Authority Claims Situating Socialist Science Studies in the GDR**

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Summary: This essay studies the narrative self-positioning of Science Studies in the German Democratic Republic during the 1980s. Drawing on archival material on the foundation of the Council for Marxist-Leninist Science Studies at the Academy of Sciences in East Berlin in March 1988, it analyses how boundaries between Science Studies as a lone standing discipline and several other fields were construed and crossed at the same time and how (scientific) authority was claimed from the intermediate position of an external insider. Not only did Science Studies engage with their subject – the sciences –, but also with the politics of the Socialist Party, with the institution of the Academy, and with (industrial) production. After a formative institutional phase that spanned across the 1970s, Science Studies made efforts to centralize their work during the 1980s, to bind themselves closer to the state and scientific institutions, and to distinguish themselves from them at the same time.

Keywords: Scientific authority, Science Studies/Wissenschaftswissenschaft, Science Studies in the GDR, Council of Marxist-Leninist Science Studies, Scientific-Technical Revolution, Cold War Studies

1. Introduction

On 10 March 1988, the Academy of Sciences of the German Democratic Republic in East Berlin hosted the founding act of the Council for Marxist-Leninist Science Studies (Rat für marxistisch-leninistische Wissenschaftsforschung). After several years of planning, the Council was to be inaugurated as the...
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central capacity for the organisation of scientific development in the GDR. Following speeches by the Academy’s vice president Werner Kalweit and the head of the Abteilung Wissenschaften of the Central Committee of the Socialist Unity Party of Germany (Sozialistische Einheitspartei Deutschlands, SED), the Council members were appointed. Finally, Günter Kröber, the designated Council chairman and head of the Academy’s Institute for Theory, History and Organisation of Science (Institut für Theorie, Geschichte und Organisation der Wissenschaft, ITW), gave an inaugural speech on the Institute’s historical premises and future tasks. Kröber was eager to place the Council in an intermediate position. Based on sound scientific analysis of the (historical) interconnectedness of research, production and politics, he believed, such a stance would produce authoritative knowledge to forge closer links and more effective collaboration of the Academy, (socialist) industry and the Party.

Kröber’s inaugural speech was typical for festive events in the GDR. Indeed, Kröber stressed the Council’s deep-rootedness in Marxist-Leninist thought, its focus on class struggle along the lines of Cold War conflicts and the consequent loyalty to the Party. His rhetoric certainly confirmed contemporary observers from Western Germany, who described these councils, at least two dozen of which existed in the GDR, as an effective means of exerting political control over the represented disciplines. On the other hand, these gestures towards political power have been explained as a strategy of façade to cover actual, non-biased work. These interpretations create an opposition between political and pure scientific authority. Meanwhile, the condition of the latter was more complex in the GDR. The epistemic authority ascribed to Marxism-Leninism could hardly be bypassed, yet it clearly interfered with other institutional, social and economic aspects, the value of actual findings, and testified applicability. Adhering to the official party rhetoric, Kröber claimed not only the political-institutional capital of Marxism-Leninism for the new Council but also a general epistemic authority for Science Studies.

This essay uses the example of the Science Studies Council to study the manifold aspects of scientific authority that may well be connected to relations between the charismatic masters and disciples studied by Michael Polanyi, or perhaps link to the social relations Pierre Bourdieu observed in France and beyond. Richard Sennett has suggested that authority may be connected to an illusion “accepted by masters and servants,” especially – but not only – in

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1 For the planning history of the Council, see several drafts in Wissenschaftlicher Beirat des ITW, Wissenschaftlicher Rat des ITW, Rat für marxistisch-leninistische Wissenschaftsforschung, 1977–1988, Archiv der Berlin-Brandenburgischen Akademie der Wissenschaften [henceforth ABBAW], A 1684.
2 The event is described according to the invitations for invited guests. “Tagesordnung der konstituierenden Sitzung,” 1988, ABBAW, A 1684.
3 Lauterbach and Schwarzenbach 1979, on 9.
4 For this context, see Laitko 2018, on 94, 131–133.
5 Polanyi 1966, Chapter 3. For authority and communication, see also: Bourdieu 1988; Bourdieu 2014, Chapter 4.
totalitarian regimes. As several scholars, who have contributed to GDR Science Studies, have repeatedly remarked, the actual influence of the ideological framework still awaits investigation both in micro and macro perspective. In this essay, official speech acts from the Science Studies Council and internal working materials from Kröber’s ITW serve to illustrate how scientific authority originated on several levels and how these were linked in narrative. After an overview on theoretical and political traditions (2), the political environment in which the Council was founded (3), and some precarious research practices (4) will be analysed. Section 5 sketches how these aspects were linked in a narrative web within which the Council was situated.

2. Traditions: The Scientific Organisation of Everything

Over the course of the 20th century, science became a key term in social, economic and political organisation on scales both large and small. Since the mid-19th century, thinkers had sought a “proper” scientific way to solve whatever problem was detected in a given field of life. Proponents of the developing modern scientific disciplines were eager to receive academic acknowledgement by differentiating their methods and theoretical dogmas, and scientific argumentation was key to consolidating thought styles by making them translatable and at the same time applicable for their purposes. As important as early explorers of natural phenomena had been to political decision-making, it was only during the fin de siècle that the attributive constitution of politically relevant figures changed and engineers, projectors, experts, and thus scientists became authoritative figures in large-scale decision-making processes.

Science became a basic feed of international politics, a least common denominator of most political directions. The rhetoric of empires and national movements closely connected modernisation and science, be it to display their imperial superiority or to project a future state of their own. At world exhibitions, scientific development and organisation became key indicators of cultural and political strength. However, although the growing power of machines and their dangers were addressed, only on rare occasions were they damned. From a capitalist point of view, machines could be improved to be more effective, often at the workers’ cost. The Left, on the other hand, called for redistributing of the means of production, machines should help to

6 Sennett 1993, on 207: “Deception which occurs without a conspiracy to deceive is properly called illusion. Illusions are deployed systematically, in norms of behavior and belief; they can be shared by masters and servants.”
7 See, for example, Laitko 2018, on 107, 127, 139.
8 For a classic example, see Shapin and Schaffer 1985.
9 Kohlrausch et al. 2010.
10 For the broader context of scientific culture see Gaukroger 2020 and Feichtinger et al. 2018 for global histories of positivism. On relations of science and (colonial) power see Chakrabarti/Worboys 2020; Delmas 2010; Tilley 2011; Headrick 2010, ch. 6. On world exhibitions specifically, see Wyss 2010; Geppert 2010.
humanize work – even Lenin argued for adapting certain Taylorist modes of organisation.\textsuperscript{11} Critics of modernity’s speed, such as psychoanalysts and many progressive educators who offered their holistic approaches, often were not rejecting modernity itself, but rather sought a way to harmonize the owned machinery of modernity with the human condition.

Before long, science itself became a subject of scientific investigation. Distinguished from the integration of disciplines that had come about by way of founding institutes, journals and congresses, science was increasingly understood as a distinct field that had to be studied in order to properly fund, develop and thus organise research. States founded after the post-1918 demise of empires, such as Poland and Czechoslovakia, became strong proponents of this development.\textsuperscript{12} Thus, the roots of what came to be known as Science Studies predated the big names that emerged in the second half of the 20th century. The main proponents of Big Science, with Derek J. de Solla Price at their forefront, had their own venerated predecessors as well – the most prominent being John D. Bernal.\textsuperscript{13} During the Cold War, division and conflict became prominent factors in scientific developments, as illustrated by the atomic bomb and the space race. At the same time, integration and overarching programmes were institutionalised in order to plan research, starting with the UN and UNESCO in 1945 and eventually leading to landmark institutions like the International Institute for Applied Systems Analysis in Laxenburg near Vienna (1972).\textsuperscript{14}

A critical, highly emphatic mode of studying science that emerged in the first half of the 20th century often occurred in close proximity to political decision-making, where belief in scientific development remained intact. This relation grew even stronger after 1945. Practically anywhere, including in the GDR, authoritative concepts for consolidating the national scientific landscape were welcomed enthusiastically. In the early years of the GDR, though, the figure of the scientist was not yet self-sufficient, especially as many academic posts were still (or again) held by representatives of the “bourgeois” classes. The resulting conflicts were not pacified until 1968, when academic institutions were remodelled during the Third Reform of Higher Education.\textsuperscript{15} Of course, the study and interpretation of science had to complement Marxist-Leninist doctrinism. When the formal language of cybernetics was introduced in the 1950s, its new, modern-sounding vocabulary merged well with ideas for efficient planning without seeming revisionist. Descriptions of “dynamic, self-regulating systems and their connections to sub-systems” were deemed fit to bring prosperity to the Socialist state. Until the downfall of the star of

\textsuperscript{11} Lenin 1972.

\textsuperscript{12} Cain et al. 2019.

\textsuperscript{13} For Bernal, see below. While Robert K. Merton’s furthered discussions in the Anglo-Saxon realm – see Merton 1938 –, other works waited to be re-discovered. Hessen 1931 became an important example for the Soviet context only after the Thaw some forty years later. A similar example of rediscovery is Fleck 1935.

\textsuperscript{14} See Seefried and Malycha 2018 for the two German states in international perspective.

\textsuperscript{15} See section 3.
cybernetics, cyberneticists were the top experts on questions of scientific organisation.\(^{16}\)

In the 1950s, the GDR went to great lengths to strengthen its technological development, especially in institutional regards. Universities and the German Academy of Sciences (\textit{Deutsche Akademie der Wissenschaften, AdW})\(^{17}\) were responsible for research, while industrial combines were tasked with translating research results into production in a process coordinated by various state organisations. This type of exchange often met with problems. Thus more direct contract research between industries and research institutions was encouraged, which was closely connected to science’s official theoretical apotheosis: Being declared a “productive force” at the 22\(^{nd}\) Congress of the Communist Party of the Soviet Union in 1961, it became a central term in Marxist economic theory.\(^{18}\) In October 1968, the GDR \textit{Politbüro} of the Party’s Central Committee seconded the new position of science and the need for systematic study.\(^{19}\) Science and every aspect of knowing about it was now automatically politically relevant.

Although cybernetics fell by the wayside when Walter Ulbricht was succeeded by Erich Honecker, its models continued to influence the Science Studies discourse established in the 1960s. Its institutionalisation was again closely connected to the “steadfast belief in the progress of high modernity,”\(^{20}\) which in the socialist states of the 1960s was condensed into the term “Scientific-Technological Revolution.” Its theorists followed the earlier work of John D. Bernal, who had coined the term in the 1950s.\(^{21}\) Henceforth, the Scientific-Technological Revolution served as a central historical model to be contextualised by the Marxist-Leninist conception of history in order to lay the groundwork for securing the demise of capitalism. How elementary and ultimately stereotypical the Scientific-Technological Revolution finally became is well illustrated by the fact that it was incorporated into the constitution of the GDR in 1968.\(^{22}\) In a resolution from that same year, the Politburo formulated an explicit call for research: “Great attention must be devoted to studying the relation between Socialism and the Scientific-Technological Revolution, alongside other connected problems of man.”\(^{23}\) The relation between science and its outcomes for society, the advancement of science,
creativity and its influence on socialist personality were central concerns.24 This was the void in the historical development of Socialism that Science Studies were cultivating and promising to close at the same time: so much could still be learned about the functioning of science as such.

As this overview illustrates, by the 1960s modernity’s multifaceted scientism had made its way to the heart of the GDR’s ideological, economic and legal system. However, the general euphoria over scientism as source of scientific solutions could not in any context be mistaken for the overarching authoritative position of scientific reasoning. Although the scholar had become an established figure, it needed to be activated within a rhetorical arsenal of specific social, economic, cultural and political discussions in which contextual, ethnic, religious and other factors could play a role. Extensive training, specific experience and applicable research results were indispensable, but most of the time it was still important to code scientific results and needs in the official Marxist-Leninist language, at least to make plausible the greater context. Impact and further funding could heavily rely on this transmission between scientific progress and the ideological promise of salvation. Scientific authority was not self-sufficient as its legitimacy was firmly connected to the Party’s epistemic authority.

The following sections will use the example of the Council of Marxist-Leninist Science Studies, mentioned at the beginning of this essay, to examine attempts to install scientific authority in an institution. Alongside other selected documents, they will outline the narrative disposition and “boundary work”25 of the relatively young discipline of Science Studies26 in East Germany, with special regard to the presentation of its history, its core positions and the “social and humanist aims” and “socialist values” that made it so important for the development of the GDR as a socialist country.27

3. History, Science Studies and the Party

In 1988, Kröber started his inauguration speech with a lengthy outline of the history of Science Studies in the GDR since the mid-20th century. He first highlighted the 1957 book Produktivkraft Wissenschaft28 by Gerhard Kosel, a seminal work on the rise of science as a productive force in the socialist states of the 1960s. As mentioned earlier, the Politburo had demanded that “the system of the sciences itself become subject to scientific research work” by the end of the decade, noting also the need to develop a “theory of science”

24 Günter Kröber, “Wissenschaftsforschung in der DDR – Stand, Positionen und Aufgaben. Zur Gründung des Rates für marxistisch-leninistische Wissenschaftsforschung. Referat des Vorsitzenden des Rates, Prof. Dr. Günter Kröber, auf der konstituierenden Tagung des Rates am 10. März 1988,” ABBAW, A 1684, on 1. See also Politburo 1968, on 1479–1480.
25 Gieryn 1983.
26 The original term in German was Wissenschaftswissenschaft, or sometimes Wissenschaftsforschung.
27 Günter Kröber, “Wissenschaftsforschung in der DDR,” 1988, ABBAW, A 1684, on 32.
28 Kosel 1957.
(“Wissenschaftstheorie” or rather, “Science Studies” (“Wissenschaftskunde”).\textsuperscript{29} In 1988, Kröber called this the “birth certificate of Marxist-Leninist Science Studies in the GDR.”\textsuperscript{30}

As expected as Kröber’s rhetoric was, as much did it mark out the space for his discipline. Only in 1968, after the Party had spoken with such vision, Kröber argued, could there emerge a broad understanding that the sciences needed to be studied as “a complex social process” in an integrated, pan-disciplinary effort ranging across both the humanities and the natural sciences to transcend singular perspectives.\textsuperscript{31} In fact, this was supported by massive efforts to restructure East German research and higher education. Since 1965, the so-called Third Reform of Higher Education was intended to break and level bourgeois academic traditions. Traditional institutes were disbanded, and new departments – the “Sektionen” – were introduced. The reform was meant to enhance research and teaching and link them more closely to (industrial) production.\textsuperscript{32}

With the official acknowledgement of both science as a productive force and the Scientific-Technological Revolution as a basic process, a new epistemic field sprang up. New institutions were established to cultivate it. In April 1968, a Section for the Theory and Organisation of Science (\textit{Sektion Wissenschaftstheorie und -organisation}, WTO) was founded at Humboldt University in East Berlin. Two years later, the ITW, which was mentioned above, was founded at the Academy under Kröber’s guidance.\textsuperscript{33} The ITW eventually became a landmark institution of Science Studies, which blossomed throughout the country.\textsuperscript{34} GDR Science Studies were also well connected on the international scale, both within and beyond the Socialist bloc, although – or perhaps because – the critique of “bourgeois” conceptions of scientific development was a given. In any case, the 30-plus Council members appointed

\begin{thebibliography}{99}
\bibitem{29} Politburo 1968, on 1460. This is quoted in Günter Kröber, “Wissenschaftsforschung in der DDR,” 1988, ABBAW, A 1684, on 1.
\bibitem{30} Günter Kröber, “Wissenschaftsforschung in der DDR,” 1988, ABBAW, A 1684, on 1. See also Laitko 2018, on 126.
\bibitem{31} Günter Kröber, “Wissenschaftsforschung in der DDR,” 1988, ABBAW, A 1684, on 2.
\bibitem{32} For the reform, see: Nötzold 2002; Connelly 2000, on 58–70; Dietrich 2018b, on 1235–1237. On the conflicts in the 1950s and during the Destalinisation period, see Dietrich 2018a, on 608–613.
\bibitem{33} The ITW was originally founded as the Institute for Theory and Organisation of Science (\textit{Institut für Wissenschaftstheorie und -organisation}, IWTO) to continue the projects of an earlier working group for science organisation (\textit{Arbeitsgruppe für Wissenschaftsorganisation, Adlershof}). After five years it was remodelled and renamed. It remained active until it was officially dissolved on 31 December 1991. See: Laitko 2007; Laitko 2018.
\bibitem{34} For example, the Philosophical Institute at the University of Leipzig had a focus in epistemology, while Theory of Science at the University of Halle was strong in historical analysis. A philosophical working group that concentrated on the analysis of scientific method formed at the University of Rostock. More work was done early on. A systematic study is still to be written. For detailed reports of formerly involved scholars, see: Laitko 2018, on 72–73; Mocek 2018, on 214–216; Wessel 2018, on 282.
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in March 1988 represented roughly a dozen national and international institutions from Socialist countries.\footnote{See a list with the candidates to be appointed to the Council in 1988 in ABBAW, A 1684.}

According to Kröber’s 1988 manuscript, the Party had not only induced the discipline; it had also continued to influence its development. In 1976, the Party’s 9th Congress had passed a programme that demanded an organic link between the “achievements of the Scientific-Technological Revolution [and] the advantages of the Socialist social system.”\footnote{Ibid., on 5.} Scientific-technological progress was to be accelerated, thus increasing the productivity and intensity of scientific work so that society might prosper. Following the Congress, Science Studies developed two major fields identified by Kröber: Theory of Science, devoted to systematic study of economic, social and scientific-technological as well as mental and cultural aspects, and History of Science, which would gather knowledge about former scientific experiences so as to better assess contemporary and future developments.\footnote{Ibid., on 9–10, 19.} Merging both fields, Science Studies faced challenges imposed by history and transmitted by the Party, and hence the need to link science and production.

In this line of argument, the fates of both Science Studies and the Party converged in Kröber’s 1988 text. The scientific authority of Science Studies did not result from pure scientific potential, but it could only be established as an effect of the new discipline’s partaking in the overall epistemic authority of Marxism-Leninism that the Party embodied. Thus, rather than build a façade for independent research, the ideological game made research possible in the first place. Science Studies, thus Kröber, had developed into a full-fledged scientific discipline and a “reliable and efficient partner in the ensemble of the Social Sciences,” as numerous assignments would illustrate, along with documents from the Party Congresses of 1981 and 1986, and of course the foundation of the new Council.\footnote{Ibid., on 9–10, 19.} This recognition incorporated future tasks, as Kröber stressed by conspicuously quoting a speech Honecker had delivered in early 1988. At a convention of local Party secretaries, the General Secretary of the Central Committee had outlined problems in the coordination of research and production. A productive answer was needed to the question of “how modern science today must be taught and studied in the face of its vigorous development, forceful dynamics and drive to innovate.”\footnote{Honecker 1988, on 65; Günter Kröber, “Wissenschaftsforschung in der DDR,” 1988, ABBAW, A 1684, on 13.}

Kröber basically stuck to the unwritten script for representative events in the GDR, but the latter parts of his speech did reflect obstacles that hampered the practical work of Science Studies, especially at the Academy Institute that Kröber managed. Its very installation reflected problems known since the 1950s, when the relations among research, production and politics were reorganised. From this perspective, the necessities of protocol can illuminate certain areas of the discipline and the wider field of the sciences, which were at
once the object and the aim of study. Before the precariousness of this partnership is exemplified in the following section, it should be stressed that Kröber’s speech was not just a reconciliation of ideological expectations. It was also meant to be understood as a means of putting the Council on the map and providing it with the potential to exert power. In any case, the Council’s actual authority concerning day-to-day research practices still warrants study. Though it is now obvious that this future was not meant to last, the Council, as presented by Kröber, was to establish relations of authority both within and beyond Science Studies.

Much as the question of the Council’s power requires further examination, for example by distribution of assignments or funding, Kröber’s speech suggests study of mechanisms of closure. Apart from merely justifying Science Studies on behalf of Party decrees, Kröber’s narrative defines the discipline in the context of its history and future development. A future synthetic theory of science would require a meticulous conceptual integration of the discipline, and the Council would have to exercise oversight of its disciplinary unity to defend it from “absorption or re-absorption by philosophy, economics, psychology, historiography etc.” The complex interconnections of science, education and production could only be studied with firm “ideological basis and political orientation,” as it had been formulated at the 9th Party Congress twelve years earlier. Quite tellingly, Kröber employed a technique of inscription that linked the authority of the Party with the need for successful research.

While Science Studies had emancipated themselves from other disciplines, “science” as its field of study acquired a more holistic connotation: “[Science Studies] is held to be indispensable to the practical work of the sciences,” Kröber stated, going on to specify that “if Science Studies is an organized form of scientific self-reflection in our society, then its addressee is the overall subject of scientific work,” whereby he referred not only to any single researcher or teacher but also to those responsible for leading teams and institutions or developing and organizing science policy. Much more than “[assisting] the creation of self-consciousness” in a socialist society, Science Studies was expected to eventually “deliver instrumental and management-related results” to serve contemporary science.

Thus, Kröber presented Science Studies as an indispensable, authoritative liaison connecting research, production and politics within the Marxist-Leninist framework and not as a detached super-discipline. By the end of his talk, Kröber had carved out an authoritative external insider position for the discipline: Science Studies formed an integral part of the scientific sphere, yet held a special position that was external to all other constituents in the field. In the development of Socialist societies, Science Studies was a “historical necessity,” Kröber indicated, several times referring, in the words of Honecker himself, to previous speakers – two elite representatives of the Academy and

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40 Günter Kröber, “Wissenschaftsforschung in der DDR,” 1988, ABBAW, A 1684, on 30.
41 Ibid., on 26.
42 Ibid., on 24.
43 Ibid., on 21–22.
the Party respectively. He had shown that science had relevance for practically every single policy area, and that studying the “objective factors” and “subjective moments” of scientific processes would contribute not only to the advancement of scientific research in particular but also to the development of society at large.

Again, Kröber’s speech was unsurprising, inasmuch as he reproduced the usual phrases spoken at official meetings. Yet in doing so he linked Science Studies and the development of Socialism in a chiastic manner. Socialist societies could only prosper if the Scientific-Technological Revolution was soundly organised. The latter, however, was most likely to thrive under the aegis of Science Studies, under Marxist-Leninist guidance. In 1988, that logic promised a strong political standing for Science Studies. Yet as much as the chiastic link fulfilled ideological expectations, it also held promise for a strong position in the everyday research activities of Science Studies, which, as the following section will show, had previously been precarious on many levels. As working materials suggest, often enough, ITW scholars had not been able to translate the epistemic or institutional authority into the field.

4. Authority Declined? Experience Gained from Practice

As mentioned above, the relation between research and industries was a central topic at the ITW. Since its foundation, the institute had housed a Department for Research Organisation that covered a wide methodological array. Many of its projects were based on fieldwork. Researchers were delegated to the President’s office, which was responsible for contacts between the Academy and production, and department staff were sent to spend time at other research facilities as well as production sites such as factories. The goal was to comprehend the complex processes of work organisation, individual creativity and interconnections, particularly those between research and production. The department therefore continued the tradition of early Socialist and Soviet studies in scientific management, focusing especially on the role of scientific-technological innovation.

Approaches for assessing the transfer of research were reorganised in the late 1970s. Instead of relying on academic institutes’ assessments of how their results had been applied, the ITW, which had been put in charge of organising these assessments, forbore to register the entirety of transfer processes and instead started measuring the tangible efficacy of research achievements in specific case studies. An interim report of 1982 mentioned that communication flaws between researchers and their interlocutors were causing setbacks in several projects. Yet the report also referenced a successful study on the science-production transfer of crop fertilisers. Further research complexes were initiated on the basis of this success, and results were expected by the end of the

44 Ibid., on 19.
45 Ibid., on 16.
46 See, for example, Bachmann 1977.
following year. The authors argued that this shift from overall assessment to singling out complex processes for concrete studies was necessary to fulfil the task set for the ITW.\footnote{The new research complexes were flexible automatisation/microelectronics, innovation and effective use of energy, as well as modern biotechnology. Karl-Heinz Strech, “Information über Forschungen des ITW zur Thematik ‘Analyse von Forschungsergebnissen der AdW der DDR und ihre Wirksamkeit’ in den Jahren 1978 bis 1983,” 1982, ABBAW, Bestand Forschungsbe-reich Gesellschaftswissenschaften, ITW, 330, on 1–3.}

The 1982 report referred in great detail to ongoing research on the efficacy and transfer of basic research, for example the assignment of young scholars to the Academy’s liaison office for cooperation with industrial combines. Further communication and transfer measures were to be based on research data from the ITW. Although the report covered only a small area of Science Studies, it provides an idea of the obstacles facing the ITW researchers.\footnote{Ibid., on 1–2.} As noted above, until the late 1970s it was Academy institutes themselves that assessed their products’ transfer to industry. Deficits in institutional cooperation became visible once “concrete case studies” by the ITW were introduced to increase the analytic value of transfer assessment. ITW researchers had been deployed to industrial combines or the Academy’s liaison office to gain experience in transfer practice, but they had not received sufficient information from either their industrial partners or the Ministry of Science and Technology. The authors’ critique was unspiring. It explicitly pointed out interfaces where the flow of information was critical or seemed to be actively withheld. They even criticised the Ministry for its negligent communication and withholding of data, stating clearly that any study, however special or comprehensive, would require institutional cooperation. The scientific authority they claimed had been disregarded.

The authors had mapped the relations of research and production in an insightful manner. However, production was treated as a somewhat homoge-

\footnote{Ibid., on 4, 5.}
not overrule certain interests in industry and government institutions that remained opaque. In this example, scientific authority was seemingly outplayed by the authority of institutional interest – or perhaps trust in (tacit) knowledge within institutions – in a non-scientific sphere.

How were the relational descriptions that separated research from production, politics and eventually Science Studies itself eliminated in practice? A 15-page brochure from that same ITW department, which was restricted to internal use, can give us an impression. In March 1985, the authors collected “Hypotheses for Collaboration between the Academy and Production.” Science Studies was not explicitly mentioned in this document, but the text clearly argued from the intermediate external insider position described above. The opening paragraphs remarked the “fundamental strategic importance” of the Academy’s collaboration with industrial “combines, companies and national economic institutions” in order to “accelerate scientific-technological progress.” Stating the dictate of “international class struggles” brought politics into the picture.50

Right from the beginning, the authors put the Academy in charge to combine all interests, as proper organisation of research was only possible when various perspectives on scientific development were combined with overarching national economic strategies.51 As the Academy saw it, the general intensification of the “total societal reproduction process” required a basic reconsideration of research cooperation and its effects on national economics, especially regarding circulation, distribution and consumption. In other words, research, production and political steering had to be interconnected on all levels. Aiming to link science and production on a new qualitative level, the brochure developed a whole rhetoric of “integration” (“Verflechtung”) that was expected to become “normal.”52 Under the primacy of politics, national economic progress was bound to joint efforts to promote mutual collaboration. Science and production had come a long way along their respective Party guidelines. The regular consultation with representatives from industrial combines, ministries and delegates for territorial development had proved especially helpful for coordination. Still, some challenges remained. The integration of science and production depended on mastering technologies as economic revenue. Technological progress could be reported with certainty, yet the brochure diagnosed challenges stemming from earlier stages of interconnection of research and production.53 Science had reached a high point of innovative potential, but it could not stand alone:

Today, science is the starting point for important developments in all areas of society. Especially in the interplay with production, separate phases like basic research, applied

50 Abteilung Forschungsorganisation, “Thesen zur Zusammenarbeit der Akademie mit der Produktion,” 1985, ABBAW, Bestand Forschungsbereich Gesellschaftswissenschaften, ITW, 330, on 1.
51 Ibid., on 2.
52 Ibid., on 11.
53 Ibid., on 5.
research, technical development and production do not take place one after another. They increasingly overlap in respect of their content, their time, and their space.  

This diagnosis of the integrated temporal structure had consequences for the co-organisation of research and production. The last part of the text therefore concerned new challenges for science management, by then a long-standing, application-oriented subfield of Science Studies. The brochure brought together several institutional aspects and the need to reinforce compliance with perspectives and goals. Important steps had been taken to tackle external challenges, and the Academy had restructured several facilities, for example in the field of semiconductor physics. Nevertheless, the brochure cautioned, there still was a long way to go in practical terms to match political aims with structural excellence and individual motivations.

One basic precondition for constructive integration of research and production was the “clear intent” to reach common aims jointly and bear risks mutually. Much like their colleagues in 1982, the authors of the brochure reported that industrial partners had too often hesitated to share quantitative data and impeded efforts to measure the efficacy and economic value of scientific results. Direct contacts, especially close personal ones on all levels, had been helpful in solving such problems. However, personal interaction required structure both on the organisational level – for example by using so-called “requirement specifications” – and on the legal level, in terms of patent law reform and contract design. Political and moral motivation was not questioned in the text, but enhanced management methods and economic incentives would improve efficacy if they were grounded in “sound scientific analysis.”

Regardless, stronger integration required increasingly more fundamental change. The brochure dwelt exhaustively on the shortcomings of mutual understanding of research and production: scientists often lacked insight into the organisation of industrial processes, whereas workers had far too little theoretical knowledge of what they were actually doing. Cadre politics was an important aspect of issues involving the integration of research and production. Referring to technical and professional shortcomings of workers and researchers, the 1985 brochure called for a general reinforcement of science education in schools in order to “advance scientific-technological progress on a massive scale.” Only thus was it possible to mould a “Socialist scientific elite” with outstanding theoretical, methodological and prognostic skills, as the authors argued. Along with the respective ideological motives and habits, such an elite would also need to develop “greater disposability and mobility”, as “personal bonds must become a core element of interconnection between the research and production sectors.”

Ibid., on 1.
Ibid., on 5–6.
Ibid., on 3, 6.
Ibid., on 3, 7, 15.
Ibid., on 8, 10.
Ibid., on 12.
Ibid., on 13, 15.
Thus, according to the authors of the brochure, the level of qualification in both research and production facilities needed to be raised in order to pay tribute to their temporal and spatial proximity: “The unity of product, technology and equipment needs to be secured by science together with combines and companies.”

Still more organisational issues remained to be raised: Rather than provide finished research results, the Academy in particular should initiate cooperation with industrial partners along the way in order to facilitate and establish rapid implementation of production. This led to proposals for application laboratories, pilot plants and test facilities to include researchers, managers and workers at all possible stages. Furthermore, the authors suggested more joint investments and overall changes in research funding.

Throughout the brochure, transfer between laboratories and factories was presented from the specific external insider position. The idea of intensifying the integration of science and production was framed by references to general scientific-technological progress and international class struggle. The text stands firmly on Marxist-Leninist theory, and especially on the core idea that modern societies and scientific-technological development were deeply connected. Furtherance of this integration could then be presented as a contribution to the fulfilment of historical development. The lion’s share of the text is written as a technical manual tacked on to the ideological situation in the GDR. Rather than question the economic system or the political foundation, it aimed to organise the interplay of different subfields, namely research and production and it put the ITW in charge to coordinate both. As a manual, the brochure was a confident claim of scientific and institutional authority. Referring to its own sound analysis the ITW attributed the capacity of sober counselling and technical advice to itself.

Both the internal report from November 1982 and the 1985 brochure allow for conclusions to be drawn regarding the practical self-positioning of Science Studies and the ITW specifically. As representatives of Science Studies, the authors inserted the discipline as central problem-solving constituent of the Socialist society, whose fate had been so prominently linked to scientific development by the Party decrees of the late 1960s. The auto-narrative from the documents, which are presented in this essay, suggests a void that had opened at this time, which Science Studies was commissioned to fill by the highest political institutions. The affirmative decision to take responsibility for the new ideologeme – the productive force of science – then allowed Science Studies to enter an intermediate position founded on expectations and fill the void with complex communication. As shown before, it stuck to the ideological scaffoldings of Socialism (in the GDR) but also maintained its ties to the sciences within and beyond the Academy, and of course to production.

The two documents analysed in this section add another facet to the chiastic link between GDR politics and Science Studies, the rise of which was connected to the promise of increasing production via closer links between
research and industry. It was the great promise of Science Studies to fill a specific position, not just between state and Party on the one hand and the sciences on the other, but also regarding the relations between those two spheres and production. The documents show how, based on their analytic perspective, the ITW’s researchers indeed claimed a specific scientific authority that added up on the institutional and ideological standing that their discipline had been granted. ITW departments offered critique, proposed changes and integrated strategic knowledge in any direction.\textsuperscript{63} The confident manner in which expectations were addressed in both internal and external communication allows us to sketch the space they attempted to occupy, and hence the authority ascribed to Science Studies. As a scientific discipline, it was an intrinsic part of the scientific sphere as well as a productive force by decree of the Party. Meanwhile, Science Studies’ task of studying basic processes and foundations of scientific work linked it even closer to this original sphere while also elevating it into positions from which the system as such could be studied. That is why the brochure and the report would so openly find fault with dysfunctional connections throughout all layers and between all spheres. As an institution of Science Studies, the ITW could claim the scientific authority to identify and describe these problems and also to suggest “persuasive scientific solutions” to work conflicts out.\textsuperscript{64} However, the extent to which the critique actually led to practical change was not a question of scientific authority alone.

5. Authority and Narrative

As the previous sections have illustrated, scientific authority has several levels. Its roots can often spread far beyond mere good argument – it has institutional and ideological aspects and can rely on applicability, it may even have to compete with an interlocutor’s trust in tacit knowledge. The Council of Marxist-Leninist Science Studies served as an example to study narrative aspects of gaining scientific authority. In Kröber’s speech, a specific ideological frame was indispensable while the internal documents from the ITW Department for Research Organisation show how the object of study actively evaded its examination, perhaps to conserve political or economic interest, as the authors suggested. Scientific authority is thus poly-vectoral.

As shown in section three, scientific authority was rarely self-sufficient in the sense that mere argument would suffice. The case of the GDR and its official languages was palpable. The foundation of a national body to coordinate research could not forgo certain rhetorical gestures. Designated chairman Kröber could not but inscribe the new Council into Socialist reality. He expectedly invoked classical stanzas of Marxist-Leninist theory and referred to the history of Party guidelines, yet at the same time, the central position that this official language automatically granted to the field of science opened up a very wide potential framework for action in the discipline of Science

\textsuperscript{63} Ibid., on 2.
\textsuperscript{64} Ibid., on 1–2.
Thus, the Council could grant a certain institutional security for the discipline, which also entailed planning security. Claiming an intermediate, meta-institutional position, it was not so much a place of substantial discussion and scientific argument as it was an arena established to present institutional strength and gain funding. In this way the Council was used to present a substantial background for scientific argument in the form of a framework that could produce authority as an effect. Rather than appease ideological pressure, Kröber ably met expectations by constantly weaving Science Studies, the Council and himself into the official rhetoric. These narrative connections helped secure his own territory within the system – in relation to government institutions, industry, and other disciplines.

To some extent, the reports from the fourth section could not rely on the intermediate meta-position when they were written in the early 1980s. However, already then the authors unarguably launched critiques of state organisations, for example the Ministry of Science and Technology. They did so on the grounds of their method-driven work, and as protagonists of the scientific discipline concerned with the principles of the productive force that science was. Their work helped them identify problematic intra-connections within the Socialist system, not just by working out explanations but also by sketching out solutions, for example concerning the organisation of factories or general education. According to a methodologically grounded capability, they were persuaded to argue for and formulate system-relevant knowledge, specifically scientific knowledge about the productive force of science. The authors were even confident enough to claim advisory capacity not only for the sciences but also for state institutions and industrial production.

So far, two narrative vectors that supported Science Studies as holding an authoritative position have been discussed. Authority was not deduced solely from the Party’s grace, nor did it grow out of an epistemic position that Party or industry would ever attain. But beyond the Marxist-Leninist framework and the epistemic values of scientific method, other aspects were in play, two of which will be briefly sketched with another look at the history and self-positioning of Science Studies.

As mentioned in the second section, science had been held in high regard during the rise of Socialism in the early days of Soviet Russia. In fact, this phenomenon reached far beyond Socialist countries, as the scientific organisation of labour was one of the commonplaces of international politics in both East and West.

From this perspective, throughout the 1960s, declaring science a productive force in Socialist states served mainly as official recognition of a position that the sciences had occupied for some time already. However, once science was moved to a central ideological position, its reflection also attracted more attention and eventually led to the institutionalization of a special discipline.

In the 1960s, arguments about the scale and quantity of science’s influence on modern societies were accompanied by narratives of qualitative change.

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65 Connelly 2000, on 58–70. See also: Aronova and Turchetti 2016; Rindzevičiūtė 2016.
Derek J. de Solla Price’s volume *Little Science, Big Science*\(^{66}\) marked a peak in Western discussions, and Gennadij M. Dobrov’s seminal book on *naukovedenie* was published in Kyiv in 1966 and followed by a German translation three years later.\(^{67}\) Somewhat earlier still, in 1959, Charles Percy Snow, in an analysis of a new era of scientific culture(s), had famously compared educational outcomes in the United Kingdom, the United States, and the Soviet Union.\(^{68}\)

As mentioned in the introduction, these systematic thoughts about science had their own interesting history, and several well-known authors, such as Boris Hessen and Ludwik Fleck, had no choice but to wait long years for recognition. One author who was influential right from the start was Irish crystallographer John D. Bernal, who had analysed the social foundations of science in 1939.\(^{69}\) Fifteen years later, he published the soon-to-be classic *Science in History*.\(^{70}\) Bernal remained a central figure in international science policy until his death in 1971. A Marxist himself, he maintained close relations with many Socialist countries. Tellingly, the first German translation of his 1954 book was published in the GDR in 1967.\(^{71}\)

Kröber’s inauguration speech skipped the greater part of this intellectual history in favour of an integrated history of Party documents and Marxist-Leninist Science Studies. This led back to Bernal, who had coined the then foundational term “Scientific-Technological Revolution.” Kröber employed this reference specifically to elevate his discipline over the wider field of sciences. Reminding of Bernal’s 1939 statement on the growing importance of science for society since the 19\(^{th}\) century, he went on to quote another text that Bernal had written 25 years later: “The science of science, or the self-consciousness of science […] is the actual drastic advance of the second half of the twentieth century.” These science studies, as Kröber paraphrased Bernal, had to be “wide-ranging.” They had to link research about “the social and economic as well as the material and technical conditions for scientific advance” on the one hand, and study the “proper use of its tools” on the other.\(^{72}\)

Kröber’s invocation of Bernal at the end of his text generated an interesting narrative structure. Recollecting the historical transition of his work in 1964, Bernal had surpassed himself by producing a core concept of systemic organisation in the GDR. This narrative mirrored the institutional development of the Council, which had not been designed from scratch and in fact had superseded the Scientific Advisory Council of the *ITW*, which dated back

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\(^{66}\) Price 1963.

\(^{67}\) Dobrov 1966. See also Dobrov 1969. *Naukovedenie* is the Soviet equivalent of Science Studies.

\(^{68}\) Snow 1959.

\(^{69}\) Bernal 1939.

\(^{70}\) Bernal 1954.

\(^{71}\) Bernal 1967. See also Bernal 1970.

\(^{72}\) Originally in Bernal 1964, on 217. See Günter Kröber, “Wissenschaftsforschung in der DDR,” 1988, ABBAW, A 1684, on 31–32.
to the late 1970s. In 1988, nearly 25 years after Bernal’s first synopsis and thus about a year prior to the 50th anniversary of the original book, new horizons opened up for Science Studies in the GDR, which was establishing a new central institution of high symbolic relevance. In a prosperous Socialist society, science needed to be studied more than ever before, and the Council was dedicated to coordinating the entirety of it. Eventually, Kröber did not simply present the Council as medium to translate political control into Science Studies but instead claimed socio-political authority for the discipline itself. From there, he finished, the discipline could promote the “great social and humanist aims and socialist values” that to strengthen it had actually been brought up for.

The final aspect concerning scientific authority approaches the realm of Marxism-Leninism and practical coordination of research and production from another angle. An essential volume on the foundations of Science Studies, published by the ITW in 1988, closed with a discussion of the complicated social responsibility of scientists, taking environmental issues as an example. These discussions had become quite involved, as they engaged scientists as well as many other actors: politicians, representatives of culture and arts, publicists and theologians. What actually was an effect of social differentiation would be presented as a sign of a “risen authority of [modern] science,” of “her continuous penetration of the world of human aspirations, decisions and actions, and the expansion of her social functions.” As the argument went, the authority ascribed to scientists had burdened them with discussions apart from their craft for too long. Only socialism, thus the conclusion, had given science a frame in which it could recognise its social significance and help build a Socialist society along the laws of social development. Once Marx had “overcome enlightenment’s narrow relation to science” in theory, Lenin was already intuitively including science as a core element “in the first months of Soviet power.” At this point, the founding narrative of the Council of Marxist-Leninist Science Studies was extended into the wider social sphere and again into the core of the ideological framework.

Marxist-Leninist Science Studies set out to moderate between the spheres – or, to paraphrase Snow – cultures of politics, production and scientific research. They operated at an intersection that they themselves continuously

73 See “Vorschlag: Bildung eines Rates für Wissenschaftsforschung an der AdW der DDR,” 1985, ABBAW, A 1684. See also “Rat für marxistisch-leninistische Wissenschaftsforschung – Konzeption,” 1986, ABBAW, A 1684.

74 Günter Kröber, “Wissenschaftsforschung in der DDR,” 1988, ABBAW, A 1684, on 32. Kröber referred to another text of Bernal here, and namely the opening lecture at the XI International Congress on the History of Sciences in Warsaw in 1956: Bernal and Mackay 1966.

75 Quite interestingly, the text even refers to environmental issues, which had been the starting point for many opposition groups in the GDR.

76 [Authors collective] 1988, on 379. The volume was a translation from a Russian book published three years earlier by a large author collective from Bulgaria, Poland, Czechoslovakia, the Soviet Union, and the GDR: [Authors collective], Osnovy Naukovedenija (Moscow: Nauka, 1985). Kröber, who translated the book into German had been part of the collective.

77 Ibid., on 402; emphasis added.
identified as precarious even as they offered solutions. A final example is illustrative: At the 2nd meeting of the Council on 8 December 1988, nine months after its inauguration, a report on an Interdisciplinary Research Program at the *ITW* (“Scientific-Technological Revolution, Social Progress and Intellectual Engagement”) laid out the tasks for the last decade of the 20th century. The central point was the big changes that the 1990s would bring – the turn from reproductive modes driven by high energy to complex problems in the relations of modes of production, of communication and of life, which would increasingly be based on information and knowledge. The tremendous effects on communication and human life would again call for “the professional social and political responsibility of the scientist,” for consecutive analyses of closely connected problems in the relation of man, humanity and nature, and finally the ethical and moral challenges to a humanist organisation of scientific and technical progress. As the author concluded, Science Studies would need to face these challenges and lay out their relevance to the Party, especially at the expected 12th Party Congress. Again, authority needed to be ordered by narrative. However, the Congress would no longer take place after the political developments of 1989, and by 1990 the scientific authority of GDR Science Studies would be dissolved, together with the entirety of its (Marxist) academic context.

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78 Dietrich Wahl, “Bilanz und nächste Aufgaben der Arbeit am Interdisziplinären Forschungsprogramm ‘Wissenschaftlich-technische Revolution, sozialer Fortschritt und geistige Auseinandersetzung,’” 1988, ABBAW, A 1684, on [22]; see Laitko 2018, on 94.

79 Dietrich Wahl, “Bilanz und nächste Aufgaben,” 1988, ABBAW, A 1684, on [22–23].

80 See Anne Kluger’s text in this volume.
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