CRYPTIC COMMONS
THE AAU SECURE PROJECT

in this exhibition - **data democracy, transdisciplinary, cryptography, translations, uses** - are not presented as any static answer or format. Instead, it is a sketch. In fact, the five points of the exhibition represent the ruin of an ideal mathematical world that does not exist outside of theory. The pentagram suggests a utopian model for digital communication in distributed cryptography. At the same time, we know that actual communication, digital and otherwise, is situated and asymmetrical (Li et al 2021).

The interactive exhibition and website "Cryptic Commons" has been developed by Astrid Oberborbeck Andersen and Adrienne Mannov (Techno- Anthropology) in collaboration with their co-researchers in the SECURE project and curated and developed by visual artist Tinne Zenner and Jan Magnussen (gagarindigital.dk). The team invites you into this collaborative process in order to understand and collectively shape what we mean, as a society and together, by *data democracy*.

About:

The SECURE team has shifted and grown from its inception in 2017 until it's culmination in this exhibition in 2021. The researchers and team members who have been involved for some or all of the project are:

<u>Control & automation engineering</u>: Rafael Wisniewski, PI; Katrine Tjell Mølgaard (PhD fellow); Tom Nørgaard Jensen (until 2018)

<u>Techno-Anthropology</u>: Astrid Oberborbeck Andersen (WP lead from 2018-2021); Maja Hojer Bruun (WP lead until 2018); Adrienne Mannov (postdoc); Jonas Falzarano Jessen (Research Assistant)

<u>Signal processing</u>: Mads Græsbøll Christensen (WP lead), Qiongxiu Li (PhD fellow)

<u>Mathematics & Cryptography</u>: Olav Geil (WP lead), Ignacio Cascudo Pueyo (until 2019), Reto Schnyder (postdoc), Jaron Skovsted Gundersen (PhD fellow)

<u>Student assistants</u>: Stefan H. Tanderup; Signe Helbo Gregers Sørensen; Kîsta Bianco Kjær

<u>Cryptic Commons Exhibition Team</u>: Astrid Oberborbeck Andersen, Adrienne Mannov, Tinne Zenner (visual artist and curator), Jan Magnussen (project leader and web and graphic design).

<u>Video-installation "Re-assembling the Actual"</u>: Tinne Zenner and Eva La Cour.

<u>Science TV</u>: Jan Magnussen, Adrienne Mannov & Astrid O. Andersen in collaboration with SECURE researchers.

<u>VR prototype</u>: Maja Hojer Bruun, Astrid O. Andersen, Adrienne Mannov, in collaboration with Vizlab

<u>MPC-simulering of a heating network</u>: Katrine Tjell Mølgaard

<u>Drawings</u>: Andreas Husballe (Vizlab)

<u>Special thanks to</u>: Kjed Thorgård, MIT Anthropology, Signe Helbo Gregers Sørensen, Mike J. Fischer, Susan Landau

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Exhibition

8th-12th November 2021
8 am - 4 pm

CREATE Aalborg University
Rendsburggade 14
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AALBORG UNIVERSITET

Welcome to the Cryptic Commons!

Cryptic Commons is a space and concept that is under development and is formed through relations. This concept and space is one of many outcomes of the interdisciplinary research project **Secure Estimation and Control Using Recursion and Encryption (SECURE)** that was financed by Aalborg University. For three years (2018-2021), **the project gathered researchers from engineering, mathematics, and techno-anthropology to work on the optimization of critical infrastructures through the use of algorithms and large amounts of collected data, while at the same time, protecting data that individuals or parties in such infrastructures perceive as private using encryption techniques.** Optimizing processes in so-called cyber-physical systems is becoming more and more common in a world where resources are limited. They affect many aspects of our lives. If we want to optimize and keep our information safe as citizens, advanced cryptographic tools are necessary, in addition to effective policy and laws. Secure Multi-Party Computation (MPC), is a distributive form of cryptography that enables privacy-preserving analyses. A great deal of the SECURE project worked on further developing MPC across disciplines and on putting it to use as a socio-technical tool.

A "commons" can be understood in different ways: first, as a site of shared community resources - or *res communis*. Extending resources to not just material items, we can also think about a commons as a site where ideas may also be shared with the community. This is similar to philosopher Jürgen Habermas's idea of a "public sphere" which he describes as an arena of "discursive relations". Here, "private people come together as a public" (1989). These ideas have inspired our imagination of the "Cryptic Commons".

But Habermas's "public sphere" was inspired by the 18th century bourgeois salons of Europe, which excluded women and other marginalized groups (Fraser 1992). The commons has been similarly criticized as a "tragedy of commons", meaning that when self-interest takes advantage of communal resources, the notion of a commons is tragically undermined. This holds true for colonial projects in which spaces were identified as uninhabited and "common", opening the door to exploitation and misrepresentation (Jatin 2019). We invite you to remain curious and critical with us of what a commons can be.

That **our commons is "cryptic"** may be understood on three levels: if we share a commons, we may not yet know what the commons consists of; we may have a common wish to safeguard our information, but we are still in the process of striving toward this goal ; and finally, how we communicate this wish can sometimes remain cryptic because we do not always understand each other. **These cryptic perspectives speak just as much to an engagement with cryptography as a socio-technical tool, to dialogue about what we mean by a "commons."**

This Cryptic Commons is not finished. **The five edges and points** presented