

STS C200, Week 3: Early Sociology of Science (cont.)

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Thought Styles

This week's readings introduce *thought styles*, a useful concept for analysing the development of knowledge. While the exact definition of a thought style varies, I consider a thought style to be the collection of norms among a certain social group that govern its methods for creating and validating knowledge. As demonstrated in [1, 2], thought styles can provide a robust basis for an historical analysis of politics (Mannheim) and science (Fleck). I will take a converse approach, using these texts as examples that shed light on the notion of thought style.

Conservative Thought / Karl Mannheim [1]

Mannheim utilizes thought styles in his attempt at characterizing conservative leanings in political thought. Although the target is in the political realm, he emphasizes the usefulness of thought styles for a unified, trans-disciplinary analysis. For example, romanticism can be viewed as either an artistic movement or a philosophical one, but these are in fact expressions of the same thought style (which will, in fact, play a key role in the development of conservatism).

Noting that one's emotional experience varies with their position in society, Mannheim studies the social conditions of groups in which conservatism is born. Conservative thought grew mostly in Germany, where the absence of a prominent bourgeois class meant that the liberalist (philosophical) revolution sweeping Europe could not find proper footing. Instead, a powerful military class provided "strong backing for the conservative movement and its intellectual and emotional development".

The aforementioned liberalist-rational revolution can be viewed as a catalyst to the creation of the conservative counter-style. Indeed, rationalism replaced and suppressed teleological Aristotelian thought, as well as the mystical style of the Renaissance; conservatism is built on the ruins of these attitudes, and expresses them based on the then-new foundation of romanticism. That said, it does not directly and completely oppose rationalist ideals, but gives them a (somewhat radically) different meaning. For example, liberty is still a central ideal, but rather than the "liberty to do as one pleases without discrimination" of rationalism's liberty and equality, conservatism calls for liberty on a personal scale ("one should realize one's potential") but prioritizes order on a societal scale.

Finally, Mannheim turns to what he calls "concrete stylistic analysis", which is based on how a group absorbs foreign cultural influences; in our case, this means an examination of conservative thinkers' responses to liberalism. He finds the earliest form of conservatism to be an attack on bureaucratic centralization. Namely, in Möser's opposition to technocratic governance based on "academic theory", which (in true romanticist fashion) is criticized as "a departure from the true plan of Nature".

But Möser still thinks in rationalist "natural-law" terms. Consider instead Adam Müller, who developed conservatism in its modern form. Stylistically, Müller steers clear of linear, evidence-based arguments. Instead, his analyses are by way of antithesis and analogy, expressing his wish to make thought as mobile as life. One example is in Müller's approach to the question of the State. He avoids a definitional treatment ("the poison of science") and instead mediates an "interplay between the four eternal estates". This results in a lively description of the nature of the state, rather than a static definition of the state as a concept.

Mediation is crucial in the thought of Müller, who views it as essential for obtaining living dynamic synthesis. Echoing Möser, Müller asserts that rather than making lifeless comparisons, judges should instead act as a bridge—between the demands of forefathers and contemporaries, between lawful behaviour and dispute, and so forth.

Genesis and Development of a Scientific Fact / Ludwig Fleck [2]

Fleck studies the (wetsern) understanding of syphilis. He aims not to critically evaluate the correctness of theories throughout history, but rather observe how theoretical progression came from stylistic bonds (i.e., thought styles) between concepts of a period.

Thought styles, per Fleck, are characterized by active and passive elements.¹ Cognition does not deal only with a knowing subject and the known object—it must also consider the existing fund of knowledge held by the subject. Active elements (in this fund) are arbitrary preconditions adopted by a group so that they may experience facts. These facts are the passive elements: they necessarily follow from the active elements in place. For example, associating all venereal diseases as the “carnal scourge” was an active element, from which passive elements (such as “treatability of the carnal scourge by mercury”) followed.

The thought collective, which is the social group(s) carrying the thought style, determine its active (and therefore passive) elements. Broadly speaking, Fleck divides the history of western knowledge of syphilis into: (a) its roots in ethical-mystical thought (“carnal scourge”); (b) subsequent empirical-therapeutic considerations (a stronger tying of syphilis and mercury); and (c) pathological and then etiological characterizations. Each of these stem from a different social background of the thought collective that carried it: (a) a religious society, (b) medical practitioners, and (c) medical theoreticians.

Fleck considers a transformative syphilis antibody test discovered in the early twentieth century known as the *Wassermann reaction*, and discusses its technical and historical origins. He then turns his analysis to more concise texts. I particularly appreciated his comparison of the definitions of clavicles (collarbones) between the seventeenth century (Bartholin) and 1914 (Möller and Müller): he observes that the former gives far more weight to linguistic analysis, because in the older thought style, a name is a relevant property of the object of reference, whereas modern styles consider names as mere identifiers and etymology does not carry medical significance.

Fleck concludes by presenting the characteristics of the then-current scientific style. They are as follows: an idealization of objective truth, clarity and accuracy; a perfect form of these ideals is believed to be unachievable, or achievable only in a distant future; scientists are worshipped as heroes, but should take upon themselves an obligation to keep their ego in the background; and lastly, technical terms are developed to give the appearance of an objective thought structure, and so the language of science is a lifeless (i.e., static) one.

Questions and topics for discussions

- While Fleck briefly surveys prior works in the sociology of knowledge, noticeably missing [4] is any mention of Mannheim (who is considered a father of “thought style” analysis [5]). How would Fleck view Mannheim’s thought style? Does his development of active and passive elements coexist with Mannheim’s original definition, or do they stand in opposition?
- Refer to the final few pages in Fleck [2], summarized in the final paragraph above. Does this description still characterize science today? For example, I would not consider the jargon of computer science or mathematics to be “lifeless”. It is ever-evolving, with constant revisions and overloaded terms—even within specific sub-fields.

¹See also [3]. Its introduction helped me understand active and passive elements.

References

- [1] Karl Mannheim, "Conservative Thought" [1925], *Essays on Sociology and Social Psychology*, London: Routledge, 1953, 74-164.
- [2] Ludwig Fleck, *Genesis and Development of a Scientific Fact*[1935], Chicago: Chicago University Press, 1979.
- [3] N. R. Biney, Ludwik Fleck's "active" and "passive" elements of knowledge revisited [2016]. *Transversal: International Journal for the Historiography of Science*.
- [4] W. Sady, "Ludwik Fleck" [2019], In *The Stanford Encyclopedia of Philosophy*. Metaphysics Research Lab, Stanford University.
- [5] R. D. Nelson, *The Sociology of Styles of Thought* [1992], *The British Journal of Sociology*.