Marianne Sommer:
“Descent / Introduction”

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cache 03

SHADOW OF THE TREE

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DESCENT

INTRODUCTION

The humanities and social sciences have proclaimed a diagrammatic turn, with diagrammatics as a new approach bridging the disciplines.[1] Diagrams might lend themselves to such an integrative approach because they seem to transgress societal and disciplinary domains and are characterized by open-ended variation. Diagrams (re-)present relations and proportions that characterize a phenomenon; they show structural analogy to it. Processes of manipulation and experimentation are intrinsic to diagrams, such that they allow new insights into the objects of representation (beyond their production). They are also constructive – they may bring relations newly into being – and they may be informed by and inform ideological conceptions.[2]

In the Swiss National Science Foundation Sinergia project *In the Shadow of the Tree: The Diagrammatics of Relatedness as Scientific, Scholarly, and Popular Practice,* out of which this cache volume arose, we work with the fact that diagrams are about relations. And we are specifically interested in organismic relatedness. While this narrows the scope of the diagrams of interest down to those that are about genealogy, pedigree, kinship, descent, affinity, etc., diagrams of relatedness in this sense still connect a wide variety of fields, including theology, law, genealogy, natural history, biology, anthropology, ethnography, genetics, and eugenics. We are interested in how diagrams constitute relatedness, for example between human individuals, biological groups, or medical pathologies. We focus on historical specificity, engaging with the particular situation and ways in which diagrams were produced and used, rather than abstracting transhistorical core principles. We understand diagrams as part of socio-political as well as epistemic practices. At the same time, we hope to uncover circulations between fields, similarities as well as differences between traditions. This cache volume, and maybe particularly its dynamic online version, might lend themselves especially to the task.

With respect to a diagrammatics of relatedness, it is the tree diagram that has not only been identified as a canonical icon in modern biology; tree thinking has also been made out as a general modern Western rationale that reduces relatedness to descent. However, as made beautifully obvious in this cache volume, there are a great number of alternative diagrams lurking in the shadow of the tree, and even what is called a tree might not always come in a strictly bifurcating shape. Finally, by far not all trees conceptualize relations of descent. Therefore, although the tree does appear as a structuring device for organismic relatedness in religion, law, genealogy, natural history, biology, anthropology, psychiatry, eugenics, genetics, etc., from the Middle Ages to the present, the history of conceptualizing and visualizing relatedness both in terms of descent and otherwise seems to be more dynamic. Even within this section on "Descent," the editors included the contribution by Petter Hellström on a genealogical tree of chords from 1815. ▸ DESCENT / TREE OF HARMONY Although working with the tree structure and drawing on metaphors like birth, growth, ascent, descent, roots, and branches, this "genealogical tree" by the composer Henri Montan Berton was not about genealogy, or a temporal development, but about natural principles supposed to underlie musical harmony.

Also in natural history, the tree was not the dominant image, and once trees appeared as a device to relate organisms, they did not refer to descent. Naturalists around 1800 preferred the network to explore "natural affinities" among organisms rather than descent – as one might glean from Rheinberger and Zischler. ▸ FORM / MONOGRAMMA Up until Charles Darwin's influence, in botany and zoology relatedness was mainly represented not by means of tree-like, but by map-like or reticulate diagrams. This diagrammatic imagery, with its crisscrossing

lines interconnecting organisms in all directions, or with its blobs, circles, or polygons representing nested groups of "affiliated" organisms, some of which can be found in Müller-Wille's contribution, is strikingly different from post-Darwinian phylogenetic diagrams. ▸FORM / PLANT AFFINITIES Hardly any of these were created with the ambition to introduce a temporal dimension or speculate about common descent, and this is true even for the few diagrams that did resemble trees.[3] Olivier Doron engages in his contribution with what seems to have been the only exception: diagrams that illustrated relations of hybridization and geographic variation among races within one species. ▸DESCENT / THE GEOGRAPHIC-GENEALOGICAL MAP While being network-structures, Buffon's *Table de l'ordre des chiens* (1755) and the French naturalist A. N. Duchesne's *Généalogie des fraisiers* (1766) were actually also about genealogy, about descent. Furthermore, like so many of the images in this volume, they point at the communication between diverse cultural realms in that Buffon and Duchesne drew on imagery from genealogical and breeding practices. Doron shows that Buffon's table stood for the new kind of genealogical reasoning in natural history that was in fact inherently intertwined with the modern notion of races as a group of organisms sharing certain characteristics due to common descent.

Practices within the realm of human kinship were certainly powerful inspirations for diagrams of relatedness in other fields than natural history. Lea Pfäffli's contribution evidences the European interest in genealogy as a driving force behind the implementation of the tool of the family tree in kinship anthropology. However, even within the field of genealogy, trees are by no means the only way of structuring kinship. Many medieval and early modern "forerunners" of tree diagrams actually depict linear relations of descent, while modern family trees may be pervaded by a reticulate logic derived from understandings of kinship laid down in canon law. Fiona Vicent's contribution gives testimony to the very "strong genealogical consciousness" that drove European patrician families in the nineteenth century to (obsessively) collect genealogical material. ▸DESCENT / BOURGEOIS GENEALOGICAL DIAGRAMS But even in this context, other diagrams than trees were employed to connect the living to the dead, such as the ascending and descending side of a triangle. Contributions to this section also look at non-European genealogical practices. Sun Joo Kim's Korean genealogies differ from early-modern European ones that were actually dominated by the tree, and Julián Míguez introduces a South American diagrammatics that is rather zigzaggy.

What becomes particularly evident in these contributions is the politics of diagrams of relatedness. The Korean elite's increased interest in family genealogies and eventually their ubiquitous production in the eighteenth century was part of the shift to Neo-Confucianism and signified a turn to a patrilineal kinship structure. ▸DESCENT / GENDER SHIFT IN GENEALOGY Entangled with the move from bilateral to patrilineal genealogical diagrams was the exclusion of women from inheritance and the performance of ancestral rituals. The South American diagrams discussed by Julián Míguez, in turn, fight a legal battle over succession regarding the territory of an indigenous ruler. ▸DESCENT / OPPOSING DIAGRAMS As part of hundreds of pages of documents, two kinship diagrams oppose each other on one page, juxtaposing noble and common descent in every sense of the adjectives. Colors and substance code for leaders and the entitled among one's ancestors, while gray schematics communicate the poverty and criminality associated with those of others. Lea Pfäffli looks at a kind of diagrammatics that developed in the colonial contact zone. ▸DESCENT / INDIGENOUS DIAGRAMS Ethnologists on expeditions tried to get at indigenous pedigrees because they believed them to store information on past social structures and social evolution. In the process, people of different cultural backgrounds (and in unequal power relations) developed diagrammatic means of communication.

Thus, Lea Pfäffli's contribution also highlights that diagrams are not only an issue of lines on

paper but may travel as metaphors in speech or writing – or are enacted with the use of sticks and stones or other objects. Finally, Fiona Vicent's contribution reminds us that diagrams of relatedness can be one more thing: incredibly beautiful images.

Notes

1 See, for example, Steffen Bogen and Felix Thürlemann: "Jenseits der Opposition von Text und Bild: Überlegungen zu einer Theorie des Diagrammatischen", in: Alexander Patschovsky (ed.): *Die Bildwelt der Diagramme Joachims von Fiore: Zur Medialität religiös-politischer Programme im Mittelalter,* Stuttgart: Thorbecke (2003), pp. 1–22; Matthias Bauer and Christoph Ernst: *Diagrammatik: Einführung in ein kultur- und medienwissenschaftliches Forschungsfeld,* Bielefeld: transcript (2010).

2 Among others, see Frederik Stjernfelt: "Diagrams as Centerpiece of Peircean Epistemology", in: *Transactions of the Charles S. Peirce Society* 36/3 (2000), pp. 357–384.

3 See, for example, Giulio Barsanti: *La scala, la mappa, l'albero: Immagini e classificazioni della natura fra sei e ottocento,* Firenze: Sansoni (1992); Mark A. Ragan: "Trees and Networks before and after Darwin", *Biology Direct* 4/43 (2009), n.p.