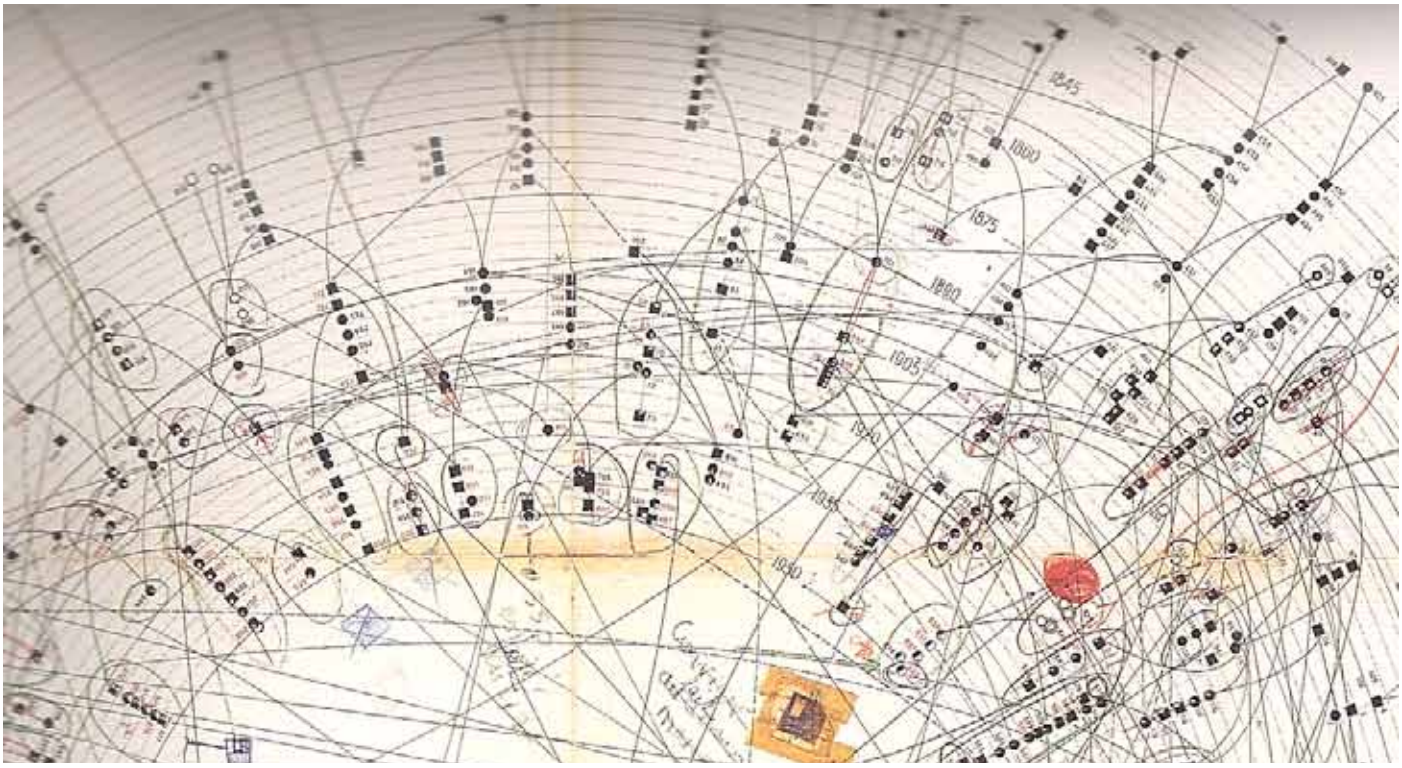
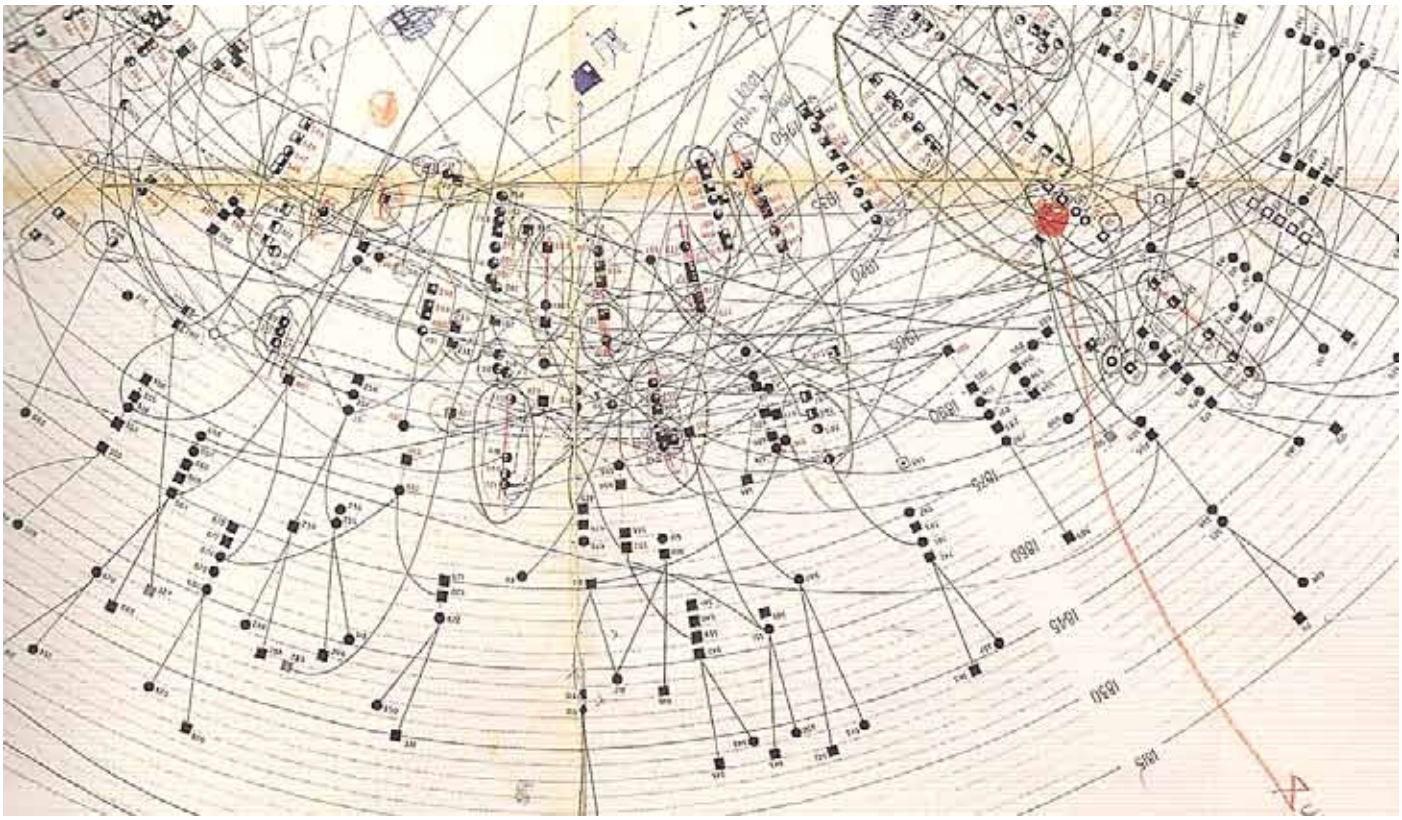
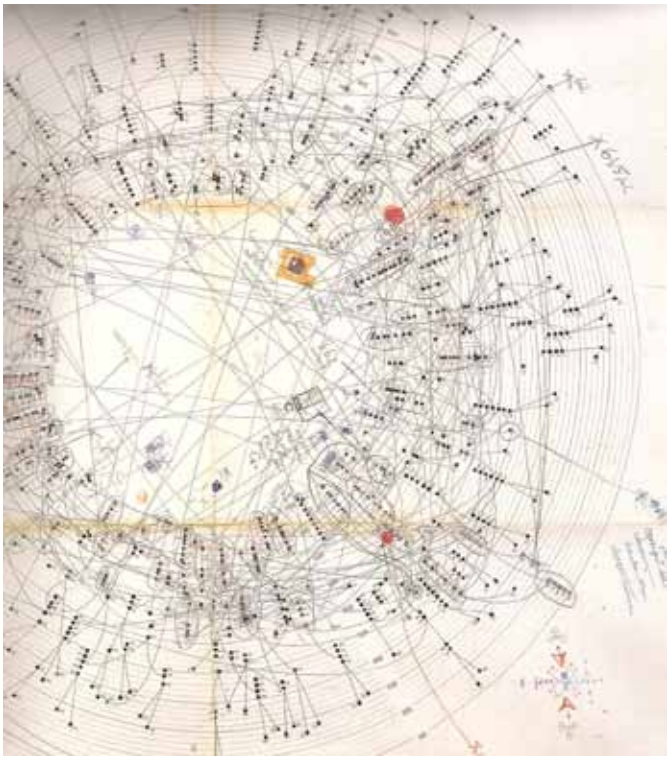


SLOW TECHNOLOGY IN ACTION

A GENEALOGY OF GREENLAND INUIT

John Fass





Graphic representation of the first geneology (sic) of the Polar Eskimos of Northwest Greenland. I made this survey, individual by individual, during the winter of 1951. The geneology (sic) was drawn up, after a second expedition in 1967, at the National Institute of Demographic Research in Paris with Léon Tabah and the geneticist Jean Sutter. From 25 to 40 families of these most northerly Eskimos in the world survived in isolation for two centuries (1600 - 1818). In 1855-1880, the group numbered from 150 to 200 individuals, and in my census of 31 December 1950 they numbered 302 men and women. Their survival depended on planned marriages, what Claude Lévi-Strauss has called the elementary structures of kinship.

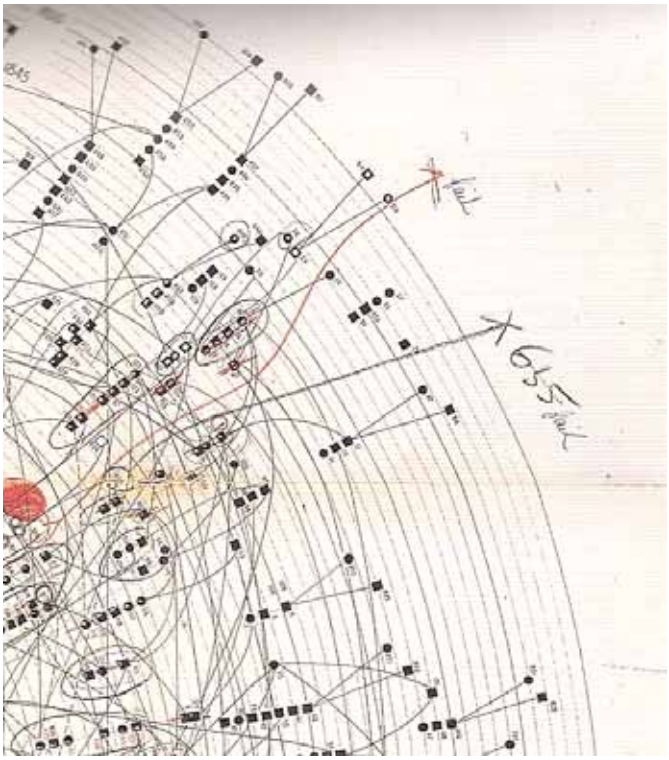
To avoid the dangers of inbreeding, the Inuit forbade the marriage of men and women related up to the fifth degree. A computer study of this geneological chart has confirmed the practice. In order to master its own destiny, this primitive people makes and follows plans. This is also true in the ecological realm. Relying as they do on hunting, they take care not to put undue pressure on the animal populations by overhunting them. Rules and taboos prevent the Inuit from doing this.

The above hand-drawn diagram is a genealogical survey of the Inuit people of Northwest Greenland. The survey was carried out by French anthropologist Jean Malaurie in 1950 and the visualisation drawn up on paper during a later research trip in 1967. It is believed to be the first genealogy of its kind of Greenland Inuit and shows a complex radial arrangement of 302 men and women, connected by various degrees of kinship. Malaurie has coded the diagram using a method of his own that traces clan and family ties up to the fifth degree (see Malaurie's own caption for the image opposite)

The original purpose of this diagram was related to census taking. With Inuit populations spread out over many thousands of miles, and family relationships a matter of implicit knowedge within the population rather than formal documentation, Malaurie set out to make a visual kinship map of a culture still in many ways (in 1950) living in a way unchanged for centuries.

As the 20th Century approached the Arctic, Inuit culture went through a series of rapid transformations. These affected education, (in the form of the Residential Schools programme), diet [6], language [5], clothing [3], transport [1], youth suicide [8] and many other areas of every day life.

Formerly tight-knit family relationships were threatened, and in many cases destroyed [7]. Up until very recently, Inuit historical knowledge was passed down orally in stories and legends designed to furnish each generation with the tools for survival [2] with no traditional focus on written or formal historical record making.



This anthropological document can be seen as an artefact of slow technology in several ways.

THE PAST

Five generations of Inuit people are recorded, specifically - how they are related to each other. The time-span represented stretches roughly 105 years, from 1845 to 1950. The artefact itself took 17 years to realise in its current form. The information content was translated from census-survey data into a visual representation over these 17 years and embodies a slow process of understanding and filtering decades of research knowledge and field ethnography. The prevailing social conditions under which the artefact was created have changed beyond recognition, changing its meaning and and of course new generations could now be added to the diagram. The immediate context of the diagram is as a tool of anthropological research, a result of academic enterprise. By redefining it as a living history of family networks in a society struggling with modernisation, it can become an example of slow technology, acting over multiple generations to contribute to the ongoing process of self-definition and self-determination by the Inuit.

THE FUTURE

Framing the artefact as a tool of self-identification and as a means of enhancing historical knowledge means implementing some structural change to make it easily updatable. It should be resistant to technological or cognitive change, and adaptable to shifting motivations and interests. The material technology used is paper and pen, with annotation and indexing showing how relationships cross different families. The marks are fixed to the paper, itself 45 years old. In other words, not a technology easily adapted or changed but perhaps well suited to long-term survival. One of the challenges faced by creators of slow technology is how to balance the need for flexibility, adaptabily and transformation with material degradation and preservation.

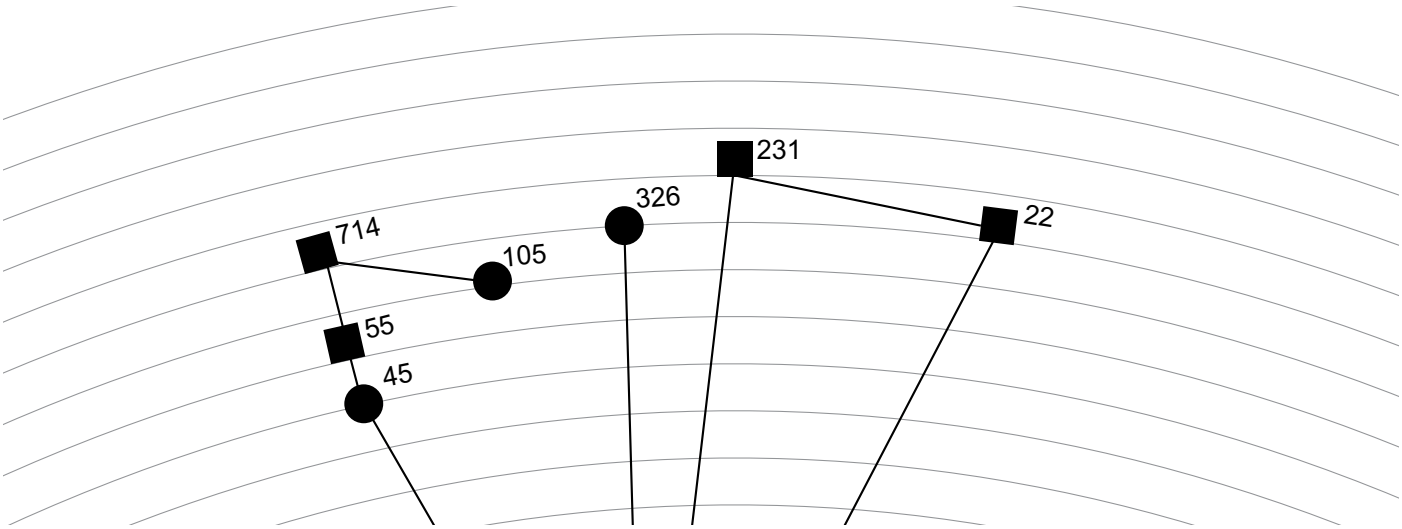
DIGITISATION

The current work in progress is a digital mapping of the existing diagram that reproduces the coding and notation system of the original and remains faithful to its overall design. Next steps are to provide a legend to the existing notation system. Further work will be to make the workings of the design more visible, in the sense of transparent, accessible and open, i.e. no overt decoding necessary. A way of showing connections throughout such a large data set can be addressed using some principles of information visualisation, for example, small multiples [9] or a micro/ macro approach. Both these methods focus on reducing information to manageable blocks or revealing layers of related information as the data is queried.

The current paper version has some valuable modular aspects that can be extended. For example, sets of concentric rings per generation (or decade) and various ways of showing degrees of connection. This inherent modularity can be extended to interaction patterns, to database structure and to technical implementation.

INTERACTION

The other essential task in making this artefact into a useful piece of slow technology is designing interactions. Interaction design in industry evolved from an engineering paradigm and has traditionally been focused on achieving throughput [10], i.e. taking a user as smoothly and quickly through the system to the endpoint of their task. More recently, interaction designers have been thinking about how to make interactions that elicit reflection or that unfold over time [4]. The digital version of Malaurie's diagram is a work in progress, one that includes some basic interactions. These include, a way of adding new people to the chart, a selection tool that reveals the relationships of one particular person, search by name, family group and generation and selective layering of the many data entities.



Our ultimate vision encompasses a dynamic system within which multiple levels of interaction take place at different scales. Some providing real time feedback, some unfolding over many generations.

ADAPTATION

A key feature of slow technology from the perspective of this project is the repurposing of existing artefacts. A large paper genealogical diagram is already a good example of slow technology, it is conducive to being adapted in the spirit of reuse and recycling to new and potentially unknown uses. While directed design intent may suggest a particular direction that has current relevance, the future usefulness of the artefact, and the context within which it might accrue meaning, are unknown. The most important task is to build in flexibility, adaptability and learnability for future users to adapt the artefact for their own uses.

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