Simon Teuscher:
“Form / Introduction”

in: Eric Hounshell, Ruth Amstutz (eds.):

cache 03

SHADOW OF THE TREE

intercomverlag

FORM

INTRODUCTION

Many different forms appear to be thriving in the shadow of the tree: triangles, roundish contours drawn around adjacent dots, islands spread over an imaginary landscape with different distances between them, and revolving disks on the background of a starry sky. The part on form reminds us that diagrams of relatedness are not only native to science but also to devotional art, constitutional pomp, and political caricature. Forms include very abstract and minimalistic shapes expressing relations or "logics" but have in some areas become elaborate iconographies or acquired iconic status. Some of them resulted from momentary thoughts that have long since been forgotten. Others outlasted centuries and were easily recognized even as they traveled from one domain to the next.

The diversity of forms is also related to the fact that attempts to bring order into biodiversity up to the late eighteenth century could still draw on notions of kinship and relatedness entirely different from geneaological ones. We are reminded of this when looking at Paul Dietrich Giseke's "Genealogical-Geographical Table of Plant Affinites" from 1792 that Staffan Müller-Wille examines. ▸FORM / PLANT AFFINITIES To approach the layers of meanings Giseke put into his notion of "affinity" and into his map of islands, Müller-Wille mobilizes contemporary meanings of affinity including Goethe's *Wahlverwandtschaften,* the "rapports" between chemical substances, and republican ideas of sociality without hierarchy.

Does form follow function? Not if we assume that a diagram's principal task is to manifest unequivocal relations. Some diagrammatic traditions evolved around a basic structure that could be represented in rapidly changing forms. Christiane Klapisch-Zuber and Herman Schadt have made this point about *arbores consanguinitatis*, the diagrams of consanguineous kinship in the Middle Ages.[1] These present a set of structural relations between kin that remained stable over centuries, while draftspersons brought them into many different iconographic shapes that include bodies, crosses, columns, buildings, and plants.
▸RECURRENCE / TREE OF CONSANGUINITY

Someone who believed in optimizing the functionality of tree diagrams was Jacques Bertin. Charlotte Bigg examines his work at the Laboratoire de cartographie he had founded in 1954 at the Ecole Pratique des Hautes Etudes in Paris. ▸FORM / DESIGNING BETTER TREES The *laboratoire*, where Bertin worked with authors such as Claude Lévi-Strauss and Fernand Braudel, was key to shaping the visual features of French structuralism in the social sciences and the Annales school in history. Bigg's contribution lets us look over Bertin's shoulders as he tries and rejects a series of similar forms in his quest to find the most efficient diagrammatic representation of kin relations and other structural relationships.

A similar formal variation characterized the medieval paintings of Divine Kinship discussed by Séverine Lepape. ▸FORM / DIVINE KINSHIP All her "Trees of Jesse" are in principle built around a direct genealogical line connecting fathers and sons, beginning with King David's father Jesse *(Isai)* and ending with Christ. Yet many of the paintings relativize the very linearity they are based on. They represent the principal line as split into two, as serpentine, or provide it with attributes of a tree even though the line does not bifurcate and hence lacks the defining feature of a tree diagram in current logic.

Forms are suggestive. They foster hopes and illusions. The Zurich *Regimentsspiegel* veils the linear and contingent character of successions to offices in the city-state of Zurich. ▸FORM / CLOCKWORK KINSHIP The lines of successors to the same office were wound into spirals and squeezed onto rotating disks. This suggests a cyclical order, comparable to the revolu-

tion of clockwork or orbiting planets. The ponderous object that once stood in the city council's assembly hall conjured up mechanisms that had never been operative in the city's government.

Sometimes it is difficult to find any connection between a diagram's uses and its formal features. An example is the most enigmatic of the diagrams in this part: a drawing found in the papers of the botanist and Romantic poet Adelbert von Chamisso. Hans-Jörg Rheinberger and Hanns Zischler each have their theory about that drawing: ▸FORM / MONOGRAMMA Is it a representation of affinities between plant species before the domination of the tree diagrams and the phylogenetic assumptions they tend to carry? Or Chamisso's attempt at reiterating his travels in the Pacific Ocean? Each of the theories is convincing. But as the authors admit, neither explains the most striking formal feature of the drawing: its elaborate symmetry.

Forms can be clues to a diagram's role in contention or persuasion. They contribute to a diagram's "eloquence," as Andrea Ceccon puts it. ▸FORM / BLOOD GROUP RACE His example deals with the American anthropologist of the 1930s, Alfred Louis Kroeber. He rejected older theories of the division and evolution of races based on serological differences. Kroeber felt he also had to replace the diagram that had long been associated with such theories: Streng's *Rassedreick* mapping frequencies of blood groups in the shape of a triangle that resembled an inverted tree and suggested that racial groups evolved from one common origin, from where some would have advanced further than others. Instead, Kroeber plotted the same data on a Cartesian coordinate system. The new diagrammatic form made manifest that serological differences crisscrossed received ideas about races and their closeness and distance.

Diagrams of relatedness move to the center of feisty political polemics in the satires and caricatures of the nineteenth century that Stéphane Jettot investigates. Here family trees were used to epitomize the decline of dynasties in the face of an emerging consumer culture. ▸FORM / TREES FROM DYNASTIC TO NATIONAL EMBLEM The pedigrees that had formerly justified social precedence now stood for undeserved privilege, pretension, and greed at the expense of a broader public. The tree, the ascending branches of which are populated by officers who enrich themselves more ruthlessly the higher they have climbed, ridicules the aristocratic concern with old and older descent. At the same time, genealogical trees were remodeled to represent a time-honored political order that had to be preserved from attacks and "tiny gardeners" such as Napoleon, who entertained entire seed-plots of tiny dynastic seedlings.

When forms of diagrams are charged with temporality, they can be mobilized to build antagonisms between the old and the new. The representations of Divine Kinship that Séverine Lepape examines are paradigmatic. They attribute the linear succession along patrilines with the Old Testament and its genealogical lists structured by indications of fathers who begot sons, who in turn became fathers who begot sons. This line culminates and ends when a woman, the Holy Virgin, appears at its height and marks the intervention of a new mode of procreation: the incarnation of God himself, the transition to the New Testament, and the time of salvation. In one of the paintings that Lepape examines, the new mode of reproduction is moreover represented in a separate image. Similar juxtapositions of the old and the new are at the core of the political caricatures Stéphane Jettot discusses. Here, tree diagrams and their many derivations were used as symbols of the old across the board. While progressives defamed the corrupted family trees of the nobility, conservatives used mighty trees to glorify the durability of the nation and the state. No wonder that also scientists dispose of iconic diagrammatic forms and recur to new ones to boost claims of their theories' novelty. In many cases, form follows politics.

Notes

1 Christiane Klapisch-Zuber: *L'ombre des ancêtres: essai sur l'imaginaire médiéval de la parenté*, Paris: Fayard (2000); Hermann Schadt: *Die Darstellungen der Arbores Consanguinitatis und der Arbores Affinitati. Bildschemata in juristischen Handschriften,* Tübingen: Wasmuth (1982).