Probability and Random Processes
ECS 315

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4 Combinatorics

Office Hours:

BKD, 4th floor of Sirindhralai building

|	
Monday	**9:30–10:30**
Monday	**14:00–16:00**
Thursday	**16:00–17:00**

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Supplementary References

- Mathematics of Choice

  How to count without counting

  - By Ivan Niven

  - permutations, combinations, binomial coefficients, the inclusion-exclusion principle, combinatorial probability, partitions of numbers, generating polynomials, the pigeonhole principle, and much more

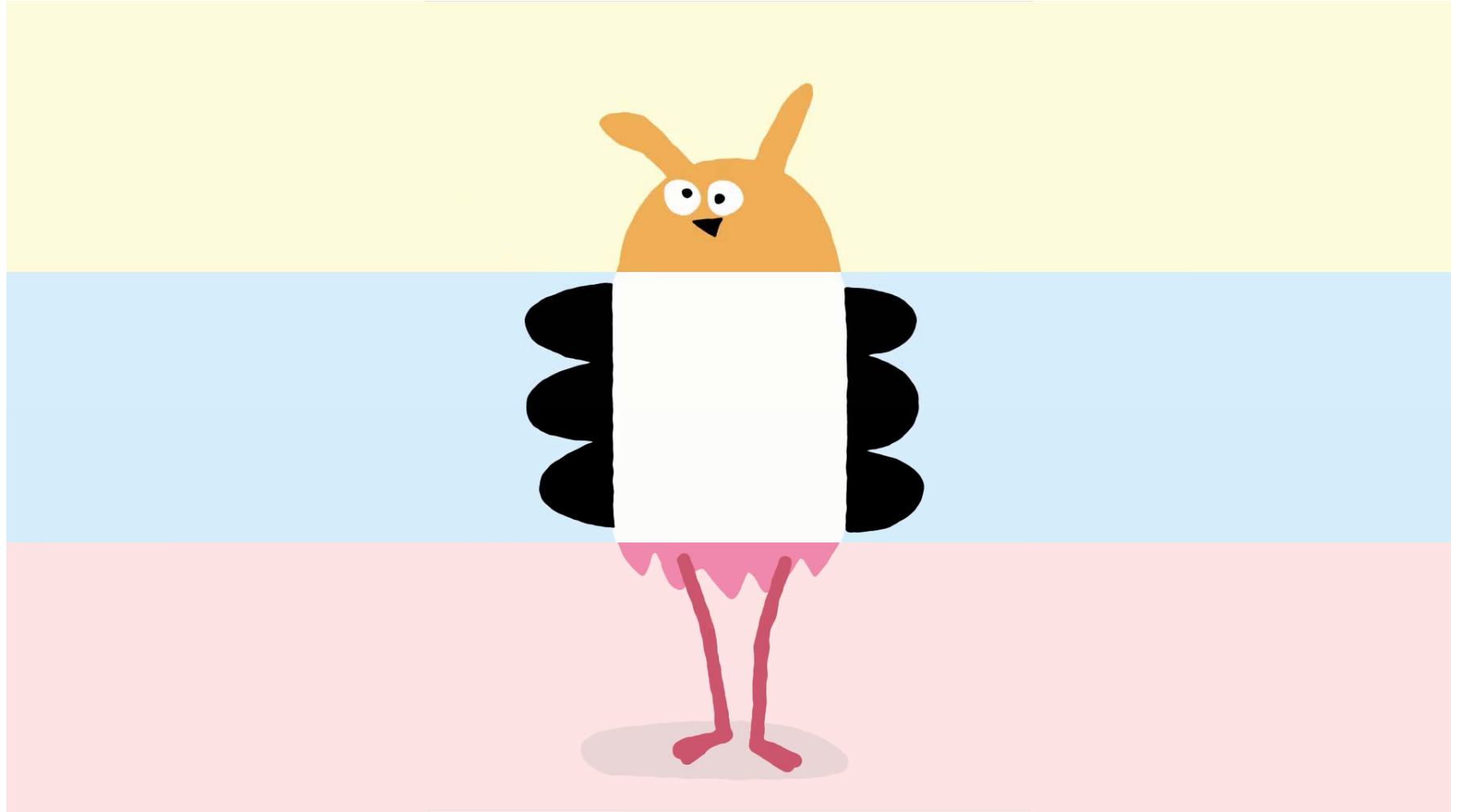- A Course in Combinatorics

  - By J. H. van Lint and R. M. Wilson
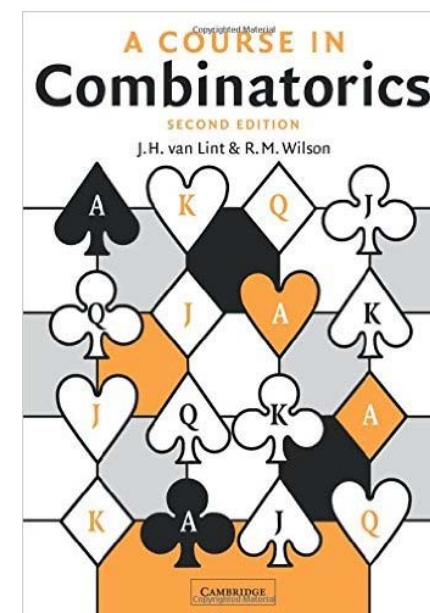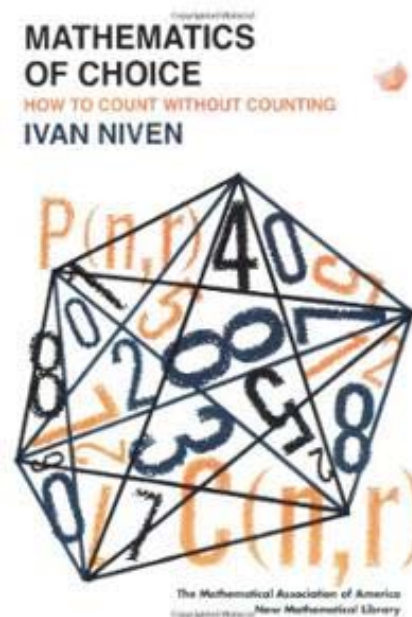
Heads, Bodies and Legs flip-book

Heads, Bodies and Legs flip-book (2)

Interactive flipbook: Miximal

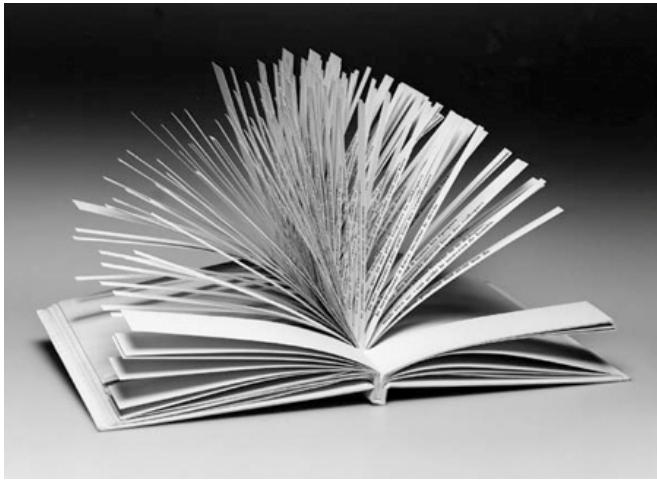[http://www.fastcodesign.com/3028287/miximal-is-the-new-worlds-cutest-ipad-app]

One Hundred Thousand Billion Poems

- Cent mille milliards de poèmes

One Hundred Thousand Billion Poems (2)

How many chess games are possible?
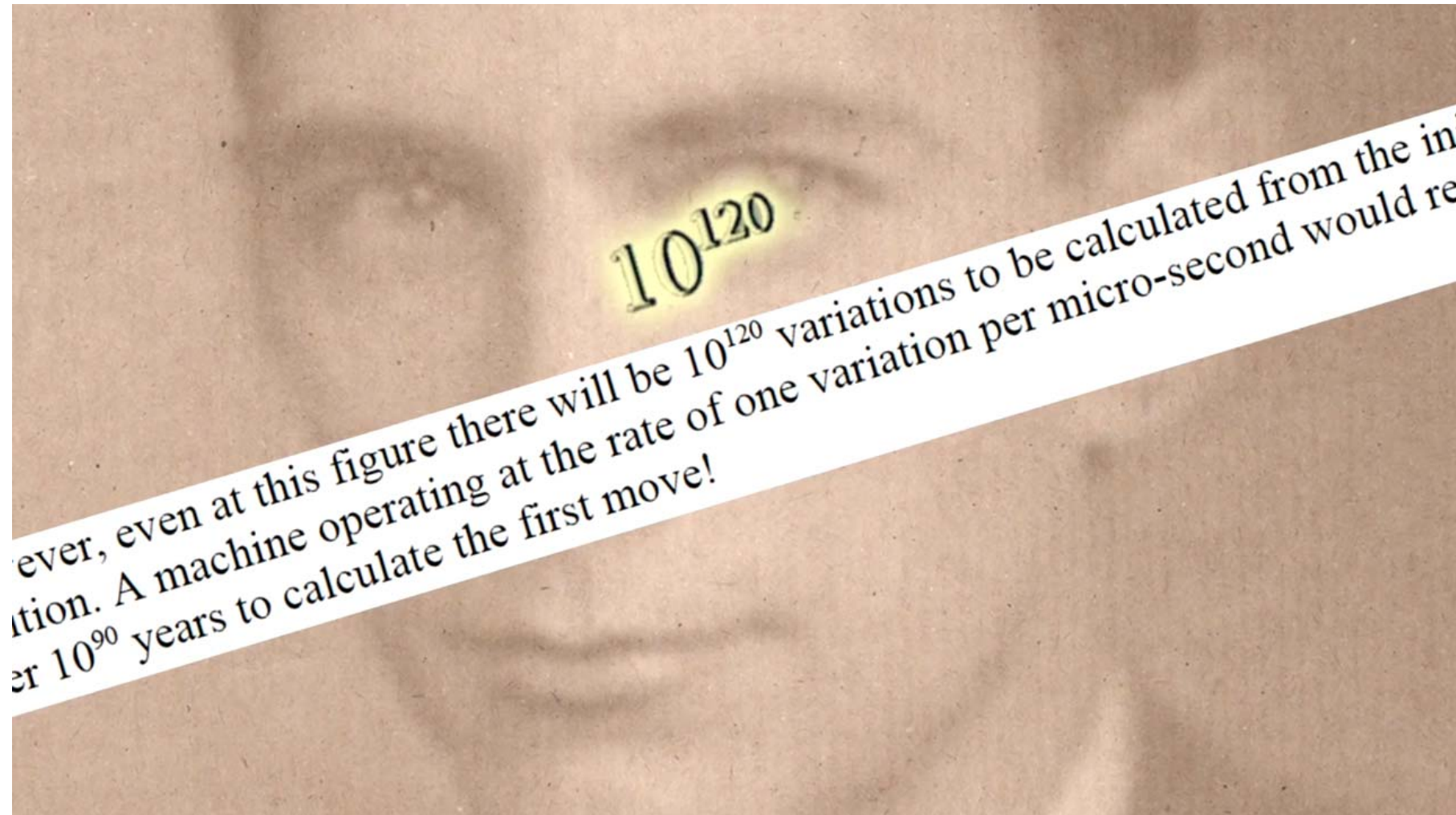
[https://www.youtube.com/watch?v=Km024eldY1A]

An Estimate: The Shannon Number

10^{120}

ever, even at this figure there will be 10^{120} variations to be calculated from the in... ...tion. A machine operating at the rate of one variation per micro-second would re... ...er 10^{90} years to calculate the first move!

[https://www.youtube.com/watch?v=Km024eldY1A]

The Shannon Number: Just an Estimate

... ever, even at this figure there will be 10^{120} variations to be calculated from the in... ...tion. A machine operating at the rate of one variation per micro-second would re... ...er 10^{90} years to calculate the first move!

[https://www.youtube.com/watch?v=Km024eldY1A]
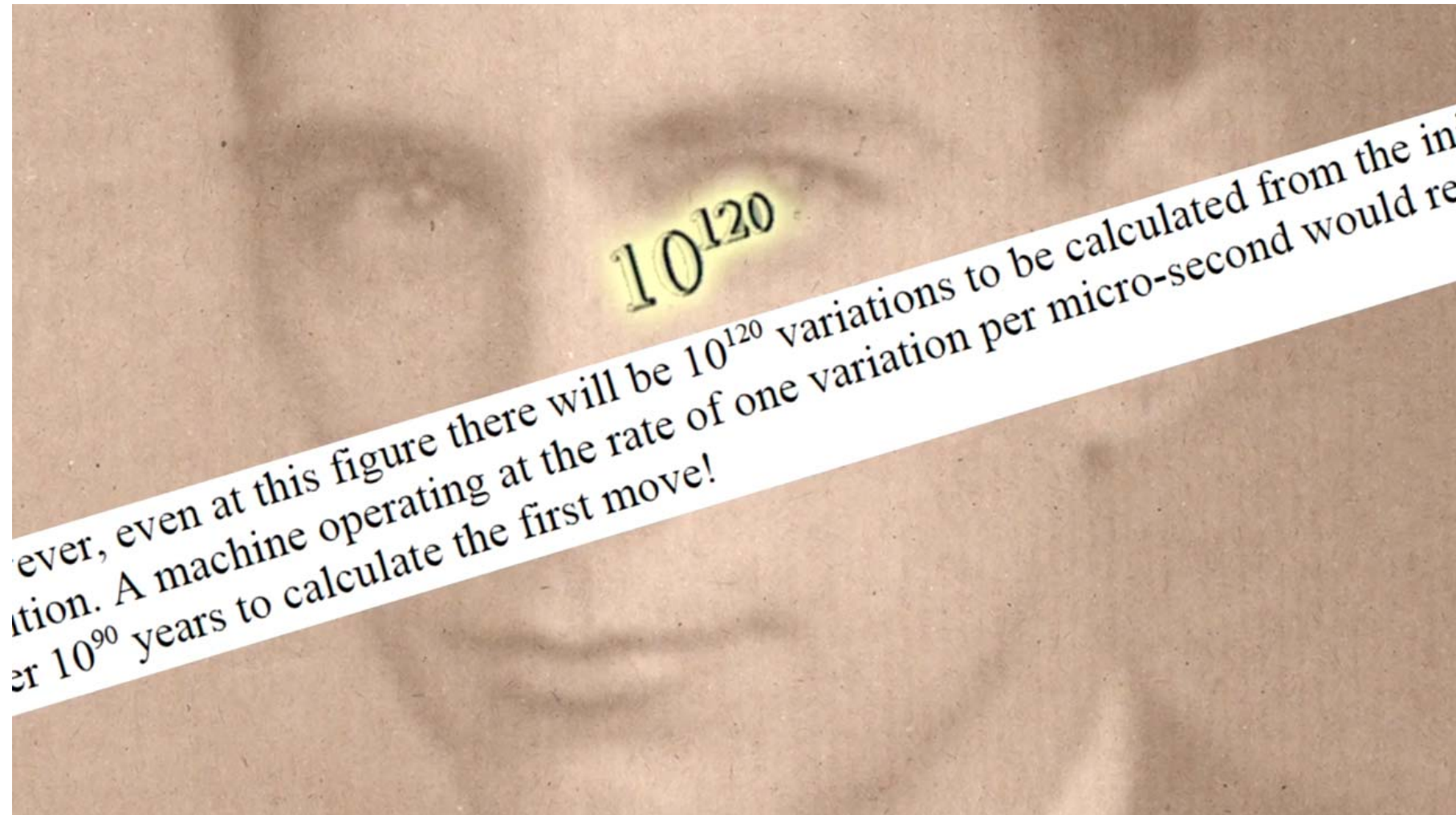
Permutation

- There are 11! = 39,916,800 ways to permute 11 persons.

[https://www.youtube.com/watch?v=2EN6jYMiGF4]