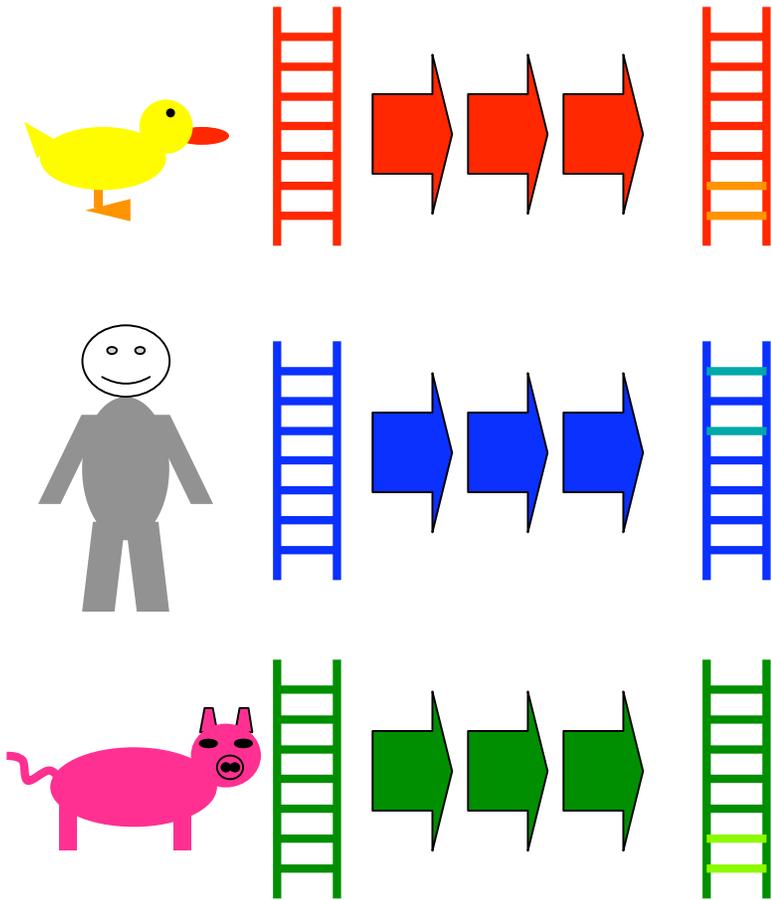
Influenza A Virus

- You become infectious before you get sick; quarantine as control measure does not work since sick people are not recognised

- Virus has high mutation rate, resulting in ever new variants

- Genome is segmented rather than one big chunk

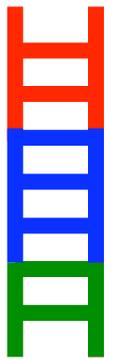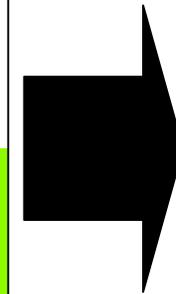- Influenza A has a broad host range: birds, mammals

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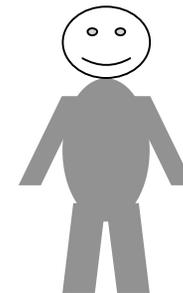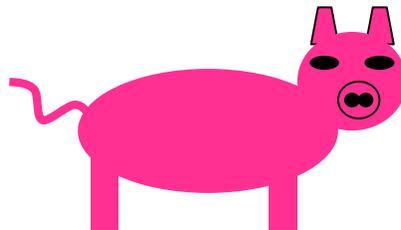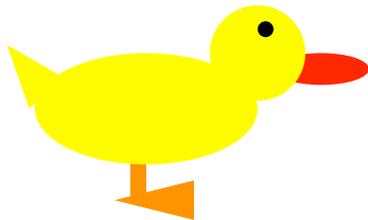
viral genome

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code sharing of whole
genome segments

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Superbugs & P2P

- Plasmids are mobile, quasi independent genetic elements that „live" in a bacterial cell
- Broad host range
- Plasmids are costly for a bacterium: cells without plasmids grow faster
- **But:** they confer additional capabilities such as antibiotic resistance
- Plasmids provide bacterial population with a sort of „genetic" P2P sharing network

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Summary

Code Sharing is a (million year old) tested and proven strategy to optimize your biological or digital program code

Thanks and have a nice 22C3

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