

# From electrons to proteins to data

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Propositions accompanying the PhD-thesis

# From electrons to proteins to data:

## How to localise, observe and organise them

Johannes Paul van Schayck

7th of March 2024

1. The choice to operate at 300 kV for cryo-EM single particle analysis is mainly driven by the availability of detectors. - *This thesis*
2. Reproducing research with its data but without the accompanying software is like trying to bake a bread without an oven. - *This thesis*
3. The affordability and versatility of hybrid pixel detectors can make them a very attractive choice for a wide range of electron microscopy techniques. - *This thesis*
4. Essential for bridging the gap between researchers and effective research data management are disciplinary data stewards. - *This thesis*
5. Research data management is the necessary precursor to enable FAIR and Open Science. - *Higman et al., 2019*
6. It is cheaper, possibly better, and certainly easier to store samples in a freezer than records on a disk.
7. Research data management is no more about computers than astronomy is about telescopes. - *free after Edsger Dijkstra*
8. The 'O' of Open is not in FAIR. - *Barend Mons*
9. No need for an excuse - vlaai is its own occasion. - *Raimond Ravelli*
10. Science is never finished, however, a PhD thesis should be finished, eventually. - *Pauline*