This statement, taken from Ludwik Fleck’s classic book of 1935, might be read as the guiding slogan of his whole enterprise. If the theory of knowledge is to bear fruit, he tells us, it must not be founded on some *Phantasiebild* of Science: some *a priori* definition, or ‘demarcation criterion’, like that which Karl Popper has always insisted on. (Popper’s *Logik der Forschung* had appeared in the previous year.) Any epistemological theory developed on an *a priori* basis alone faced insurmountable problems: it would do no more than explore the consequences of some arbitrary initial conception, selected to indicate what Science must be, if it was to fit the prejudices of the individual philosopher in question.

Instead, the theory of knowledge should investigate what Science actually is: this meant studying the historical processes, modes of thought, linguistic styles, social organizations and institutions, channels of collaboration and publication, and relations with the larger community, out of which the ‘discoveries’ and ‘truths’ of Science emerge, and through which they become accredited as ‘facts’. So Fleck put all *a priori* explorations aside in favor of investigating *wirkliche Erkenntnis*. In doing so, of course, he was breaking sharply — and consciously — with the orthodox philosophy of science of the 1920s and 1930s: notably, with the prevalent idea that philosophers are required to ‘justify’ Science, and to provide it with intellectual ‘foundations’.

What is the historical context and philosophical significance of Fleck’s new move? Like Wittgenstein, he turned his back on the Humean empiricism of Ernst Mach and the *Wiener Kreis*, and placed himself squarely in the tradition of Kantian, or ‘transcendental’ philosophy. As Kant had taught us, the philosopher’s task is not to meet radical Cartesian doubts about the very possibility of knowledge. Rather, we should take the *existnece* of
knowledge for a fact; and then we can investigate the 'preconditions' of that existence — by asking on what conditions such knowledge is überhaupt möglich, or 'possible at all'. The answer to this question will go beyond, and behind, the actual theories of the sciences: the conditions for the practical relevance and applicability of (for instance) Euclidean geometry or Newtonian mechanics are not themselves part of Euclid's or Newton's empirical-yet-mathematical system, nor can they be incorporated into it without changing its nature. But they form a legitimate subject of study for those who are interested in standing back and assessing the intellectual implications of such theories.

This task can be approached in two different spirits: either, in the hope of finding some new 'justification' of science, or in a more detached and 'scientific' frame of mind. On the one hand, one may start with certain anxieties about the intellectual status of Euclid's or Newton's work; and seek some way of allaying those doubts, by arguing that the 'preconditions' for the applicability of their ideas are either necessary, or at least good enough to resolve our problems. Or, on the other hand, we may begin with all the assurance we require about those systems; and go on to investigate their 'preconditions' for their own interest. The former approach encourages the normative ambitions that have formed one major element in the transcendental tradition, from Kant up to Popper: it assumes that we are, now, in a position to define the 'essential and necessary' nature of Science, in terms that will have permanent validity. By contrast, the latter approach turns the study of transcendental preconditions itself into an empirical enterprise with corrigible results: we need no longer assume that Science has an 'essential and necessary' nature, which is to be established deductively, but only an 'actual' (wirklich) nature which remains to be discovered as we go along.

Ludwik Fleck firmly opted for the second of these programs. Like Nietzsche, he was sceptical about the normative ambitions of the philosophers. The anxieties that philosophers display about Science are misplaced, and the assurances that they demand are inappropriate. So, the only defensible program for epistemology is the empirical one: that of showing how the sciences in fact operate, and in virtue of what preconditions any particular science (say, geometry or mechanics) has in fact come into existence.

The force of such questions may, of course, turn out to be quite complex. In some respects, the natural sciences may be as they are, because human beings have the kinds of nervous systems they do; in others, because they have developed the kinds of cultures and institutions they have; in others