



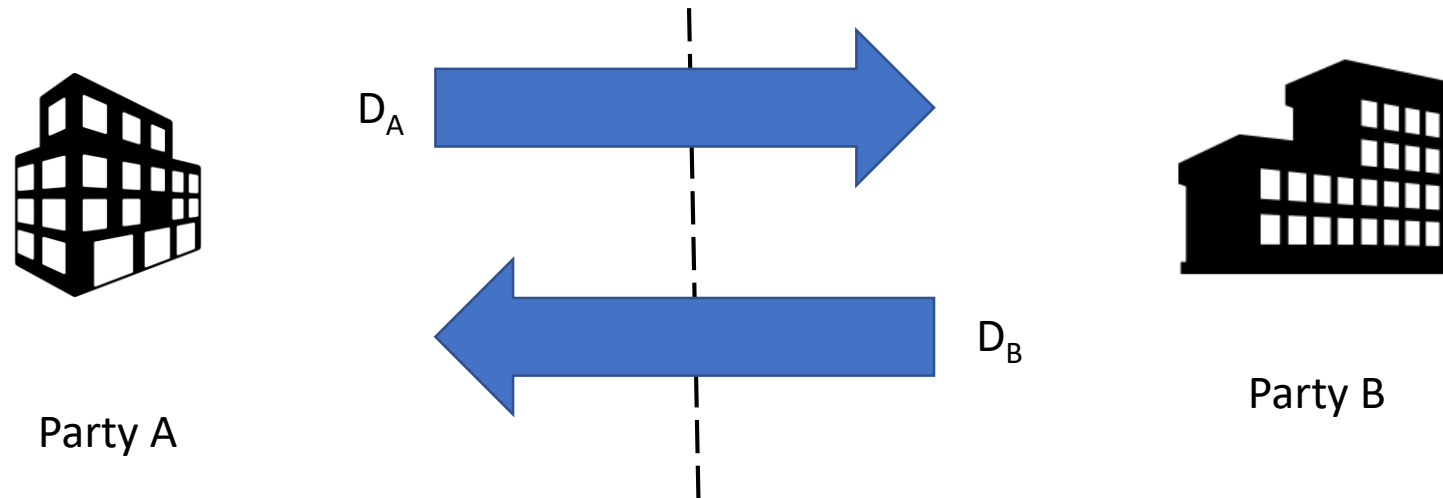
ENISA Workshop

Engineering Personal Data Sharing

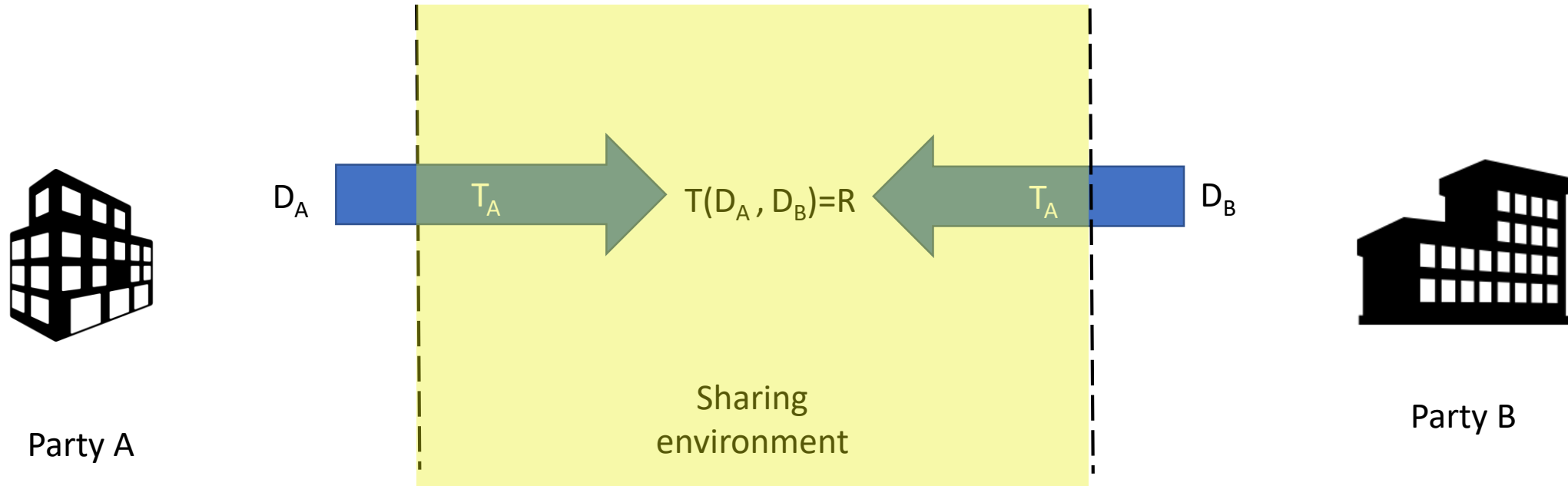
Giuseppe D'Acquisto

7th October 2022

A closer look at the notion of "sharing"



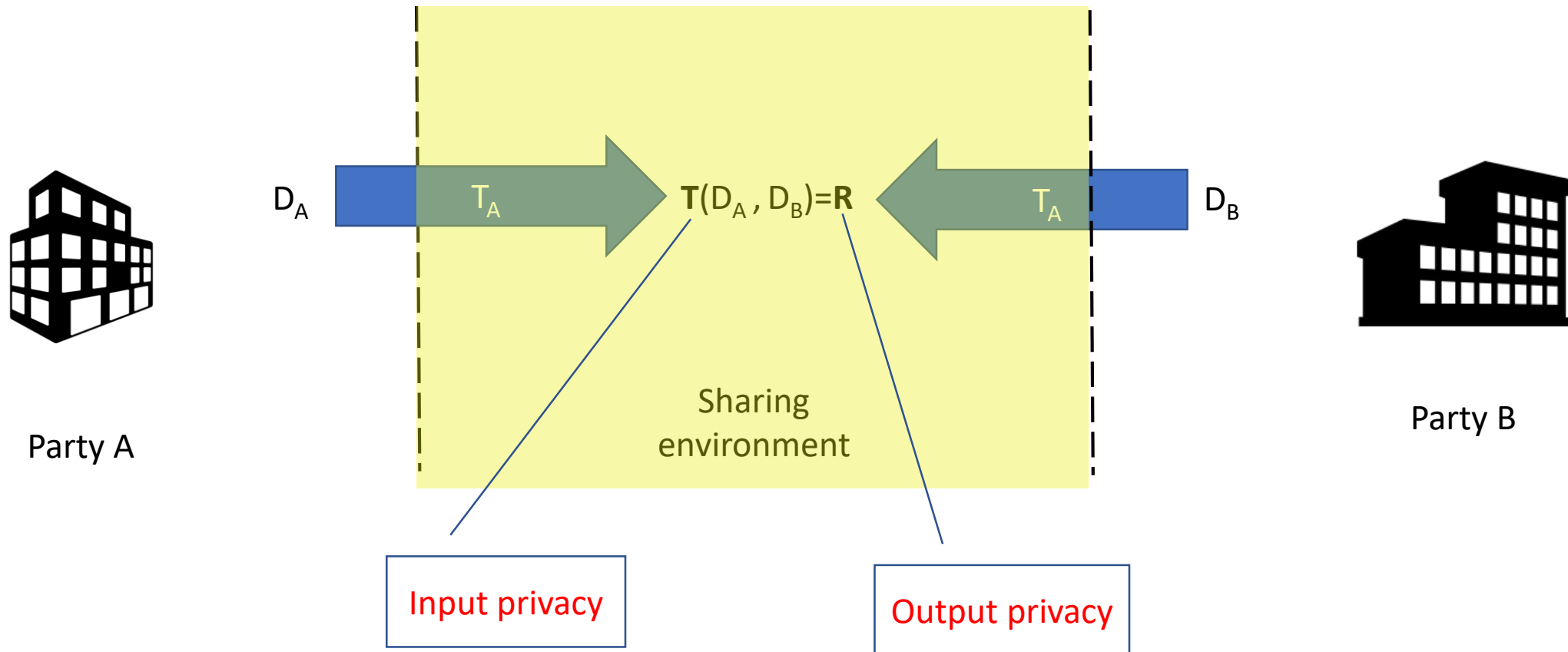
A closer look at the notion of "sharing"



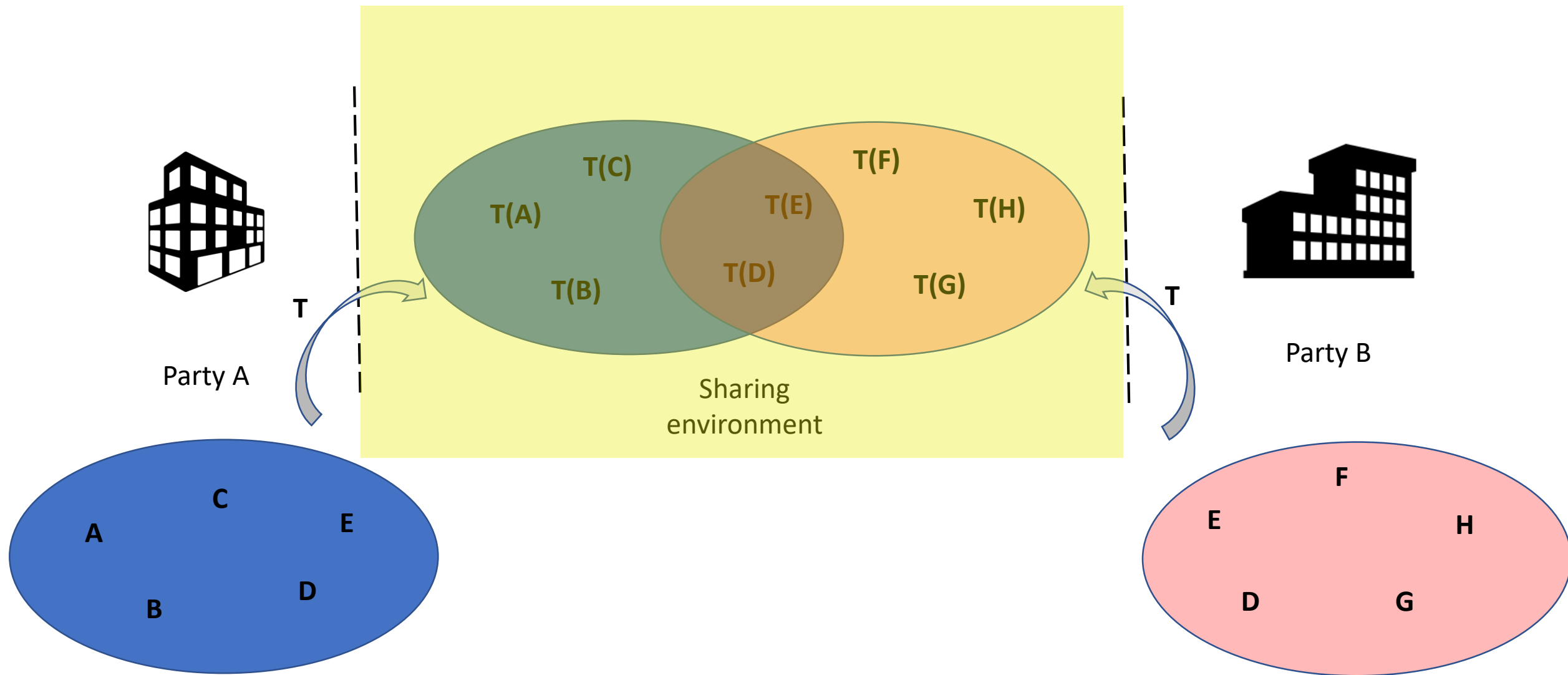
Party A

Party B

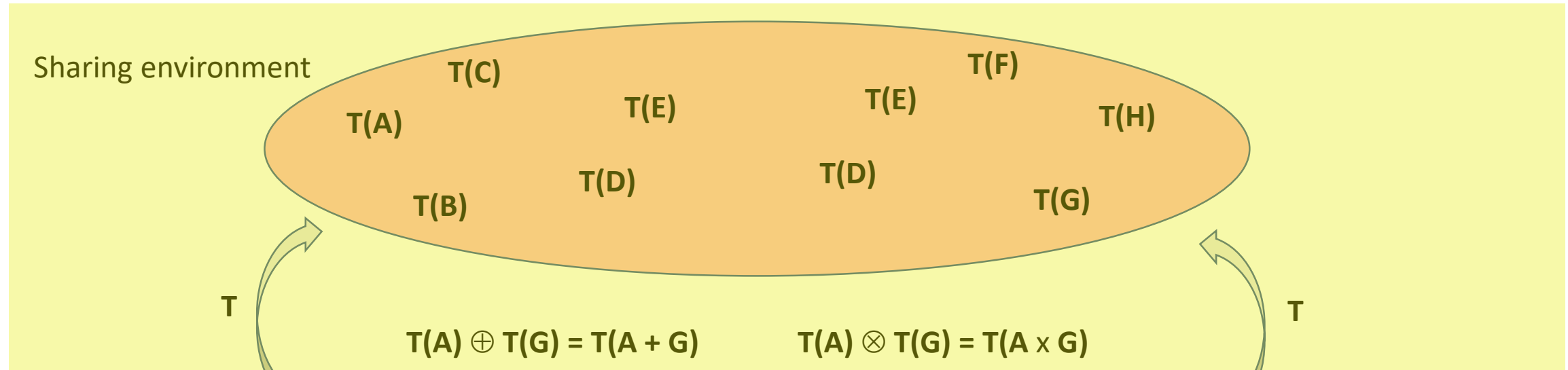
Input and output privacy problems



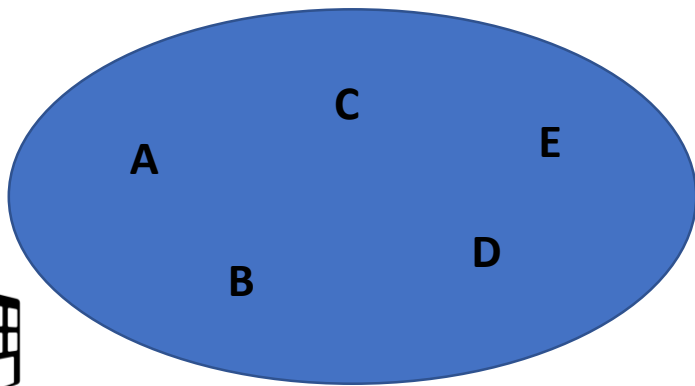
Input privacy: private set intersection



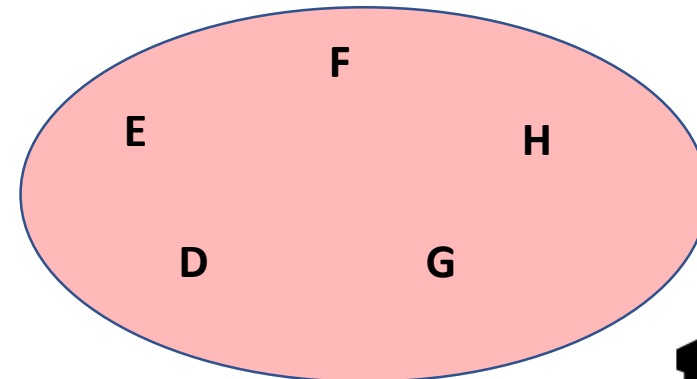
Input privacy: homomorphic encryption



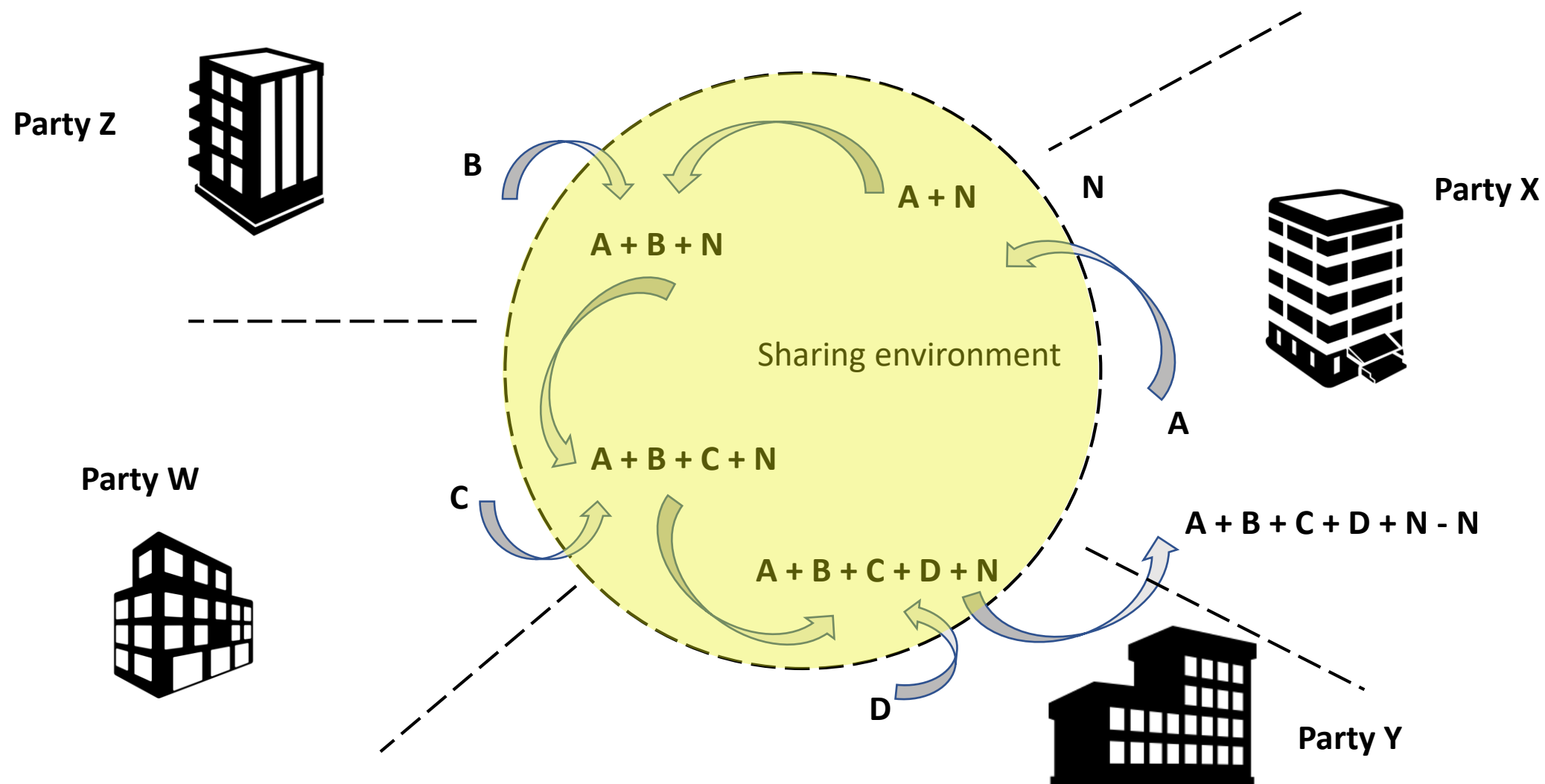
Party X



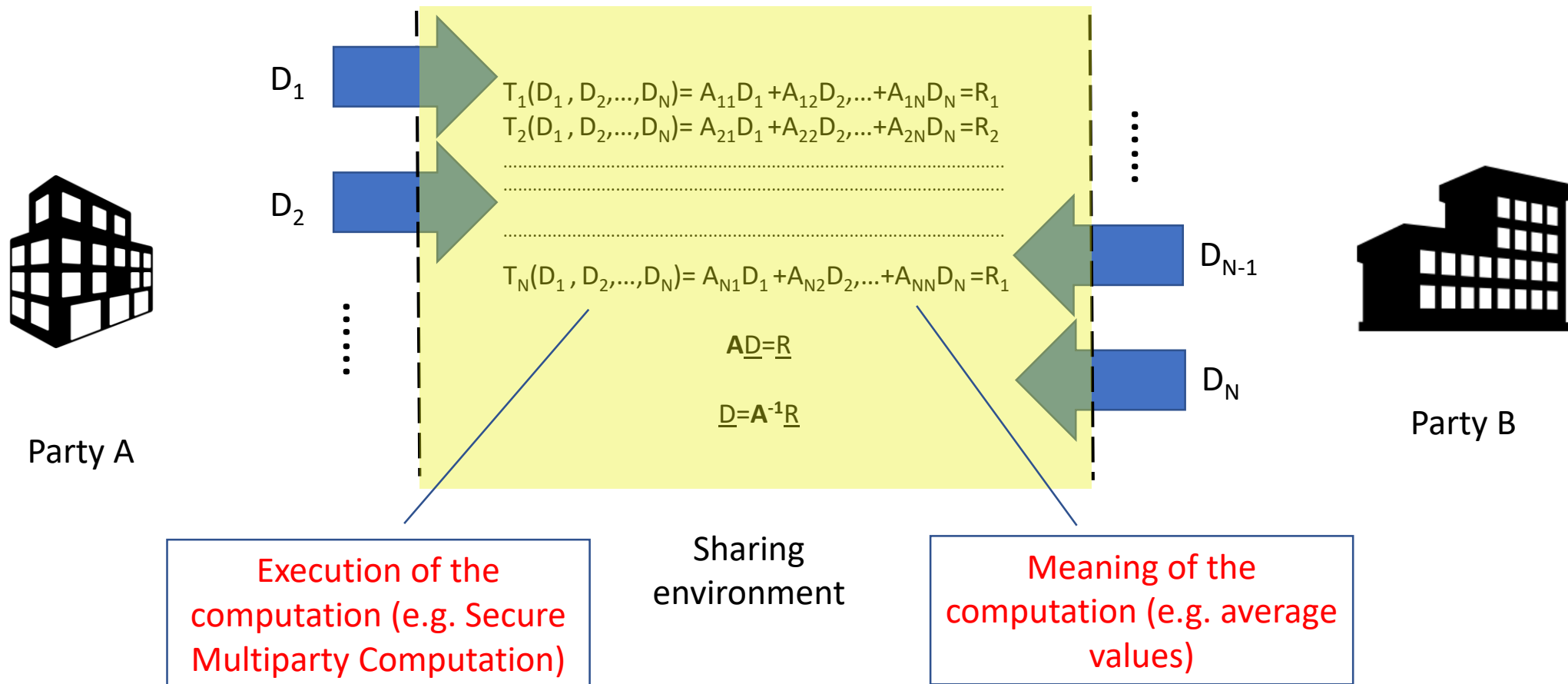
Party Y



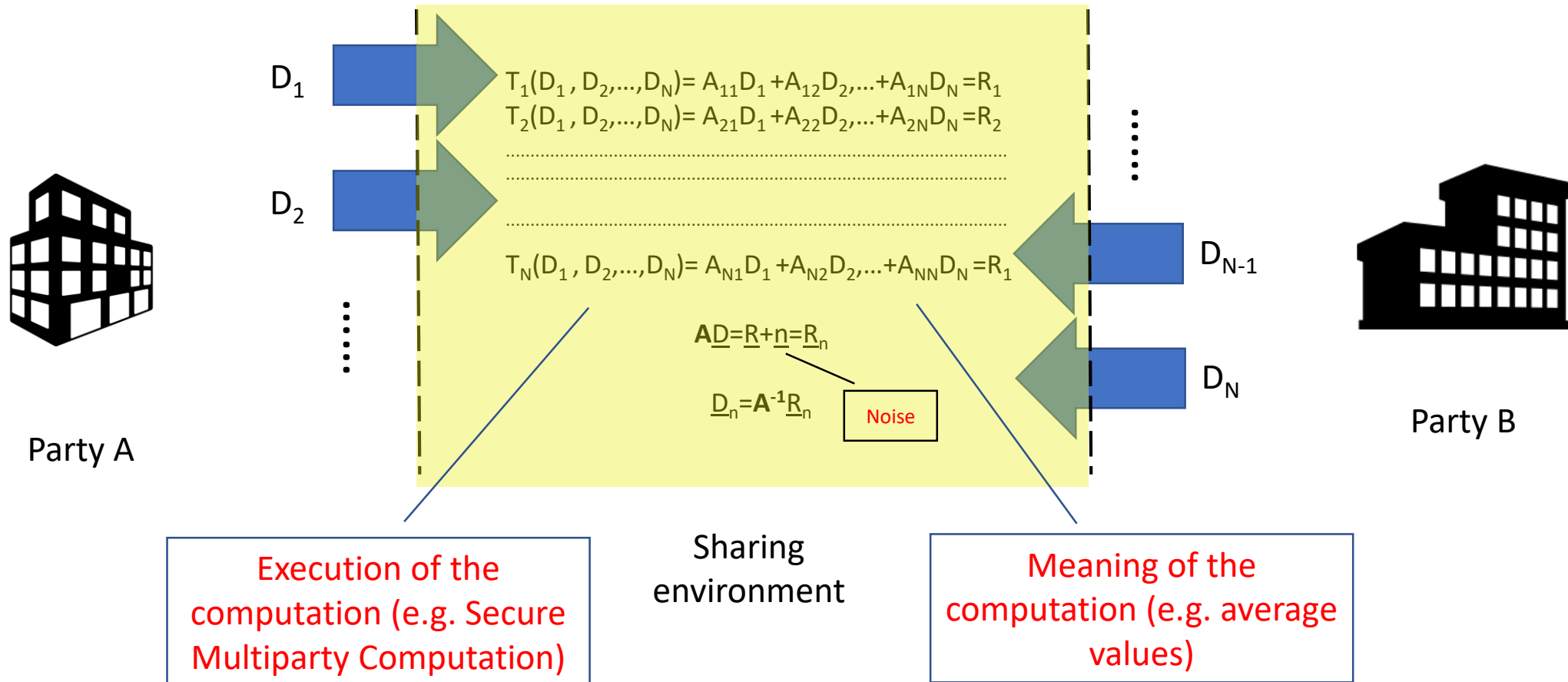
Input privacy: Secure Multiparty Computation



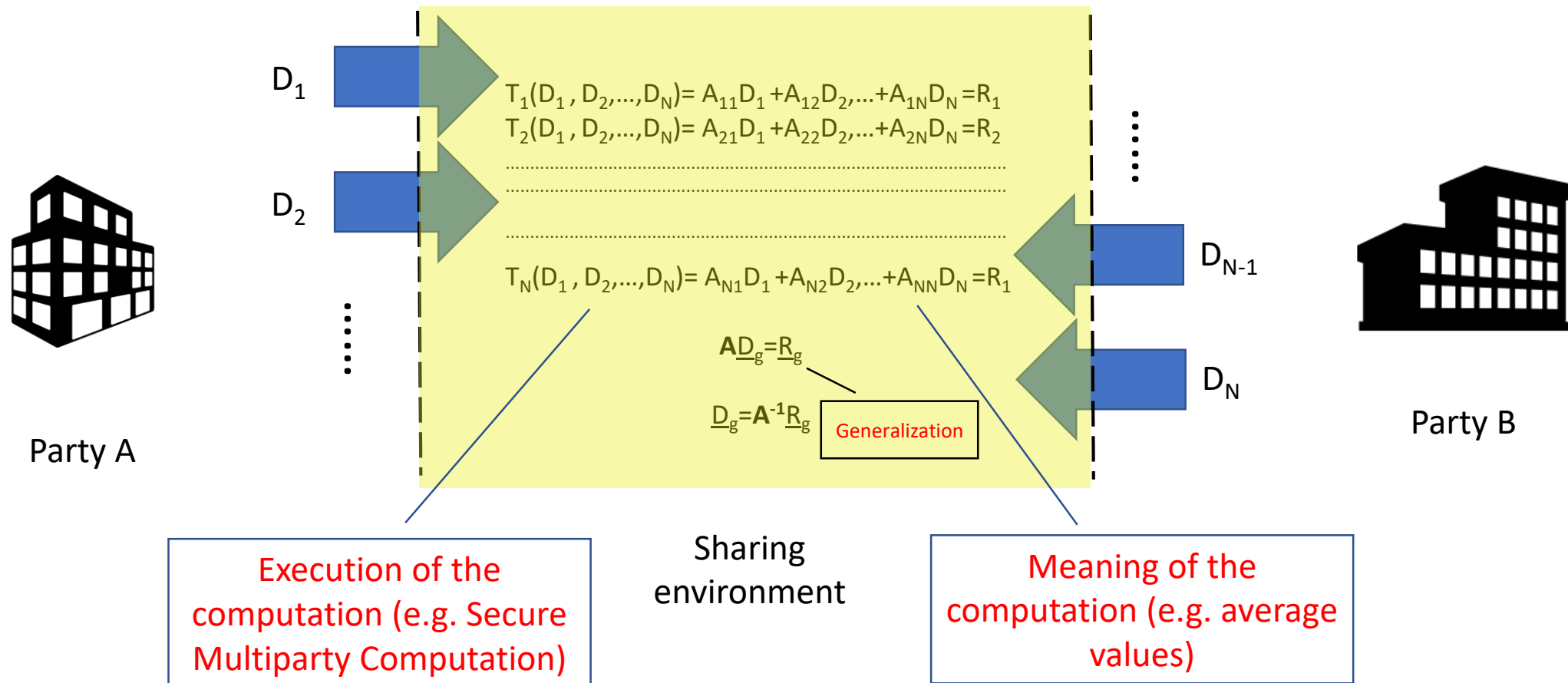
Output privacy problem



Output privacy: randomization



Output privacy: generalization



Conclusions

- Data protection engineering is an (“the”) enabler for data sharing
- Without data protection engineering **it is impossible** to implement data protection within sharing environments in an effective and enforceable way
- With data protection engineering, **sharing and data protection may be compatible**
- **Simplification** of these matters **is necessary** (we need new metaphors to describe the benefits)
- **Oversimplification doesn't work**. We have to simplify these concepts but not too much! Only if we bear in full the complexity of the engineering phase we can get effectiveness