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Merton and Kuhn: The Relationship That Shaped Science Studies

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This study examines the intellectual and personal relationship between Robert K. Merton and Thomas S. Kuhn, and its lasting influence on the emergence of science studies as a distinct field. While Merton is often positioned as a founder of the sociology of science and Kuhn as the architect of the modern philosophy and history of science, their correspondence and collaborations reveal a deeper and more reciprocal exchange. Drawing on archival sources, including letters, notes, and memoirs, the research demonstrates that Merton and Kuhn's interactions shaped each other's academic trajectories in ways often overlooked in standard narratives. Merton's sociological frameworks helped provide Kuhn with a lens for thinking about scientific communities and norms, while Kuhn's historical and conceptual innovations, like his articulation of paradigm, redirected Merton's attention toward new intellectual currents. In particular, their exchanges in the 1970s show a mutual effort to resist being cast as opposites by external commentators. This study concludes that the dialogue between Merton and Kuhn was not incidental but formative, providing a connective tissue that helped establish science studies as an interdisciplinary domain bridging history, philosophy, and sociology of science.

1. Introduction

Robert K. Merton (1910–2003) and Thomas S. Kuhn (1922–1996) are two of the most influential scholars of the twentieth century. While each made foundational contributions to the history, philosophy, and sociology of science, collectively known as science studies, their intellectual relationship remains underexplored. Their collaboration over a period of forty years played a crucial role in the development of science studies as an interdis-

ciplinary field. Emerging in the twentieth century, science studies examines the creation, development, and implications of scientific knowledge by integrating historical, philosophical, and sociological perspectives on science. It goes beyond the content of scientific discoveries, delving into the processes behind them, the communities involved, and the social, cultural, and political contexts in which science operates, thus highlighting the societal impact of science. This paper explores how the intellectual bond between Merton and Kuhn influenced the growth of science studies.

2. The Harvard Connection

Harvard played a central role in the institutional and intellectual foundations of science studies in the United States. From the 1930s through the 1950s, it became a hub for the history, philosophy, and sociology of science by fostering interdisciplinary spaces where scholars could cross disciplinary boundaries. President James B. Conant (1893–1978) was especially influential in promoting general education, interdisciplinary teaching, and courses in the history and philosophy of science, later inspiring both Robert K. Merton and Thomas Kuhn (Hershberg 1993, pp. 409–11). Merton later recalled Conant's appreciation of his work on the role of Puritanism in the advancement of science, while Thomas Kuhn dedicated his magnum opus *The Structure of Scientific Revolutions* (1962) to Conant¹ (Merton 1977, p. 85). Biochemist and sociologist Lawrence J. Henderson (1878–1942) introduced the case-study method into the human sciences, shaping the work of Talcott Parsons, Merton, and eventually Kuhn (Barber 1970; Isaac 2012, p. 70). Harvard's intellectual environment, bolstered by wartime research priorities and postwar federal and private grants, encouraged social scientists to address real-world problems through rigorous, empirical methods (Isaac 2012, p. 159; Shaw 2024, pp. 39–40). Together, Conant's vision, Henderson's pedagogy, and the institutional support for interdisciplinary collaboration made Harvard a crucible for the emergence of science studies, providing the context in which figures like Merton and Kuhn could develop their influential ideas.

Robert K. Merton's intellectual trajectory was profoundly shaped by his time at Harvard, where he studied under Pitirim Sorokin, George Sarton, and Lawrence J. Henderson. Encouraged by Sorokin to join Harvard as a graduate student, Merton gained access to a network of leading scholars and developed his sociological interest in science and technology. Working on his dissertation, Merton came in contact with pioneering historian of

1. August 5, 1961. *Letter to James B. Conant* [Box 10, Folder 3]. Thomas S. Kuhn Papers (MC-0240), Department of Distinctive Collections, Massachusetts Institute of Technology, Cambridge, MA.

science George Sarton. Merton acknowledged in a memoir that Sarton had “bound me to him—not with any such intent, I believe—by a flow of gifts, freely bestowed, which in their cumulative outcome may have affected my life and work” (1985, p. 474). Sarton not only provided intellectual guidance but also institutional opportunities, including workspace, exposure to historical methods, and early publication outlets in *Isis* and *Osiris*. This support culminated in Merton’s dissertation, *Science, Technology, and Society in Seventeenth-Century England* (1938a), a landmark study that examined the social and institutional conditions fostering modern science.

Even after leaving Harvard in 1939, Merton continued expanding on his training and insights for the next decade. He joined Columbia University in 1941, where he collaborated with Paul Lazarsfeld to institutionalize empirical sociology and directed the Bureau of Applied Social Research. His influential essay “The Normative Structure of Science” (1942) codified the ethos of science into four enduring norms: universalism, communism, disinterestedness, and organized skepticism. These norms, Merton argued, “are in varying degrees internalized by the scientist, thus fashioning his scientific conscience” (1973, p. 269). By 1949 Merton had written another groundbreaking work in *Social Theory and Social Structure* which collected his work over the past fifteen years and popularized concepts such as “self-fulfilling prophecy” and “role model.” Merton’s early work not only shaped a generation of science sociologists, such as Bernard Barber, Harriet Zuckerman, Stephen Cole, and Jonathan Cole, but also influenced scholars from the broader domain of science studies, such as Thomas S. Kuhn.

Thomas S. Kuhn joined Harvard in 1940 as an undergraduate in Physics. Though science was Kuhn’s primary area of interest, he also took courses in history and philosophy. By 1946 Kuhn was well into his graduate journey with an aim to obtain a doctorate in Quantum Mechanics. However, there was a growing realization in him that “physics might not be his future” (Heilbron 1998, p. 506). Owing to this, Kuhn increasingly pursued historical and philosophical questions. A decisive influence came from Harvard President James B. Conant, who in 1946 asked Kuhn to prepare “some lectures on the origins of seventeenth-century mechanics for the trial run of Natural Sciences 4” (Isaac 2012, p. 211). The course was part of Conant’s general education science program which aimed at bridging the gap between humanities and sciences (Wray 2016, pp. 8–9). Preparing these case studies led Kuhn to develop a more nuanced understanding and appreciation for the history and philosophy of science. Kuhn recognized Conant’s pivotal role in his intellectual formation in a letter, dedicating *Structure* to Conant: “Historically, you are the one who ... started me on the road of which the present manuscript describes the early stage. And personally, you are the one who taught me that a turtle travels

fastest when his neck is out.”² Kuhn’s statement supports the earlier claim of Conant being a common influence in the academic journey for both Merton and him.

Conant’s support brought Kuhn into Harvard’s Society of Fellows in 1948, an elite intellectual environment that gave him the freedom to pursue interdisciplinary studies. Here Kuhn read philosophers such as Kant and Carnap, physicists like Schrödinger, and psychologists including Jean Piaget, whose work on cognitive development shaped Kuhn’s ideas about conceptual change. A significant moment came from his engagement with Robert K. Merton’s *Science, Technology, and Society in Seventeenth-Century England* (Figure 1). The work introduced Kuhn to the idea that puritan values in seventeenth century England fostered empirical science which is also known as “Merton Thesis.” Kuhn revisited this idea throughout his career, including in his undergraduate teaching at the University of California, Berkeley³ and in later historiographical essays on the development of science (Kuhn [1968] 1977, [1973] 1977). Like many of his contemporaries, Merton’s study helped Kuhn grasp the role scientific communities play in advancing science and gave him a sociological lens for understanding the collective organization of science. The Harvard environment—through mentors like Conant, and intellectual interlocutors like Merton—thus furnished Kuhn with the historical, sociological, and philosophical tools that became the foundation of his theory of paradigms and scientific revolutions.

3. Unity of Science and Center for Advanced Study in the Behavioral Sciences

Kuhn and Merton most likely made each other’s acquaintance while working on a project for the Institute of the Unity of Science. The Institute was established by Harvard philosopher and physicist Philip Frank in 1947 in Cambridge, Massachusetts to bring history, philosophy, and sociology of science under the same roof. One of the institute’s early initiatives was a research project in the sociology of science in 1952. In his letter dated 16 June 1950, Frank requested Merton’s help in preparing an outline of a program for research in the sociology of science as he was “one of the few sociologists who has worked in this field.”⁴ With contributions from Frank and philosopher Ernest Nagel, an outline of the project was prepared by the fall of 1952 with the goal of uncovering the role sociological

2. August 5, 1961. *Letter to James B. Conant* [Box 10, Folder 3]. Thomas S. Kuhn Papers (MC-0240), Department of Distinctive Collections, Massachusetts Institute of Technology, Cambridge, MA.

3. Kuhn, Thomas S. 1957. *Philosophy 127: Lecture 3—02/08/57* [Lecture notes, Box 1, Folder 27]. Thomas S. Kuhn Papers (MC-0240).

4. Philip Frank. June 16, 1950. *Letter to Robert K. Merton* [Box 26, Folder 13]. *Robert K. Merton Papers*, Rare Book and Manuscript Library, Columbia University, New York, NY.

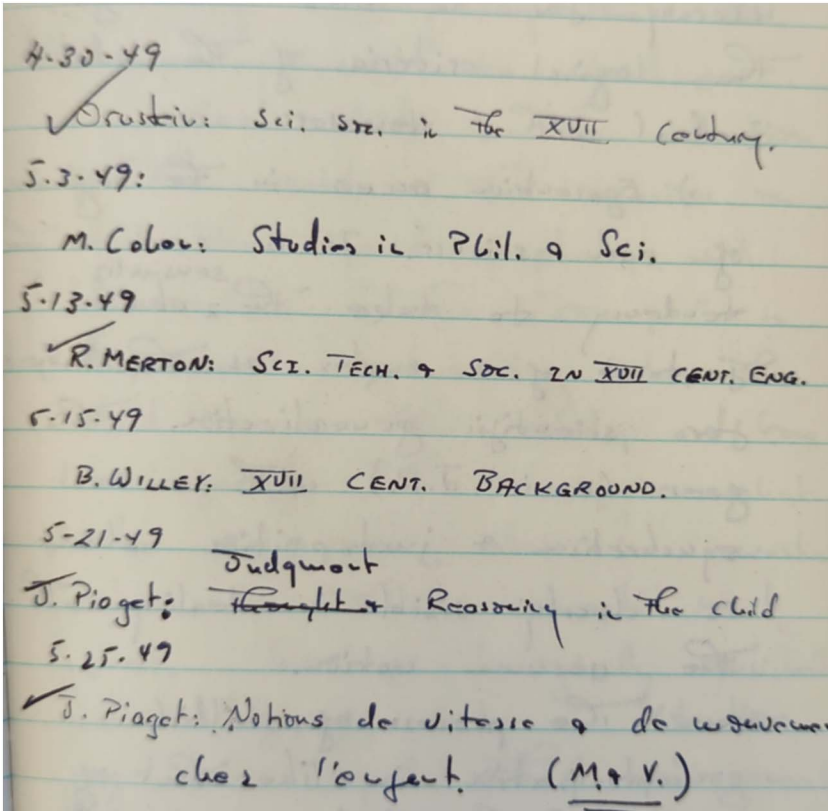


Figure 1. Kuhn's Reading Notes from 1949 during his Time at Harvard's Society of Fellows.⁵

factors have played in the acceptance of scientific laws and theories. Merton, Frank, and Nagel listed several research topics (Figure 2), some of which dealt with investigating “the role of social utopias ... in bringing about new forms of organization and regimentation of the sciences,” “influence of social status and social philosophy of natural scientists upon their ... scientific preferences”⁶, and the nature of simultaneous discoveries.

5. Kuhn, Thomas S. ca. 1949. *Student notes: Notes and ideas* [Manuscript, Box 1, Folder 7]. Thomas S. Kuhn Papers (MC-0240), Department of Distinctive Collections, Massachusetts Institute of Technology, Cambridge, MA.

6. Philip Frank. December 2, 1952. *Letter to Thomas S. Kuhn* [Books: The Structure of Scientific Revolutions (1962) – Correspondence, pre-publication, 1952–1962, Box 25]. Thomas S. Kuhn Papers (MC-0240), Department of Distinctive Collections, Massachusetts Institute of Technology, Cambridge, MA.

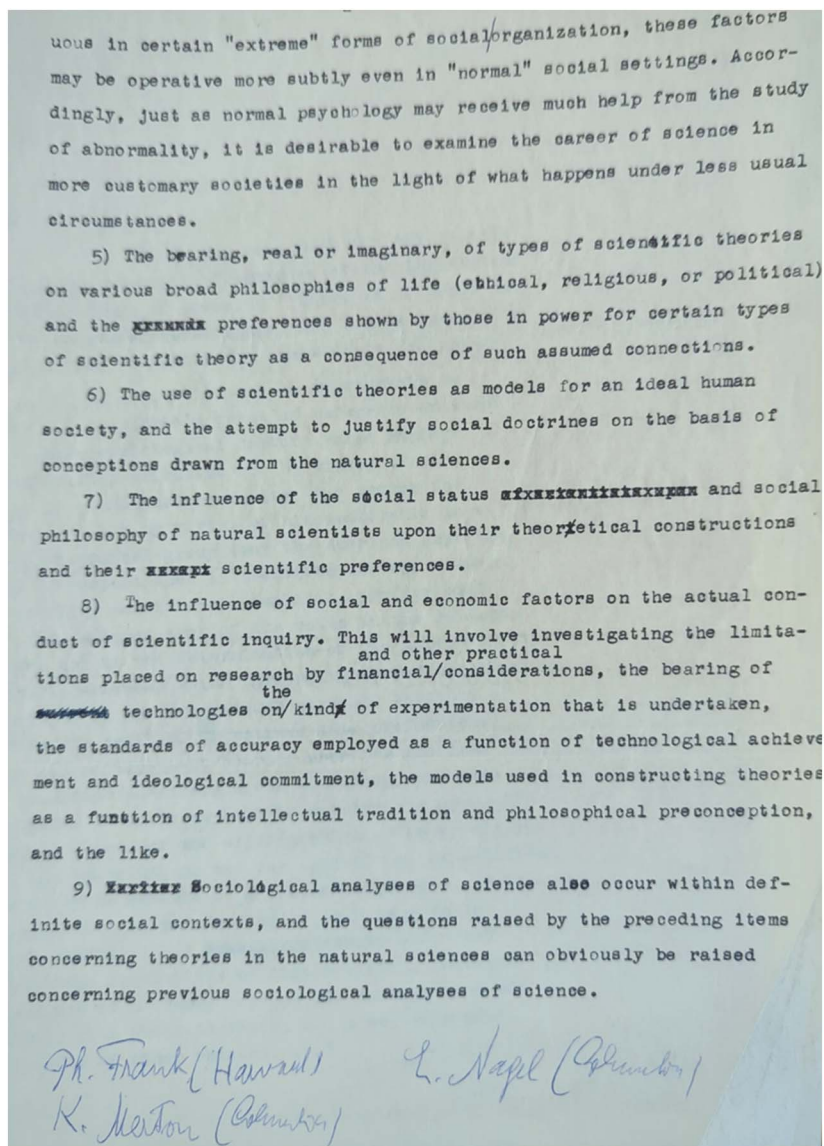


Figure 2. Goals for the Project in the Sociology of Science. Attached with a letter from Frank to Kuhn.⁷

7. Frank, Philip. December 2, 1952. *Letter to Thomas S. Kuhn* [Books: *The Structure of Scientific Revolutions* (1962) – Correspondence, pre-publication, 1952–1962, Box 25]. Thomas S. Kuhn Papers.

These topics strongly aligned with the work Merton had done earlier in his career or would take up later.

With the project goals in place, Frank reached out to Kuhn, which most likely marked the beginning of the Merton-Kuhn association. Frank's 2 December 1952 letter to Kuhn explained the project goal and asked him to become part of the "committee for organizing [the] research." While Kuhn's official response is missing from the archive, an unsent draft reveals his enthusiasm, as he noted, "there is no group in which [he] should rather participate."⁸ (Kuhn ca. 1952). In discussing the project, Kuhn observed

that in twentieth-century western science socially conditioned, implicit professional "faiths" have assumed many of the roles in the guidance of research and in the determination of the acceptability of scientific theories which religion and metaphysical systems played in the seventeenth century⁹.

This statement is a direct nod to Merton's work in *Science, Technology and Society in Seventeenth Century England* in which he discussed the role of religious movements like puritanism and pietism in the growth of science.

While no surviving correspondence or direct evidence confirms communication between Merton and Kuhn in the early 1950s, Merton later recalled first hearing about Kuhn around 1952 from Harvard-based philosophers, historians, and physicists (Merton 1977, p. 99). Frank was a physicist turned philosopher working at Harvard in the early 1950s and fits Merton's description neatly. It is reasonable to assume that Merton would have heard of Kuhn from Frank and then reached out to Kuhn to discuss the project details. Regardless of the exact circumstances, Kuhn's association with the project likely deepened his engagement with the sociology of science while simultaneously shaping ideas he would soon publish.

By the early 1950s, Thomas S. Kuhn's intellectual trajectory was converging toward what would become *Structure*, shaped by both his institutional affiliations and his growing engagement with interdisciplinary inquiry. Due to his relationship with the Institute of The Unity of Science, Kuhn was commissioned to write a monograph on the history of science for the institute's mouthpiece, the International Encyclopedia of Unified

8. Thomas S. Kuhn, ca. 1952. *Unsent Draft Letter to Philip Frank* [Books: The Structure of Scientific Revolutions (1962) – Correspondence, pre-publication, 1952–1962, Box 25]. Thomas S. Kuhn Papers (MC-0240).

9. Thomas S. Kuhn, ca. 1952. *Unsent Draft Letter to Philip Frank* [Books: The Structure of Scientific Revolutions (1962) – Correspondence, pre-publication, 1952–1962, Box 25]. Thomas S. Kuhn Papers (MC-0240).

Science, in 1953 (Isaac 2012, p. 220). Although his commitment to completing *The Copernican Revolution* (1957) delayed this project, the unwritten monograph eventually evolved into *Structure*.

At the same time, a broader institutional transformation was underway with the founding of the Center for Advanced Study in the Behavioral Sciences (CASBS) in 1953–54. Established by the Ford Foundation to promote interdisciplinary collaboration, CASBS attracted eminent figures such as Paul Buck, Robert Sears, Paul Lazarsfeld, and Robert K. Merton (Thackrey 2018). The Center’s mission to unite scholars across the social and behavioral sciences provided the ideal intellectual environment for Kuhn’s synthesis of historical, philosophical, and sociological perspectives. CASBS ultimately became the place where Kuhn began shaping his theory of paradigms and scientific revolutions—an opportunity made possible in part through Merton’s support in securing his fellowship there.

An advisory committee on the selection of fellows was formed in August 1953 to identify researchers who could benefit from a year in the CASBS.¹⁰ Merton and Buck were both part of this committee, which proved helpful for Kuhn as the fellows were selected only by recommendation from institute members. Meeting notes from an advisory meeting on 14 November 1953 indicate the nomination of Kuhn by Paul Buck.¹¹ Buck was the first provost of Harvard and the Francis Lee Higginson Professor of History. In 1945, Paul Buck nominated Kuhn to work on the Harvard Alumni Bulletin due to his articles in Harvard’s student magazine, *Crimson* (Hufbauer 2012, p. 428). Buck was also associated with Harvard’s General Education and History of Science program, where Kuhn spent most of his time from 1951 to 1955. The two had a strong association of nearly a decade, which explains the recommendation. There is no other comment on Kuhn in the notes of that particular advisory committee meeting. It is interesting to note that though CASBS focused on behavioral and sociological studies, they considered having a historian of science in their ranks.

Notes from the CASBS Archive and Merton’s own research about Kuhn for one of his papers could help explain the circumstances of Kuhn’s nomination (Merton 1977, pp. 71–109). An undated rating card lists Kuhn’s name under the “June 54 Board List” in blue ink (Figure 3). The card does

10. Center for Advanced Study in the Behavioral Sciences. August 22, 1953. *Notes on Meeting of Advisory Committee* [Box 31, Folder 18]. Center for Advanced Study in the Behavioral Sciences Records (SC1055), Department of Special Collections and University Archives, Stanford University Libraries, Stanford, CA.

11. Center for Advanced Study in the Behavioral Sciences. November 14, 1953. *Center advisory committee meeting* [Box 11, Folder 14]. Center for Advanced Study in the Behavioral Sciences Records (SC1055), Department of Special Collections and University Archives, Stanford University Libraries, Stanford, CA.

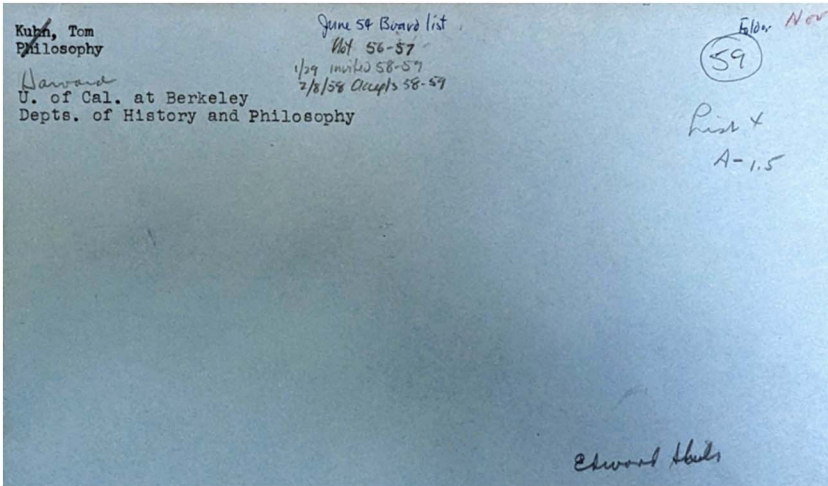


Figure 3. Rating Card indicating Kuhn’s candidacy for Center for Advanced Study in the Behavioral Science fellowship from 1954 to 1958.¹²

not contain any rating on Kuhn for 1954. Merton also noted in his research notes that the card “does not record that Kuhn got onto the June ’54 Board List because I urged his case, explaining that I knew of what he was doing in the history of science.”¹³ Due to “the sociometric networks at Harvard ... Kuhn had become abundantly visible to several sociologists of science early on” (Merton 1977, p. 98). Kuhn’s talent was known among Harvard historians, many of whom were linked with “the behavioral scientists variously engaged in helping institute the Center” (p. 98). Merton was one such individual and an important one in the context of CASBS.

There are two ways through which Merton could have learnt about Kuhn’s work. The first source could be Harvard historian Phillip Frank, who founded the Institute of Unity of Science and worked with Merton and Kuhn on the sociology of science project in 1952. The second source could be Paul Buck. Buck and Merton were in Harvard in the 1930s and were now working together in 1953–54 to lay the foundations of CASBS. As Buck was the one who suggested Kuhn’s name for fellowship, Merton,

12. Center for Advanced Study in the Behavioral Sciences. (n.d.) *June 54 board list* [Box 49, Folder 2]. Center for Advanced Study in the Behavioral Sciences Records (SC1055), Department of Special Collections and University Archives, Stanford University Libraries, Stanford, CA.

13. Robert K. Merton. ca. 1976a. *CASBS ratings on Tom Kuhn* [Box 357, Folder 18]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

either due to his own knowledge of Kuhn's work or learning it from Buck, would have supported the nomination. Strengthening this conclusion is a note from Merton's research on Kuhn's selection to the CASBS. In his research, Merton appears to recall the discussions that led to Kuhn's selection and the individuals who played an influential role. Merton mentioned in one of his notes to "telephone TSK" and ask, "how well did he knew Paul Buck by 1950–54."¹⁴ The above discussed evidence suggests that Merton's connections with Buck and Frank likely played a role in his awareness of Kuhn and his support for the fellowship.

Another person mentioned on the "Telephone TSK" note is University of Chicago sociologist and CASBS member Edward Shils, who too played an active role in Kuhn's nomination and selection. The question listed on the note is if Kuhn "had ... met Ed Shils by then?"¹⁵ Shils knew of Kuhn's work independently as confirmed by Merton. Merton noted in "Sociology of Science: An Episodic Memoir" (1977) that "Shils and I had come to independent judgements about the young Kuhn in the precise sense that we had not discussed our respective opinions of his promise." According to Merton (1977), both he and Shils independently recognized Kuhn's promise, reflecting their shared interest in the sociology of knowledge. CASBS records further confirm Shils's involvement, as his name appears on the bottom right hand corner of Kuhn's rating card (Figure 3). Together, these details suggest that Shils was an active supporter of Kuhn's selection to the Center.

Merton's early recognition of Kuhn's potential was instrumental in shaping the latter's career trajectory. Based on Merton's, Buck's and Shils's nomination, Kuhn was invited to join the inaugural cohort CASBS in 1954. However, having accepted a Guggenheim Fellowship that same year, he was unable to take advantage of the opportunity. In 1958, Kuhn accepted a second invitation and joined the 1958–59 CASBS cohort. Highlighting Merton's role in CASBS selection process is one of the earliest instances of Merton's belief in Kuhn's potential and his effort in providing Kuhn's genius with a platform to do his best work. Merton's judgment would prove prescient, as CASBS ultimately became the setting in which Kuhn finally started writing his seminal work, *Structure*.

4. Merton's Role in the Writing of *The Structure of Scientific Revolutions*

A series of letters exchanged between Merton and Kuhn reveal the importance of Merton in getting *Structure* published. Inspired by discussions amongst sociologists in his CASBS cohort, Kuhn started thinking about

14. Robert K. Merton. ca. 1976b. *Telephone TSK* [Box 357, Folder 19]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

15. Robert K. Merton. ca. 1976b. *Telephone TSK* [Box 357, Folder 19].

the nature of scientific revolutions in terms of paradigms or shared beliefs and recognized problem-solutions by a scientific community (Kuhn 1959¹⁶; 1962, p. vii–viii). Eventually, Kuhn reached out to Merton on 19 June 1959¹⁷ from CASBS to share the book’s first chapter and get his reactions. More importantly, Kuhn mentioned his desire for feedback on future drafts to Merton: “I shall continue to pester you with pieces in this vein as they become available.”¹⁸ Merton’s response is not preserved as there are no surviving letters between the two until the spring of 1961. Finally, on 14 April 1961, we see Kuhn sharing the completed manuscript with Merton. At the beginning of the letter, Kuhn mentioned that he has been talking about the book “in conversations and footnotes for such a disgracefully long time.”¹⁹ Kuhn was corresponding with Merton about the work since June 1959, and it is likely that he would have received some comments either in person or in writing. Describing the current draft, Kuhn cautioned that the last two sections were still a work in progress: “I had hoped to rewrite them entirely before sending the draft to the select group that I think may be sympathetic to what I am trying to achieve.”²⁰ This statement reflects more than just a simple request for a review and reveals the trust Kuhn had in Merton. With his expertise in sociology of science, Merton would not only understand the significance of the project but could also guide the work in the right direction.

In the second half of the letter, Kuhn requested Merton’s support in the form of a recommendation to the University of Chicago Press for publishing, which arguably became Merton’s most significant tangible contribution to *Structure* (Figure 4). The idea for the book originated back in 1953, when the *International Encyclopedia of Unified Sciences* commissioned him to write a monograph on the history of science. While he intended to honor his commitment, he noted that the Encyclopedia had limited distribution and audience. As a result, he was in discussions with the University of Chicago Press (which also published the Encyclopedia) to simultaneously publish the work as a book. To facilitate this arrangement, Kuhn asked

16. Thomas S. Kuhn. July 31, 1959. *Letter to Ralph W. Tyler: Evaluation of my fellowship year* [Box 49, Folder 2]. Center for Advanced Study in the Behavioral Sciences Records (SC1055), Department of Special Collections and University Archives, Stanford University Libraries, Stanford, CA.

17. Thomas S. Kuhn. June 19, 1959. *Letter to Robert K. Merton* [Box 357, Folder 17]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

18. Thomas S. Kuhn. June 19, 1959. *Letter to Robert K. Merton* [Box 357, Folder 17].

19. April 14, 1961. *Letter to Robert K. Merton* [Box 357, Folder 17]. Robert K. Merton Papers.

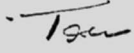
20. April 14, 1961. *Letter to Robert K. Merton* [Box 357, Folder 17]. Robert K. Merton Papers.

Professor R. K. Merton - 2 - 14 April 1961

it can stand anything like that much pruning. In addition, I am by no means satisfied that as of the year 1961 the Encyclopedia can supply the audience, either qualitatively or quantitatively, that I should like the manuscript to gain. As a result, I find myself in a considerable bind.

Since I do not want, at this very late date, simply to refuse delivery, I plan to try persuading the Chicago Press (which publishes the Encyclopedia) to give me simultaneous publication in another format. If they would put the whole manuscript out with annotation either in a volume by itself or with some of my other papers, then I'd give them a drastically cut and unannotated version for the Encyclopedia. Some arrangement of that sort may well be possible. But it is surely not going to be popular, and I stand more chance of making the necessary deal if I can persuade the Press from the start that more is involved than the usual amour propre of the artist. Therefore, if you think the manuscript important enough to justify some pressure, I would be very grateful for a letter that I could send to the Press with a copy of the draft when I start to dicker. I very much hope that whatever arrangement is to be made can be worked out quickly, for I can do a much more effective job of final revisions this summer if I know before I start what the publication format will be.

I think you know me well enough to realize that I do want your criticism in any case. The letter for use in publication-politicking is an extra to be extended only if you feel it makes full and comfortable sense to do so.

Sincerely,

 Thomas S. Kuhn

K
t*k

Figure 4. Part of the letter where Kuhn asks Merton for recommendation to University of Chicago Press for publishing *The Structure of Scientific Revolutions* in a book format.²¹

21. April 14, 1961. *Letter to Robert K. Merton* [Box 357, Folder 17]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

Merton, “if he thinks the manuscript important enough” to send a letter of recommendation to the Press.²² This request demonstrates the trust Kuhn placed in Merton’s understanding of the value of his work and, given Merton’s stature, a hope to convince the Press to give his work greater visibility. Merton’s response (4 May 1961) expressed confidence in Kuhn’s work: “I have read the earlier draft and this alone is enough to justify a strong recommendation to the Press.”²³ As Kuhn had hoped, Merton also wanted the book to reach the widest possible audience and provided the letter of recommendation. This exchange illustrates the deep respect and mutual regard Merton and Kuhn had for one another.

The publication of *Structure* in 1962 not only redefined the study of scientific change but also reflected the deep, if often understated, influence of Robert K. Merton’s sociology of science. Kuhn’s central thesis that scientific advancement occurs through paradigm shifts rather than cumulative progress challenged traditional notions of objectivity and linear scientific growth. He introduced the concepts of “normal science,” where research operates within a shared framework, and “revolutionary science,” where anomalies lead to paradigm change (Kuhn 1962). Rather than presenting paradigm shifts as purely logical or philosophical developments, Kuhn emphasized that such transformations are deeply influenced by the shared norms, values, and institutional structures within scientific communities. In the pre-revolutionary phase, a scientist’s worldview is “determined jointly by the environment and the particular normal-scientific tradition” in which they are trained (Kuhn 1962, p. 112). During a scientific revolution, however, “the scientist’s perception of his environment must be re-educated” (1962, p. 112). Accepting a new paradigm is not simply a matter of better data or argument; it requires persuasion, negotiation, and often resistance, as the community collectively redefines what counts as a valid problem or an acceptable method. Given that Merton was the leading authority on scientific communities and Kuhn sought his guidance from the outset while writing *Structure*, it is reasonable to infer Merton’s influence on some of the key sociological insights that shaped Kuhn’s thinking.

The importance of *Structure* from a sociology of science perspective was always evident to Merton. When Merton received his copy of the book, he praised it as “brilliant,” commending Kuhn for blending historical,

22. Thomas S. Kuhn. April 14, 1961. *Letter to Robert K. Merton* [Box 357, Folder 17]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

23. Robert K. Merton. May 4, 1961. *Letter to Thomas S. Kuhn* [Box 357, Folder 17]. Robert K. Merton Papers.

philosophical, and sociological insight.²⁴ Kuhn, in turn, described Merton's letter as "among the nicest presents" he had ever received and emphasized how much Merton's approval meant to him.²⁵ In subsequent work, Merton adopted the term paradigm to denote exemplars of codified assumptions, problem sets, key concepts, and selectively accumulated knowledge that guide inquiry across the sciences (Wray 2011, p. 385). This usage comes remarkably close to Kuhn's own formulation. Taken together, the letters and Merton's use of the paradigm concept reveal both the personal warmth and the intellectual reciprocity that defined their relationship.

Merton's intellectual and institutional support played a crucial, yet unrecognized role in the creation of *Structure*, firmly positioning him as a key figure in the foundational narrative of science studies. From the book's inception, Kuhn sought out Merton for his reviews and comments. Given Merton's expertise in investigating the workings of scientific communities, Kuhn wanted Merton's viewpoint on how he treated the subject. Though we do not have Merton's comments on Kuhn's drafts of the book, his letter of 13 December 1962 sums up his opinion on that matter.²⁶ Merton's pioneering research on the sociology of science laid the groundwork for Kuhn's own analysis of scientific paradigms, and his efforts to bring Kuhn to CASBS provided the time and space Kuhn needed to complete his most important work. Merton's involvement, ranging from conceptual influence to publication support, left unmistakable imprints on Kuhn's work. In light of this sustained engagement, it is not an overstatement to suggest that without Merton's intervention, science studies might never have received its defining text in *Structure*.

5. The Merton-Kuhn Correspondences

The shared institutional links and correspondences on *Structure* between Merton and Kuhn were results of a strong intellectual bond that they shared as revealed by their letters over a period of 20 years (1957–1977). The intellectual dialogue between Kuhn and Merton were one of the most fertile exchanges in the emerging sociology of science and science

24. Robert K. Merton. December 13, 1962. *Letter to Thomas S. Kuhn* [Box 357, Folder 17]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

25. Thomas S. Kuhn. January 21, 1963. *Letter to Robert K. Merton* [Box 357, Folder 17]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

26. Robert K. Merton. December 13, 1962. *Letter to Thomas S. Kuhn* [Box 357, Folder 17]. Robert K. Merton Papers.

studies in general. Their letters, essays, and shared institutional experiences demonstrate a steady exchange of ideas on how scientific knowledge is structured, legitimized, and transmitted. Together, they bridged two disciplines, the sociology and history of science, by combining Merton's sociological analysis of norms and rewards with Kuhn's historical attention to paradigms, measurement, and theory change.

By the late 1950s, this dialogue was already bearing fruit. Merton's "Priorities in Scientific Discovery" (1957) analyzed how disputes over simultaneous discoveries arise from "the institutional norms of science" that define originality as a supreme value and make "recognition of one's originality a major concern" (pp. 639–40). He argued that humility serves as a counterbalance, reminding scientists of their "heavy indebtedness to the legacy of knowledge bequeathed by predecessors" (p. 646). These ideas extended his earlier essay "Science and the Social Order (1938b)," in which he articulated science as a social institution governed by norms of recognition and reward. Kuhn responded with enthusiasm, calling Merton's article "just the sort of work that could make the sociology of science a very worthwhile field."²⁷ Their mutual interest in the sociology of discovery culminated in Kuhn's "Energy Conservation as an Example of Simultaneous Discovery ([1959] 1977)," where he argued that discoveries arise not by coincidence but through "the rapid and often disorderly emergence of the experimental and conceptual elements" that collectively form new theories (p. 72).

Building on these foundations, Kuhn's "The Function of Measurement in Modern Physical Science" (originally written in 1959 and published in 1961) further deepened the sociological dimension of his work and strengthened his partnership with Merton. Kuhn contended that "measurement and quantitative technique play an especially significant role in scientific discovery ... by displaying serious anomaly, they tell scientists when and where to look for a new qualitative phenomenon" (1961, p. 120). His examples, such as Boyle's Law and Mercury's orbital anomaly, illustrated how scientific observation is shaped by prevailing theories and community standards. In his reply dated 25 May 1959²⁸, Merton praised Kuhn's work. Merton noted the paper as "no run-of-the-mill piece," and "an eye-opener to many social scientists" due to its in-depth analysis of the history of science and its discussion of scientists'

27. Thomas S. Kuhn. September 16, 1958. *Letter to Robert K. Merton* [Correspondence with individuals: Merton, Robert K., 1958–1976, Box 22]. Thomas S. Kuhn Papers (MC-0240).

28. Robert K. Merton. May 25, 1959. *Letter to Thomas S. Kuhn* [Correspondence with Individuals: Merton, Robert K., 1958–1976, Box 22]. Thomas S. Kuhn Papers (MC-0240).

engagement with measurements in refining and refuting theories. Their correspondence revealed Kuhn's adoption of Mertonian ideas such as the "self-fulfilling prophecy" to explain how belief in a theory can influence the very measurements that confirm it. Merton also encouraged Kuhn to extend his analysis of anomalies—quantitative and qualitative alike—into a broader framework for understanding scientific change. This collaboration marked a turning point in the history of science studies: Merton provided Kuhn with a sociological lens for understanding scientific practice, while Kuhn gave Merton's sociology of science a vivid historical embodiment.

The 1960s saw Kuhn revisit themes shared with Merton in his article "The Historical Structure of Scientific Discovery" ([1962] 1977), arguing that scientific discoveries are not discrete events but cumulative, socially embedded processes. "Discovering something has usually seemed to be a unitary event," a view that Kuhn suspected to be "rooted in the nature of scientific community" ([1962] 1977, p. 165). He cited Merton's (1957) "Priorities in Scientific Discovery" "for a brilliant discussion of these points" (p. 166), acknowledging that norms of prestige and originality shape the narrative of discovery. Similarly, Merton, between 1961 and 1963, published three papers, "Singletons and Multiples in Scientific Discovery" (1961), "Resistance to the Systematic Study of Multiple Discoveries in Science" (1963), and "The Ambivalence of Scientists" ([1963] 1976) that expanded on his earlier arguments. He wrote that "some [discoveries] flow directly from antecedent knowledge ... others involve more of a leap" (Merton 1961, p. 486). These ideas, very similar to Kuhn's notion of "normal science" and "revolutionary" change as introduced in *Structure*, strongly suggests the influence of Kuhnian work on Merton. Both scholars recognized that discovery is neither isolated nor accidental but rather arises from shared intellectual and institutional contexts.

After reading Merton's new papers, Kuhn wrote to him on 10 September 1964, requesting, "Send whatever you've still got that's up my alley,"²⁹ and asked to be added to Merton's reprint list. Merton reciprocated warmly, admitting he had been "lax in getting my papers out to people I would most like to read them"³⁰, and requested Kuhn's latest work in return. Whereas Kuhn had earlier sought Merton's feedback on his drafts, these letters reveal the reverse dynamic: Merton now actively

29. Thomas S. Kuhn. September 10, 1964. *Letter to Robert K. Merton* [Box 357, Folder 17]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

30. Robert K. Merton. November 16, 1964. *Letter to Thomas S. Kuhn* [Box 357, Folder 17]. Robert K. Merton Papers.

sought Kuhn's opinion on his own research, regarding Kuhn's historical insight as indispensable to refining sociological theory.

By the end of the decade, their mutual regard manifested in their respective writings. Merton's revised edition of *Social Theory and Social Structure* (1968a) incorporated Kuhn's concept of paradigms as an organizing tool for sociological analysis, arguing that "paradigms have great pro-paedeutic value" because they "bring out into the open the array of assumptions, concepts, and basic propositions employed in a sociological analysis" (p. 69). He maintained that paradigms "advance the cumulation of theoretical interpretation" by providing a flexible yet systematic framework for sociological theory (p. 71). Kuhn, in turn, acknowledged Merton's lasting influence in his essay "The History of Science," which traced the field's evolution from a pursuit of scientists seeking to "establish its tradition" to a mature discipline integrating both "internal" theoretical developments and "external" social, institutional, and economic forces ([1968] 1977, p. 105). He credited the "Merton Thesis" for shaping this dual understanding, even as he noted that its original formulation linking the rise of modern science to Puritanism had been found narrow in its application to capture the diversity of influences in the development of science. Kuhn's critique was not a rejection but a refinement, reaffirming Merton's insight that science must be studied as a social enterprise shaped by cultural and institutional conditions. Together, their 1968 writings marked a moment of reciprocal acknowledgment: Merton formally integrated Kuhn's paradigms into sociology, while Kuhn historicized Merton's sociology within the broader narrative of science studies.

The 1970s further reflected the continuity of this intellectual partnership. On 28 January 1972, Kuhn delivered the George Sarton Memorial Lecture at Princeton University, titled "Mathematical Versus Experimental Tradition in the Development of Physical Science." In it, he examined how the rise of the experimental sciences in the seventeenth century interacted with the mathematical tradition, arguing that historians should avoid treating science either as a single unified enterprise or as fragmented into rigid subfields (Kuhn 1976). He called for a hybrid historiography that recognizes both disciplinary specificity and cross-disciplinary unity. Central to this lecture was Kuhn's discussion of the Baconian sciences and their connection to the "Merton Thesis." He observed that Baconian empirical methods "created a different sort of empirical science, one that for a time existed side by side with, rather than supplanting, its predecessor" (Kuhn 1976, p. 10) and that the "appeal of the Merton Thesis" was greater when applied to the rise of these experimental traditions (1976, p. 26). This argument extended Merton's earlier work by demonstrating how communal ethics and social values undergirded the experimental turn in science.

Merton's reaction to the lecture further attested to their enduring intellectual rapport. After reading the manuscript in 1973, he wrote to Kuhn expressing his "mounting satisfaction," describing the discussion of the "contrasting styles of historiography of science—the single-science mode and the unity-of-science mode—as wonderfully germinal."³¹ Over the next two years, their correspondence continued as Kuhn prepared the paper for publication and sought Merton's help for a review. On 16 April 1975, Merton sent eight pages of detailed feedback, noting humorously, "What kind of life do I lead which keeps me from reading your paper for months on end," before offering a sociological critique of Kuhn's treatment of the mathematical and experimental traditions (Figure 5). How subdomains emerge in science was of prime importance to Merton as a sociologist of science. He advised Kuhn to read some of his material and the work of sociologists Harriet Zuckerman and Jonathan Cole "on the emergence of the sociology of science as a self-exemplifying case of specialty-formation." Merton praised Kuhn's "eye-opening mode of inquiry"³² and linked it to his own research in "Social Conflict over Styles of Sociological Work" ([1961] 1973) which explains polarization within scientific communities.

Beyond seeking feedback on papers, Merton and Kuhn also solicited contributions from one another for their respective books. After Merton's extensive 16 April 1975 feedback, Kuhn invited him to contribute to a planned book and later to write the afterword for *The Essential Tension* (1977). Unfortunately, neither of the two materialized but it reflects the value Kuhn bestowed on Merton's academic opinion and a desire to collaborate. The two eventually got to collaborate over the English translation of Ludwig Fleck's *Genesis and Development of a Scientific Fact* (1979) which is now considered a foundational text in the sociology of science. Merton and Thaddeus Trenn asked Kuhn to write the foreword, as none of them "had even known of the Fleck book before coming upon [Kuhn's] generous reference to it in the Preface" of *Structure*.³³ This exchange epitomized the culmination of decades of intellectual reciprocity. It was through a footnote in Merton's *Science Technology and Society in Seventeenth Century England* that Kuhn first encountered the writings of French psychologist Jean Piaget (1896–1980), a discovery that shaped his work in *Structure*. After the publication of *Structure*, it was now Kuhn who introduced Merton to the work

31. Robert K. Merton. May 28, 1973. *Letter to Thomas S. Kuhn* [Box 357, Folder 17]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

32. Robert K. Merton. April 16, 1975. *Letter to Thomas S. Kuhn* [Box 357, Folder 17]. Robert K. Merton Papers.

33. Robert K. Merton. February 18, 1976. *Letter to Thomas S. Kuhn* [Box 357, Folder 17]. Robert K. Merton Papers.

Columbia University
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NEW YORK, N. Y. 10027

16 April 1975

PROFESSOR
ATHER HALL

Professor Thomas S. Kuhn
Program in the History and
Philosophy of Science
Princeton University
220 Palmer Hall
Princeton, New Jersey 08540

Dear Tom,

Has it really been almost half a year since we had those few minutes of talk at the History of Science Society meetings? Nor will I leave it as a rhetorical question: the sad answer is telling and cause for self-inspection. What kind of life do I lead which keeps me from reading your paper for months on end although, as some scribbled notes on the first few pages grinily testify, I actually began to read it just a week after you sent it along, in mid-December. But then a doctoral

Figure 5. Merton's Feedback on Kuhn's Two Science Traditions Paper. Part of the letter containing comments on Kuhn's "Mathematical versus Experimental Tradition in the Development of Physical Science."³⁴

of Fleck. Their partnership thus completed a full intellectual circle, reinforcing the connection between historical and sociological perspectives in the study of scientific knowledge.

The exchange of ideas between Merton and Kuhn shaped the trajectory of science studies. Merton regarded Kuhn as a pioneering historian whose sociological sensibility enriched the study of science, while Kuhn saw in Merton's work the conceptual scaffolding that legitimized his own vision of science as a community-bound enterprise. Their continued communication spanning topics from discovery and paradigms to the unity and fragmentation of scientific traditions illustrated a rare intellectual partnership

34. Robert K. Merton. May 28, 1973. *Letter to Thomas S. Kuhn* [Box 357, Folder 17] Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

that bridged sociology, history, and philosophy. Merton-Kuhn partnership exemplifies the modern interdisciplinary approach to analyzing science which continues to date.

6. The Apocryphal Kuhn versus Merton Debate

The so-called “Kuhn versus Merton” controversy originated in the early 1970s within the newly established Sociology of Scientific Knowledge (SSK) movement centered at the University of Edinburgh. SSK scholars such as Barry Barnes, David Bloor, and R. G. A. Dolby argued that Thomas S. Kuhn’s *Structure* implied that all knowledge is socially constructed and context-bound, in contrast to Robert K. Merton’s emphasis on universal norms like communalism, universalism, disinterestedness, and organized skepticism. As these interpretations spread through journals including *Isis* and *Science Studies* (now *Social Studies of Science*), some commentators began presenting Kuhn’s concept of paradigms and Merton’s model of cumulative progress as mutually exclusive. The resulting narrative framed Merton as a theorist of linear scientific growth and Kuhn as a champion of discontinuous revolutions, despite the fact that neither man recognized such opposition in his own work.

Privately, both scholars were dismayed by these distortions. In a letter dated 14 May 1975, Merton informed Kuhn of a “small but loudly vocal band of sociologists of science, mostly English, who declare ... that your ideas and mine are locked in mortal combat.”³⁵ Merton proposed that Kuhn’s forthcoming book on the mathematical and experimental traditions in science might serve as a forum for setting the record straight. Kuhn replied on 19 June 1975, agreeing that the project “may provide an opportunity to set the record straight about the absence of any conflict” between their positions.³⁶ This exchange confirmed their shared belief that sociological and historical analyses of science were complementary: both accepted that scientific inquiry was governed by social values while allowing that those values could evolve as paradigms shifted. Merton soon followed up with his essay “Structural Analysis in Sociology” (1976), where he gently mocked overzealous “Kuhnians” who have turned Kuhn’s idea “to mean all manner of things” as they deem appropriate (Merton 1976, p. 134). Although the essay did not explicitly mention anyone, one can reasonably assume that Merton aimed his comment at SSK scholars who identified themselves as Kuhnians (Wray 2021, p. 112). Kuhn later

35. Robert K. Merton. May 14, 1975. *Letter to Thomas S. Kuhn* [Box 357, Folder 17]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

36. Thomas S. Kuhn. June 19, 1975. *Letter to Robert K. Merton* [Box 357, Folder 17]. Robert K. Merton Papers.

wrote that he was “gratified to have the evidence in black and white” that Merton fully understood his views.³⁷

The debate reached a critical turning point with the “Horan episode.” At the 1976 annual meeting of the Southern Sociological Society, Patrick M. Horan of the University of Georgia presented a paper contrasting what he described as Kuhn’s non-cumulative formulation of scientific knowledge and relativistic application of scientific norms with Merton’s normative sociology of science. Merton, who was present at the conference, objected to Horan’s characterization and pitting Kuhnian views on science against Mertonian. Seeking clarification, Horan mailed his paper and Merton’s comments to Kuhn for review. On 3 February 1976, Kuhn responded in a letter copied to Merton: “I feel exactly as Merton does about your attempt (it is by no means unique) to portray his and my views as incompatible.”³⁸ Kuhn emphasized that variability of scientific values across time and communities was not inconsistent with Merton’s universal norms but rather an illustration of how those norms operate under different historical circumstances. Kuhn also wrote that there is no reason to assert that the Mertonian position “is compatible only with a linear or cumulative conception of scientific development.”³⁹ In Kuhn’s view, “the Mertonian and Kuhnian approaches [are] complementary and mutually supporting” (Figure 6). He warned that the continuing effort to polarize the two perspectives was “likely to do profound damage to attempts at sociological examination of the sciences.”⁴⁰ The letter provided definitive evidence of Kuhn’s alignment with Merton and became a cornerstone for resolving the debate.

After receiving Kuhn’s letter, Merton wrote again on 18 February 1976 to thank him for what he called an “aptly timed response.” He lamented “this new industry seeking to promote a Kuhn vs. Merton cleavage of theoretical perspectives,” blaming the English sociologists for “selective perception and consequent distortion” of their writings.⁴¹ Kuhn shared Merton’s frustration and suggested that Merton could use the afterword of Kuhn’s *The*

37. Thomas S. Kuhn. January 26, 1976. *Letter to Robert K. Merton* [Box 357, Folder 17]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

38. Thomas S. Kuhn. February 3, 1976. *Letter to Patrick Horan* [Box 357, Folder 17]. Robert K. Merton Papers.

39. Thomas S. Kuhn. February 3, 1976. *Letter to Patrick Horan* [Box 357, Folder 17]. Robert K. Merton Papers.

40. Thomas S. Kuhn. February 3, 1976. *Letter to Patrick Horan* [Box 357, Folder 17]. Robert K. Merton Papers.

41. Robert K. Merton. February 18, 1976. *Letter to Thomas S. Kuhn* [Box 357, Folder 17]. Robert K. Merton Papers.

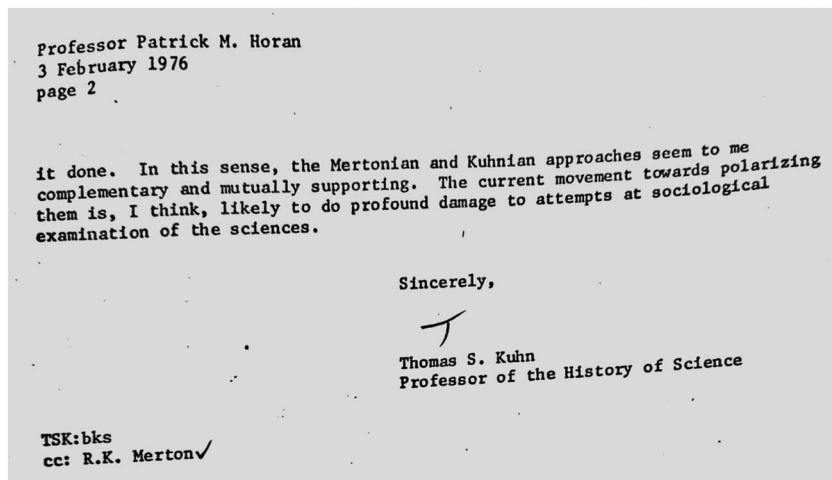


Figure 6. Kuhn's letter to Horan on Complementarity of Mertonian and Kuhnian Approaches to Science. Part of the letter discussing Horan's paper on the wedge between Mertonian and Kuhnian approaches to science studies.⁴²

Essential Tension (1977)—which Kuhn requested Merton to write—as a public venue for their joint position.⁴³ Although Merton's afterword ultimately did not appear, Kuhn's preface to *The Essential Tension* made the point explicitly, rejecting the claim that values were irrelevant to scientific practice and reiterating that his model of paradigms presupposed the existence of guiding norms and standards within scientific communities.

Merton soon published his own rejoinder in *Sociology of Science in Europe* (1977), which included a memoir of Kuhn's contributions to the sociology of science. There he stated that any reading of Kuhn "inferring that the accumulation of knowledge certified by the community of scientists is simply a myth would be flagrantly at odds with the historical record" (Merton 1977, p. 13). By making this statement in print, Merton publicly affirmed Kuhn's compatibility with the Mertonian framework of cumulative and value-governed scientific progress. Subsequent commentators, including Trevor J. Pinch (1979) in "Kuhn—The Conservative and Radical Interpretations" and Sal Restivo (1983) in "The Myth of the Kuhnian Revolution," reinforced this reconciliation by showing how Mertonian sociology and

42. Thomas S. Kuhn. February 3, 1976. *Letter to Patrick Horan* [Box 357, Folder 17]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

43. Thomas S. Kuhn. February 24, 1976. *Letter to Robert K. Merton* [Box 357, Folder 17], Robert K. Merton Papers.

Kuhnian historiography converge in portraying science as a socially organized yet cognitively disciplined enterprise. By jointly rejecting the false dichotomy propagated by SSK writers, Kuhn and Merton restored coherence to the interdisciplinary study of science and demonstrated that historical and sociological perspectives could coexist within a single analytic framework.

7. Merton's Episodic Memoir on Kuhn

Perhaps the greatest testament to Merton and Kuhn's friendship is the 38-page memoir by Merton on Kuhn. The piece appeared in "The Kuhnian Presence" section of the essay "The Sociology of Science: An Episodic Memoir," published in Merton's *The Sociology of Science in Europe*. The essay offered an intellectual history of the sociology of science, combining Merton's reflections with a broader historical perspective on the discipline's development. A special section in the essay was dedicated to Kuhn's influence on the sociology of science and analysis of Kuhn's academic journey utilizing ideas like the reward mechanism in science and the cumulative advantage popularized by Merton as the "Matthew Effect" (Merton 1968b).

To prepare the memoir, Merton conducted extensive research on Kuhn's early academic career, obtaining records from the Center for Advanced Study in the Behavioral Sciences (CASBS), including Kuhn's fellowship applications, rating cards, and letters of recommendation. These materials revealed how figures like Paul Buck, Edward Shils, and Harvard president James B. Conant played formative roles in Kuhn's rise. Merton noted that Kuhn's 1958–59 CASBS fellowship, which he had personally helped facilitate, signified an extraordinary recognition for a historian of science in a program dominated by social scientists. As Merton observed, Kuhn's selection "for that matter of any field of historical study" demonstrated his exceptional promise (Figure 7). He interpreted Kuhn's ascent as a vivid example of how "institutional arrangements, selective processes, and the reward system in the domains of science and scholarship" amplify recognition for talented individuals within elite academic settings (Merton 1977, p. 76). The memoir thus reframed Kuhn's trajectory, from Harvard student to Guggenheim and CASBS fellow, as a sociological exemplar of the "Matthew Effect," where early advantages compound through successive opportunities and mentorships.

Merton's account also credited the influence of academic networks, especially Conant's mentorship, in shaping Kuhn's intellectual development. Conant, who had similarly supported Merton's early work, encouraged Kuhn's shift from physics to history and philosophy of science and provided him research and teaching positions that nurtured his emerging ideas. Merton's narrative emphasized that Kuhn's success was not merely the product of privilege but of exceptional analytical ability and

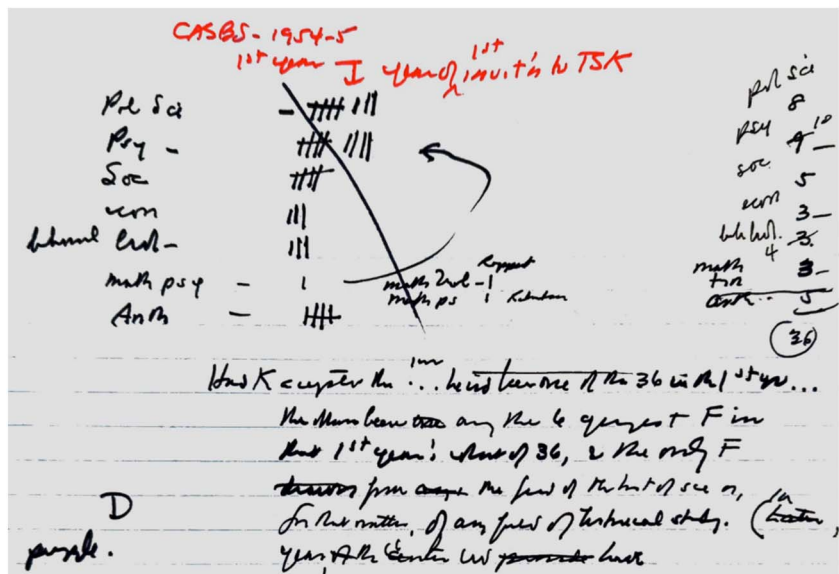


Figure 7. Merton’s handwritten note counting the number of fellows from different disciplines nominated for the first batch of CASBS in 1953.⁴⁴

intellectual rigor. Despite publishing relatively little before *Structure*, Kuhn earned early recognition because of what Merton called his “assessed quality of mind as encountered at close range” (Merton 1977, p. 92). He admired Kuhn’s perfectionism and unhurried approach to scholarship, a point which he also made in private to Kuhn in a 1976 letter: “I must conclude that you alone, among all my friends and associates, hold on to a manuscript just as long as I do,” and hence, “every slight change in the [manuscript] is a change for the nuanced better.”⁴⁵ For Merton, Kuhn exemplified how the reward system in science often values depth of insight and intellectual consistency over sheer productivity.

Beyond sociological interpretation, Merton explored Kuhn’s broader contribution to the sociology of science. He argued that Kuhn’s work represented a “progressive consolidation of sociological and philosophical orientations to the historical development of science” (Merton 1977, p. 80). For Merton, Kuhn’s analysis of the role of scientific communities in paradigm formation helped transform the sociology of science by emphasizing how

44. Robert K. Merton. ca. 1976c. CASBS-1954–55 [Box 357, Folder 18]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

45. Robert K. Merton. February 18, 1976. Letter to Thomas S. Kuhn [Box 357, Folder 17], Robert K. Merton Papers.

shared norms, values, and problem-solving practices define scientific progress. Though mostly appreciating of Kuhn's work, Merton also offered a subtle critique in his memoir. While he agreed with Kuhn on the importance of internal values and institutional norms, he argued that Kuhn's framework in *Structure* underplayed "extra-theoretical influences" such as economic, political, and cultural forces that also shape scientific inquiry (Merton 1977, p. 107).

Finally, Merton used the memoir to defend Kuhn's legacy against misinterpretation by radical sociologists and political theorists. He criticized "self-appointed Kuhnians" who distorted Kuhn's theory to claim that science lacked any objectivity, asserting instead that both he and Kuhn consistently viewed science as a value-driven yet disciplined enterprise. Ending with the wry remark "Je ne suis pas Kuhniste" (Merton 1977, p. 108), Merton captured Kuhn's own frustration at being misread as a relativist. Reviewers later hailed "The Kuhnian Presence" as the most insightful section of Merton's book, recognizing it as both a sociological case study and a testament to one of the most influential intellectual friendships in twentieth-century science studies. As sociologist Steve Fuller observed, Merton became "the most artful Kuhnotropist" (Fuller 1992), using his own theoretical lens to illuminate how Kuhn's genius and institutional positioning together shaped the study of science.

8. The Lasting Influence of Mertonian-Kuhnian Legacy

Throughout their careers, Robert K. Merton and Thomas S. Kuhn maintained a long-standing intellectual partnership that extended across several major institutions and initiatives in science studies. Their collaboration began in 1952 when both contributed to the Institute for the Unity of Science's project on the sociology of science, organized by Philip Frank. This early interaction marked the beginning of a productive partnership in shaping the sociology and history of science. In 1959, when the Social Science Research Council's Pendleton Herring consulted Kuhn about advancing the sociology of science, Kuhn recommended forming a small working group with Merton and Bernard Barber to study "Outstanding Problems in the Sociology of Science" and "applying sociology to science rather than science to sociology."⁴⁶ Their collaboration continued into the 1960s, when Kuhn invited Merton to Princeton University to lecture to his students.⁴⁷ These instances demonstrate Kuhn's effort to

46. Thomas S. Kuhn, November 21, 1959. *Letter to Pendleton Herring* [Box 357]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

47. Thomas S. Kuhn, July 5, 1967. *Letter to Robert K. Merton* [Box 357, Folder 17]. Robert K. Merton Papers.

shape the landscape of interdisciplinary study of science with the help of Merton.

By the 1980s, both scholars were deeply involved in institutionalizing science studies through the Society for Social Studies of Science (4S). Founded in 1975, 4S became a global hub for the sociology and history of science, with Merton serving as its first president. Kuhn, who received the Society's John Desmond Bernal Prize in 1983, later served on its award committees in 1985 and 1986. When asked to join the 1986 jury chaired by Merton, Kuhn responded that "it will give me extra pleasure if Bob Merton does accept the chair."⁴⁸ Their mutual esteem extended beyond 4S: in 1987, Kuhn asked Merton to support the nomination of his student, historian John L. Heilbron, to the National Academy of Sciences, describing him as "the world's leading historian of physics in his generation." These exchanges illustrate Kuhn's high regard for Merton's leadership and their shared dedication to mentoring younger scholars and solidifying science studies as a legitimate field of inquiry.

Merton regarded Kuhn not only as a collaborator but as an enduring interlocutor whose work continually inspired sociological reflection on how scientific communities evolve, negotiate consensus, and institutionalize change. His archives contain annotated drafts of Kuhn's essays and notes on critics such as Israel Scheffler, Karl Popper, and Imre Lakatos. In 1971, Merton provided comments on Alan Musgrave's "Review of Kuhn's Second Thoughts," engaging with Kuhn's ideas on normal science and community consensus.⁴⁹ In that same year, Lakatos requested Merton's feedback on *Criticism and the Growth of Knowledge* (1970), which addressed the Kuhn–Popper debate.⁵⁰ Merton's involvement in these discussions reflected his authority as both Kuhn's contemporary and one of the few scholars equally conversant in sociology, history, and philosophy of science. Moreover, these instances were the undercurrents that shaped science studies discussions during its inception.

The combined influence of Merton and Kuhn in shaping the sociological thought around science could be seen in the work of scholars like Stephan Cole and Trevor J. Pinch. Cole's writings from the 1970s onward demonstrated what might be called a "Mertonian–Kuhnian synthesis," a

48. Thomas S. Kuhn, June 4, 1986. *Letter to David Edge* [Publications: Social Studies of Science, 1970–1976, Box 12]. Thomas S. Kuhn Papers (MC-0240), Department of Distinctive Collections, Massachusetts Institute of Technology Libraries, Cambridge, MA.

49. Alan Musgrave. 1971. *Kuhn's Second Thoughts: Review of The Structure of Scientific Revolutions* [Box 357, Folder 19]. Robert K. Merton Papers, Rare Book and Manuscript Library, Columbia University, New York, NY.

50. Imre Lakatos, June 1, 1971. *Letter to Robert K. Merton* [Box 50, Folder 5]. Robert K. Merton Papers.

possible result of Merton's tutelage. In "In Defense of the Sociology of Science" (Cole 1971⁵¹ and "Why Sociology Doesn't Make Progress Like the Natural Sciences") (Cole 1994), Cole applied Merton's ideas on reward systems and Kuhn's model of paradigms to explain why sociology lacked a unified core of knowledge. Cole attributed this to both the absence of paradigmatic cohesion (Kuhn) and institutional commitment to Mertonian norms (Cole 1994). Similar reflections emerged in the work of sociologist Trevor Pinch, who noted that a "conservative interpretation" of Kuhn aligns closely with Mertonian sociology because both attach significance "to the value system of science together with its institutions" (Pinch 1997, p. 469). Through these extensions, Merton's students and successors ensured that the dialogue between his and Kuhn's theories continued to shape science studies long after their own collaboration had ended.

The endurance of this intellectual legacy became particularly visible during the Fifteenth-anniversary commemorations of Merton's *Science, Technology and Society in Seventeenth Century England* and Kuhn's *The Structure of Scientific Revolutions*. The 1990 volume *Puritanism and the Rise of Modern Science*, edited by I. Bernard Cohen, reaffirmed that Merton's "evaluation of the significance of this great classic is far from simple," yet its central insights on the social origins of modern science remained vital (Cohen et al. 1990, p. xi). Reviewers such as Trevor Pinch and John Henry hailed the book as "as relevant now as it was fifty years ago" (Pinch 1992, p. 1133), crediting it for revealing "the sociological dimension within which we all operate" (Henry 1992, p. 270). Similarly, the 2012 anniversary edition of Kuhn's *Structure* reignited debate on its cross-disciplinary influence. Philosopher Ian Hacking observed that Kuhn's work "changed the image of science by which we are now possessed. Forever" (Hacking 2012, p. 27). Alexander Bird and David Kaiser emphasized its enduring impact on contemporary thought, particularly its naturalistic approach combining history, psychology, and philosophy (Bird 2012; Kaiser 2012). These tributes underscored how both scholars' ideas had permanently altered the intellectual landscape of science studies.

In recent years, the Mertonian–Kuhnian synthesis has continued to inform research on how scientific communities balance tradition and innovation. Studies such as Foster et al. (2015) have drawn explicitly on Merton's theory of reward structures and Kuhn's paradigms to show that during periods of stability, scientists prioritize incremental work, while in times of crisis, they reward revolutionary innovation. This ongoing

51. Stephen Cole, 1971. *In Defense of the Sociology of Science* [Box 15, Folder 6]. Robert K. Merton Papers.

engagement demonstrates that, far from being relics of twentieth-century thought, Merton's and Kuhn's frameworks remain central to understanding how science evolves. Their shared vision that the progress of knowledge depends simultaneously on institutional norms and paradigm-driven transformations continue to define the sociology of science. The Mertonian–Kuhnian legacy endures as a testament to one of academia's most fruitful intellectual partnerships, uniting historical insight with sociological imagination to explain how science both changes and endures.

9. Conclusion

Documenting the collaboration between two scholars who never co-authored a paper presents unique challenges. Though Robert K. Merton and Thomas S. Kuhn never jointly published any academic work, their shared intellectual terrain reveals a deep and mutually influential relationship. Their correspondence, frequent citations of each other's work, and the visible evolution of their ideas based on one another's suggestions demonstrate how foundational their exchange was to the development of science studies. In the absence of co-authored publications, their letters and intellectual cross-referencing serve as compelling evidence of a rich scholarly dialogue.

Their affiliation with common academic institutions also significantly shaped science studies. Both were products of an interdisciplinary environment prevalent in Harvard during the 1930s and 40s, which focused heavily on bringing sciences and humanities together. Merton and Kuhn's work at the Center for Advanced Study in the Behavioral Sciences (CASBS) contributed to science studies' intellectual foundation. Their later involvement with the Society for Social Studies of Science (4S) further advanced the field's growth. Similarly, the journal *Science Studies*, on whose editorial board Kuhn served and which Merton read attentively, became key platforms for shaping and disseminating the field's foundational ideas. Articles in this journal even sparked the so-called Kuhn vs. Merton debate on the sociology of knowledge, which ultimately led to a joint statement from the two scholars denying any such wedge in their ideas. This singular act in itself was a major development in the field of science studies.

Above all, the personal and professional bond between Merton and Kuhn profoundly enriched their respective scholarly trajectories. Merton's support was instrumental in Kuhn's early career, from securing his fellowship at CASBS to recommending *Structure* for publication at the University of Chicago Press. In turn, Kuhn's conceptual innovations, such as the idea of paradigm, left a lasting imprint on Merton's sociology of science. Merton not only encouraged sociologists to adopt Kuhn's framework but also used Kuhn's career to exemplify his own concept of the Matthew

Effect. The shift from Kuhn seeking Merton's guidance on the sociological dimensions of his work to Merton studying Kuhn to enrich his own theories is perhaps the most telling testament to the depth and significance of their intellectual friendship and its role in the foundation and evolution of science studies.

References

- Barber, Bernard. 1970. "Preface." Pp. vii–ix in *L. J. Henderson on the Social System*. Chicago: University of Chicago Press.
- Bird, Alexander. 2012. "The Structure of Scientific Revolutions and Its Significance: An Essay Review of the Fiftieth Anniversary Edition." *The British Journal for the Philosophy of Science* 63(4): 859–883. <https://doi.org/10.1093/bjps/axs031>
- Cohen, I. Bernard, K. E. Duffin, and Stuart Strickland, eds. 1990. *Puritanism and the Rise of Modern Science: The Merton Thesis*. New Brunswick, NJ: Rutgers University Press.
- Cole, Stephen. 1994. "Why Sociology Doesn't Make Progress like the Natural Sciences." *Sociological Forum* 9(2): 133–154. <https://doi.org/10.1007/BF01476359>
- Fleck, Ludwig. 1979. *Genesis and Development of a Scientific Fact*, trans. Fredrick Bradley and Thaddeus J. Trenn, ed. Robert K. Merton and Thaddeus J. Trenn. Chicago: University of Chicago Press.
- Foster, J. G., A. Rzhetsky, and J. A. Evans. 2015. "Tradition and Innovation in Scientists' Research Strategies." *American Sociological Review* 80(5): 875–908. <https://doi.org/10.1177/0003122415601618>
- Fuller, Steve. 1992. "Being There with Thomas Kuhn: A Parable for Post-modern Times." *History and Theory* 31(3): 241–275. <https://doi.org/10.2307/2505370>
- Hacking, Ian. 2012. "Introductory Essay." In *The Structure of Scientific Revolutions*, 4th ed. Chicago: University of Chicago Press.
- Heilbron, J. L. 1998. "Thomas Samuel Kuhn, 18 July 1922–17 June 1996." *Isis* 89(3): 505–515. <http://www.jstor.org/stable/237146>
- Henry, John. 1992. "Review of *Puritanism and the Rise of Modern Science: The Merton Thesis*. Edited by I. Bernard Cohen with K. E. Duffin and Stuart Strickland." *The British Journal for the History of Science* 25(2): 269–270. <https://doi.org/10.1017/S0007087400028892>
- Hershberg, James G. 1993. *James B. Conant: Harvard to Hiroshima and the Making of the Nuclear Age*. New York: Alfred A. Knopf, Inc. <https://archive.org/details/jamesbconantharv0000hers/page/n5/mode/2up>
- Hufbauer, Karl. 2012. "From Student of Physics to Historian of Science: T. S. Kuhn's Education and Early Career, 1940–1958." *Physics*

- in Perspective* 14(4): 421–470. <https://doi.org/10.1007/s00016-012-0098-5>
- Isaac, Joel. 2012. *Working Knowledge: Making the Human Sciences from Parsons to Kuhn*. Cambridge, MA: Harvard University Press.
- Kaiser, David. 2012. “In Retrospect: The Structure of Scientific Revolutions. Review of *The Structure of Scientific Revolutions*, by Thomas S. Kuhn.” *Nature* 484(7393): 164–165. <https://doi.org/10.1038/484164a>
- Kuhn, Thomas S. 1957. *The Copernican Revolution: Planetary Astronomy in the Development of Western Thought*. Cambridge, MA: Harvard University Press.
- Kuhn, Thomas S. [1959] 1977. “Energy Conservation as an Example of Simultaneous Discovery.” Pp. 66–104 in *The Essential Tension: Selected Studies in Scientific Tradition and Change*. Chicago: University of Chicago Press.
- Kuhn, Thomas S. 1961. “The Function of Measurement in Modern Physical Science.” *Isis* 52(2): 161–193. <https://doi.org/10.1086/349468>
- Kuhn, Thomas S. 1962. *The Structure of Scientific Revolutions*, 1st ed. Chicago: University of Chicago Press.
- Kuhn, Thomas S. (1962) 1977. “The Historical Structure of Scientific Discovery.” Pp. 165–177 in *The Essential Tension: Selected Studies in Scientific Tradition and Change*. Chicago: University of Chicago Press.
- Kuhn, Thomas S. [1968] 1977. “The History of Science.” Pp. 105–126 in *The Essential Tension: Selected Studies in Scientific Tradition and Change*. Chicago: University of Chicago Press.
- Kuhn, Thomas S. [1973] 1977. “Objectivity, Value Judgment, and Theory Choice.” Pp. 320–339 in *The Essential Tension: Selected Studies in Scientific Tradition and Change*. Chicago: University of Chicago Press.
- Kuhn, Thomas S. 1976. “Mathematical vs. Experimental Traditions in the Development of Physical Science.” *The Journal of Interdisciplinary History* 7(1): 1–31. <https://doi.org/10.2307/202372>
- Kuhn, Thomas S. 1977. *The Essential Tension: Selected Studies in Scientific Tradition and Change*. Chicago: University of Chicago Press. <https://doi.org/10.7208/chicago/9780226217239.001.0001>
- Lakatos, Imre, and Alan Musgrave, eds. 1970. *Criticism and the Growth of Knowledge: Proceedings of the International Colloquium in the Philosophy of Science, London, 1965*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9781139171434>
- Merton, Robert K. 1938a. “Science, Technology, and Society in Seventeenth Century England.” *Osiris* 4: 360–632. <https://doi.org/10.1086/368484>
- Merton, Robert K. 1938b. “Science and the Social Order.” *Philosophy of Science* 5(3): 321–337. <https://doi.org/10.1086/286513>

- Merton, Robert K. 1942. "The Normative Structure of Science." Pp. 267–278 in *The Sociology of Science: Theoretical and Empirical Investigations*. Edited by Norman W. Storer. Chicago: University of Chicago Press.
- Merton, Robert K. 1949. *Social Theory and Social Structure*, 1st ed. New York: The Free Press.
- Merton, Robert K. 1957. "Priorities in Scientific Discovery: A Chapter in the Sociology of Science." *American Sociological Review* 22(6): 635–659. <https://doi.org/10.2307/2089193>
- Merton, Robert K. 1961. "Singletons and Multiples in Scientific Discovery: A Chapter in the Sociology of Science." *Proceedings of the American Philosophical Society* 105(5): 470–486. <https://www.jstor.org/stable/1985546>
- Merton, Robert K. [1961] 1973. "Social Conflict over Styles of Sociological Work." Pp. 47–69 in *The Sociology of Science: Theoretical and Empirical Investigations*. Edited by Norman W. Storer. Chicago: University of Chicago Press.
- Merton, Robert K. 1963. "Resistance to the Systematic Study of Multiple Discoveries in Science." *European Journal of Sociology* 4(2): 237–282. <https://doi.org/10.1017/S0003975600000801>
- Merton, Robert K. (1963) 1976. "The Ambivalence of Scientists." Pp. 39–70 in *Sociological Ambivalence and Other Essays*. New York: The Free Press. <https://archive.org/details/sociologicalambi0000mert/page/n7/mode/2up>
- Merton, Robert K. 1968a. *Social Theory and Social Structure*, 3rd ed. New York: The Free Press.
- Merton, Robert K. 1968b. "The Matthew Effect in Science: The Reward and Communication Systems of Science Are Considered." *Science* 159(3810): 56–63. <https://doi.org/10.1126/science.159.3810.56>, PubMed: 5634379
- Merton, Robert K. 1973. *The Sociology of Science: Theoretical and Empirical Investigations*. Edited by Norman W. Storer. Chicago: University of Chicago Press.
- Merton, Robert K. 1976. "Structural Analysis in Sociology." Pp. 109–144 in *Sociological Ambivalence and Other Essays*. New York: The Free Press. <https://archive.org/details/sociologicalambi0000mert/page/n7/mode/2up>
- Merton, Robert K. 1977. "The Sociology of Science: An Episodic Memoir." Pp. 3–141 in *The Sociology of Science in Europe*. Edited by Robert K. Merton and Jerry Gaston. Carbondale, IL: Southern Illinois University Press.
- Merton, Robert K. 1985. "George Sarton: Episodic Recollections by an Unruly Apprentice." *Isis* 76(4): 470–486. <https://doi.org/10.1086/353958>
- Pinch, Trevor J. 1992. "Review of *Puritanism and the Rise of Modern Science: The Merton Thesis*." Edited by I. Bernard Cohen with K. E. Duffin and

- Stuart Strickland." *Social Forces* 70(4): 1132–1133. <https://doi.org/10.1093/sf/70.4.1132>
- Pinch, Trevor J. 1997. "Kuhn—The Conservative and Radical Interpretations: Are Some Mertonians 'Kuhnians' and Some Kuhnians 'Mertonians'?" *Social Studies of Science* 27(3): 465–482. <https://doi.org/10.1177/030631297027003004>, PubMed: 11619256
- Restivo, Sal. 1983. "The Myth of the Kuhnian Revolution." *Sociological Theory* 1: 293–305. <https://doi.org/10.2307/202054>
- Shaw, Jamie. 2024. "The Influence of Science Funding Policy on Kuhn's *Structure of Scientific Revolutions*." Pp. 37–52 in *Kuhn's The Structure of Scientific Revolutions at 60*. Edited by K. Brad Wray. Cambridge: Cambridge University Press. <https://doi.org/10.1017/9781009122696.005>
- Thackrey, Arnold. 2018. "CASBS Origins." Center for Advanced Study in the Behavioral Sciences. <https://casbs.stanford.edu/news/casbs-origins>
- Wray, K. Brad. 2011. "Kuhn and the Discovery of Paradigms." *Philosophy of the Social Sciences* 41(3): 380–397. <https://doi.org/10.1177/0048393109359778>
- Wray, K. Brad. 2016. "The Influence of James B. Conat on Kuhn's *Structure of Scientific Revolutions*." *HOPOS: The Journal of the International Society for the History of Philosophy of Science* 6(1): 1–23. <https://doi.org/10.1086/685542>
- Wray, K. Brad. 2021. *Kuhn's Intellectual Path: Charting The Structure of Scientific Revolutions*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/9781009057882>